

POCOMOKE RIVER, MD.

LETTER

FROM

THE SECRETARY OF WAR,

TRANSMITTING,

WITH A LETTER FROM THE CHIEF OF ENGINEERS, REPORTS ON
PRELIMINARY EXAMINATION AND SURVEY OF POCOMOKE
RIVER, MD.

MAY 24, 1916.—Referred to the Committee on Rivers and Harbors and ordered
to be printed, with illustration.

WAR DEPARTMENT,
Washington, May 23, 1916.

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 22d instant, together with copies of reports from Col. L. H. Beach, Corps of Engineers, dated June 20, 1913, and February 6, 1915, with map, on preliminary examination and survey, respectively, of Pocomoke River, Md., made by him in compliance with the provisions of the river and harbor act approved July 25, 1912; also supplemental reports of survey by Col. John Biddle, Corps of Engineers, dated February 28, 1916, and April 7, 1916.

Very respectfully,

NEWTON D. BAKER,
Secretary of War.

WAR DEPARTMENT,
OFFICE OF THE CHIEF OF ENGINEERS,
Washington, May 22, 1916.

From: The Chief of Engineers, United States Army.

To: The Secretary of War.

Subject: Preliminary examination and survey of Pocomoke River, Md.

1. There are submitted herewith for transmission to Congress reports dated June 20, 1913, and February 6, 1915, with map, by Col. L. H. Beach, Corps of Engineers, on preliminary examination and

wide across "The Muds," making the cost \$71,500 and \$15,000 annually for maintenance. He also submits an estimate for a channel 7 feet deep and 100 feet wide through the shoal just inside the mouth, the amount being \$4,400 for first construction and \$300 a year for maintenance. The district officer recommends only the work inside the mouth in accordance with this new estimate.

8. From the information now available, it appears that the present project depth of 9 feet in the upper river is ample for any boats that now use the river or are likely to do so in the near future. This depth is now available except across "The Muds," and for a short distance just inside the mouth. Owing to the very soft composition of "The Muds," it is considered impracticable to secure any material increase in their depth at a cost at all commensurate with probable resulting benefits. The improvement now proposed by the district officer across the shoal just inside the mouth could, however, be effected at moderate cost, and owing to the hard material through which the cut would be made, the subsequent cost of maintenance should be small. The increased depth of 7 feet would be sufficient to accommodate any vessel that could be brought through the soft "Muds," and this would be advantageous to existing and prospective commerce. In view of the foregoing, the board reports in concurrence with the views of the present district officer, that it is advisable for the United States to undertake the further improvement of the Pocomoke River to the extent of providing a channel 7 feet deep at mean low water and 100 feet wide through the shoal near the mouth of the river between Williams Point and Shelltown, at an estimated cost of \$4,400 and about \$300 a year for maintenance. The total amount for original work, \$4,400, should be made available in one appropriation.

9. In compliance with law, the board reports that there are no questions of terminal facilities, water power, or other subjects so related to the project proposed that they may be coordinated therewith to lessen the cost and compensate the Government for expenditures made in the interests of navigation.

For the board:

FREDERIC V. ABBOT,
*Colonel, Corps of Engineers,
Senior Member of the Board.*

PRELIMINARY EXAMINATION OF POCOMOKE RIVER, MD.

UNITED STATES ENGINEER OFFICE,
Baltimore, Md., June 20, 1913.

From: The District Engineer Officer.

To: The Chief of Engineers, United States Army.

(Through the Division Engineer.)

Subject: Preliminary examination of Pocomoke River, Md.

1. In compliance with department letter of August 3, 1912, the following report is submitted on the preliminary examination of Pocomoke River, Md., as provided for in the river and harbor act of July 25, 1912.

2. Pocomoke River rises in Great Cypress Swamp, a section of country over 100 miles in extent, partly in southern Delaware and partly in Maryland. It flows thence south and then in a south-westerly direction for a distance of about 55 miles, entering the northeast corner of Pocomoke Sound. The tide ebbs and flows to a distance of about 33 miles above the mouth. The area of this drainage basin is about 170 square miles. In southern Delaware and Maryland vast tracts of black alluvial soil are drained by ditches into the unreclaimed portion of the swamp and thence into Pocomoke River. The freshets in the river are not extreme, rising only from 1 to 5 feet, but each rise carries with it a considerable portion of fine mud, which is deposited at various points along the course until it ultimately reaches Pocomoke Sound. Here it is deposited over an area about 3 miles long and about 2 miles wide, locally termed "The Muds." This deposit has accumulated until it is now reported to be more than 20 feet in thickness, having a nearly uniform depth of between 4 and 5 feet of water over it at mean low tide. The rise and fall of the tide at the mouth of the river is about $2\frac{1}{2}$ feet. (See Report of the Chief of Engineers, U. S. Army, 1879, Part 1, p. 507.)

3. This river has been navigable by the class of vessels handling its commerce to the fixed county bridge at Snow Hill, about 26 miles from its mouth: beyond this there is a fair channel of 7 feet depth for about $2\frac{1}{2}$ miles; thence it is crooked and navigable only by the smallest boats. It has been under improvement by the General Government since 1878, when the original project for a channel 7 feet deep at mean low water by varying widths between Snow Hill and Shad Landing was adopted. The existing project is for a channel 9 feet deep and from 100 to 130 feet wide from Shad Landing, Md., to Snow Hill, a distance of about $4\frac{1}{2}$ miles. There is another Shad Landing on the lower river in Virginia. This project was completed about 1904 and has been maintained to project dimensions. There has been expended to date for completion of projects and maintenance \$42,181.80. Of this amount \$20,500 was expended on the original project, and the balance, \$21,681.80, on the existing one. Propositions have been considered for connecting this river with Indian River, Del., and with Sinepuxent Bay, and for extending the existing project to Gumboro, Del. (Annual Report of the Chief of Engineers, U. S. Army, 1895, p. 1154; 1895, p. 1167; and H. Doc. No. 344, 61st Cong., 2d sess.)

4. The area contributing commerce to this river includes half of Worcester and Somerset Counties, Md., and a small part of Accomac County, Va. There are numerous landings and small villages along its banks. The two principal places are the towns of Pocomoke City and Snow Hill, Md. The first of these is located on the south side of the river, about 13 miles above its mouth, and is a station on the New York, Philadelphia & Norfolk Railroad. The second is on the same side, about 25 miles from the mouth, and is a station on the Philadelphia, Baltimore & Washington Railroad. The principal business is done at these two localities, where are located numerous stores of various kinds, several hotels, one basket, barrel, and crate factory, one brickyard, three building-material supply houses, one foundry and machine works, one lumber company dealing in mine timber, one marine railway and shipyard, one lumber mill, one ice

plant, two coal yards, one public water-supply system, two produce exchanges, and one carriage factory. The aggregate population of the area contributing commerce to this river is about 15,000.

5. The amount of ingoing and outcoming freight handled on this river in 1912 was as follows:

	Tons.	Value.		Tons.	Value.
Agricultural products.....	9,665	\$386,581.00	Gum logs.....	2,200	7,200.00
Baskets, truck, empty.....	350	13,250.00	Lumber.....	23,747	317,220.00
Berries.....	3	300.00	Lime.....	80	720.00
Bricks.....	175	560.00	Oysters, shucked.....	35	5,600.00
Building materials.....	100	6,500.00	Oil, coal.....	9	405.00
Canned goods.....	15,412	1,233,012.00	Oil, gasoline.....	6	262.50
Coal, anthracite.....	2,988	16,008.00	Poultry and live stock.....	354	70,674.00
Coal, bituminous.....	1,215	4,340.00	Potatoes, all kinds.....	450	7,500.00
Crates, berry, empty.....	300	10,000.00	Shingles.....	190	3,250.00
Cement.....	195	2,000.00	Timber.....	300	3,600.00
Fertilizers.....	1,100	22,000.00			
General merchandise.....	32,901	3,290,098.00		91,775	5,401,080.50

This was carried in three steamboats of an aggregate net registered tonnage of 2,228, 95 sailing vessels of an aggregate net tonnage of 5,300, and 10 launches of an aggregate net tonnage of 50; there are also 3 tugs, with an aggregate tonnage of 150, and 30 small pleasure and fishing vessels using the stream. Two thousand seven hundred and ninety-three passengers were carried during the year.

6. The steamboats of the Baltimore, Chesapeake & Atlantic Railway Co. make four trips a week in each direction between Baltimore and Pocomoke City, each alternate trip extending to Snow Hill. There are eight wharves at Pocomoke City, four at Snow Hill, and seven others at points along the river. Two of them have cranes, and most all have storehouses on them. About half the number is public and open to all on equal terms; the other half is private and used exclusively by the respective owners. They are sufficient to accommodate the commerce.

7. There are two drawbridges across the stream, one (that of the New York, Philadelphia & Norfolk Railroad) is at about the lower limit of Pocomoke City, and the other (that of the county) at the upper limit. Both have draws of sufficient opening for present traffic.

8. This preliminary examination is the result of a request by the Baltimore, Chesapeake & Atlantic Railway Co., whose boats find a constantly increasing difficulty in entering and in navigating the upper reaches of the river. The officials of that company state that the channel depth of the present project is sufficient, although they would prefer a width of 200 feet. The approved project does not, however, authorize any work at the mouth of the river, and they greatly desire that such work be done as will render navigation from the sound into the river reasonably free and unobstructed. Others interested in the improvement of Pocomoke River have requested a channel 12 feet deep at mean low water by 300 feet wide from the 12-foot contour in Pocomoke Sound, which would involve formation of a channel about 9 miles in length. Still others desire a depth of 10 feet with a width of 200 feet from the mouth to Pocomoke City, and that the present 9-foot channel be widened to 200 feet between Pocomoke City and Snow Hill. It is generally admitted that any improvement

of the stream would not materially affect freight rates, and would probably increase the amount of commerce only from 6 to 10 per cent a year. Those desiring the larger channel state that the establishment of such a channel would enable the shipyard formerly at Pocomoke City to resume business. Many fishing boats of as much as 12 feet draft were formerly built and repaired here, but this business has disappeared on account of the shoaling at the mouth, which compelled them to go elsewhere.

9. Owing to the liquid consistency of the mud and the consequent greater density of the water, steamboats drawing 7 feet have, until recently, been able to cross "The Muds" at mean low water. At least 85 per cent of the commerce of the river is carried in these boats. The other 15 per cent is carried in launches, barges, and sailing vessels, some of the last of which may draw as much as 10 feet and can get in only on high tide. From inside the mouth of the river to Shad Landing, Md., there is a least depth of not less than 13 feet at mean low water, with varying widths, believed to be generally 100 feet or more. It is reported, however, that some of the points have built out in the upper river, rendering navigation past them rather difficult. From Shad Landing, Md., to Snow Hill the project widths of 100 to 130 feet are probably still sufficient. The mud flats are undoubtedly a most serious obstruction to the navigation of the river to the full extent of its interior capacity and a barrier to the development of increased commerce. It is believed that the extension of the present project throughout the entire length of the stream and to its mouth will be sufficient to accommodate the commerce and it is not regarded as necessary or advisable to increase either present project depth or width. The best manner of making a channel across "The Muds" and the cost involved are questions which can be determined only by information developed by a survey. It is, therefore, recommended that a survey be made of the river and its mouth, or at least of those localities where obstructions to navigation exist.

10. There are no questions of water-power development or land reclamation that could be considered in conjunction with an improvement of this waterway.

11. A sketch map¹ of the locality, taken from a post route map, accompanies this report.

LANSING H. BEACH,
Colonel, Corps of Engineers.

[First indorsement.]

OFFICE OF DIVISION ENGINEER, EASTERN DIVISION,
New York City, June 27, 1913.

To the CHIEF OF ENGINEERS, UNITED STATES ARMY:

Forwarded, concurring in the views and recommendation of the district engineer officer.

W. M. BLACK,
Colonel, Corps of Engineers.

¹ Not printed.

[Third indorsement.]

BOARD OF ENGINEERS FOR RIVERS AND HARBORS.
July 16, 1913.

To the CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. For reasons stated herein, the board concurs with the district officer and the division engineer in recommending a survey in order to determine the extent and advisability of the improvement.

For the board:

W. M. BLACK,
Colonel, Corps of Engineers,
Senior Member of the Board.

SURVEY OF POCOMOKE RIVER, MD.

UNITED STATES ENGINEER OFFICE,
Baltimore, Md., February 6, 1915.

From: The District Engineer Officer.

To: The Chief of Engineers, United States Army
(Through the Division Engineer).

Subject: Survey of Pocomoke River, Md.

1. In compliance with department letter of July 24, 1913, the following report is submitted on the survey of Pocomoke River, Md.

2. The fieldwork was performed in April, May, and June, 1914, and the results are shown on the accompanying maps.¹ The portion of Pocomoke Sound, known as "The Muds," was surveyed by triangulation. The river itself was surveyed by traverse line, 32 miles long, run from the triangulation system at the mouth to Snow Hill, Md. Soundings were made and cross sections taken at each station on the river. The survey of "The Muds" was carefully made, and every effort made to ascertain the character of the material involved, and the rate of change, if possible. Observations were made upon the direction and velocity of the tides; samples of water were taken at different depths and at various stages, and also at different directions of the tide, and it was found that while the water has a muddy appearance, no sample was secured from which a greater deposit than one-third of 1 per cent of solid matter was obtained, even after the sample had been allowed to stand for a week. The character of the material was taken at the points marked on the map by pushing a gas pipe down through the mud by the weight of from one to three men, and driving same into the harder material when encountered by means of a maul. The depth at which the hard material was encountered was invariably greater than that of the channels desired by parties interested in the improvement. On this account the work of ascertaining the character of the material was not carried further than to determine the thickness of the soft mud, and to make sure that the hard material encountered was not a thin layer but had sufficient thickness to be the hard bottom. These tests showed that the soft mud was in no case less than 16 feet thick. This depth

¹ Only one map printed.

was encountered near the upper end of Pocomoke Sound, as the mouth of the river was approached. One boring showed 18 feet, while another showed 30 feet of mud. In other cases no bottom was found to the soft mud at depths of 32 and 38 feet. A comparison of the data of the survey of "The Muds" with Coast Survey charts back as far as 1863 shows no material difference in the depths across the flats in the past 50 years. This would indicate that there must be some other cause than change in Pocomoke Sound for the falling off of business of building and repairing fishing and other boats mentioned in paragraph 8 of the preliminary examination report.

3. The steamers used by the Baltimore, Chesapeake & Atlantic Railway Co. in navigating the Pocomoke River have a draft loaded of 6½ feet, and it is understood that these steamers are usually able to enter and leave the river at all stages of tide. The company states that it is not advisable to use a greater draft than 7 feet, as the boats would have difficulty in forcing their way through the mud with a greater draft than this, and might have to wait for high tide. The steamers used at present are side-wheel steamers, and it is understood that vessels of this type have been usually used on this run. A side-wheel steamer tears down the banks and is less likely to preserve the channel already made, or to gradually create a channel, than steamers with propellers, although it is doubtful if any channel could be formed by steamers in the soft mud of the flats which would retain its depth, however slight.

4. Jetties have not been considered, for their construction in this soft material is regarded as impossible on account of the excessive cost which would be involved. Estimates for dredging channels of the various dimensions desired and doing other work requested have been made and are as follows:

To increase the present project channel of 9 feet deep and 100 feet wide from Shad Landing, Md., to Snow Hill, to a width of 200 feet:		
314,000 cubic yards, scow measurement, at 25 cents		\$78,500
Engineering, superintendence, and contingencies, about 10 per cent		8,000
		<u>\$86,500</u>
Channel 12 feet deep at mean low water and 300 feet wide from Pocomoke Sound to Pocomoke City:		
Williams Point to Pocomoke City—		
3,160,000 cubic yards, scow measurement, at 20 cents		632,000
Engineering, superintendence, and contingencies, 10 per cent		63,200
		<u>695,200</u>
Across "The Muds"—		
2,000,000 cubic yards, place measurement, at 50 cents		1,000,000
Engineering, superintendence, and contingencies, 10 per cent		100,000
		<u>1,100,000</u>
Total		<u>1,795,200</u>

Channel 10 feet deep at mean low water and 200 feet wide from Pocomoke Sound to Pocomoke City:

Williams Point to Pocomoke City—

242,000 cubic yards, scow measurement, at 20 cents	\$48,400	
Engineering, superintendence, and contingencies, about 10 per cent	4,800	\$53,200

Across "The Muds"—

750,000 cubic yards, place measurement, at 50 cents	375,000	
Engineering, superintendence, and contingencies, 10 per cent	37,500	412,500

Total 465,700

To produce a depth of 9 feet at mean low water, with a width of 100 feet, across "The Muds":

325,000 cubic yards, place measurement, at 50 cents	162,500	
Engineering, superintendence, and contingencies, about 10 per cent	16,500	179,000

To dredge a channel of present project dimensions through the obstructive shoal near the mouth of the river between Williams Point and Shelltown:

70,000 cubic yards, scow measurement, at 20 cents	14,000	
Engineering, superintendence, and contingencies, about 10 per cent	2,000	16,000

Scow measurement is regarded as equal to 1.20 times place measurement.

The quantities stated in these estimates for the work across "The Muds" are for the yardage of the theoretical channel involved, without any allowance for overdepth. On account of the fluidity of the material on "The Muds," it is probable that the amount to be removed to create the channel will be about two and a half times that in the theoretical cross section, and for that reason the unit price has been placed at 50 cents per cubic yard. The cost of maintenance will probably be about 25 per cent annually of the cost of construction, or higher.

5. It is thought the annual maintenance of the channel between Williams Point and Shelltown will not be in excess of \$500. Since the adoption of the present project in 1896, \$7,695.55 has been expended for maintenance of the channel between Shad Landing and Snow Hill, which is less than \$430 annually.

6. It is not regarded as necessary or advisable to increase the present project width, which is one that has for a long period proved satisfactory for the class of vessels using this river. To make the channel 200 feet wide, as requested by the Baltimore, Chesapeake & Atlantic Railway Co., would involve the necessity of dredging away fast land at several narrow places in the river, which fast land is covered with trees and filled with roots and snags to such an extent that the unit cost of dredging would probably be appreciably increased, as shown in the estimate.

7. It is believed that the cost of making and maintaining an artificial channel of any depth across "The Muds" would be in excess of the benefits derived, and this part of the proposed project is, therefore, regarded as unworthy of improvement by the United States. Although a greater depth than 7 feet can not ordinarily be carried

into the river, a depth of 9 feet inside is regarded as necessary on account of the narrowness of the channel. Were the channel several hundred feet wide instead of only 100, it is probable that a less depth would be sufficient, but as a boat can not be navigated economically or advantageously in a channel that is of such small dimensions that the water can not escape readily past the hull, it is necessary to furnish such channel dimensions as will permit the boat to properly answer its helm and to proceed at a reasonable speed. If the channel were made of a less depth than 9 feet, it would be necessary to widen it proportionally, which would be a much more expensive undertaking. Furthermore, the river channel should have sufficient depth to accommodate a vessel that may have crossed "The Muds" at high tide. For these reasons it is believed that the present project of 9 feet should not only be retained but be made applicable for the river from the mouth to the head of navigation, for the channel in the river should be of equal capacity in the lower reaches to that which has already been established at the upper end. It is, therefore, recommended that the present project for a depth of 9 feet at mean low water by a width of 100 feet in straight reaches, and 130 feet at bends, be extended so as to include the river from Williams Point to Snow Hill, and that the cost be increased by \$16,000 to cover the cost of the additional dredging. This sum should be provided in one appropriation.

8. The total annual maintenance cost of the project, if extended as recommended, would probably be about \$900.

9. As stated in the preliminary examination report, there are no questions of water power, terminal facilities, or other subjects so related to the proposed improvement as to be considered in connection therewith to lessen the cost.

LANSING H. BEACH,
Colonel, Corps of Engineers.

[First indorsement.]

OFFICE OF DIVISION ENGINEER, EASTERN DIVISION,
New York City, February 10, 1915.

To the CHIEF OF ENGINEERS:

Concurring in the views and recommendations of the district engineer officer.

W. M. BLACK,
Colonel, Corps of Engineers.

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

SUPPLEMENTAL REPORT ON SURVEY OF POCOMOKE RIVER, MD.

[Second indorsement.]

UNITED STATES ENGINEER OFFICE,
Baltimore, Md., February 28, 1916.

To the CHIEF OF ENGINEERS, UNITED STATES ARMY (Through the Division Engineer).

1. Returned.

2. To comply with instructions, the then district engineer officer of this district, Col. L. H. Beach, held a hearing at Pocomoke City on

May 6, 1915. This hearing was largely attended by the business men and others of Pocomoke City and vicinity. In the hearing it was brought out that the communities on the Pocomoke River were suffering on account of the difficult navigation of that river and sound, and would be greatly benefited by improvement (report of hearing appended). The depth generally asked for was 10 feet at low water. The depth of 9 feet recommended by Col. Beach in his report of survey would, however, seem to be sufficient. It was claimed that on account of the lack of depth in the river and sound, Pocomoke City and other communities not only had to pay a higher railroad rate, but also that merchandise was brought in and taken out by boats at greater expense than would be if a good navigable depth were obtained. There can be no question but that these are facts.

3. Subsequent to the hearing, at the request of the district engineer, the Pocomoke City Board of Trade submitted a statement giving figures as to the advantages to the city of improved navigation (statement appended). Their totals sum up as follows, although they state they were obliged to omit statements from two of their largest agencies, one of which deals in coal, cement, lumber, fertilizer, building material, etc., and uses the river as much as practicable. The actual river commerce in 1914 is given as 27,177 tons; the freight paid, \$47,495.37. It is estimated that the improvement would cause an increase in tonnage of 35,925. It is computed that if the river had been in good navigable condition, the saving in freight rates of rail and river carriers would have amounted in 1914 to \$22,647.95; and the estimated actual gross benefit following improvement is estimated at \$33,527.25 a year. In the annual report of 1915 the tonnage is given as 33,772 tons. The difference between that and the figures above given might be covered by the firms which are not reported in the latter case. This tonnage shows a considerable falling off from that of the previous years, claimed to be due largely to a different method of collecting statistics. The saving in freight costs is calculated from the freight rates to other points having better navigable depth.

4. On taking charge of this office, the persons interested in the navigation of the Pocomoke Sound and Pocomoke River were again communicated with, including the manager of the boat company that plies regularly on the Pocomoke River. A delegation from Pocomoke City visited this office on January 13, 1916. It did not seem necessary to hold another hearing, as the information given at this meeting was practically the same as what was given in the hearing before the Board of Engineers for Rivers and Harbors on March 16, 1915, and before the district engineer officer in Pocomoke City, as above stated.

5. The three special points to which the Board of Engineers for Rivers and Harbors calls attention are:

(1) That the draft that can be carried through "The Muds" at all times disagrees somewhat from what is contained in the report of survey submitted February 6, 1915, by the district engineer officer.

(2) That the material to be excavated differs somewhat from that stated in the report.

(3) That another plan of improvement might be considered.

6. The statement in the report is that it is understood that steamers loaded to a draft of 6½ feet can usually go in and leave the river at all stages of the tide. The Baltimore, Chesapeake & Atlantic Rail-

way Co., which operates the main steamer line going up the river, states that the extreme draft of their steamer when loaded is 7 feet, and when light, is 5 feet, and that they are often held up several hours if loaded in passing through Pocomoke Sound at low tide; that this occurs more frequently in summer when running double trips, and when boats are more heavily loaded both ways, as a rule, than they are in winter. From the map of Pocomoke Sound, and from statements and observations, it is probable that boats loaded to 7 feet will be usually held up at low tides. The low tide depth at some places in the channel is not over about 4½ feet, and while the material is very soft, it seems certain that boats loaded to 7 feet would have difficulty in getting through. Sailing vessels or those with small power would have even more difficulty if loaded more than 5 feet. The tide is about 3 feet.

7. Nothing very definite could be ascertained as to how the material was considered different from that stated in the report on survey. The speakers alluded to places where the material was harder, but it is believed to be those points which on the map are noted as "hard," lying off North End Point. It is thought that the statements in the report as to the character of material are generally correct.

8. The proposition for a different type of improvement appears to be to cut through Williams Point at some place not very definitely stated, but generally in the vicinity of the coast survey station, as shown on the map. It was claimed that if a cut were made through this point, the action of the tide would not only keep it open but would extend deep water a considerable distance on either side.

9. An examination was made of this point, both by the former district engineer officer and myself. It consists generally of sand 2 or 3 feet above high water, interspersed with some marshland. The earliest maps of Pocomoke Sound in this office show the existence of Williams Point substantially the same as at present. The cost of cutting a channel through this point would not be excessive, estimated, for a channel 9 feet deep at low water and 100 feet wide, at about \$10,000, exclusive of the value of the land.

10. It is quite possible that the action of the tide would keep this cut open, but unless a dike be constructed connecting the south bank of the cut with the south bank of the mouth of the river this is not certain. The affect of the cut would, however, probably not extend much beyond its immediate limits. Pocomoke Sound is 1 to 2 miles in width, and any concentration of the flow at Williams Point would have effect but for a short distance.

11. The distance from this cut to deep water (9 feet) in the sound would be about the same as from Williams Point; that is, about 5 miles. It is to be noted that the present channel follows the inside of Williams Point, and that with not very much dredging, as estimated in the report on survey, a sufficient channel could be readily maintained from the river to the head of Williams Point. It is claimed that this channel along inside of Williams Point is shoaling. Maps 40 years old indicate a slight shoaling of 6 inches or so.

12. If this dredging on inside of Williams Point is done as recommended, the gain by making the cut would be simply lessening slightly the distance over "The Muds" to be traversed, and would not affect the ability of boats to cross the sound. Moreover, this new

channel would be somewhat across the currents existing at present, and therefore would have a greater tendency to fill.

13. It is believed that only by a system of training or spur dikes could depths be maintained without continued dredging. On account of the lengths of the flats to be traversed, the width of the sound, and the great depth of the soft mud, the cost of such dikes would be very great in comparison with the commerce benefited. The best way of improvement across "The Muds" would evidently be that indicated in the report of the district officer on the survey of Pocomoke River of February 6, 1915, by continuous dredging, the line of such dredging to be determined by further investigation of currents, bottom, etc.

14. While doubtless any dredged channel would fill quickly and have to be frequently redredged, yet the material flowing in would be of soft nature, and it is likely that such dredging and maintenance will assist navigation across "The Muds."

15. In accordance with second paragraph of letter of the Board of Engineers for Rivers and Harbors, the method of making the estimate is modified. Furthermore, it is thought, after further consideration, that the estimate may be materially decreased. The amount of excavation for the prism of the proposed dredging across the flats, 100 feet wide and 9 feet deep, is 325,000 cubic yards. On account of the softness of the material, it is estimated that twice this quantity will have to be dredged. The estimate is, therefore, as follows:

650,000 cubic yards of excavation, at 10 cents per cubic yard-----	\$65,000
Engineering, superintendence, and contingencies, 10 per cent-----	6,500
	<hr/> 71,500

The cost of maintenance will be heavy, but it can not well be estimated until after trial, as it can not be stated how much the channel will deteriorate. From the amount of maintenance given since 1890 to the Manokin River Bar, lying about 15 miles to the north, and where the conditions are somewhat similar, the estimated maintenance would be about \$15,000.

16. That part of Maryland lying on the eastern shore of the Chesapeake Bay should find its natural market in the city of Baltimore. This shore has a number of small rivers, which have good depths within the rivers themselves, but are obstructed by bars at the mouths. These bars have been usually dredged, and with a reasonable amount of maintenance have been kept open. While the commerce in any individual case is not large, the total aggregates a considerable amount, and the prosperity and convenience of the people living in this section of the country is largely dependent on water connection with the city of Baltimore. Regular boat lines connect Baltimore with most of these places, and besides considerable traffic is carried on by sailboats and motor boats.

17. The estimated cost of improvement is not out of proportion with that spent on other rivers in this district, and also along the Delaware and Jersey coast, and would compare favorably with the expenditures authorized on many rivers in proportion to the commerce. The total amount expended to date on the river proper since 1878 is about \$42,000, or \$900 a year.

18. If, therefore, this improvement could be considered to be of a permanent nature, it could well be recommended. In view, however,

of uncertainty of permanent results, and the probable large expenditure for maintenance, I agree with the report on survey of the district engineer officer then in charge of this office and recommend that the expenditures for Pocomoke River and Sound be limited to the river itself.

JOHN BIDDLE,
Colonel, Corps of Engineers.

SUPPLEMENTAL REPORT ON SURVEY OF POCOMOKE RIVER, MD.

[Seventh indorsement.]

UNITED STATES ENGINEER OFFICE,
Baltimore, Md., April 7, 1916.

To the CHIEF OF ENGINEERS, UNITED STATES ARMY:

1. Returned.

2. It is believed to be desirable to have the channel of Pocomoke River just inside of Williams Point, as indicated by the Board of Engineers for Rivers and Harbors in the fourth indorsement, greater than the depths on "The Muds," for the reason that the material at the bottom is hard and the channel is narrow and somewhat crooked. In the Pocomoke River proper the channel of 9 feet was recommended on account of the narrowness of the river in order to give proper steerage facilities. In the part under consideration, the river being wide, this necessity does not exist. It is therefore believed that a channel 7 feet in depth at low water would be sufficient for navigation in this locality.

3. The following estimate is therefore submitted to take the place of the estimate of \$16,000, previously submitted by this office. Excavating a channel 100 feet wide and 7 feet deep, with an allowance of 1 foot for overdepth and the necessary side slopes, would require the removal of 20,000 cubic yards. The estimate becomes, therefore—

20,000 cubic yards, at 20 cents per cubic yard-----	\$4,000
Engineering, superintendence, and contingencies, 10 per cent-----	400
	<hr/> 4,400

It is thought the annual maintenance of the channel covered by this estimate will not be in excess of \$300.

JOHN BIDDLE,
Colonel, Corps of Engineers.

LETTER OF THE POCOMOKE CITY BOARD OF TRADE.

Pocomoke City, Md., June 16, 1915.

DEAR SIR: In accordance with your very liberal invitation extended to our board of trade, by which we are permitted to supplement our general statements, arguments, and data made to you at the public hearing May 6 last, with more specific facts and figures showing the actual commerce on our river covering a period of one year, both in tonnage and the freight, in dollars on this tonnage, as well as the prospective commerce and benefits to be derived following this desired improvement, we, the Board of Trade of Pocomoke City, Md., re-

spectfully submit for your consideration the following compiled statement, as well as the individual letters¹ and papers¹ attached hereto and made a part herein.

In compiling this report we have tried to avoid making any general statements, which you have repeatedly advised us carry little or no weight. We note, however, that you request arguments, and therefore feel justified in submitting certain facts and conditions which we believe to have a direct bearing on this question of improvement but which can not be presented to you in a specific form. We do not wish to take advantage of the word "argument" as used in your request, and will therefore try to confine our remarks to Webster's definition of the word as "that which is advanced in support of proof with a view to persuade or convince the mind."

In our opinion one of the greatest benefits to be derived from this improvement of our waterway is of such a character that it can not be reduced to dollars and cents, even in an approximate manner, by any member of the present generation. We feel, nevertheless, that it should and will receive at your hands a great deal of consideration in making up your report on this waterway problem. The benefit to which we refer is that of transportation, transportation by both rail and water, transportation in a larger and broader sense than that affecting any individual, firm, or corporation now operating or maintaining a business enterprise in any section tributary to this waterway. We speak of the transportation which enters into the daily life of everyone, affecting all that we do, the food we consume, the clothing that covers us, the house that shelters us from the summer's heat and the winter's cold, the fuel which cooks our food and warms us in winter. Indeed, there is nothing in the practical business of life which is not affected more or less by the cost of conveying things from the one who sells to the one who buys, and the heaviest taxes we have to pay (much greater than all other taxes combined) are those paid for transportation. As illustrating what is meant, take the rate which supports most strongly the position of the carrier with reference to transportation, namely, the rate from Norfolk, Va., to Salisbury, Md., on carload shipments of lumber is 4 cents per hundred pounds, while the rate from Norfolk, Va., to Pocomoke City, Md., a less distance by 25 miles and over the same road, is 8 cents per hundred pounds. We have found, and it can not be gainsaid, that merchandise of almost every kind can move by water route from Norfolk to Salisbury, while it can not from Norfolk to Pocomoke, and that therefore the rate made by water does limit and control the rail rate made between two points. We desire to make plain at the outset that this argument is not intended for an attack upon the railroads, for we are aware of the fact that the Commerce Court sustains them in charges of this character, where the rates at the more distant points are influenced by competitive conditions which do not exist at the intermediate points—provided the rate at the intermediate point is not found unreasonable in and of itself. It is truly said of the railways that each locality is entitled to its natural advantages. The railroads fully recognize the effect of water competition, both from Atlantic seaboard cities and from interior points. We have stated these facts at great length in order that you may be able to understand the true meaning of our statement above, that we can not approximate the benefit in dollars and cents on this one point, as a large portion of our freight will continue to move by rail; in fact, we have one enterprise in our little city which has shipped out alone 75 cars of produce in a single day, all by rail, the freight charges on same to be influenced by a water competitive rate, should we be successful in obtaining this improvement. At many railroad points carriers absorb switching charges upon carload freight when the traffic originates at water competitive points and decline to absorb such charges when the shipment is from a noncompetitive point. This being true, it is evident that the total charges paid by the shipper are greater from noncompetitive points, where he must pay the switching charges. On this one point alone we can not estimate the advantages to be derived by our farmers and other shippers, by reason of making our city a water competitive point. We do not deem it necessary to dwell further on this point, but we do think it advisable to bring the matter directly to your attention, since our section tributary to this waterway under consideration is a very fertile section, and our farmers, through the medium of our produce exchange, ship a very great amount of produce to northern and eastern points, where a water route would be available if we had a 10-foot channel through the muds in our river.

¹ Not printed.

Proceeding to our arguments based upon more specific information obtained from our actual commerce on the river, we deem it necessary first to make an explanation showing the territory covered by this report. Our report covers the entire territory adjacent to both banks of this river with a radius of 9 miles, independent of the town of Snow Hill, from which we understand an additional report will be submitted.

Since we can not accurately estimate the prospective increase in river commerce, following this improvement, from the merchants at the extreme points, we think it admissible to include in this report, from these more distant points only, such heavy freights as coal and fertilizer, which now tends to follow this river route, and from these river points hauled to the farmers near by. We, however, feel that a great deal of this freight not included will be greatly influenced by having better water facilities. We prefer to be conservative with our report and leave this character of estimating to your better judgment.

In directing your attention to the specific information below, we do not think it necessary to add to or repeat anything set out in the individual reports attached hereto and referred to as Exhibits A, B, and C, further than to compile the summaries of each report so as to show the gross tonnage on the river during the year 1914, the freight in dollars paid on this tonnage, the prospective increase in tonnage following the improvement, and the benefits to be derived after the cutting out of the mud. We attach the individual reports in order that you may be able to compute such additional data as you may deem necessary.

We will take up Exhibits A, B, and C in the order named and carry out the figures opposite the individual firms and corporations.

Statement.

Firm or corporation.	Actual river commerce, 1914, in tons.	Freight paid on 1914 river commerce.	Estimated increased tonnage on river following improvement.	Estimated total tonnage on river following improvement.	Estimated benefit to be derived computed on actual freight paid during 1914 to rail and river carriers.	Estimated annual gross benefit following improvement.
Quince Ashburn.....	12	\$90.00	2,820	2,832	\$7,181.68	\$7,181.68
W. B. Duncan.....			1,260	1,260	950.50	1,302.00
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F. E. Matthews (Exhibit B)...	1,000	1,600.00	500	1,500	1,000.00	1,500.00
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Other freight.....	1,257			1,257		
Exhibit C.....	2,442			2,442		
Total.....	27,177	47,495.37	35,925	63,102	22,647.95	33,527.25

We regret very much that in making this report we are compelled to leave out statements from two of our largest industries, namely, the Worcester Canning Co. and F. M. Wilson & Co. The latter firm deals in coal, cement, lumber, fertilizer, and building material, and uses the river as far as possible to do so. A statement from them would greatly increase our report. We, however, submit same, leaving any necessity of his report to your judgment.

The Worcester Canning Co. uses the river extensively though not without difficulty, as frequently they have had schooners on the muds for days. The manager of this company has been out of this locality since we have been actively engaged in obtaining this data. He is expected to return during the month of July.

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We leave our request in your hands and trust that you will regard this data, together with that submitted from Snow Hill, as sufficient evidence to justify your favorable recommendations for this much-needed improvement.
Respectfully submitted.

Col. L. H. BEACH,
Corps of Engineers.

POCOMOKE CITY BOARD OF TRADE.
QUINCE ASHBURN, *Vice President.*
W. C. CULLEN, *Secretary.*

HEARING BEFORE THE BOARD OF ENGINEERS FOR RIVERS AND HARBORS IN REFERENCE TO POCOMOKE RIVER, MD.

(Act of July 25, 1912.)

MARCH 16, 1915.—11 A. M.

Col. Black, Col. Abbot, Col. Winslow, Col. Taylor, Col. Newcomer, and Maj. Johnston were present.

Messrs. E. James Tull, E. W. McMaster, W. D. Corddry, W. U. Schoolfield, A. Child, Frank Fords, and John W. Ennis appeared before the board in reference to the above subject.

Col. BLACK. Gentlemen, we will hear what you have to say in reference to Pocomoke River.

Mr. ENNIS. We are here, gentlemen, in response to an appointment we have with your board to appear here this morning at 11 o'clock in reference to the Pocomoke River proposition. We assume that you are men of acts rather than of words, and we shall not endeavor to consume your time with any multiplicity of words or in any lengthy speech making, but we shall endeavor to get down to concrete facts as speedily as possible and to present the matter to you as intelligently as we possibly can, for your favorable consideration.

I first present to you the Hon. E. James Tull, the mayor of Pocomoke City, who will give you some facts as to the proposition that we are here to present to you.

STATEMENT OF MR. E. JAMES TULL.

Mr. TULL. I will not take up your time, gentlemen, to any extent.

The situation down there is a very grave one with reference to the navigation of Pocomoke River. The data, of course, you have, I presume, in the survey. Knowing the situation as I have for the last 30 years or more, I have always reached the conclusion that the old survey was altogether wrong; that is, in the wrong direction. It is not practicable at all. It would make it very expensive, and very expensive to maintain and to keep up.

We desire to cut across the strip of land there known as Williams Point and make a direct line from the last bend in the river. If you have that drawing there I could very readily show you what I mean. We desire to make a straight line from the entrance to a little opening there, a gut or drain across that piece of land, and make a direct line for the buoy—what is known as Old Rocks. That would bring the distance down somewhere, as near as we can get at it, within a radius of 3 miles. You are absolutely out of the range of any oyster ground, gentlemen.

Col. WINSLOW. Is the land through which you expect to go marshy land?

Mr. TULL. Well, it shows marshy. The point is sand. Where you cut through there I think it is all marsh—about 4,000 feet. There is a point of marsh there. The natural conditions there are such that it is filling up both ways on the flood tide, and the tide takes the sediment over to what is known to those people down there as Pocomoke—the Virginia people call it Pocomoke—on the southwest side. Then the tide takes a rebound back and brings that over and has changed the channel by perhaps two or three hundred yards in the last 25 years. It makes the channel very narrow there, and it is filling up rapidly. I mean, now, inside Williams Point. On the other hand, in going out, the ebb tide going around Williams Point goes across to Shad Landing, which you can see there [indicating on chart] and the rebound fills the mud in on that side. We desire to make a straight line from the entrance to the mouth of this gut and the last bend in the river and cut a straight line for the buoy down to Old Rocks, where you drop into, I understand, somewhere from 9 to 12 feet of water. As near as we can

measure the distance in time a boat would run over it and across somewhere inside of 3 miles, which would cover the distance.

Col. WINSLOW. Three miles is the total?

Mr. TULL. Three miles.

Col. WINSLOW. Of which what proportion would be what you might call marshy land?

Mr. TULL. I should judge, about 4,000 feet; something like that. That has an elevation, perhaps, of 2½ feet—not over 3 feet.

Col. WINSLOW. Above high or low tide?

Mr. TULL. Low tide. About 4,000 yards across that point [indicating on chart].

Col. WINSLOW. Would there be any difficulty in getting a right of way through there?

Mr. TULL. I am not in a position to answer that. A few years ago it was offered gratis. When I made some endeavor some 12 or 15 years ago to ascertain about it from the party who owned that property he offered it gratis. It is valueless only for the sand bank at the point, and that will be just as valuable after the cut is made as now, because it is not even pasture.

Col. WINSLOW. You mean, the sand is used for building purposes?

Mr. TULL. For building and road purposes.

Col. WINSLOW. Would the community undertake to furnish a right of way free to the United States if we decide to cut across there?

Mr. TULL. I can not just answer that, but I rather think yes.

Col. TAYLOR. That would leave one town out of consideration. In the vicinity of Shelltown would there be any improvement made?

Mr. TULL. It is below Shelltown.

Col. TAYLOR. It leaves the river below Shelltown and enters the river above Shelltown?

Mr. TULL. No; it enters the river below Shelltown, below the last bend.

Col. TAYLOR. Then, it leaves the river across from Shelltown and enters below. Is that right?

Mr. TULL. No, sir. It leaves the river below Shelltown and goes out on what is called the Mud, direct for the black buoy.

Col. TAYLOR. Then, that line on this chart is wrong. It is just below Shelltown.

Mr. TULL. Yes, sir.

Col. TAYLOR. Then, you put it wrong on the other map?

Col. NEWCOMER. You are still getting in that formation of the mud?

Mr. TULL. Yes, sir; you get over 2 miles in that formation of mud.

Col. NEWCOMER. You simply escape part of it?

Col. BLACK. There would be very slight escape, because at Williams Point that mud is hard. There would be almost no difference in the length of the mud.

Col. TAYLOR. And also below Shelltown, from Williams Point at least half the way, you have got mud now?

Mr. TULL. Yes.

Col. BLACK. Mr. Tull, you would gain very little in the channel, either in distance or in the amount of mud that is traversed.

Mr. TULL. You changed the course of the tide in going down the last bend in the river; instead of making the bend the cut that we propose or suggest would be there [indicating on chart], instead of making that bend in there [indicating], where it is filling up very rapidly.

Col. TAYLOR. Unless you made a very large cut at great expense, the size of your cut would have no appreciable effect on the tide. There would not be water enough to go through that cut to have any effect.

Mr. TULL. The channel at that point is very narrow, and building a little jetty there it would turn that current—the tide coming down in that bend.

Col. NEWCOMER. Do you know anything about the character of the material in here [indicating on chart], which is inside Williams Point?

Mr. TULL. It is hard bottom in here. The old channel would run away over in here [indicating on chart], but by reason of this tide filling in, in the last 30 years, where a vessel is drawing 8 or 9 feet of water they have only got about 2 feet of water. The channel now is right under this beach. It is very narrow. There is a bulkhead formed right across where this mud would start. With the cut made, instead of the tide swinging around in here [indicating], it would go through there [indicating].

Now, gentlemen, we do not want to presume or to press anything that is beyond reason. Of course, we claim that we have never had anything, but our business is suffering very seriously, and the situation is growing very much worse every year. If the conditions that have existed for the last 30 years continue for the next 10 or 15 years, this will be filled up and we will have but little water after we turn Williams Point, since it is filling all the time. The flood tide does that. The ebb tide does what I claim on the other side. You go over to Shad Island and you find more water, because the tide rushes over there and then swings back out on the mud again, and there are settlements all around there. We have, as you all know, a very little bit of water, and while we have a splendid river there to navigate, after they get into it, the deep-draft vessels are absolutely shut out. We have to resort to almost any method to get our transportation in and out of the river. It makes the freights enormous, because we have to pay small vessels or resort to the steamboats in small lots and pay exorbitant freight rates. With this improvement made our freight rates would be minimized very materially.

Col. NEWCOMER. Then, you are not asking for a channel across the muds proper?

Mr. TULL. No, sir; not the old route. It will take just a little bit from the old route, from the lower buoy, when we turn down by the Old Rocks, to go over toward that point I designated for you.

Col. BLACK. The difficulty is that if a channel were put in that mud flat, it would fill right in. The plan that you propose does not get away from that at all.

Mr. TULL. The most of that mud, if you please, is that sticky mud. The worst part of the mud proper is at the lower end of the mud, where we have a sort of clammy substance. After you get farther up toward the point called Pig Point, then the mud stops and the most of it is sticky. It looks like pipe clay. When you push a pole down into it and pull it out it is sticky. Our opinion is and our experience in handling that sort of material is that it will not shift like thin mud or sand. Of course the winds will not have that effect on mud—that sort of mud—as it does on sand, because it will not shift about. There will be a direct lead for the tide through that cut, without any turning whatsoever, to have the tendency to fill it in. We would appreciate it very much if you gentlemen will give that some serious consideration. I have never thought that that was a practicable thing at all. I never have found in 30 years that the old survey which was made there a good many years ago, from Williams Point around that circuitous route, was practicable. I have always thought that this was the proper way.

Col. NEWCOMER. Your steamers that give you regular service go in there now, do they not?

Mr. TULL. They do not come in without difficulty. They have to come over on high tide, and some very slowly.

Col. NEWCOMER. The district officer's report said that they come in at almost any stage of tide.

Mr. TULL. Who reports that, please?

Col. NEWCOMER. The district officer—that a boat drawing 6½ feet pushes in at almost any stage of the tide.

Mr. TULL. It can not be done, sir.

Col. NEWCOMER. Drawing more than the draft of water, because the mud is so soft.

Mr. TULL. The mud is soft. But the point we speak of now is that most of this mud there will be of this sticky kind.

Col. NEWCOMER. Tell me about the boats. The boat now does not get in, you say, except at high tide?

Mr. TULL. The other night she got in at 11 o'clock, when she ought to have been in there at 2 or 3.

Col. NEWCOMER. Was it on account of that difficulty that you mention?

Mr. TULL. Yes, sir; on account of that trouble. That boat was only drawing 6 feet. I went out over the mud in company with her in a small boat and ran past her, and she was dragging on top of the tide and absolutely light, without any freight, and she was not making over 4 miles an hour.

Col. NEWCOMER. Where was that difficulty encountered?

Mr. TULL. Right where I am speaking about, on the mud proper, where we are asking to have the cut.

Maj. JOHNSTON. You mean between Pig Point and Williams Point?

Mr. TULL. Below Williams Point, I think.

Maj. JOHNSTON. Below Pig Point?

Mr. TULL. From Pig Point down, that mud is so that you will have but a very short distance to go.

Col. NEWCOMER. It is out toward the sound from Pig Point.

Mr. TULL. Out toward the sound from Pig Point. There is the stiff mud. It is the only way that we can see to relieve us of that difficulty, the only practicable way, at all. It shortens the distance and gives the tide a direct shot from the river proper down to the Old Rocks.

Maj. JOHNSTON. Could she get up as far as Pig Point from the Chesapeake Bay?

Mr. TULL. No. That is where the trouble is.

Col. TAYLOR. Your trouble is the other side. After you get up to Pig Point you are all right?

Mr. TULL. Oh, no; you are not all right. It needs some cutting, but the mud is soft and you could get through. But the worst part of the mud proper is below Pig Point. Of course, there is soft mud between that point and the point named, through that piece of marsh, but the distance is not half so long. You must make that circuitous route around the point and maneuver around to the buoy. It is a very crooked route, and I have always claimed it would fill in very materially and be very expensive to maintain; while I believe, with my little smattering knowledge of handling material, mud or sand, and so on, a direct line through there will practically keep itself cleaned out.

Col. TAYLOR. Above Shelltown you are all right?

Mr. TULL. We are all right.

Col. TAYLOR. You do not want any change up there?

Mr. TULL. We are all right below Shelltown. We are all right down to the point I marked out there [indicating on chart].

Col. TAYLOR. Simply across that point?

Mr. TULL. Yes, sir.

Col. WINSLOW. You would strike the present channel at Pig Point, and you would have the same trouble below Pig Point that you have now.

Col. ABBOT. If you do not go to the beginning of that you would get the same thing that you have now.

Mr. TULL. You go by Pig Point, of course, but you are farther over to the north.

Col. TAYLOR. This channel would lead out from the river almost directly toward Pig Point, would it not?

Mr. TULL. Yes, sir; a bee line.

Col. TAYLOR. A bee line for Pig Point?

Mr. TULL. Oh, a bee line from where the entrance of the gut is; that bench mark already was there, as you see, and you will get a straight line for the buoy. We put up marks and went down and picked up the buoy and came in and took them up with flags and found we had practically a bee line.

Maj. JOHNSTON. But your trouble is outside of that, toward Pocomoke Sound?

Mr. TULL. Pocomoke Sound is all right when you get out to the buoy.

Col. TAYLOR. But between Pig Point and the sound is where you have your trouble?

Mr. TULL. Yes, sir.

Col. TAYLOR. This cut would not help you at all, as far as I can see, because that would be above Pig Point—

Mr. TULL. We have practically to go from the buoy to the river, and we have to shorten the distance.

Maj. JOHNSTON. Is this [indicating on chart] the red-spar buoy out in the sound?

Mr. TULL. Yes, sir; when you get there you are all right.

Col. TAYLOR. So you would have to dredge all the river and simply go up across this point [indicating on chart]?

Mr. TULL. It would shorten the distance and straighten the run of the tide.

If there are any other questions that I can answer I should be very glad to do so. I am representing the people from Pocomoke and my own personal interest as well. It has almost put me out of business. I do not want to bring myself very prominently into it. It has cut out the deep-water vessels, the fishing steamers, and that class of vessels that I handled, and I am absolutely debarred now from handling any more. It interferes with almost every branch of business from Snow Hill down to the mouth of the river.

Col. NEWCOMER. The district officer states in his report that the conditions out on the mud flats, as shown in this survey, are practically identical with the oldest surveys that we can get, running away back 40 or 50 years ago.

Mr. TULL. You mean the line I have marked?

Col. NEWCOMER. The depth of water shown on the charts.

Mr. TULL. That has not changed very materially.

Col. NEWCOMER. Then, I do not quite see why it has grown so much worse for boats lately.

Mr. TULL. It has grown very much worse inside of Williams Point before we go up to this place [indicating on chart]. There is a hard bulkhead formed across there, and the channel is very narrow.

Col. NEWCOMER. The principal trouble in getting in is outside?

Mr. TULL. Yes; but there is a serious trouble, of course, inside, just below or about abreast of the point. We have arrived at that point in history where things are not done, as you gentlemen know very well, as they used to be, and the trade has not increased very materially, and unless we can handle the material in larger cargoes it makes it almost impossible to do business.

Col. ABBOT. Then, it is a change in the kind of boats you want?

Mr. TULL. We want to get deeper draft vessels in there. That is the point exactly. We want it made navigable for deeper draft vessels, because the other kind are almost a thing of the past.

Col. TAYLOR. In other words, the existing channel there would do all right for the class of vessels you had 15 or 20 years ago?

Mr. TULL. We could get along with them then. We made out to get along with horse cars, but we can not do that any more. We are arrived at that point in history where we can not go that way any more. The fellow that undertakes to do that is away behind.

I appreciate your hearing, gentlemen, and I thank you.

Col. TAYLOR. We were just trying to find out what the conditions actually were.

Mr. TULL. I have been watching the conditions there very closely for the last 25 or 30 years, because I was vitally interested myself in the situation. It is absolutely necessary that we have some change.

Mr. ENNIS. I now present to you, gentlemen, the Hon. W. D. Corddry, the mayor of Snow Hill.

STATEMENT OF MR. W. D. CORDDRY.

Mr. CORDDRY. Gentlemen, this comes to me in the nature of a surprise, because I really know nothing about the mouth of the river. I do happen to know, however, that they are at a very serious handicap on account of not having the proper amount of water at the mouth. I am in the lumber business, and I know that where we are paying a small vessel to bring lumber from Norfolk and other points \$1.75 or \$2 a thousand, if we could bring that lumber in barges, carrying 400,000 or 500,000, we could cut that price in two.

The feasibility of making this channel that these people are talking about I really do not know anything about. I assume from what Mr. Tull has said that probably cutting this channel across that marsh is more feasible than an attempt to maintain a channel through this soft mud. It looks to me as though it would be an impossibility to cut a channel and maintain it for 4 or 5 miles through mud that I understand is of the consistency of cream; whereas, if you would cut through this sandy material through this point [indicating], on account of having straightened the river, it might keep itself open.

With that tide sweeping through it might keep itself open. Of course, that is a matter for you engineers to decide which is the most feasible plan. I do know, however, as I said in the very beginning, that the lack of water at the mouth of the river is a very serious handicap to Snow Hill and Pocomoke and the other little points on that river. We are obliged to bring things by railroad at a cost doubling that of ordinary water transportation, and that is really, after all, the most serious matter, as I see it. I think that if something could be done looking toward giving us more water there, business would increase in volume on the river. I have no doubt that you have reports showing very little business on the river. That is on account of the changed condition. These little sailing vessels that used to come there, we can not use any more because they hang there on the mud two or three days. They do not want to come there at any time, and if you go out to charter a boat, as soon as you say "Snow Hill" or "Pocomoke City," they throw up their hands and say, "We don't want to go there."

If some condition, such as has been suggested by Mayor Tull, can be brought about I know it will be of very great benefit to the people along that channel.

Mr. ENNIS. I now take pleasure in introducing to the gentlemen of the board Hon. Alfred Child, who has a few facts to present.

STATEMENT OF MR. ALFRED CHILD.

Mr. CHILD. Gentlemen, I come before you representing the Peninsular Produce Exchange of Maryland. I am not here to talk engineering at all, but as a business proposition.

I have been over the situation and know something about it, and I know that unless there is a better channel made over that mud there is no such thing as increasing our waterways by that river. We have no trouble whatever after a vessel gets into the mouth of the river to get her right up to Snow Hill.

Col. NEWCOMER. What do you mean by the mouth of the river? To what point in the mouth of the river do you refer?

Mr. CHILD. Probably a half or three-quarters of a mile below Shelltown, right where the last turn is. When you get them in there—and I would say further that after they have got by those two buoys they generally come the balance of the way all right. That red buoy there at Old Rocks and Pig Point, when they get by that they do not have much trouble unless it is a sailing vessel.

We do a great deal of business there. The produce exchange, to give you an idea of it, eight years ago did \$100,000 worth of business. We are selling agents for the farmers. Last year the business amounted to over \$1,000,000. We find that it is almost impossible to do any business along that river on account of the boats of the B. C. & A. We have had them leave as high as 400 barrels of our produce on the wharf because they could not go over the muds. They have at times, from McMaster's down to the mouth of the river, to leave probably 2,000 barrels. They were left on these open wharves, with the rain and the sun, and that property was practically destroyed. It is getting so now that those people will haul their goods 7 or 8 miles to the railroad. That stops the development of the community. They can not afford to do that, and they can not afford to risk that loss of development.

The substance of the whole thing is that unless there is more water over that outer buoy we can not make any growth in that section from a business point of view. Whether that can be done or not, of course, remains with you gentlemen. We can triple that business on the river in two years if you give us 9 feet of water over that bulkhead. We would ourselves get our seed potatoes from Maine for one-half of the freight we are paying now. We have this season put out over 400 tons of seed potatoes to the farmers and have had to pay high railroad freights. We would also, if we had the opportunity that Baltimore and Salisbury and Norfolk and St. Charles and those other points have, make and manufacture the phosphate for the entire peninsula. We have to have some way of getting the basic rock from the South. We can not afford to pay railroad rates. It is a great detriment to that business over that 35 miles, which is the channel across that mud. If there is any way of getting around it we should like to have it done. Of course, I am here just from a business point of view to say what we have done and what we are doing. We can triple that business inside of three years. It is not confined to our business alone. I am just simply stating what might be done for our line of business if we had a chance to get over that mud.

I do not believe I have anything more to say in reference to the channel, except that I have been down there and looked over it, and I am satisfied that a line cut through across there would shorten the distance at least 1 mile, and, as far as that mud is concerned, I would like to see surveys taken across there.

Gentleman, I believe that is all I have to say. I thank you.

Mr. ENNIS. I now present Hon. E. W. McMaster.

STATEMENT OF MR. E. W. M'MASTER.

Mr. M'MASTER. Gentlemen, the mayor, Mr. Tull, has about covered the ground, so far as I know, about the cutting of a channel. I have always contended for many years that if a channel were cut from the red buoy across to Williams Point the current would in great measure keep the channel clean.

I have been owner of vessels since I arrived at the age of 21, and I know that we have been detained on the mud as long as two weeks at a time. I believe

the last detention was something like a year ago last November. I had a vessel to get on a bar between Shelltown and Williams Point—a bar that my captain told me used to be a channel that he thought he could get over—and the vessel got there on the bar and remained there for two weeks or more.

My idea would be to start that cut north of this buoy and run it across Williams Point about where Mr. Tull suggested.

Judge Child, who is connected with the Peninsula Produce Co., made the remark that there had been 400 barrels of produce left on my wharf by the B. C. & A. Steamboat Co. because of not being able to get over the mud with a full load. That is true. I do not know that it was exactly 400, but it was around 400 barrels. That has occurred more than once.

I live on the river and the B. C. & A. Co. use my docks. I believe, also, that that current through this channel would in a measure keep it clear.

Mr. ENNIS. I now present, gentlemen, Mr. W. U. Schoolfield.

STATEMENT OF MR. W. U. SCHOOLFIELD.

Mr. SCHOOLFIELD. I will simply give you, gentlemen, an idea of this location. I think, in the first place, there is an appropriation to cut a creek through, is there not, from Crisfield through Pocomoke Sound?

Maj. JOHNSTON. Up near Laurel?

Mr. SCHOOLFIELD. Oh, no; down near Pocomoke River, through to Pocomoke Sound. I think there is an appropriation for that. At any rate, with that creek cut through, the B. C. & A. steamer would be on time. The B. C. & A. steamer, or any other steamer, is late, and they should be at Snow Hill at 10 or 11 o'clock in the morning, and they do not get there until midnight.

Capt. WEBER. They recommend a very narrow cut there. It is only 5 feet deep.

Mr. SCHOOLFIELD. I do not know. I guess the B. C. & A. did recommend something like that. I do not know. But this river I have known for a great many years. Up above Williams Point, in 1861, a man took a shovel and went across there and cut the point out—a point called Bullbaker Point—making a little thoroughfare. From the time of the digging of that thoroughfare through to the present day that point is all washed away. The mouth of the river, concentrated at that point at that time, is spread out to a mile wide, and the stuff that goes down the river, filling the old channel, has spread over there and dropped into this point that Williams Point shoots around, and that has been the cause of that place inside of Williams Point filling up so. The channel was 6 feet deep at the mouth of Holings Creek. Any vessel that went up there 45 or 50 years ago went up the mouth of Holings Creek, but now it can not go up there. From Red Buoy to Old Rocks is exactly like the triangulation points shown on the chart there. We sounded it the other day going up there and found it to be 6 feet of water, on a fairly good tide, from Old Rocks, known as Pig Point, right across from Pig Point and Ellis Gut, on the Somerset side; and there would be as far as you would have to go—I suppose, about 3½ feet of water there. From the point up there you would have to increase that a little to the regulation depth, and I suppose you would have to go above the point—inside the point—up the river, maybe, 250 yards. Then you would hit the deep water in the river.

That point, in my recollection, has become almost impassable.

Col. WINSLOW. When these boats stick, as referred to, it is usually outside of Pig Point or inside of Pig Point?

Mr. SCHOOLFIELD. They stick outside at Pig Point, and Pig Point down to the red buoy, or two-thirds of the way to the red buoy. Right about at Pig Point is the shoalest water. That channel will run about 500 feet north of Pig Point buoy and you will be on the northwest side of the sound. The winds will blow that stuff and deposit it on the other side. The winds would have some effect, you know. We would go around Williams Point, from that point to the buoy, and then across Pig Point.

Mr. ENNIS. Gentlemen, we have tried to present the matter to you from a business standpoint and to show you how we are suffering for the need of some channel or some way by which we can have larger vessels. We can only put the matter into your hands hoping that you will have an engineer look into this proposition and see if we can get larger vessels up to this point. That is about all we can ask of you at this time, and we shall be very glad to cooperate with the board and your engineer in going over this matter and

render any assistance possible, because we are seriously handicapped from a business standpoint by this mud at the mouth of the river. As we view it it is a useless expenditure of money to put any more money or expend any more money in Pocomoke River unless the mouth of it is relieved, because we have in the 35 miles from Snow Hill anywhere from 7 to 30 feet of water, and I do not think there is any vessel that would come up that way but would have plenty of water to take care of her after she gets into the river. But until the mouth of the river is fixed it strikes me it is a useless expenditure of money on Pocomoke River. As I say, we have plenty of water after we get in there, but the difficulty is in getting in there.

We should be very glad to have you gentlemen look this matter over, and we shall be glad to render any aid that we can. We thank you for giving us this hearing.

Mr. TULL. There is just one other point, as the matter of the steamboat question was raised as to their getting in and out on time. Our merchants are seriously handicapped by reason of the late arrival of goods. For instance, goods that should be there on Saturday afternoon or Friday afternoon very often do not get there until the next morning. Take, for instance, the line of green groceries and stuff of that sort. Consequently it is put away in their ice boxes and the sales are lost and the citizens are deprived of them, and all that sort of thing. The matter of the boats not getting in and out on time has been referred to, and Judge Child has referred to their leaving produce on wharves. They go away and leave it and go on to Baltimore and our stuff must stay there until it rots and our people consequently suffer.

We have given you a plain, unselfish, and unbiased statement of the situation; and, as Mr. Ennis has stated, we should be glad to cooperate with you, and if you would kindly send an engineer down there we will furnish a boat and take him down there and look over the plan that we have mapped out, and I think if that is done it would have a very different coloring on it.

Col. NEWCOMER. Do the steamers arrange their schedule time so as to accommodate themselves to the tide or do they have a definite sailing time?

Mr. TULL. They have a definite schedule.

Col. NEWCOMER. And it may fit the tide or not?

Mr. TULL. Sure; a definite schedule.

Maj. JOHNSTON. Do they leave Baltimore at the same hour every day?

Mr. TULL. About the same hour. It depends on the tide, you know. If the hour happens to be right for the tide. You know the tide varies every day about three-quarters of an hour. They simply stay there on that mud until they can get in or get out. It was only Saturday night, if my memory serves me correctly, that the boat got in there at 11 o'clock when she ought to have been there at 2 o'clock in the afternoon. And then she had to make her trip on up to Snow Hill.

Mr. CHILD. Sunday morning it was about 2 o'clock.

Mr. TULL. I was guessing at the hour perhaps.

Mr. CHILD. I know, because I was up there at the time.

Mr. TULL. That is the situation, gentlemen, so far as the boat is concerned. They get along; they are not interested in this. They are only interested in the other way. I have no criticism to make of the B. C. & A. Capt. Thompson and I are friends.

Mr. ENNIS. Is there an appropriation for surveys of this kind or does it require an act of Congress to authorize a survey?

Col. TAYLOR. The survey has been authorized, and a survey has been made.

Col. NEWCOMER. Not along the lines that you suggest.

Col. TAYLOR. That can be arranged, though.

Mr. TULL. I do not think you will have more than two-thirds of the material to move from the old route to the new—not more than two-thirds would you have to move.

Col. BLACK. The estimated cost, as I recollect it, of that portion from the deep water at Williams Point on is a million and a half, is it not?

Col. TAYLOR. I think so.

Col. NEWCOMER. For the big channel. For the small channel, somewhat less.

Mr. TULL. We do not absolutely need a very wide channel there, and we do not ask for that. We do not think it is necessary. Every vessel now has power in her or about her somewhere. There is room enough for two of these ships to pass, and that is all that we see is absolutely necessary. We are willing to cut it down to the minimum.

Col. NEWCOMER. Even that would be shown to be very, very expensive, over that mud.

Mr. TULL. It would not be very expensive?

Col. NEWCOMER. It would be; yes.

Mr. TULL. Of course, you are an engineer and I am not. Here are two engineers who have been talking with you a little bit. Of course, it is expensive, but we have not had anything on Pocomoke River, and we feel that we are almost entitled to it at this late time, while our business is suffering so seriously, and it will continue to do so until we get some relief. Every branch of business, from the farmer to the mechanic, is seriously handicapped by reason of that trouble there. It is not a matter of what we had 50 years ago; it is a matter of what we have now.

Mr. ENNIS. Do I understand that there was an appropriation or there is an appropriation now for that survey?

Col. BLACK. There is an appropriation which probably could be made available enough for a further survey if it is deemed necessary.

Mr. TULL. We can not see where there is any necessity of spending it on the river above there. It is crooked, of course; it is all crooked from head to mouth. It is a very crooked river, but there is water enough to take care of anything that at any time wants to go from Williams Point to Snow Hill. We think it is a waste of money to spend any money at all above the mouth of that river. What we want is relief here so we can get in and out.

Col. BLACK. We are very much obliged to you gentlemen for the information you have given us.

Mr. TULL. We are very much obliged to you for your kindness, and we hope we will have consideration. If you will send some one down there, we will do him the courtesy of showing him the plan that we have mapped out.

I thank you very much.

(Whereupon, at 12 o'clock noon, the board proceeded to the consideration of other business.)

REPORT OF HEARING BEFORE COL. LANSING H. BEACH, CORPS OF ENGINEERS,
CONCERNING THE DESIRED IMPROVEMENT OF POCOMOKE RIVER, MD.

Hearing convened in the Empire Theater, in Pocomoke City, Md., at 8 p. m. Thursday, May 6, 1915.

Present: E. James Tull, shipbuilder and mayor of Pocomoke City; M. L. Veasey, proprietor of T. F. Hargis department store; John W. Ennis, cashier Pocomoke City National Bank and president board of trade; E. J. Schoolfield, manager Marvel Package Co.; Quince Ashburn, manufacturer of building material and dealer in coal; Alfred Child, representing Peninsula Produce Exchange of Maryland; W. C. Cullen, secretary and treasurer Peninsula Produce Exchange of Maryland and secretary board of trade; W. D. Corrdry, of the Corddry Co., Snow Hill, Md.; Marion T. Hargis, M. T. Hargis & Co., Snow Hill, Md.; Frank Fooks, of Snow Hill, manufacturer of fertilizer; F. M. Wilson, president Pocomoke City National Bank and dealer in coal, feed, and building material; E. W. McMaster, farmer and owner of sailing vessels; R. P. Stevenson, general manager the Electric & Ice Manufacturing Co.; Orlando Harrison, of Harrison's Nurseries, Berlin, Md.; E. W. Veasey, president city council of Pocomoke City; J. F. Price, of Snow Hill, Md.; Mr. Purnell, of Snow Hill, Md.; W. S. Schoolfield, merchant, dealing in general merchandise; J. Harry Young, representing county commissioners; W. H. Schoolfield, secretary and treasurer Electric & Ice Manufacturing Co.; James T. Young, of Young & Sons, dealers in lumber and building materials; E. C. Fontaine, principal of high school; A. A. Parker, physician; R. Harlan Robertson, Pocomoke Foundry & Machine Works; William B. Duncan, manufacturer of barrels and lumberman; H. W. Callahan, clothing and gents' furnishings; Rodger Lankford, Bevans & Scott Co., hardware; James M. Crockett, Pocomoke Telephone Co.; H. C. Powell, Turner Sign Co.; J. T. M. Sturgis, dealer in fertilizers; C. E. Byrd, cashier Citizens' National Bank; W. H. Clark, druggist; Thomas Hill, Hill & Tolson department store; E. I. Blaine, Lloyd & Blaine, druggists; H. B. Pilchard, contractor and builder; N. E. Sartorius, physician; R. J. Lambden, shoe store; W. E. Hall, Picken & Hall Co., hardware; and about 70 others.

The object of the hearing was explained by Col. Beach, who asked Mayor Tull to designate the speakers, or parties known to have information to present.

Mr. TULL. Col. Beach, I made this letter, which I will read, very concise; I tried to get at the point in as few words as possible, in the name of Pocomoke City, which I represent.

(Mr. Tull then read as follows:)

POCOMOKE CITY, MD., May 6, 1915.

Col. LANSING H. BEACH,

United States Engineer Office, Baltimore, Md.

DEAR SIR: As mayor of the town, and knowing the situation as I do, I have repeated inquiries as to the means of water transportation looking toward the building of factories in our thriving little city, such as guano factories, box factories, and others numerous, which I need not mention. As you very well know, this contributes largely, if not more than anything else, to the development of any town or small city in the way of handling crude materials.

Further, I wish to state that, while I or my people have no unkind feeling whatever toward the B. C. & A. Ry Co. by reasons of the serious delay of the arrival of their boats—far beyond the schedule time—a serious interference is suffered by our merchants, farmers, and manufacturers in receiving their goods; very often one day behind time, because of the arrival of the boat very late in the afternoon and sometimes at a late hour at night, when if there was a sufficient amount of water these boats could come on up the river and not be delayed by reason of the matter in question.

I wish to call your attention further that Pocomoke City and the other towns and country represented along the river, has never yet received an appropriation or improvements that has very much enhanced their interests. We do think, and must insist, that the time has come when our interests should at least be considered with the waterways leading to the prominent towns on the Chesapeake Bay.

On behalf, and for the people of Pocomoke City, which I represent, I do most earnestly ask and urge that you use your best endeavors to grant to Pocomoke City such water facilities as those enjoyed by some of our sister towns, thus permitting us to come to the front along the lines which I have named.

Thanking you in advance for your kindness in giving us your presence to hear our complaints and our wishes, I am,

Most respectfully, yours,

E. JAMES TULL,

Mayor of Pocomoke City, Md.

Mr. TULL. It is almost out of the question to consider a plan of the sort that I refer to here without we have water transportation, and when I say water transportation I mean such as will carry large cargoes, as we could not afford to pay the enormous freights that the little boats charge. For illustration, one little vessel will carry 140 tons, which runs coal to here and Snow Hill. It was at my place for overhauling, and the captain said to me, "I often have to unload some freight to get over 'The Muds.' Instead of bringing in 140 tons, I will have to bring in 120 at the most, and sometimes I am there a week. I would rather haul coal at least 25 cents a ton less and come loaded than do as I am doing now."

With reference to my individual business, I wish to make this statement:

(Mr. Tull then read as follows:)

POCOMOKE CITY, MD., May 6, 1915.

Col. LANSING H. BEACH,

United States Engineer Office, Baltimore, Md.

DEAR SIR: Regarding the matter of dredging out the mud flats at the mouth of the Pocomoke River, I, as a shipbuilder, wish to state that my business is greatly handicapped due to the fact that—

First. Being especially fitted up for the building and rebuilding of fishing steamers and other boats of considerable draft, I am not only handicapped but almost prohibited from doing this work from the fact of the shallowness of the water over the mud. My best former customers have said to me repeatedly that they would be very glad to give me their patronage, but to be tied up on the mud for days and sometimes for weeks was the reason they could not.

Second. The high freight rates over the railroads and steamboats on large shipments of lumber from the South so increases the cost of material when it reaches my plant that I can not compete with my competitors along this line and in consequence of which my business is narrowed down simply to boats of very small tonnage, out of which I realize a very small margin.

I have an opportunity now, could I, to make estimates on 1,000-ton ships, but I find that even in the cities of New York and Boston they can get the southern lumber put on their yards at a less freight rate than I can at Pocomoke City:

In view of the above, I most urgently request that you use your office in relieving such an enterprise of this hampered state of affairs.

Very respectfully, yours,

E. JAMES TULL.

Mr. TULL. I introduce to you Mr. Milton L. Veasey, who is a prominent merchant in our town and interested in the farming business.

Mr. VEASEY. Mr. Chairman, Col. Beach, I don't think we have taken very much interest in this matter, or have gone about it in a way that should have been done to produce any results. I venture to say that if this river was in the western section of the country, where the people are progressive, and get up and do things, and succeed in getting the Government to do things, that this mud would have been gone long ago. All the remarks which I will make will be very general. We think that this improvement must necessarily make the traffic upon the river very much larger than at present. There are a number of factories in Pocomoke, which at this time are compelled to bring the raw product here from the South by rail, having had large steamers built to bring—we have one factory, the Marvil Package Co.; I don't know whether anyone is here to speak for them or not; Mr. Schoolfield is here. But we have been almost prevented from any development along any extensive lines because of the fact that it is almost impossible to get across that mud. Capt. Thomson, whose official position you know, was in Pocomoke this morning, and he made the statement, talking to a number of us, that there were only two hours in the day when their steamers could pass over that mud with certainty, that being the two hours of the high tide. He also made the further statement that his company had been interested in this improvement for a long time, and that they very much hoped that this time the efforts which we were making to accomplish our purpose would be successful. We are very sorry that he could not stay and be here tonight, but we hope that he will forward you a large bunch of data different from that which he had previously forwarded to the Board of Engineers at Washington. It is a fact that only steamers which are built for river trade are able to ply up and down this river. Capt. Thomson stated this morning that by reason of the fact that they had lost two steamers they were going to be very much handicapped in handling the river trade during the approaching shipping season, for the reason that they had not the boats—that it is impossible for them to hire any, as all the boats which they could charter were boats of very much larger draft than the river could accommodate on account of the mud. While the amount of business which could be done up here is large, and to some extent speculative, yet we have splendid towns up this river. Snow Hill at the head of the river is a very splendid town, with both rail and water facilities, except for the mud. Pocomoke City we feel would increase the number of its industries very materially if it were possible to get boats of large draft across the mud, and we think that the benefits that would accrue both in the immediate future and in the prospective future would be such as would justify the Government to go to this expense. We know that the Government is spending large sums of money in work of this character, and it does occur to us that the reason that nothing has been accomplished along this line here has been because of our apparent indifference and lack of any concerted action toward accomplishing this purpose. Now, there are representatives here from a large number of plants to whom I could refer, and there are many instances about these plants to which I could refer, but I will leave that to them, and they can tell you the trouble that they have. We have a progressive town, a town that is entitled to growth, and we believe that this one thing would help us very materially in our effort toward expansion.

Col. BEACH. You quoted Capt. Thomson of the B. C. & A. Fortunately, if I may use the term, I wrote to Capt. Thomson when this matter first came up. I have here a letter from Capt. Thomson, on B. C. & A. paper with his signature at the bottom, which says that the improvement of the Pocomoke River desired is from Snow Hill down the river to Shad Landing, a distance of about 1 mile, and from Williams Point, at the mouth of the river, to extend about one-half mile up the river. I went back at Capt. Thomson and I asked him if he did not want some improvement at "The Muds." He told me that he did not, that his vessels never were delayed on

"The Muds," that they could go through at any time, and that as far as he was concerned the improvement which he stated in this letter was all that the B. C. & A. desired. You see where I stood in making my report.

Mr. VEASEY. What is the date of that letter?

Col. BEACH. The date of the letter is January 24, 1913, when I first started to get up the report. It took me until February 6, 1915, to get sufficient data to make an unfavorable report.

Mr. ENNIS. As I stated to you this afternoon, when we in a committee representing Pocomoke City went before the War Department, we were impressed that that was the report of Capt. Thomson, and we stated to the board that we were positive that this B. C. & A. steamer did not arrive here on time one day in 365, and we were convinced right then and there that Capt. Thomson had made such a report to keep any improvement from being made at these muds, and we were thoroughly convinced that Capt. Thomson had played traitor to us, and I was in hopes that he would be here to-night. This man [pointing to Mr. Tull] gathered some data with reference to the freight on this river and put it in the hands of Capt. Thomson for the purpose of having this mud dug out. Mr. Tull had absolute sincerity in Capt. Thomson, and on taking the matter up after the date of the hearing he wrote to Mr. Tull that he forgot it. He conveniently forgot it, because he did not—and does not to this day, to my mind—want "The Muds" dug out, and that is why he made you such a report. But we are here to-night to refute any such statement that he has filed; and their schedule shows that our statement is correct and his is absolutely incorrect. Furthermore, the B. C. & A. schedule has been uncertain, because they can not get over this mud; the freight they used to bring to Pocomoke City on this stream they now transfer at Crisfield, and if they did not do that we would be complaining about their schedule all the time. Ninety per cent of the freight that comes from Baltimore is transferred from their steamers at Crisfield and brought here by rail over the N. Y. P. & N. lines, which, to my mind, further proves that Capt. Thomson is incorrect as to his steamers getting here on time. It used to be that we had vessels come up and carry our cargo; now the mud has gotten so thick that it is absolutely impossible for us to charter any vessel to bring any heavy freight to our community.

Col. BEACH. Can you bring any proof of the statement that the B. C. & A. routes its freight via Crisfield, and present it here?

Mr. ENNIS. Every merchant can testify here to that.

Col. BEACH. But I think the board of trade, or whoever is preparing data on this matter, would do very well to present a clear and full statement in that respect. It has considerable bearing on the matter.

Mr. ENNIS. We can prove that, and our freight bills can show it; they simply can't get here on time because of the mud.

Mr. TULL. I don't wish to sling any mud at Capt. Thomson; personally, we are friends. At the same writing, sometime in January, to which you referred, I received a letter from Capt. Thomson, which I now have at my office, saying that he had received a letter from you, and sent me your letter, a copy of which I received by the former mail, stating that he did not think it was necessary and that it was absolutely futile, or something of that sort, to ask for the expenditure of any money below Williams Point, and would like to have my views on the subject, and, of course, I gave them to him.

Col. BEACH. Can you send me that letter?

Mr. TULL. Yes, sir.

Mr. TULL. I introduce to you Mr. E. J. Schoolfield, manager of the Marvil Package Co.

Mr. SCHOOLFIELD: I have gone to some little trouble to prepare some data for this evening, and have addressed this communication to Col. Lansing H. Beach, as I presumed it would come into your hands, and if you will give me the permission, I will read the letter that I have. I think they are facts, and they are facts that can be proved, and thoroughly so.

(Mr. Schoolfield then read as follows:)

POCOMOKE CITY, Md., May 6, 1915.

Col. LANSING H. BEACH.

Corps of Engineers, United States Army.

HONORED SIR: Following your suggestion under date of April 29, we beg to submit for your consideration the following facts and data regarding the greatly needed and much desired improvements at the mouth of the Pocomoke River.

To be as brief as this great contemplated improvement will permit, we desire to state that our business is such as has compelled us to use almost constantly the waters of the Pocomoke River, passing in and out over the mud at the mouth of said river. Only in a few cases have we found it possible to move our boats or barges over this mud without several days' delay, our barges and sailboats not drawing more than 5 to 6 feet of water.

It is not an unusual occurrence that we have a serious delay to our sailboats and barges of at least 10 to 15 days, thus causing very expensive and most serious delay to our business, many times at a cost from \$75 to \$100 per day. It is not unusual at low water to find less than 5 feet of water around our boats or barges, which are stuck in this mud. Our barges only drawing 8 to 8½ feet of water when full loaded we are, therefore, compelled to only half load our barges or load to about 6 feet depth in order to reach our river with any degree of certainty.

In loading our barges in Virginia and North Carolina and having to pay full tonnage tow rates on a half cargo of material makes it very expensive. We are not overestimating when we make the assertion that this mud proposition has cost us many thousands of dollars and has proved a very great menace to the best interest and advancement of our business.

Under these great disadvantages that we have above described, we have been compelled to freight in and out of the Pocomoke River over this mud from ten to fifteen thousand tons of material and made-up product annually. This amount of tonnage with a sufficient deep water outlet from our river to the Pocomoke Sound could be conservatively estimated to increase to thirty or forty thousand tons—at least threefold from what it has been in the past.

We have a beautiful and most productive strip of land lying on either bank of our river from its mouth to its source, populated with prosperous and intelligent farmers, representing one of our most productive truck sections.

We have two beautiful and thriving little cities of near 8,000 inhabitants located upon the banks of this river. We estimate, directly and indirectly, that no less than 25,000 people will receive great and lasting benefits from the connection of our river through a sufficiently deep waterway to the Pocomoke Sound, and add many hundred thousands of dollars to the present value of real estate thereto.

In our finite mind we can imagine of no improvement that would be so conducive to our people's best interest and advancement, and undoubtedly benefit our citizens, including the oncoming generation, threefold for every dollar invested, with 6 per cent interest paid semiannually.

Our best business interests as a corporation, as well as the interest most conducive to the advancement and progress of our entire citizenship, has been seriously impaired for many years past for the need of this deeper waterway, connecting our country with the Pocomoke Sound and thus with the Chesapeake Bay and the more powerful commercial centers of our country by water. As we view it, there is no improvement that would serve our people's interest so well as giving us this deeper waterway.

As we promised to be brief, we wish to extend to you our sincere thanks and appreciation for the most patient hearing you have accorded our people. We trust, through you, with our cooperation, we may secure the survey needed for this most worthy improvement, and thus lay the foundation that will eventually bring this needed improvement to our country and people.

Very truly, yours,

MARVIL PACKAGE CO.,
By E. J. SCHOOLFIELD.

Mr. SCHOOLFIELD. I do not think that I am putting it too strong when I say that every dollar for this improvement that will be spent by the Government will benefit our present generation and oncoming generation threefold, with 6 per cent interest paid semiannually, for every dollar invested; that is conservative, I think—exceedingly so.

Col. BEACH. You made your statement with regard to the Marvil Package Co. in general terms. You have not stated exactly what the difference would be in dollars and cents to your company if you had a good channel there. Could you do that?

Mr. SCHOOLFIELD. I have explained that, Colonel; the difference in the tonnage, we think, would be threefold.

Col. BEACH. Could you state what your tonnage is, and what you would save a ton if you had a channel so that you could load your barges to full depth and bring them straight in?

Mr. SCHOOLFIELD. I think it would save us from \$1,500 to \$2,000 annually.

Col. BEACH. The reason I ask that is this: Estimating from the survey that we made of "The Muds," a channel 9 feet deep and only 100 feet wide would cost about \$200,000—just the digging; a channel 10 feet deep and 200 feet wide would cost about \$470,000; and a channel 12 feet deep and 300 feet wide would cost about \$1,800,000. Now, the people of Pocomoke have to talk to these figures. If you want the improvement you have to show that you are going to receive a benefit—or the country tributary to the river under consideration will receive a benefit—which will justify the United States expending the money for one or the other of these channels. The United States can not go on general statements, and it simply becomes a matter of dollars and cents of benefit and of expenditure, and that is why I ask for concrete figures instead of general statements. If you can figure out a benefit which will justify the United States in expending the amount involved in any one of these channels, I am sure you would have no trouble in getting a favorable recommendation all along the line, but unless you can show that there will be difficulty in getting the improvement.

Mr. SCHOOLFIELD. Of course, I have stated here what in my judgment it would save our company alone. There are other companies here, I suppose, that are represented here to-night, that it would save just as much.

Col. BEACH. Can you write me a letter showing in dollars and cents just what you could save your company, and how you arrive at that figure?

Mr. SCHOOLFIELD. I will do that with pleasure. I think we will have no trouble to show you very plainly that it is essential and that it is an investment.

Col. BEACH. You know, the United States likes to audit the figures.

Mr. TULL. I would like to impress this: You will please keep this in your mind—it is not what we are doing now, but what we want to do, and what we will do if the improvement is made for us to do it with. As I stated in my report, I am cut out of the paying part of my business, and I can't estimate what my business will be in the future if the improvement is made.

Col. BEACH. If you make an estimate of the prospective benefits, or the prospective commerce which will follow the improvement, and if it is made reasonably and on a fair basis, it is exactly what we want in considering this case.

Mr. ENNIS. I believe that we can present to you facts that will make the Government dig that biggest channel.

Col. BEACH. If you can show justification for it, I will give it the strongest kind of a recommendation, but I have always felt this way—I have to have something to base my recommendation upon.

Mr. TULL. I introduce to you Mr. Quince Ashburn, a dealer in building material.

Mr. ASHBURN. I have gotten up a report of what we have done by rail, as I do not use the Pocomoke River but very little, on account of our inability to get large or sea-going vessels in here. I have addressed this communication to you.

(Mr. Ashburn then read as follows:)

POCOMOKE CITY, MD., May 6, 1915.

Col. LANSING H. BEACH,
Baltimore, Md.

DEAR SIR: I respectfully call your attention to the following data obtained from our records in reference to proposed traffic on the Pocomoke River.

For the first four months of 1915 we have received by rail 47 carloads of freight and paid freight charges amounting to \$4,101.88. This is for incoming freight. Most of this material is reshipped, a part of it going out via Pocomoke River, but the most of it shipped by rail.

We have not been able to receive a great deal of our requirements by water, because seaworthy vessels can not get in the mouth of the Pocomoke River; for that reason we are forced to get the most of our requirements by rail.

If it were possible for us to receive our requirements by vessel, our freight charges would be materially reduced. I believe the reduction would run as high as 40 per cent. This reduction would place us in a much better position to compete with Norfolk and Baltimore manufacturing establishments of the same kind as mine, and of course would be the means of a large increase to my business.

If the Government will open up the mouth of the Pocomoke River and thus make it possible for Pocomoke City to get a water competitive rate, the freight charges to Pocomoke would undoubtedly be reduced to one-half of their present rate. For illustration, Philadelphia has a rate from Norfolk of 9

cents per 100 pounds, a distance of 257 miles, while Pocomoke has a rate of 8 cents from Norfolk, a distance of only 100 miles.

I trust this is the information that you want.

Yours, very truly,

QUINCE ASHBURN.

Col. BEACH. I would like to ask one or two questions. What class of building materials do you get in by water now?

Mr. ASHBURN. We get but very little stuff by water. We get some framing material that comes in light-draft boats from across the bay. The most of our lumber that we get, we get from the South; we get all of our shingles from the South, and we could get them by boat. Cypress, as you know, is mostly found along watercourses, and can be gotten by boat at a much reduced rate, but on account of seaworthy vessels not getting in over the mouth of the river, we can't handle it that way. Shingles, or other material, would come from along the seacoast.

Col. BEACH. Where does your lumber come from?

Mr. ASHBURN. The most of our lumber comes from North Carolina and South Carolina.

Col. BEACH. In what class of vessels is it brought?

Mr. ASHBURN. Most of ours comes by rail.

Col. BEACH. You don't bring it in barges?

Mr. ASHBURN. No, sir; by rail.

Col. BEACH. Would you bring it in by schooner if the channel were improved?

Mr. ASHBURN. Yes, sir.

Col. BEACH. Do you handle cement?

Mr. ASHBURN. Yes, sir.

Col. BEACH. Would that come by water, or would it have to come by rail?

Mr. ASHBURN. We could get a much better freight rate by water.

Col. BEACH. Do you know what the difference would be?

Mr. ASHBURN. I have had it quoted to me at, I think, about 10 or 15 cents a barrel.

Col. BEACH. Can you send me the exact quotations at my office in Baltimore?

Mr. ASHBURN. Yes, sir.

Mr. TULL. I introduce to you the representative of the Peninsula Produce Exchange of Maryland, Judge Alfred Child.

Mr. CHILD. I will read this letter.

(Mr. Child then read as follows:)

POCOMOKE CITY, Md., May 6, 1915.

Col. LANSING H. BEACH,
Corps of Engineers, United States Army, Baltimore, Md.

DEAR SIR: In response to your notice under date of April 29, 1915, that a public hearing would be held in Pocomoke City, Md., May 6, 1915, for the purpose of receiving statements, arguments, etc., in reference to the desired improvement of Pocomoke River, we, the Peninsula Produce Exchange of Maryland, respectfully submit the following data and information for your careful consideration.

We have presented this in as concrete form as possible, and as our business is confined to the shipment of produce and to the furnishing of seeds, etc., to the produce growers, we have confined our statements principally along that line. The situation at present, as we understand it, is as follows:

The survey of the Pocomoke River authorized by Congress in the act approved July, 1912, has been made and the report submitted which is unfavorable to any channel construction across "The Muds" because the character of the material existing there would make the cost excessive in comparison with the benefits to be derived. The report, however, does recommend the widening of the channel from Shad Landing to Snow Hill, and, as we understand it, the object of this hearing is in the nature of an appeal from the report submitted.

Inasmuch as we have a river some 30 miles long, passing through a fertile section of the country, with a depth of water from 10 to 20 feet, with the approaches to this river with only a depth of 7 feet at ordinary high water, it looks to us as if it is useless to deepen or widen the channel in the river if there is no prospect of getting a deeper channel at the entrance or across what is known as "The Muds." This section through which this river flows is only partially developed so far as raising produce is concerned, due

principally to the lack of transportation facilities, and this is especially so on the northwest or Somerset side of the river. With this section raising only a small percentage of what it could produce, they are unable during the height of the season to move its crop of potatoes to the city markets upon anything like schedule time, as the loaded steamers of the B. C. & A. Railroad Co. are unable to cross "The Muds" only under the most favorable circumstances; and when we say "favorable circumstances," we mean that they are obliged to use the top of the high water, and practically can use daytime only. It has to be very favorable if they attempt to make this trip after dark. It happens frequently that the steamers have to leave potatoes on the wharves, sometimes on account of the low run of tides; other times it is necessary to leave before they are completely loaded in order to save the high water over "The Muds," or lose 24 hours in waiting for the high tide on the following day. This statement is not made as a reflection on the B. C. & A. Railroad Co., as we are satisfied they do the best they can under the existing circumstances.

Under the present conditions the farmers are getting discouraged. As Baltimore is our distributing point for our river shipments, we are often seriously handicapped by not having our produce delivered on schedule time. Having to ship produce out of the river under the present conditions is a serious drawback to this section; but, in our opinion, it is not as much of a drawback as the loss to this section of being able to bring in raw materials for manufacturing purposes. With no improvement in the channel at the mouth of the river, development of this section is at its height so far as the river trade is concerned.

What we want is a channel 10 feet deep leading into the river or across "The Muds." Give us this and the Peninsula Produce Exchange promises to increase its shipments of produce from its river points 100 per cent the first season. As soon as this channel is assured so we can secure by vessel the raw material necessary to manufacture a fertilizer, we will erect a factory with a capacity equal to the demands. We will also arrange to have our seed potatoes come in from Maine by vessel, as points south of us are now doing. We will then be in a position to furnish our farmers with seed potatoes at the lowest possible price, a fertilizer at a price that will at least be a saving to them of the freight from other points, and with a channel 10 feet deep across "The Muds" and a guaranty from the produce exchange to find a market for their produce, the farmers will be in a position to cultivate their land to its utmost capacity, and at the end of three years from the time this channel is completed, the output of produce from this river will increase 300 to 400 per cent.

We have stated what we will do and the question naturally arises, Can the Peninsula Produce Exchange do it? A business firm's ability is judged by its past record. Allow us to give you a synopsis of our past record.

The Peninsula Produce Exchange of Maryland was organized in 1904, with a paid in capital stock of \$2,700. To-day the paid in capital stock is \$34,690, with a book value of 150. During this time we have paid in dividends to our stockholders 127 per cent. In 1904 we had 350 shippers. To-day we have 2,500.

In 1904 at points where we loaded 1 and 2 cars of potatoes a day, we are now loading 25 cars per day. We now ship produce in carload lots as far north as Montreal, Canada, as far south as Jacksonville, Fla., as far east as Bangor, Me., and as far west as Denver, Colo.

We have on our list of customers over 700 names.

In 1904 we handled 105,052 packages. Gross sales of the same amounted to \$122,781.33.

In 1909 we handled 218,768 packages. Gross sales of same amounted to \$296,376.80.

In 1914 we handled 489,673 packages, the gross sales of same amounting to over \$1,000,000.

The number of packages handled at river points are as follows: 1904, 11,765; 1909, 17,250; 1914, 37,161.

In showing the growth of our business you will notice that we have used the years 1904, 1909, and 1914, which means the first, middle, and last year of our business. If you will take the pains to compare the increase in the number of packages, you will find the percentage is larger during the last five years than it was during the first five, which is rather an unusual occurrence for an enterprise of this nature. This shows that this section of the country has developed more rapidly in the last five years than it probably ever did in its history.

The statements that we have made in this report are not exaggerated in any way, shape, or form. Most of them can be verified by the examination of the records at our office. The others we ask you to investigate fully and if they are erroneous in any way, we will be glad to have you advise us.

There is much more that we could say in reference to the opening up of the mouth of the river, but we leave that for those who are interested in other lines of business to show you how they are affected as well as the farmers.

Thanking you most cordially for the interest that you have manifested in reference to the desired improvement of the Pocomoke River, we remain,

Yours, very truly,

PENINSULA PRODUCE EXCHANGE OF MARYLAND,
PER ALFRED CHILD.

Col. BEACH. There is a point which I do not quite understand, and I am pretty sure that those who will review the report concerning the improvement do not understand. I know that if you send perishable products, like strawberries, that you will suffer damage if they do not arrive on schedule time. But I do not understand why you are damaged when potatoes do not arrive on time.

Mr. CHILD. By the change in the market.

Col. BEACH. Isn't the market just as likely to go up as it is to go down?

Mr. CHILD. No, sir.

Without going into details, we have had as many as 700 and 800 barrels of potatoes left on the wharf.

Col. BEACH. Can you give us definite information in this respect?

Mr. CHILD. Yes, sir.

Col. BEACH. I would like to have this. It has a pretty important bearing on the matter, and if you can give me a few instances, to show that it is not a single occurrence, I would appreciate it very much.

Mr. VEASEY. I understand that in a number of cases, the B. C. & A. has been sued on account of delay of boats, and that almost invariably before the cases have come up they have been settled.

Col. BEACH. It would be a very good plan to include a few of those instances in the statement.

Mr. TULL. We want to be neighborly to our neighbors, and our sister town, Snow Hill, is represented here to-night by its ex-mayor, Mr. W. D. Corddry.

Mr. CORDDRY. I have reduced what I shall say to manuscript for at least three reasons. First, that I may know what I am going to say; second, that I may know what I have said; and, third, because it seems to be the view of Col. Beach upon this occasion, and it is also, I believe, quite popular to have it this way.

Col. BEACH. I would state, Mr. Corddry, that one of the reasons why I have requested statements in writing is that I have found that if they are not reduced to writing, or at least a large part of them presented in writing, the speakers become very enthusiastic, and there is no question about it that after a statement is once presented, if it is probably overdrawn, it casts doubt on all the other statements, and really hurts the case.

(Mr. Corddry then read the following letter:)

Col. BEACH AND GENTLEMEN: In view of the fact that I was present at a hearing granted by your board in the city of Washington on the 16th of March last, on the question of the improvement of the Pocomoke River, to persons interested, as a representative of Snow Hill, I have asked to reiterate at this meeting thoughts expressed at the Washington meeting, supplementing same somewhat, and adding thereto some facts and figures in support of our contentions.

Leaving the question of the feasibility of the plan presented by our friends from Pocomoke City for the desired improvement to you and your board for solution, feeling that if your presence here indicates anything, it shows your interest in the problem, which from my viewpoint, at least, guarantees that it will be promptly and properly disposed of, we beg to submit that the condition existing at the mouth of the Pocomoke River, commonly known as "The Muds," is a most serious handicap to business now in operation on the river, to say nothing of the fact that it is impossible to get enterprises seeking locations with water facilities to consider locating among us.

While this condition affects the business houses primarily, it is ultimately felt by the entire community. As a matter of fact, the consumer finally pays the bill, in so far as it can be paid with dollars and cents. So, it would seem

that the general public is interested in the question of improved facilities for transportation. The business concerns that are directly interested in water transportation in Snow Hill at this time, are: The Worcester Fertilizer Co., fertilizers; the Corddry Co., lumber, coal, and building materials; the Snow Hill Electric Light & Power Co., coal, fuel; Snow Hill Brick & Tile Co., coal, fuel; the town of Snow Hill, coal, fuel; W. H. Jones & Co., flour mill, coal, fuel; Thos. P. Selby, flour mill, coal, fuel; M. T. Hargis & Co., general merchants; the Snow Hill Canning Co., coal, fuel, and other supplies; Hastings & Timmons, fertilizers, general merchants; Roberts Bros., canners, coal, fuel, and other supplies.

The operations of the business concerns mentioned are about as follows:

The Worcester Fertilizer Co.: Three thousand tons by water (which should increase very much under more favorable conditions), and several hundred tons by rail, which they would like to bring by water if water transportation was more satisfactory.

The Corddry Co.: Practically nothing by water; some 1,500 tons by rail, which should come by water if satisfactory transportation could be had.

The Snow Hill Electric Light & Power Co. and the town of Snow Hill: About 1,000 tons by water.

Thomas P. Selby: About 450 tons by water.

M. T. Hargis & Co., Snow Hill Brick & Tile Co., William H. Jones & Co., the Snow Hill Canning Co., Hastings & Timmons, Roberts Bros.: Nothing by water; some 1,000 tons of coal, etc., by rail, which should come by water. The above figures have only to do with cargo and carload shipments coming to Snow Hill.

The Corddry Co. are using in the manufacture of box shooks and building materials at this time 5,000 tons of lumber, obtaining their supply locally to a very great extent. This supply is fast becoming exhausted, and they will soon have to bring their lumber from the South or go out of business. If they bring lumber from the South, it must come by water.

To sum up: There is coming to Snow Hill by water 4,450 tons, and by rail 2,500 tons that should come by water, making 7,000 tons. The present freight rate to Snow Hill by water from Baltimore and Norfolk is \$1.

If boats drawing 10 feet of water could come in the river, this rate could be cut to 50 cents per ton.

Vessels trading in the river, by conservative estimate, spend one-third of their time on "The Muds."

Only a week ago a vessel bound to Snow Hill for the Worcester Fertilizer Co. spent five days on "The Muds," while a few months ago one spent three weeks. Neither of these delays were unusual, even for vessels loaded to 6½ feet, as these were loaded.

During the past year many thousands of dollars were sacrificed by the State in transportation of stone for road building in this county. The logical way at this time to transport materials cheaply is by water and in barges. To do this a 10-foot channel is required. My information is that there is 10 feet of water from "The Muds" to Snow Hill; hence, if a waterway such as has been suggested could be created, it would seem that our transportation facilities would be all that could be desired.

In my estimate of the tonnage to Snow Hill I did not include shipments by steamer, which amount to several thousand tons annually. It is understood that while the steamboat company is greatly annoyed by being held up on "The Muds" nearly every trip they make, that they are fairly well satisfied with existing conditions, since they practically preclude the possibility of competition.

It is claimed that the competition that previously existed between the railroad and steamboat company is a thing of the past, and that the benefits derived by the existence of the river, in so far as the freight rates on local shipments are concerned, are very meager indeed. I think it goes without saying that we are not getting the benefits that the existence of the Pocomoke River entitles us to enjoy.

I want to say that it is impossible to estimate the increased prosperity that might come to this section by virtue of a deeper waterway, or rather by the solving of the problem of the removal of the obstruction at the mouth of the river, so that the expression "water competition" would be a reality and not a joke.

WM. D. CORDDRY.

Mr. CORDDRY. I got the information as to the time spent on "The Muds" from a very reliable captain who sails a vessel I happen to be interested in. I asked him to give me some data, and he said that he spent at least one-third of the time on the mud.

Col. BEACH. You did not verify that?

Mr. CORDDRY. By this captain. He would be delighted to send you a letter to this effect.

Mr. CORDDRY. Regarding the loss on stone shipments, I would say that this can be verified by our company's books. I remember the contracts I have had for stone up the river. We had it in barges 8 or 9 feet draft and were obliged to lay out in the sound and bring the material across "The Muds" in little boats up the river. I did not have time to find out just what amount of money was probably spent, but I feel perfectly safe in saying that several thousand dollars were wasted on account of this mud.

Mr. CORDDRY (continuing). There is one question which you raised a few minutes ago about cement. We handle cement, but, like Mr. Ashburn, I never looked into the question of water transportation, because it is an impossibility—because it is impossible to bring it that way. You can not consider bringing coal by water, because there is no certainty about it. We have a railroad siding and we have a wharf, and our coal yard is between the siding and wharf, and we might bring it just as well by water as by rail. But we have no assurance of time of delivery by water.

Col. BEACH. Suppose you had 10 feet of water?

Mr. CORDDRY. If we had 10 feet, we would bring all our coal by water, and we would save to the community at least 75 cents a ton.

Mr. TULL. Just while it is on my mind, Col. Beach, I would like to bring up a point that might mix things a little. There are two points on this river—one up the river, and one down the river called Shad Landing.

Col. BEACH. Yes; one is Shad Landing, Md., and the other is Virginia.

Mr. TULL. With reference to one statement which Mr. Corddry has made: I very easily know the captain to which he refers. While I was overhauling his vessel some months ago he said this to me: "I would gladly haul coal at 25 cents per ton if I could load and get in on time."

There are one or two other gentlemen from Snow Hill that I would like to hear.

Mr. HARGIS. Gentlemen, I have no statement to make in addition to what Mr. Corddry has presented to you, except to say that what occurs to me as having great bearing upon this question is the matter of prospective increase of trade on the river. Pocomoke River is really distinct in that it has a greater depth of water than most streams of its size and length, and with a large territory contiguous to this river and dependent upon it to a great extent it does seem that so short a passage as would be necessary to open the mouth of the river should be undertaken. Of course, as you have mentioned, you want figures and do not want speculation as to the prospective increase, and that appears to me a matter worthy of very careful consideration.

Col. BEACH. I hope I was not misunderstood. I said that we wanted figures, but we want the figures of your prospective commerce; that is, the commerce that will follow the improvement, because we always feel that you are going to have a benefit and an increased commerce from any improvement that is worth undertaking; and if you are going to tell what the prospective commerce is, you have to make, to a certain extent, yourself a prophet and predict something which may come or may not; but we want as accurate a statement as to what is likely to come as can be made from present data. We do want a statement of prospective commerce, but we want it drawn as accurately as we can get it drawn and upon a reasonable basis.

Mr. HARGIS. I think I understand that very clearly, Col. Beach. The point I wanted to make was that approximating of that sort would be very hard to arrive at. I am optimistic, but feel that it would be an exceedingly difficult matter to speak within bounds and give an estimate of the advantages that would come to this community and those that are contiguous to Pocomoke River if it is improved. These gentlemen here have made statements, but I certainly believe the future holds more in it than any of us suspect.

Col. BEACH. Yes; but the mere statement that the future holds more in it than any of you suspect wouldn't help me to convince the Board of Engineers for Rivers and Harbors that it contained \$475,000 worth. Your statement is general, and they will not take a general statement compared with a \$475,000 statement from me.

Mr. HARGIS. Any prophecy of that sort must be general; it can not be specific. We can not make a specific prophecy without danger of speculating.

Col. BEACH. But Mr. Corddry did make a statement which was excellent.

Mr. HARGIS. I am most happy to think that he made the proper impression along that line.

Col. BEACH. He stated what they received, and that it would probably come in by water in case the improvement were made, and I do not think Mr. Corddry overstated his case a particle; in fact, I would say he understated it, for he made his basis the present commerce, and if you got the reduced rates which water would bring, I think that you would find a greater commerce than you have now.

Mr. HARGIS. May I add another word, Col. Beach. Is it a fact, which I believe Mr. Corddry touched upon, that other manufacturing enterprises would spring up, which we have no knowledge of, with increased water facilities?

Col. BEACH. If the community is alive and awake, they ought to try improvements of that kind.

Mr. CORDDRY. Another suggestion: We said that we would bring our cement by water. If we could bring ours by water instead of by rail, we would save \$600 in freight—we would save alone on the cement item \$600 a year.

Col. BEACH. That is a very good prospective statement, and I think that if they can sell the cement there much cheaper, they can probably sell very much more of it than in the past.

Mr. TULL. I introduce to you Mr. F. M. Wilson.

Mr. WILSON. I have no figures at all. Of course, I have been here and have been in business for several years. I have been in the fertilizer business and the coal business quite a little. We have to pay very much more freight on coal coming here than going to Norfolk—we have to pay nearly double; in fact, we can not get coal barges or any boats, unless some boats that are used to the river. After we get a new boat from Baltimore chartered, they never come again. They get stuck on "The Muds" and lay there several days and often for a week or more. The vessels not being able to get over there is a great drawback; it has cost me a good deal more freight. I agree with all the gentlemen who have spoken that if we had 10 feet of water at the mouth of the river, the business on this Pocomoke River would increase very materially. I feel very sure of that.

Col. BEACH. Mr. Wilson, you said you had no figures, but you did give one fact that is very important. Could you give me a statement of any particular vessels that were chartered by you and declined to be chartered again?

Mr. WILSON. Yes, I could. One trip is all they want.

Col. BEACH. If you can give me the names and addresses of the vessels that were chartered and declined the second time, I think it would have a bearing on the case.

Mr. TULL. I introduce to you Mr. E. W. McMaster, a vessel owner.

Mr. McMASTER. I have prepared no paper. I think I can give you some facts in reference to the contentions that we have had on our muds. I have been interested in vessels for a number of years, and I have found it quite a drawback to commerce on the river; in fact, it has been such a drawback that my vessels are not working on the river. We have been detained so much on the mud that I found that it was not profitable to run up Pocomoke River. While we got a dollar a ton on coal, we found that frequently we were in bad. Now the distance from Norfolk—but you know as much about that as we do—from Baltimore to Norfolk and from Pocomoke to Norfolk is not the same, and yet you can get coal freighted to Norfolk around 40 cents or less while coal merchants here have to pay a dollar; and, as Mr. Wilson says, unless the captain is familiar with the muds of the sound, or the river, they never come but once. Now, I think Mr. Corddry made a statement there that the difference in freight would mean something to the dealers, but it would mean a great deal to the community. Now, I think he is perfectly right about that. The community are the ones who suffer from the high freights. The merchants, of course, are going to make their usual profit, and if they can get a lower freight, the consumer receives the benefit of it.

Now, as to cutting that channel across Williams Point. I have contended for a number of years that the outgoing tide would keep that channel clear. I am sure that you engineers know more about that than we laymen. I have always contended, I have always felt, that the outgoing current, or ebb tide, meeting the salt water causes the sediment from the river to form at the junction of the fresh water and salt water and causes that mud. Now, I do think it is

impracticable to clear out the mud, because I think it would fill in again. I think you have made such a statement in your report—that the channel would fill in again—but if we have a current that is not impeded by going around this point, I am sure that it would keep its way clear. I do not know that I have anything further to say. My vessels are not now plying on the Pocomoke River.

Mr. TULL. I introduce to you Mr. R. P. Stevenson, representative of the Electric & Ice Manufacturing Co., of our town.

(Mr. Stevenson read the following letters:)

POCOMOKE CITY, MD., May 6, 1915.

Col. LANSING H. BEACH,
Corps of Engineers, United States Army.

DEAR SIR: In reply to your request for data from parties concerned regarding the improvements of the mouth of the Pocomoke River, we are herewith inclosing such data as we believe will best show the need of such improvement.

It may be well for us to state that we are manufacturers of ice and electricity and dealers in coal and wood.

Our output of coal, together with our own consumption, amounts to something like 500 tons yearly by water, 1,000 by rail; if the muds were open all would come by water.

By reason of the condition of the muds we are compelled to pay an increase of 100 per cent in freight and to use small boats.

If the Government would provide a channel of 10 feet depth we could easily get vessels of large tonnage to freight our coal at a decrease in freight rate of 50 per cent.

At this writing we have a vessel stuck on "The Muds" which left Norfolk Saturday p. m., which delay has caused us considerable expense by reason of us having to purchase our coal at retail until boat arrives.

Respectfully submitted.

THE ELECTRIC & ICE MANUFACTURING CO.,
W. H. SCHOOLFIELD,
Secretary and Treasurer.

Mr. STEVENSON. We are now buying coal from a retail coal dealer at Pocomoke in order to operate our plant. We have only one boat on the river now that we can get to haul coal, and he is now stuck on the mud. The last trip he got stuck on the mud, and each time he wants a little higher freight rate for becoming caught upon the mud.

Mr. TULL. I introduce to you Mr. J. F. Price, of Snow Hill.

Mr. PRICE. This is very unexpected. Whilst I feel a very great interest in this affair, yet at the same time I am not what you might term a shipper. I have some interest in lumber in North Carolina, and have been somewhat handicapped. We have sold Mr. Corrdry some material over here; we could sell more if we could get it by water, but the freight rates are so expensive that it practically shuts us out. And I have realized that it is a great handicap to the commerce of this river, this town and our own; this mud here. For several years when I was a young man I used to load lumber on schooners and shipped it from Snow Hill. I was then employed by a firm that handled a great deal of lumber, and we never could calculate when a vessel was going to land or go over the mud. And I have been thinking about a little matter that has been discussed here—something about schedule time of the steamer. I think about two years ago I took a trip on the same boat—had a little vacation and went to Baltimore—and my recollection is that their schedule time was about 5 o'clock in the morning—that was during potato season—and they got there at 11 o'clock. And the question was asked how it affected the sale of potatoes. I believe you asked the question, Col. Beach. Well, it occurred to me this way—it affected the sale in this manner—that when they arrived at Baltimore with their load of potatoes, the commission men had already supplied themselves, and then the potatoes had to go for what you could get for them. Now, as far as the schedule time is concerned, I think that the steamer is very rarely on schedule time, unless the schedule time is early in the morning. Sometimes one gets in Sunday morning, afternoon, sometimes not at all. But that one instance came to my mind. I was aboard of this same steamer, and instead of arriving at Baltimore at 5 o'clock we arrived at 11.

Mr. TULL. I introduce to you Senator Orlando Harrison, of the Harrison Nurseries, at Berlin, Md., the largest nurseries in the world, extending from Berlin nearly to Pocomoke.

Mr. HARRISON. I spent the entire day on the discussion of transportation with the railroad people. I have just come through from Georgetown, without any supper yet, and have to be brief because of the rather light diet. I am not familiar with the conditions; that is, at Pocomoke City, and the point in question, but I would take it from what I have heard since I have been in the room, that the point is that you want the channel deepened so that you will be able to bring your vessels up on time. We are interested in that ourselves from the point of carrying freight as far up as Snow Hill. But our people are interested—the entire county. It seems to me, from what I have found in other sections of the country where channels are deepened and people have the advantages of the low freight rates, that there is no spot on earth worthy the consideration that Worcester County is entitled to at this time. I have been over this matter quite thoroughly to-day with a number of Pennsylvania Railroad men that keep in pretty close touch with things. If there is any point anywhere in the United States that deserves something to be done by the Government, by the men in authority, it is right here in Worcester County. I regret that I am not more familiar with the situation to-night. I regret that I was not here earlier, but I would be glad for any question that any of you people can put at me to get to the bottom of what is wanted, other than that we are not getting, as worthy citizens of the country, what justly belongs to us from the point of deepening our waterways in order that we may have cheaper transportation.

Col. BEACH. Did the Pennsylvania Railroad officials seem to think that the Pocomoke River was to be improved?

Mr. HARRISON. They didn't have a word to say. I have been with the officials since 11 o'clock this morning.

Mr. TULL. I introduce to you the president of our city council, Mr. E. W. Veasey. Mr. Veasey, when he was a young man, used to run on this line.

Mr. VEASEY. I had some experience about 30 years or more ago on the Pocomoke Muds. I spent about six years on one of the steamers—it used to be called the Eastern Shore Steamboat Co. at that time—and some one spoke about steamers coming on schedule time. I don't think we would average once a month of getting in on schedule time, for we often got caught on "The Muds" and lay there sometimes anywhere from two to six hours. Since I was running on the steamer they have built a wharf just on the other side of "The Muds" called the Saxis Pier, and I understand the steamer now when she comes up there—they know they can't get over "The Muds"—they lay at the pier until the tide gets favorable, and by doing that they can save about probably from one to two hours. For instance, if she comes up on "The Muds" and gets stuck there, it will take—the tide will have to run in at least one or two hours longer before she can get out of that ditch she has made there in the mud; but by laying at this pier and coming in after the tide has started in, and with the tide coming in with her, she can save a little more time by it—from one to two hours. Sometimes in busy seasons, you can cut off anywhere from two to five hours in getting into market. They spoke about the difference in the sale of potatoes and perishable goods. The markets in the city are usually in the morning, say from 5 to 8 o'clock, and after 8 o'clock the market is considered over—8 or 9 o'clock at least, and then any produce that comes in after that hour has to lay over at the docks and be sold at a reduced price the next day, and often a day's time makes quite a little difference in price. I think that is about all I can think of along that line.

Mr. TULL. Gentlemen, I have tried to help you out as much as I could, but if I have overlooked, or have not been informed of any that would like to speak to Col. Beach, I would be glad to have you do so. I think I see Mr. Purnell, from Snow Hill. Has Mr. Purnell any statement he would like to make?

Mr. PURNELL. I don't think I have any statement to make.

Mr. TULL. If there are no others, on behalf of Pocomoke and Snow Hill and the surrounding country I wish to extend our hearty thanks to you, Col. Beach, for your coming to Pocomoke and showing your interest in our interest.

Mr. McMASTER. This 10-foot channel would be at mean low water?

Col. BEACH. All depths for channels are measured at mean low water.

Mr. McMASTER. Then if we had a channel 10 feet, at high water we would have water 13 feet, because we have about 3 feet rise and fall of tide. Now, I think that the channel they have cut at the upper end of the river, at Snow Hill, is 9 feet at mean low water. Well, if we were to have a channel cut over "The Muds" 9 feet, it would be a saving of hundreds of thousands of dollars. If we were to have a channel 9 feet at mean low water, it would mean at high

water 12 feet, while the boats that have been coming up this river have been drawing about 9 feet. Very few of them draw over 9 feet, and they could come in on almost mean low water, and if we can save \$100,000 it might induce the Government to cut the channel. And if we were to ask for a channel of 9 feet at mean low water, I think it would answer our purpose, because at the head of the river, or near Snow Hill, you already have a depth of 9 feet at mean low water. It would put Snow Hill on a footing with Pocomoke. I do not live in either town, yet they are both my towns, and I think that we ought to do as much for Snow Hill as we do for Pocomoke.

Mr. TULL. Mr. McMaster is very charitable, Col. Beach, and I appreciate it very much, his charitable view of things. If we always maintain fully 9 feet at mean low water at "The Muds," all well and good, but there will be more or less filling, and as far as my end of the business is concerned—and we are all selfish—we certainly do not want less than 9 feet at mean low water, because the ordinary fishing steamer is drawing anywhere from 9 to 12 feet of water; and if we can, we would like to get the deeper draft vessels to run up here, like the different sail vessels, the three-masted schooners, coal vessels; they draw somewhere about the same amount of water. But I do agree with Mr. McMaster that if we always have 9 feet of water, at low water, all well and good, but certainly not less; and I think 10 feet would be preferable. Before closing, Mr. Milton L. Veasey would like to say a word or two more.

Mr. VEASEY. It hardly seems to me that this is necessary at this stage of the meeting. I will only say, while I am up, that I hope we have given some manifestation of our interest at this hearing. I will also say that I have made careful note of the suggestions for further information, and will say that it will be sent promptly. I would like to ask you, if you will be kind enough to do so, to yourself take the floor and suggest to us what we have left undone or what further we may do which will help us to accomplish the purpose that we are after.

Col. BEACH. There is one feature which appeared to me that has not been done, and that is that your Board of Trade might collect the statistics with regard to the coal used along the Pocomoke River and ascertain the entire consumption. There is not much doubt of the fact that the coal would probably come from Baltimore by water if you could bring it in in barges—I think that a small portion would probably come by steamer—and if you could estimate the entire amount of coal you could find what the saving would be. Then there are other commodities which your Board of Trade could estimate in similar manner which would have a bearing. And I think that if they would look over the field in that way, and make an estimate as closely as they can in dollars and cents of the saving which would be effected by having a greater depth, and also estimate a reasonable prospective increase in business, it would be effective. It has been found in every community that where you cheapen transportation you increase business, and the increase in business reacts on the transportation and further increases that, so that a reasonable increase over the present amount might annually be expected; and after looking over the field it seems to me that the officials of your board of trade could make an estimate of these quantities and the increase in trade which may annually be expected to follow. And it ought to be as closely as you can estimate in dollars and cents; round numbers, of course. We do not expect to get it exactly, but the people who are on the ground ought to be able to make an estimate; and any information of that kind showing the saving which will result in freight rates, the increase in business which will result, and the prospective commerce which will ensue, would have a bearing upon the case. I would say that if you get cheaper coal and cheaper commodities, that you can confidently expect a somewhat greater increase in population, which will in turn add to the commerce, and if you can work up a report like that, I am sure it will have a great deal of effect, especially if it is done so that the figures show that they have been conservatively and carefully prepared, and are not a "farmer's prospectus." And I want to say that if there is any information which I can give at any time that will help in that work, I would like to have the parties that are interested consult me freely and frankly, and I will do my best to assist them, because in a matter of this kind we are trying to work toward the same end. The Government wants the facts. You think the facts are sufficient to justify the improvement of the stream, and the closer we get together, the better able we will be to decide the case. I hope, sincerely hope, that you can make a good case for yourselves. I thank you all. I call the hearing closed.

Mr. TULL. I would like to ask a question. Is there a sufficient appropriation available that can be applied toward the accomplishing of this work should the Board of Engineers recommend it?

Col. BEACH. We will have to recommend another appropriation by Congress. We may have an additional survey made across "The Muds."

Mr. ENNIS. There is then a fund that could be used.

Col. BEACH. There is a fund that could be used for the survey. There is plenty of money—all the money that is needed to present the facts to Congress. All that you need to do is to give the facts to me. But there is no money for making the improvement itself until after the appropriation is made by Congress.

(Hearing closed at 10 p. m.)

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 year 1839 was a landscape of the
 English Lakes. It was taken by
 the Englishman, William Henry Fox Talbot.
 He was the first to use the term
 "photography" to describe his process.
 The word is derived from the Greek
 words "phos" (light) and "grapho"
 (to write). Talbot's process was called
 "calotype" and it was the first to
 produce a negative image. This was
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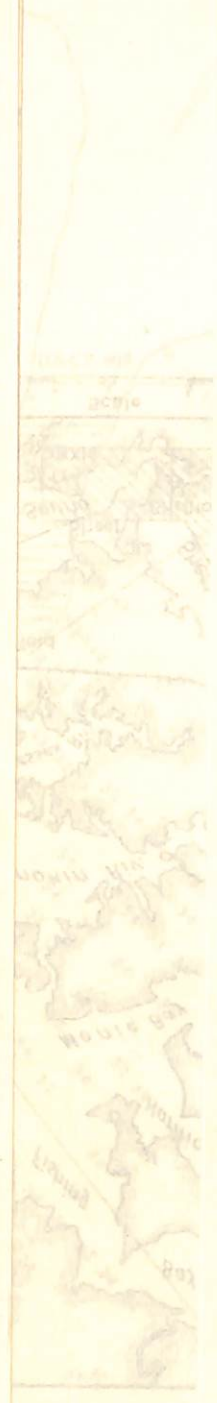
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Soundings refer to mean low water.

Tidal observations made at half tide shown thus:

Boring No 6 - Rod went through 30 ft of soft mud the hard bottom is 30 ft below.

Boring No 5 - There is 30 ft of mud over layer of muddy sand.

Boring No 4 - Rod went through 30 ft of soft mud. No hard bottom reached.

Boring No 3 - Rod went through 35 ft of mud. No hard bottom reached.

Boring No 2 - There is 30 ft of soft mud on a bed of hard sand.

Boring No 1 - There is 30 ft of soft mud on a bed of hard sand.

Borings were made by a hand auger. The auger was used to determine the depth of the soft mud and the position of the hard bottom.

There have been taken from the borings Shell Fish Commission Chart No. 1. The chart shows the position of the borings and the depth of the soft mud.

B. M. Nos 1 & 2 are each at an elevation of 10 ft above mean low water.

eastward from the pier head. The B. M. is 4 ft from the northwest corner of the pier head.

under the surface of the water on the mean low of Saxis, about 22 ft below the surface of the water.

B. M. No 2 consists of seven copper nails in horizontal line into the just east of the pile in which gauge is attached.

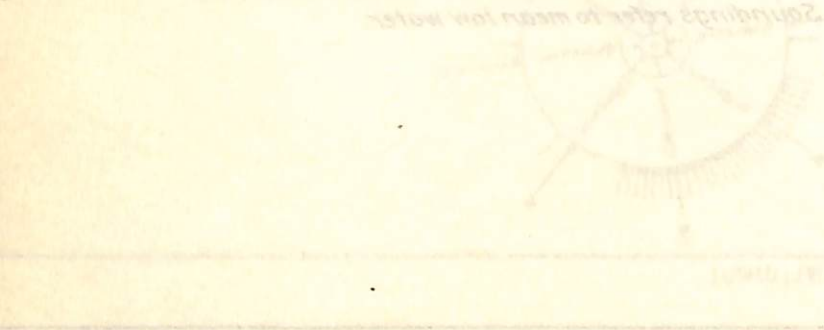
B. M. No 1 consists of seven copper nails in horizontal line into the just east of the pile in which gauge is attached.

Zero of tide gauge is at mean low water. Mean range of tide - 5.4 ft.

of the B. C. & A. Co. at Saxis Pier head.

U. S. E. tide gauge is a plain staff fixed to a pile on the north side of the pier head.

U. S. C. S. triangulation stations are shown thus: A.



Church Spire

Saxis



1000

1000