

YAQUINA BAY AND BAR ENTRANCE, OREGON.

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LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING,

WITH A LETTER FROM THE CHIEF OF ENGINEERS, REPORT OF  
PRELIMINARY EXAMINATION OF YAQUINA BAY AND BAR  
ENTRANCE, OREGON.

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FEBRUARY 6, 1913.—Referred to the Committee on Rivers and Harbors and ordered  
to be printed.

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WAR DEPARTMENT,  
*Washington, February 5, 1913.*

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

SIR: I have the honor to transmit herewith a letter from the Chief of Engineers, United States Army, dated 4th instant, together with copy of a report from Capt. H. H. Robert, Corps of Engineers, dated November 12, 1912, on preliminary examination of Yaquina Bay and bar entrance, Oregon, made by him in compliance with the provisions of the river and harbor act approved July 25, 1912.

Very respectfully,

HENRY L. STIMSON,  
*Secretary of War.*

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WAR DEPARTMENT,  
OFFICE OF THE CHIEF OF ENGINEERS,  
*Washington, February 4, 1913.*

From: The Chief of Engineers, U. S. Army.

To: The Secretary of War.

Subject: Preliminary examination of Yaquina Bay and bar entrance,  
Oregon.

1. There is submitted herewith for transmission to Congress report dated November 12, 1912, by Capt. H. H. Robert, Corps of Engineers, on preliminary examination of Yaquina Bay and bar entrance, Oregon, including consideration of any proposition for cooperation

on the part of local interests called for by the river and harbor act approved July 25, 1912.

2. Yaquina Bay and bar entrance have been improved by the construction of converging jetties and the removal of submerged rock at a total cost of about \$710,000. As a result of an examination made in 1903, work was discontinued by the United States. No examinations of the entrance have since been made, but the improvement of the river up to Toledo has been recommended in cooperation with local interests, and the report on this subject is now before Congress. At the present time the outer ends of both jetties have been beaten down and submerged for several hundred feet in length at low water. There are at present two channels across the bar, one well to the north crossing the line of the north jetty and the other to the southwest, with an extensive shoal middle ground between. The bar was in unusually bad condition the past summer, and the controlling depth in the two bar channels as reported by vessel masters did not exceed 8 or 9 feet at mean low tide and the maximum draft that could safely cross the bar at high tide was about 11 feet.

3. The district officer states that the present commerce of Yaquina Bay is not large; that there are no large industries established on the bay; and that the cost of restoring the jetties to their original condition or any other further improvement of the bar entrance would be very great as compared with the amount of commerce to be benefited thereby. No favorable response has been received to his request for submission of any proposition for cooperation on the part of local interests. He therefore expresses the opinion, in which the division engineer concurs, that the locality is not worthy of further improvement by the General Government at the present time.

4. This report has been referred, as required by law, to the Board of Engineers for Rivers and Harbors and attention is invited to the board's accompanying report of January 6, 1913, concurring with the views of the district officer and the division engineer.

5. After due consideration of the above-mentioned reports, I concur in general with the views of the district officer, the division engineer, and the Board of Engineers for Rivers and Harbors, and therefore, in carrying out the instructions of Congress, I report that the improvement by the United States of Yaquina Bay and bar entrance, Oregon, in the manner apparently desired by the interests concerned as described in the reports herewith, is not deemed advisable at the present time.

W. H. BLIXBY,  
*Chief of Engineers, U. S. Army.*

## REPORT OF THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS.

[Third indorsement.]

BOARD OF ENGINEERS FOR RIVERS AND HARBORS,  
*January 6, 1913.*

## The CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. Under the original and modified projects for Yaquina Bay and bar entrance this harbor has been improved by the construction of converging jetties and the removal of submerged rock, at a total cost of about \$710,000. The jetties were completed in 1895 and resulted in securing the contemplated depth of 17 feet at ordinary high tide. The commerce of Yaquina Bay has never been large, and as a result of an examination made in 1903 work at this harbor was shortly afterwards abandoned. The outer ends of both jetties have been beaten down and submerged for several hundred feet in length at low water, and there are at present two channels across the bar with extensive shoal middle ground between. Reports state that the controlling depth in the two bar channels during the past year did not exceed 8 or 9 feet at mean low tide. The range of tide at Newport, near the entrance, is 7.1 feet and at Toledo, 12 miles above Newport, about 6 feet. The work of restoring the jetties would require new wharves, new trestlework, and a new plant, and would therefore be expensive.

2. With reference to the question of cooperation, the district officer states that the citizens of Toledo have formed a port district and raised by the sale of bonds the sum of \$50,000 for the purpose of improving the channel of Yaquina River up to Toledo. Work has been carried on by that district, but it does not extend down to the harbor entrance. There has also been established the port of Newport, covering the territory adjacent to the bay proper. This district, however, is neither large nor wealthy, and it would be unable to raise any very considerable sum. The district officer states that no favorable reply has been received from anyone in response to inquiries as to the amount the interested locality would be willing to furnish in cooperation with the Government in the further improvement of the harbor. There are no towns of importance and but a few small ones in this vicinity, and the adjacent country is sparsely settled.

3. With reference to the improvement desired, it is stated that some would like to see the existing jetties restored and extended with a view to an increased depth across the bar and a more permanent channel. Others request only a survey to determine present conditions. The district officer states that the present commerce of Yaquina Bay is not large, that there are no large industries established on the bay, and that the cost of restoring the jetties to their original condition or any other further improvement of the bar entrance would be very great as compared with the amount of commerce that would be benefited thereby. He is therefore of opinion, in which the division engineer concurs, that Yaquina Bay and bar entrance are not worthy of further improvement by the General Government at the present time.

4. Interested parties were advised of the unfavorable report of the district officer and given an opportunity of submitting their

views to the board, but no communications on this subject have been received.

5. It will be seen from the history of this harbor that while there has been a considerable expenditure of public funds, resulting, for a time at least, in very fair harbor conditions, the commerce has been quite small, ranging from a few hundred tons to about 40,000 tons, that there have been no commercial industries of importance established, and that there is no prospect of any material increase in commerce in the near future. In view of these conditions, coupled with the fact that there is no offer of cooperation, the board concurs with the district officer and the division engineer and reports that in its opinion it is not advisable for the United States to undertake any further improvement of Yaquina Bay and bar entrance at the present time.

6. In compliance with law, the board reports that there are no questions of terminal facilities, water power, or other related subjects which could be coordinated with the suggested improvement in such manner as to render the work advisable in the interests of commerce and navigation.

For the board:

WM. T. ROSSELL,  
*Colonel, Corps of Engineers,  
Senior Member of the Board.*

#### PRELIMINARY EXAMINATION OF YAQUINA BAY AND BAR ENTRANCE, OREGON.

PORTLAND, OREG., November 12, 1912.

From: Capt. H. H. Robert, Corps of Engineers.

To: The Chief of Engineers, United States Army

(Through the Division Engineer, Northern Pacific Division).

Subject: Report on examination of Yaquina Bay and bar entrance, Oregon.

1. In compliance with instructions contained in department letter dated August 3, 1912, the following report of a preliminary examination of Yaquina Bay and bar entrance, Oregon, including consideration of any proposition for cooperation on the part of local interests as provided for in act of July 25, 1912, is submitted:

2. Yaquina Bay is a tidal estuary on the Oregon coast about 110 miles south of the mouth of the Columbia River. The bay proper is 3½ miles long and somewhat over a mile wide. The Yaquina River, a small stream rising in the coast mountains and flowing in a general westerly direction for about 30 miles, empties into its upper eastern end. The tidal area of the bay, including that of the Yaquina River up to Elk City, 20 miles from the entrance, is about 5 square miles. The mean range of tide at Newport, near the entrance, is 7.1 feet, the extreme range varying from 5 to 11 feet. There is a mean discharge, mainly tidal, of 40,000 cubic feet per second. The entrance to the bay from sea is between a low sandy spit on the south and a headland of soft sandstone, covered with loose sand, on the north. The bar itself is composed of fine sand overlying flat rocky reefs, to an uncertain depth, with projections here and there to or above the general covering of sand. At a dis-

tance of about 1 mile offshore is located a broken reef of rock, which parallels the coast. At several points the depth on this reef does not exceed 8 feet at low tide. It contains many gaps, with depth of several fathoms of water, one of which opposite the entrance provides a safe approach for vessels.

3. Between the outer edge of the bar and this outer reef, the distance is about a quarter of a mile, with depths of from 4 to 6 fathoms. The outer reef has a material effect on the entrance by sheltering it to some extent from the heavy storm seas that usually come from the west and southwest. Although the reef has been in a measure an assistance to works of bar improvement, and is still a protection to the entrance channel obtained, its presence would, no doubt, as stated in previous reports, complicate further improvement by any considerable extension of the jetties seaward.

4. Originally before improvement there were 3 shifting channels across the bar with a controlling depth of about 7 feet at mean lower low tide, and the maximum draft that could safely be carried across the ocean bar at high tide was only about 8 or 9 feet. Vessels that were able to cross the bar could proceed up the bay and river without difficulty at high tide, for a distance of 12 miles. After the jetties at the entrance were completed in 1895, the least depth in the bar channel was about 12 feet at mean lower low tide, and vessels drawing as much as 15 feet could and did cross the bar for a time. The steel steamer *Francis Leggett* of 1,606 tons gross, took out a load of about 1,000,000 feet b. m. of lumber in June, 1907, on a 16.6-foot draft.

5. The ship channel in the bay and river for a distance of about 4 miles from the gorge varies in width from 150 feet to 700 feet with a least depth of 18 feet at mean lower low tide. In the deepest portions it slightly exceeds 5 fathoms. The anchorage area over 18 feet in depth has an area of about one-third square mile.

6. There are but two towns in the locality. Newport, near the entrance, with practically no manufacturing industries, and chiefly of importance as a summer resort with a permanent population of 1,400, which is temporarily increased during the summer to about 4,000, and Toledo, the county seat of Lincoln County, situated on Depot Slough near its junction with the Yaquina River, 12 miles above Newport, with a population of 600. At this place there are two sawmills (with a combined capacity of 125,000 feet b. m. per day), and a small creamery. There is a small settlement of about 100 people at Yaquina, the terminus of the Corvallis & Eastern Railroad, about 3 miles east of Newport, and also a smaller one at Oysterville, a short distance above, near which place is located a salmon cannery. At Elk City, a short distance below the head of tide on the Yaquina River, is another small sawmill with a daily capacity of 12,000 feet b. m. Elk City is a small village of something over 150 people.

7. The country surrounding and tributary to Yaquina Bay is sparsely settled. Most of the timber on the Yaquina watershed was destroyed by fire many years ago. The country is rough and hilly; the bottoms along the river and streams although not extensive are very fertile and produce hay, vegetables, fruit, and dairy products.

8. The commercial importance of Yaquina Bay is due to the fact that it is the sea terminal of a railroad 142 miles long running from

near the summit of the Cascade Mountains through the towns of Albany and Corvallis, which are in the fertile and productive Willamette Valley, and are on the main lines of the Southern Pacific Railway.

9. The following is a list of previous examinations of Yaquina Bay and reference to the documents in which the reports thereon may be found:

Section covered.	Congressional documents.				Annual reports of Chief of Engineers.	
	House or Senate.	No.	Congress.	Session.	Year.	Page.
Entrance <sup>1</sup> .....	Senate	148	46	2	1880	.....
Do. <sup>1</sup> .....	..do..	47	51	1	1890	.....
Do. <sup>1</sup> .....	..do..	30	52	1	1892	.....
Do. <sup>1</sup> .....	House.	96	52	2	1893	3314
Do. <sup>1</sup> .....	..do..	227	53	3	1895	3450
Do. <sup>1</sup> .....	..do..	68	54	1	1896	3284
Do. <sup>1</sup> .....	..do..	110	56	1	1900	4293
Do. <sup>1</sup> .....	..do..	158	58	2	1904	3449

<sup>1</sup> Contains maps.

\* Contains no maps.

10. Yaquina River has been examined in the following years: In 1896, 1902, 1909, and 1911, and the reports thereon will be found in House Document No. 112, Fifty-fifth Congress, second session, and House Document No. 240, Fifty-eighth Congress, second session; House Document No. 351, Sixty-first Congress, second session; House Document No. 519, Sixty-second Congress, second session.

11. The original project for the improvement of the entrance to Yaquina Bay was approved by the Secretary of War June 14, 1891, and provided a plan for expending the appropriation of \$40,000 made by act of June 14, 1880, previous to the regular survey of the department. This plan contemplated the building of a short south jetty to secure 17 feet at ordinary high tide. Active work was commenced in the spring of 1881. The project was modified in 1888, to provide for a north jetty in addition to the original south jetty. Examinations were made in 1892 and 1894, with a view to ascertaining the worthiness of modifying or extending the existing project to secure an increased depth. Two converging high-tide rubblestone jetties, the south 3,748 feet long and the north 2,800 feet long, with outer ends 1,000 feet apart, were finally completed in 1895, at a cost of \$685,000. The construction of these jetties resulted in securing the contemplated depth of 17 feet, at ordinary high tide, and for limited periods as much as 2 or 3 feet more. The sundry civil act of March 2, 1895, authorized an examination of Yaquina Bay, by a board of Engineer officers, with a view to a project for deeper water. This board in its report proposed a project to extend the two existing jetties and remove some detached rocks in the entrance, at an estimated cost of \$1,025,800. The act of June 3, 1896, appropriated \$25,000 and provided that a contract or contracts might be entered into by the Secretary of War for such materials and work as might be necessary to complete the work recommended by the board of Engineer officers, October 11, 1895, to be paid for as appropriations

might be made by law not to exceed \$1,000,000. In 1899, a board of Engineer officers made an examination with a view to ascertaining the desirability of prosecuting the work authorized by the act of June 3, 1896. The board's opinion was that the commerce of the bay did not render it advisable to prosecute the work as authorized by the river and harbor act of 1896, except as it referred to the removal of the detached rocks in the entrance.

12. These rocks which protruded from the bedrock ledge underlying the bar, were removed by hired labor, using Government plant in the summer seasons of 1900 and 1901. The total appropriations for the Yaquina Bay improvement amount to \$710,000, all of which was expended save \$1,661.04 which reverted to the Treasury. A formal examination was made in 1903 by a board of Engineer officers, which board reported that the conditions did not warrant continuing improvement at that time, and not long afterwards the work was abandoned.

13. This preliminary examination was made by Assistant Engineer J. S. Polhemus during the month of August, 1912.

At the present time the outer ends of both jetties have been beaten down and submerged for several hundred feet in length, at low water. There are at present two channels across the bar, one well to the north crossing the line of the north jetty and the other to the southwest, with an extensive shoal middle ground between. The bar was in unusually bad condition the past summer, and the controlling depth in the two bar channels as reported by vessel masters, and believed by this office to be correct, did not exceed 8 or 9 feet at mean low tide, and the maximum draft that could safely cross the bar at high tide was about 11 feet.

14. Since this examination was made, however, conditions are reported to have improved somewhat, possibly by as much as 2 feet, a condition which is quite possible in view of the nature of the entrance. The present depth in the former navigable channel, and the only channel that is marked at present, is reported as only about 4 feet at low tide, and a small vessel, the *Pilgrim*, in attempting to come in on the present marked range, was recently capsized with the loss of five lives.

The change in bar conditions seems to have been quite marked in the past year or two. There appears to have been no correspondingly marked deterioration of the jetties in this period. The work of restoration of the jetties would require new wharves, new trestlework, etc., and new plant, as the old wharves and trestlework are completely destroyed so far as any further usefulness is concerned and have practically disappeared, and the plant formerly used has been sold, destroyed, or removed to other work. The last survey of Yaquina Bay and bar entrance was made in 1899.

15. The citizens in the vicinity of Toledo formed a port district in 1910, under the Oregon State laws, and raised by the sale of bonds the sum of \$50,000 for the purpose of improving the channel of the Yaquina River to Toledo, so that those vessels that could cross the bar could pass on up to Toledo without difficulty. The port of Toledo purchased a parcel of land for a public wharf, built two pile and brush dikes and built a bucket dredge at a cost of about \$16,000, and to this date has expended about \$15,000 in dredging the shoals in the river and at the mouth of Depot Slough, so that the controlling low-water

depth from the entrance to Toledo, in a somewhat narrow channel, is not less than 6 feet at mean low tide. A project to complete this improvement with a view to obtaining 10 feet at mean lower low water for this section, in cooperation with the interested locality, has been recommended by the Board of Engineers for Rivers and Harbors, but not yet approved by Congress. (See H. Doc. No. 519, 62d Cong. 2d sess.) It is expected upon its completion the mills at Toledo will be able to ship lumber coastwise.

16. The Yaquina River is a small stream which takes its rise in the Coast Range of mountains about 30 miles in a direct line from the Pacific Ocean. Twenty-one miles from its mouth, at the settlement of Elk City, it is joined by its principal tributary Big Elk. The fresh water flow of both of these streams is inconsiderable. The tidal influence extends about 5 miles above Elk City on the main stream and 3 or 4 miles up Big Elk Creek, which is as far as these streams are navigable, and then only for skiffs and small light draft scows. Above these points there is no present navigation and no possibility of future navigation on either stream.

17. At Elk City the river is about 160 feet wide; from that point to the mouth of Depot Slough, a distance of 9 miles, it gradually widens to about 800 feet. The controlling depth throughout this part of the river is about 3 feet at mean low tide, although many long stretches have depths of from 5 to 10 feet, and even more at the same stage. There is a silt shoal or bar in the river about 1 mile above the mouth of Depot Slough on which the ruling depth is 3 feet at mean low tide. Rocky Bar,  $1\frac{1}{2}$  miles below Elk City, caused by a bowlder slide, is also an obstruction, but can be passed by hugging the north bank. There are many snags in the river between Elk City and the head of tide on the river and on Big Elk Creek.

18. A mud bar originally blocked the mouth of Depot Slough leading to Toledo, on which the depth was but 2 feet at low tide, before a channel was dredged through it by the port of Toledo.

Depot Slough is navigable for small scows and skiffs for about two miles above Toledo. The average range of tide at Elk City is about  $5\frac{1}{2}$  feet and at Toledo about 6 feet. Freshets occasionally occur in the winter of variable heights, probably not exceeding 15 feet above the height of ordinary water, and of short duration, but they do not materially affect navigation. From the mouth of Depot Slough downstream to Oysterville, a distance of 6 miles, the river varies in width from 800 to 1,000 feet except at the first bend below Depot Slough where it is but 400 feet wide. The channel depths throughout this distance originally varied from 4 to 20 feet at low tide, but as previously stated has now been increased to about 6 feet. Between Oysterville and Yaquina, at the head of the bay, a distance of  $2\frac{1}{2}$  miles, the ruling depth at mean lower low tide is about 12 feet. The remaining 3 miles to Newport near the entrance has a controlling low-water depth of 17 or 18 feet. The banks of the Yaquina River between Yaquina and the head of tide are alluvial except where the rocky hills come down to the river. They are, however, fairly stable. The bottom of the river between the above points is composed of mud, silt, and sand with some bowlders, a short distance below Elk City.

19. The bottom lands of the valley of the Yaquina River, although not very wide, are fertile and produce dairy products, hay, vegetables, live stock, etc. The Corvallis & Eastern Railroad parallels the river



throughout its entire navigable length, but nevertheless the river is used extensively by the residents along its banks, at all seasons, about equally, to transport their products to market and to bring back supplies. The small sawmill at Elk City ships most of its lumber to local points by the river.

## COMMERCIAL STATISTICS.

20. Commercial statistics on Yaquina Bay have not been collected since 1902. The following is a comparative statement of the commerce of the port for the years 1882 to 1902:

Year.	Com- merce.	Depth mean high water.	Year.	Com- merce.	Depth mean high water.
	<i>Tons.</i>			<i>Tons.</i>	
1882.....	1,830	14-17	1893.....	24,767	21
1883.....	1,359	17	1894.....	23,345	19-21
1884.....	4,995	19	1895.....	24,589	19-22
1885.....	9,951	18	1896.....	17,883	22
1886.....	6,249	20	1897.....	15,364	.....
1887.....	24,094	18	1898.....	10,380	22
1888.....	23,431	21	1899.....	5,990	19
1889.....	32,921	18-19	1900.....	691	18
1890.....	40,074	18-19	1901.....	576	17-19
1891.....	27,540	18	1902.....	1,152	18-19
1892.....	27,111	17-22			

21. At the time of the adoption of the original project a railroad was commenced between Yaquina, a point on the bay, and the Willamette Valley, crossing the main line of the Southern Pacific Railroad at Albany. This railroad, now the Corvallis & Eastern Railway, was finished in 1888, and considerable freight was shipped from valley points to Yaquina Bay and thence to San Francisco by steamer. The railroad went into bankruptcy, the steamers were taken off the run, and the road finally passed into the control of the Southern Pacific. The only ocean commerce since has been that furnished by a few small coasters operating in competition with the railroad.

22. For a time the ocean commerce declined to almost nothing, but lately has been increasing. During the past fiscal year from July 1, 1911, to June 30, 1912, the following small vessels called at the bay, making 234 arrivals and departures, viz:

The gasoline schooner *Anvil*, of 362 tons; the gasoline schooner *Patsy*, of 150 tons; the gasoline schooner *Tillamook*, of 281 tons; the gasoline schooner *Wilhelmina*, of 100 tons; the gasoline schooner *Gerald*, of 30 tons; the gasoline sloop *Nenamosha*, of 8 tons; the gasoline sloop *Condon*, of 42 tons; the steam tug *L. Roscoe*, of 117 tons.

These vessels carried in and out over the bar during the year ending June 30, 1912, as shown by the records of the collector of customs at Yaquina, 10,065 tons of freight, of which 8,931 were feed, flour, implements, and general merchandise and cannery supplies, etc., 970 tons lumber, and 164 tons shingles. It is not known how much of this freight was left at Yaquina Bay points, but it is estimated that 3,000 tons remained on the bay. The *Ahwaneda*, a gasoline schooner of about 50 tons, built at Toledo, August, 1912, has a contract with the merchants to carry freight from Portland to bay points for \$7 per ton, which is a considerable saving over rail freight.

23. Several tons of halibut were caught last summer on a bank about 16 miles southwest from Yaquina entrance, and a cold-storage plant is to be erected at Newport to handle the catch commercially on a larger scale in the future.

24. In the valley of the Siletz River, from 10 to 20 miles north of the Yaquina River, is said to be a very large body of unusually fine yellow fir and spruce timber, estimated at 8,000,000,000 feet b. m., much of which it is expected will find an outlet by way of a short railroad with easy grade down Depot Slough to the Yaquina River.

#### DESIRES OF LOCAL INTERESTS.

25. Some of those interested in Yaquina Bay as a shipping point would like to see the existing jetties restored and extended, with a view of securing an increased depth across the bar and a more permanent channel. Others, including the Port Commission of Newport, request only a survey at present to determine exactly the existing conditions and the cost of improving same. Others request only an authentic survey for the information of the public, claiming that since no survey has been made since 1899, the circulation of reports of less depth than actually exists at the entrance has hindered the development of commerce and retarded the establishment of industries, such as sawmills, in the locality, and that a Government publication of the existing conditions is necessary to remove this obstacle to development. It may be stated that such a survey as is requisite for the above-mentioned purpose could be made during favorable season for not to exceed \$1,500, and that it would be of some benefit to commerce of the locality in view of the material changes in the hydrography at the entrance that have occurred since last survey was made.

26. There are already two port commissions in the locality organized under the State laws. The port of Newport for the territory adjacent to the bay proper has neither a large or wealthy district, and would be unable to raise any very considerable sum toward cooperation. This port proposes soon to build a public dock at Newport. The port of Toledo has already raised \$50,000 by the sale of bonds, which it has nearly expended in the improvement of the channel to Toledo, and the citizens are not in a position to increase their taxation to any great extent for harbor-improvement purposes. No favorable reply has been received from anyone in response to inquiries as to the amount the interested locality would be willing to furnish in cooperation with the Government in further improving the harbor, although all those known to be interested were written to on the subject.

#### TERMINAL FACILITIES, ETC.

27. The port of Newport has been given a deed to a piece of land in front of block 6, Newport, between Front Street and the harbor line, with a deep water frontage of 300 feet, on which it proposes to construct a public wharf with a frontage of 140 feet in the near future. The city of Newport claims it was granted all the tide land in front of the town by the State legislature in 1885. It has disposed of some of it by sale or lease, including the above-mentioned piece, to the port. It owns yet 1,500 feet of water front, probably one-third of which may have been leased to private parties. However, the railroad from the

bay to Corvallis, then called the Willamette Valley Coast, was granted a subsidy by the State in 1874 of all the tide lands in Benton (now Lincoln County), subject to certain conditions, as an inducement to construct a road. This grant was renewed in 1878 and again in 1885, at which time all breaches of condition to that date were waived, but the tide land in front of Newport was excepted and granted to that town. The matter found its way into the courts, and in 1912 the supreme court of the State decided that the title to the tide lands passed to the railroad by the act of 1874, when it filed the necessary acceptance, the conditions being held to be subsequent. The matter of their fulfillment may yet be in dispute, but it is believed, however, that the city of Newport holds a good title to its tide land. The Corvallis & Eastern Railway holds a strong title to nearly all the remaining tide land and water frontage on the bay. At Newport there are a number of small private wharves and landings between Bay Street and Hurburt Street in front of the town.

28. The town of Toledo has a small municipal wharf with 100 feet frontage on Depot Slough not connected with the railroad tracks. The port of Toledo owns a frontage of about 600 feet on Depot Slough in front of Toledo, where it has already erected a public wharf 205 feet long on the channel. The tracks of the Corvallis & Eastern Railway run close to this wharf, but a spur has not been extended to it. There are a few small unimportant private wharves at Toledo. It is possible the railroad company may claim the tide land on which all these wharves are situated.

29. The Corvallis & Eastern Railway owns a wharf 350 feet long at Yaquina, its terminus on the bay, along the face of which its tracks run so that freight can be readily transferred between vessels and cars. A commodious warehouse is built on the wharf alongside the tracks. The railroad controls this property in its own interests. There are no mechanical facilities for handling freight at any of the wharves in the localities named in this region.

30. There is no valuable water power available on Yaquina Bay, it being tidal.

#### CONCLUSIONS.

31. The present commerce of Yaquina Bay is not large. There are no large industries established on the bay. It is not believed the prospective commerce will be of great importance until the movement of the large body of timber in the Siletz Valley, by way of Yaquina Bay, commences to take place.

32. The cost of restoring the jetties to their original condition or of any other further improvement of the bar entrance would be very great as compared with the amount of commerce that would be benefited thereby.

33. The interested localities are not prepared to contribute any money to the further improvement of the bar in cooperation with the General Government at present.

34. It is believed that the present depth on the bar is sufficient for the present needs of commerce and that the marketing of the timber mentioned in paragraphs 24 and 31 of this report will furnish the principal demand for and utilization of any future increased depth of Yaquina Bay and Bar entrance. There is no sufficient indication that such considerable demand will occur in the immediate future.

35. It is my opinion that Yaquina Bay and Bar entrance are not worthy of further improvement by the General Government at the present time.

HENRY H. ROBERT,  
*Captain, Corps of Engineers.*

(Through the Division Engineer, Northern Pacific Division.)

[First indorsement.]

UNITED STATES ENGINEER OFFICE,  
NORTHERN PACIFIC DIVISION,  
*San Francisco, Cal., November 14, 1912.*

The CHIEF OF ENGINEERS, UNITED STATES ARMY:

Concurring in the views expressed by the district officer.

THOS. H. REES,  
*Lieut. Col., Corps of Engineers,*  
*Division Engineer.*

[For report of the Board of Engineers for Rivers and Harbors,  
see p. 3.]

