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DELAWARE OYSTER SURVEY COMMISSION

1909 - 1912

REPORT OF COMMISSION

BY

Members of Commission

Governor SIMEON S. PENNEWILL

Senator ALVIN B. CONNER

Senator JOHN W. SHELDRAKE

Representative WALLER DONOHO

Representative ALFRED L. AINSCOW

REPORT OF SURVEY

By CHARLES YATES

*U. S. Coast and Geodetic Survey
Consulting Engineer of Commission*

KING BROTHERS, BALTIMORE, MD.

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REPORT OF COMMISSION.

To the Governor and General Assembly of the State of Delaware:—

By an Act of the General Assembly, approved April 5, 1909, being Chapter 131, Vol. 25, Laws of Delaware, this Commission was created for the purpose of resurveying and plotting the oyster grounds of Delaware Bay, the language of the Statute being as follows:

TEXT OF ACT CREATING COMMISSION AND PROVIDING FOR SURVEY.

Section 1. That a Commission is hereby created and established consisting of Governor Simeon S. Pennewill, Senator Alvin B. Conner, Senator John W. Shel-drake, Representative Waller Donoho and Representative Alfred L. Ainscow, for the purpose of caring for the oyster interests in this State as hereinafter provided. Said Commission shall organize by the election of a President and Secretary, and the acts of a majority shall be valid and binding as the acts of said Commission.

Section 2. It shall be the duty of said Commission and it is hereby authorized and directed to arrange for and superintend a survey of the oyster grounds of the Delaware Bay and the marking of the boundaries thereof, and to cause a sub-division of said grounds to be made into tracts or plots suitable for leasing purposes. The said Commission may employ a surveyor or surveyors and such assistants as may be necessary for the purposes of making and completing said survey and plot.

Section 3. The sum of Five Thousand Dollars or so much thereof as may be necessary is hereby appropriated for the purposes provided in this Act, and the State Treasurer is directed to pay all bills incurred by said Commission in carrying out the provisions of this Act upon orders drawn upon him signed by the President and Secretary of said Commission.

Section 4. The members of said Commission shall each be allowed the sum of Four Dollars per day for the actual time in which they shall be engaged in the duties imposed by this Act, together with necessary expenses.

AMENDMENTS PROVIDING FOR CODIFICATION OF OYSTER LAWS.

By an Act of the General Assembly, approved March 29, 1911, being Chapter 153, Volume 26, Laws of Delaware, the following additional sections were added to the original Act, to wit:

Section 5. It shall be the duty of the said Commission to publish with its report a copy of the Chart of the Survey and a carefully prepared codification of the oyster laws of the State.

Section 6. The sum of Five Hundred Dollars or so much thereof as may be necessary, is hereby appropriated for the purpose of enabling the Commission to carry out the provisions of the preceding Section.

ORGANIZATION OF COMMISSION.

In accordance with the provisions of the Act, the Commission at its first meeting held in the spring of 1909, was organized by electing Governor Simeon S. Pennewill as President and Senator Alvin B. Conner as Secretary.

The Commission was authorized by Section 2 of the said Act to employ a "surveyor or surveyors and such assistants as might be necessary for the purpose of making and completing said survey and plot," and after investigating this subject, it was decided that it would be desirable to have the engineering work done under the supervision of some government officer familiar with the surveying of oyster bottoms, if it were possible to make such an arrangement.

CO-OPERATION OF U. S. COAST AND GEODETIC SURVEY.

Through the efforts of Congressman Heald, and the courtesy of Hon. Charles Nagel, Secretary of the Department of Commerce and Labor, and Superintendent O. H. Tittmann of the Coast and Geodetic Survey, we were able to secure the services of Captain Charles C. Yates as Consulting Engineer for this work. The Government, at such times as was necessary, granted to Captain Yates a leave of absence without pay, in order that he might do this work, and the *Commission only paid for his services such a sum per diem as he would have received from the Government if he had not been granted such a leave.* In this way the best service was secured at the least possible expense. Indeed, without the assistance thus received, the work could not have been done within the appropriation made.

Before the work of surveying was begun the lessees of the oyster beds were notified by the Consulting Engineer that such a survey was about to be made and that they should fix stakes showing exactly the bottoms covered by their respective oyster plantations. This gave them an opportunity to protect all the oyster bottoms claimed by them, and at the same time compelled them to pay for all the area they occupied. The lease-holders were permitted to do this regardless of the shape and size of the particular tract occupied.

Captain Yates* has made a separate and very interesting report which together with the "Chart of the Leased Oyster Bottoms," prepared under his discretion, form a part of this document.

CO-OPERATION OF U. S. BUREAU OF FISHERIES.

By a fortunate combination of circumstances the Commission was able to secure the co-operation of Dr. H. F. Moore* of the Bureau of Fisheries in making a complete survey of the natural beds of the State, although this was not a part of the duties imposed by the Act creating the Commission.

This work of Dr. Moore's is a very valuable contribution to the oyster industry of Delaware, and is greatly appreciated by the Commission. Dr. Moore's report together with a map of the natural oyster beds has been published by the U. S. Bureau of Fisheries, and can be obtained from that branch of the government service.†

**Concurrent Resolution Thanking Captain Yates and Dr. Moore for Their Services to the Delaware Oyster Survey Commission.*

Whereas, Captain C. C. Yates, of the U. S. Coast and Geodetic Survey, and Dr. Moore, of the U. S. Bureau of Fisheries, have rendered very valuable service to the Delaware Oyster Survey Commission, now therefore:

Be it Resolved by the Senate of the State of Delaware, the House of Representatives concurring therein:

That a note of thanks be given to Captain Yates and Dr. Moore for the services they have performed to the State of Delaware, in successfully carrying out the work of the Delaware Oyster Survey Commission.

And be it further Resolved, That a copy of this Resolution be sent to Captain Yates and Dr. Moore.

†This publication is entitled "Condition and Extent of the Natural Oyster Beds of Delaware by H. F. Moore, U. S. Bureau of Fisheries".

AMENDMENTS TO THE OYSTER LAWS OF THE STATE RECOMMENDED BY
THE COMMISSION AND ADOPTED BY THE GENERAL
ASSEMBLY OF 1911.

The Commission, in order that its work might be made effective, recommended to the last General Assembly certain legislation which was enacted. That law, approved April 13, 1911, is Chapter 154, Volume 26, Laws of Delaware, and reads as follows:

Whereas, by an Act of the General Assembly, approved April fifth, 1909, a Commission was created for the purpose of having a survey made of the Oyster Grounds of the Delaware Bay.

And Whereas the said survey was completed on the first day of July, 1910, and a chart made of the bottom covered by the existing leases.

And Whereas, in order that the said survey and chart may be made effective and of value to the Oyster Industry, therefore,

Be it enacted by the Senate and House of Representatives of the State of Delaware in General Assembly met:

Section 1. That the survey and chart made under the direction of the Commission created by Act of the General Assembly, approved April fifth, 1909, which chart bears date of the first day of July, 1910, be, and the same is hereby made the official chart of the survey of the Oyster Grounds of the Delaware Bay, including bottoms occupied on the date aforesaid; and all new licenses issued by the Oyster Revenue Collector shall be issued and prepared in accordance with said official chart.

Section 2. That hereafter no permanent lease for bottom within the boundaries described in Section 12, Chapter 653, Volume 19, Laws of Delaware, as the same has been or may hereafter be amended, shall be granted, nor shall a license be issued, unless the boundaries of the same are laid out and established and clearly marked on the official chart. When application is made for a license, however, the Oyster Revenue Collector shall issue a temporary license which shall give the licensee the same rights as a permanent license, but said temporary license shall be good only until a survey of said leased bottom can be made as hereinafter provided. Such temporary license shall be based upon approximate location of new bottom as marked out on the official chart.

Section 3. For the purpose of keeping the official chart up to date, the Oyster Revenue Collector shall in the month of June, July or August, of the year 1911, cause a survey to be made of all portions of the bottom leased since July the first, 1910, and shall cause the location of the same to be marked on the official chart, together with the date of such revision of the official chart; and a like survey of all new portions of the bottom leased since the day of the revision of the official chart shall be made in the month of June, July or August of each and every year, and a like revision shall be made in the official chart.

Section 4. The Oyster Revenue Collector shall charge in addition to the fees now provided by law, the sum of two dollars and fifty cents for each corner necessarily made in marking out the plot of new portions of the bottom desired to be leased, and the sum so charged by him shall be used in paying the expenses of the surveys provided for in the preceding section.

Section 5. The Oyster Revenue Collector, for the purpose of assisting the making of any additional surveys, shall keep and maintain the survey monuments, signal towers, etc., established in the survey of 1910, above referred to, and any person who shall wilfully injure or destroy any of such monuments or towers or other property used for the purpose aforesaid shall be guilty of a misdemeanor and shall be punished by a fine or imprisonment within the discretion of the Court.

Section 6. That no future lease, or modification of any existing lease resulting from the survey of 1910, shall be granted for oyster bottoms the boundaries of which are so placed that the adjacent "turn rows" will be greater than twenty yards, if the adjacent vacant space remaining for licensing be less than two hundred and fifty yards.

Section 7. The Oyster Revenue Collector shall keep and maintain the official chart and shall permit the same to be examined and copied by any person upon request. He shall also keep a book in which shall be recorded the leases made by him.

Section 8. If a person holding a license which is about to expire, desires the bottom occupied by him, licensed to another person, the Oyster Revenue Collector may compel that the shape and location of such bottom be changed, so far as may be practicable, to comply with Section Six of this Act. Any license granted may be transferred by the licensee to any other person, provided the same shall not become effective until approved by the Oyster Revenue Collector; and provided further that the said Oyster Revenue Collector shall have the same authority to compel a change in the shape and location of the bottom as in this section hereinbefore provided.

Section 9. That in addition to the rental for Oyster Bottoms and for tonnage the tax now provided for under existing law, on and after the first day of April next there shall be an additional annual tax of one dollar for each and every corner more than four in number of plots of bottom licensed as aforesaid for any one oyster plantation held by one lessee, which said sum shall be paid to the Oyster Revenue Collector, provided that two or more plantations held by one lessee, which are not separated at their nearest point by a distance of two hundred and fifty yards shall be considered as one lot in fixing the tax on corners.

INCREASE IN STATE REVENUES DUE TO SURVEY OF LEASED
OYSTER BOTTOMS.

The survey of the leased oyster bottoms showed a great number of acres occupied by oyster planters upon which no license or other rental had been paid. After a complete survey was made and the amendments above quoted were passed the status of every lessee became fixed and thereby much improved. The published "Chart of Leased Oyster Bottoms" which was distributed by the Commission, free of charge, to all interested in oyster culture showed much valuable ground that was not leased, and this led to a considerable increase in the area and number of oyster plantations. All these circumstances combined caused a decided increase in State oyster revenues which is clearly brought out by the interesting figures furnished by the State Auditor who states that the "collections, expense and net amounts paid into State Treasury for the past six years" were as follows:

<i>Year.</i>	<i>Collected.</i>	<i>Expense.</i>	<i>Paid State Treasurer.</i>
1907.....	6,953.00.....	1,133.47.....	5,819.53
1908.....	6,759.60.....	1,064.93.....	5,694.57
1909.....	6,632.00.....	1,435.57.....	5,196.43
1910.....	6,104.50.....	867.16.....	5,237.34
1911.....	9,606.50.....	1,670.73.....	7,937.77
1912.....	11,559.00.....	1,988.40.....	9,570.60

This shows a comparatively large increase in the year 1912 over any year previous to the completion of the survey in 1910. As Captain Yates said at the last meeting of the Commission, "figuring on a five per cent. basis, *the State of Delaware by means of the 'oyster survey' has increased the 'going valuation' of her oyster properties about \$80,000 which is a very good return for the less than \$5,000 invested in the work.*"

RECOMMENDATIONS.

The work of this Commission is finished, but we believe that there are yet great opportunities of further improving the oyster industry of Delaware, and at the same time increasing the revenue to the State; and we think the General Assembly would be justified in providing for a permanent, non-partisan Commission, to be appointed by the Governor, at a nominal salary, to carry out the work which has been started by

our Commission, and to make the most of the opportunity furnished by the oyster resources of our State.

And if such Commission should be provided for, it might be well to consider whether the Oyster Revenue Collector should not be appointed by such Commission, and be under its supervision so that its plans could be more effectively carried out.

SIMEON S. PENNEWILL.

President,

ALVIN B. CONNER,

Secretary,

JOHN W. SHIELDRAKE.

WALLER DONOHO,

ALFRED L. AINSCOW.

LAWS OF THE STATE OF DELAWARE RELATING TO OYSTERS.

COMPILED BY DANIEL O. HASTINGS,

*Attorney at Law,
Wilmington, Delaware.*

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TEXT OF LAWS.

Section 1. Unlawful to Take Oysters in Delaware Bay or River Without License—Penalty—Oyster Revenue Collector—Bailee of Oysters on Certain Bay and River Bottom. No person, be he resident or non-resident of this State, shall dredge for or take and carry away any oysters growing in the Delaware Bay or River unless he shall have first taken out one or the other of the licenses provided for in Sections 3, 10, 11, 12, 23, 44, 59, 60 and 64 of this Chapter, and in case of the violation of this Section the offender shall be deemed guilty of larceny and punished accordingly. And in order to promote the execution of this Section, and for that purpose only, the oysters growing or being at any time in the said Bay or River, on bottom over three feet deep, at ordinary low water, and not within any plantation, shall be held and taken to be in the custody and may be described in any proceedings for violation of this Section as the property of the person who at the time of prosecution may be the Collector under Section 35 of this Chapter; which said person by reason of his said office of Collector shall be the Bailee of said oysters, and have the same kind of special property therein as Bailees have by law of property in their possession by bailment under contract.

19 Del. Laws, Ch. 653, § 2.

Section 2. Unlawful to Plant Oysters Within Certain Limits Except as Provided. It shall be unlawful for any person to lay out or plant oysters within the following limits in Delaware Bay: Beginning at the mouth of Mispillion River and running in an easterly course to West Flats, thence South to Cape Henlopen, thence a Westerly course to the beach, except as in this Chapter provided.

19 Del. Laws, Ch. 653, § 3.

Section 3. Citizens May Appropriate Portion of Bottom of Bay Described in Section 2 for Oyster Planting—Grounds how Marked—Property in Oysters—Licenses—Fees. Any person or persons who are *bona fide* citizens of the State of Delaware may, for the purpose of planting oysters and catching the same by means of dredges, tongs or rakes, appropriate to his or their own use a part of the bottom of the bay within the limits defined in Section 2 of this Chapter, which shall not exceed in area more than fifty acres, nor less

than twenty-five acres, which part shall be designated by him or them by stakes to show at least two feet above high-water mark and not to be obstructive to navigation or interfere with the rights of fishermen. It shall be the possession of the planter or planters and the oysters to be deposited therein and their increase shall be his or their private property; but before any person shall avail himself of this privilege, he shall apply in writing to the Collector of the Oyster Revenue for a license for that purpose, and shall pay to the said Collector the sum of fifty cents per acre for each and every acre to be by him or them staked off for the purpose aforesaid, and also the sum of one dollar per ton (custom-house measurement) for the vessel employed in the business of dredging or planting, and shall also pay to the said Collector, as the fee or price therefor, for the privilege of dredging or tonging said oysters, five dollars for each and every boat and pair of tongs used in said boat, and the said tongs shall have painted on them a number (corresponding with said boat's number), and no more shall be demanded for the use of said tongs by whomsoever used.

The said license shall last only one year and must be renewed by the first day of April of each year and the like sum be paid at the time of each renewal.

19 Del. Laws, Ch. 653, § 4.

Section 4. Taking Oysters from Plantation of Another, Larceny—Penalty—Fines How Applied. If any person or persons shall take or carry away from the plantation of another, so as aforesaid appropriated to his use, any oysters being within the limits thereof, without the consent of the owners thereof, he shall be deemed guilty of larceny and upon conviction thereof be punished accordingly, and it shall be no objection to a prosecution for larceny in such a case that the act was done openly.

In addition to the said punishment there shall be imposed a fine of one hundred dollars, one-half to be given to the informer, and the other half to the owner or owners aforesaid.

19 Del. Laws, Ch. 653, § 5.

Section 5. Violation of Section 2 a Misdemeanor, Penalty. Any person violating the provisions of Section Two of this Chapter shall be deemed guilty of a misdemeanor, and on conviction thereof, before any justice of the peace of Sussex County, shall be fined for each offense the sum of one hundred dollars and shall forfeit all oysters planted by him or them, the vessel used by him or them in the planting of said oysters, and all and everything in and belonging to her; the one-half of said fine shall be paid to the informer and the other half to the Collector of Oyster Revenue.

19 Del. Laws, Ch. 653, § 6.

Section 6. Complaint Charging Violation—Duty of Justice of the Peace. When an affidavit is filed before said justice, charging that a violation of Section 2 of this Chapter has been committed by any one, and setting forth a description of the boat or vessel used by him or them so charged, the said

justice shall issue a warrant directed to any constable of said county, authorizing him to arrest the person or persons therein charged and also to seize and hold said boat or vessel and all and everything in and belonging to her until the final order of the justice of the peace in the premises.

19 Del. Laws, Ch. 653, § 7.

Section 7. Offenders Committed—Seizure of Boat. Upon such conviction the said justice of the peace shall have the power and authority to commit any one so offending to the jail of Sussex County until said fine and costs are paid, and also to issue an order to any constable of said county empowering and directing him to seize and sell said boat or vessel used by such offender in the planting of oysters in the waters aforesaid, or catching or carrying away the same without the consent of the owner thereof, and all and everything in and belonging to her, on ten days' notice, posted in two of the most public places in each of the hundreds of Cedar Creek, Broadkilm, Lewes and Rehoboth, and that such sale shall convey to the purchaser or purchasers of said boat or vessel and all and everything belonging to her a good and valid title thereto.

19 Del. Laws, Ch. 653, § 8.

Section 8. Proceeds of Sale of Boat How Applied—Appeal—Duty of Attorney General. The proceeds of said sale so as aforesaid made by the constable, after deducting costs which shall be retained by the said officer and paid to the parties entitled, shall be paid over to the county treasurer of Sussex County; provided that the parties defendant may appeal to the Court of General Sessions within ten days from the time when the judgment was rendered, upon giving bond to the State, with security to be approved by the justice of the peace, in a sum double the amount of the fine imposed and the value of the property seized by the constable, conditioned that if the said appeal shall be prosecuted with effect then the same shall be void, otherwise to be in full force and effect. The proceedings shall be in the name of the State of Delaware, and upon the docketing of the appeal in the Court of General Sessions the Attorney General shall answer the appeal and conduct the case for the State.

19 Del. Laws, Ch. 653, § 9.

Section 9. Plantation Owners and Deputies may Arrest. The owner or owners of the plantations prescribed and authorized within the limits set forth in Section 2 of this Chapter, and all persons deputized by him or them as his or their agents, shall have the right and are hereby clothed with full power and authority to make arrests for any violation of any of the provisions of Sections 1 to 79, inclusive, of this Chapter, as duly constituted officers of the laws of Delaware, and their acts and doings as such shall be respected as legal and valid.

19 Del. Laws, Ch. 653, § 10.

Section 10. Certain Oyster Plantations and Oysters Thereon Property of Planters—Rental—Tonnage Fees—Forfeiture of Rights by Non-Payment of Tax—Plantations and Boats Numbered—Vessels Dredging on Natural Beds, How Designated.

All oyster plantations not exceeding fifty acres occupied and used by boats or vessels of over nine tons (custom-house measurement), and all plantations not exceeding thirty acres occupied and used by boats of the tonnage of nine tons (custom-house measurement) and under, prior to the ninth day of April, A. D. 1893, made in the Delaware Bay, shall be deemed and taken to be the possession of the respective planters, and oysters deposited or to be deposited in such plantations and their increase shall be the private property of the said planters; provided and upon the condition that the said planters shall pay annually, by the first day of April, to the Collector of Oyster Revenue, to be appointed as in Section 35 of this Chapter, the sum of twenty-five dollars as rent for the ground so held by him or them and used by boats or vessels over nine tons (custom-house measurement), and the sum of fifteen dollars as rent for ground so held by him or them and used by boats or vessels of nine tons or under (custom-house measurement), and the further sum of three dollars and fifty cents per ton (custom-house measurement), for the boat or vessel to be used in the business of working the said plantations. Failure to pay such rent and license fee by the time above mentioned shall be a forfeiture of all the rights hereby secured. The said plantation shall be designated by stakes, as provided in the next section for new plantations, and the oysters within them shall be protected as hereinafter provided. The different plantations shall be treated as numbered in the order which said licenses to plant are issued, and the boat or vessel used in the business of planting shall wear that number, painted in black, at least eighteen inches long, in the middle of her mainsail, one-third of the distance below the head thereof. Provided, however, that where more parts than one, but not exceeding in the whole fifty acres or thirty acres, as the case may be, are appropriated by one person, they shall bear the same number, and that number only shall be necessary for designation of the boat or vessel; and every plantation shall be designated as soon as appropriated by the number of the license under which it is occupied, attached in some proper form to each corner of the plantation, the figures to be not less than ten inches in length, the expenses of which shall be borne by the planters; and the boat or vessel used in the business for dredging for oysters only on the natural beds of this State, under license authorized by this Chapter, shall wear in the middle of her mainsail, one-third of the way from the head thereof, a Roman letter, painted in black, eighteen inches long, to be designated in the license and to be in orderly succession from the beginning of the alphabet.

An east line drawn from the end of the old Mahon's Road running a due east course to Blake's Channel shall be an established line between the part of the bottom which is set apart for planting purposes and the natural beds in the Bay.

The captain of the watch boat, assisted by his crew, shall mark by stakes or buoys, or both, the line by law prescribed as the northern limit of the plantation ground in the Delaware Bay and which is drawn due East from Mahon River Light House to Blake's Channel, and replace the said stakes or buoys from

time to time as the same may become destroyed. The cost of the necessary stakes or buoys used for the marking of said line shall be paid by the Oyster Revenue Collector as other expenses of the said watch-boat are paid.

19 Del. Laws, Ch. 653, § 11; 20 Del. Laws, Ch. 465, § 4; 20 Del. Laws, Ch. 466, § 1; 22 Del. Laws, Ch. 149, § 1; 23 Del. Laws, Ch. 130, § 2.

Section 11. Other Plantations—Within What Limits—How Marked—Oyster Property—Planter Licenses—Fees—Privileges of Sections 10 and 11 do not Extend to Natural Oyster Beds. Any person or persons may appropriate to his or their own use a part not exceeding fifty acres for boats or vessels to be used by him or them of a larger tonnage than nine tons (custom-house measurement), and a part not exceeding thirty acres for boats or vessels to be used by him or them of nine tons and under (custom-house measurement) of the bottom of Delaware Bay, south of Mahon River and west of Blake's Channel, embraced and lying between the two following parallel lines, to wit: one drawn due east from Mahon River Light House and the other due east from a point on the shore at ordinary high-water mark, three miles south of the middle of the mouth of Murderkill Creek, saving and excepting, however, that part on the bottom of the Delaware Bay lying between the two aforesaid parallel lines and extending three hundred yards into the Bay from the ordinary low-water mark, unless the same be then appropriated according to law, which part shall be designated by him or them by stakes not more than fifty yards apart to show at least two feet above the ordinary high water and not be obstructive of navigation; it shall be the possession of the planter or planters, and the oysters to be deposited therein and their increase shall be their private property. But before any one shall avail himself of this privilege, he shall apply in writing to the said Collector for a license for that purpose and pay to the said Collector the sum of twenty-five dollars as the fee or price thereof for boats or vessels to be used by him or them of a larger tonnage than nine tons (custom-house measurement) and the sum of fifteen dollars as the fee or price thereof for boats or vessels used by him or them of nine tons and under (custom-house measurement) and also the sum of three dollars and fifty cents per ton (custom-house measurement) for the boat or vessel to be employed in the business of planting, if he be a resident of this State, and two dollars and fifty cents per ton (custom-house measurement) if he be a non-resident of this State. The said license shall last only to the first day of April following the date thereof, and must be renewed by the first day of April of each year, and the like sum be paid at the time of each renewal; provided that nothing in this Chapter contained shall be construed to authorize the appropriation by any one person of so many parts as shall exceed in the aggregate fifty acres for boats or vessels over nine tons (custom-house measurement), and thirty acres for boats or vessels of nine tons (custom-house measurement) or under. The privileges granted by this and the preceding section shall not embrace any portion of the bottom of the bay which is a natural oyster bed and has been hitherto used and worked as such, nor shall be extended beyond the mere right to plant oysters and hold them as property.

19 Del. Laws, Ch. 653, § 12; 20 Del. Laws, Ch. 466, § 1.

Section 12. Natural Oyster Beds to Be Dredged Only by Citizens—Right How Obtained—Collector to Issue Certificate—License How Obtained, How Forfeited, Fees For—Licensed Planters Not Required to Take Out License to Dredge on Natural Beds—Certificate Necessary—Crew of Dredge Boat—Dredge Bags Regulated. No person who is not at the time a *bona fide* resident of this State, and shall have been such *bona fide* resident continuously for at least six months, and the vessel used by him at least one-half part thereof be *bona fide* owned by *bona fide* residents of this State and wholly manned by *bona fide* residents (all of which said *bona fide* residents shall have lived and resided in this State as such *bona fide* residents continuously for at least six months prior to the time of making application for the certificate hereinafter mentioned) shall dredge for oysters, or otherwise take the same up from any natural oyster beds of this State. But any *bona fide* resident of this State as aforesaid, and using a boat or vessel, one-half of which at least is owned by *bona fide* residents of this State as aforesaid, and wholly manned by *bona fide* residents of this State as aforesaid, desiring to avail himself of the privilege of dredging for oysters, or otherwise taking them up from any of the natural oyster beds of this State, for planting or other purposes, shall first procure from the collector as aforesaid a certificate under his hand, stating that he has complied with the provisions of the law in that behalf; and in order to obtain such certificate the owner, or one of the owners (if more than one) of any such boat or vessel, shall file with the collector a written application, stating the name of the boat or vessel, the name of the owner or owners (if more than one), and the place or places of residence (if living in a city the street and number must be given) of such owner or owners, and the shares in which such owners own the same, and the duration of residence in this State of the resident owners of at least one-half of said boat or vessel, and shall verify such statement by his oath or affirmation, which the said collector is hereby authorized to administer. The owner so applying shall file at the same time a written statement of the crew and master of such boat or vessel, showing the names and places of residence of each of the said crew and master of such boat or vessel, and the duration of residence in this State of the captain or master of said boat or vessel and of each of said crew (and the street and number of their residence if in a city), which shall also be verified by the oath or affirmation of the captain or master and each of the said crew respectively; which the said collector is also hereby authorized to administer. If it appears by such application or statement that at least one-half part of the said boat or vessel is *bona fide* owned by a *bona fide* resident or residents of this State as aforesaid, and is wholly manned by a crew all of whom are *bona fide* residents of this State as aforesaid, and have been such *bona fide* residents continuously for at least six months prior to the time of making such statement, the said collector shall issue and deliver to the master of such boat or vessel a certificate, unless the said collector shall have good grounds to believe that the statements made by any such owner or owners or any of the crew are untrue; and in such case the said collector may refuse to issue such certificate until he shall have had a reasonable time to inquire into the truth or falsity of said statement, and if upon such inquiry the said collector shall be satisfied of the truth of such state-

ment, he shall thereupon issue such certificate; but if he shall be satisfied, upon due inquiry, that any of said statement is false, he may refuse to issue such certificate.

The certificate may be according to the following form:

"This is to certify that the owner of the vessel called having fully complied with the provisions of law in that behalf, the said vessel is allowed and permitted to be used and employed in dredging on any of the natural oyster beds within the waters of this State (excepting the portions reserved by law for tonging purposes) during the period by law prescribed for dredging; but the permission hereby conferred shall instantly cease and terminate whenever less than one-half part of said vessel shall be *bona fide* owned by *bona fide* residents of this State, or whenever said vessel shall not be manned by a crew wholly composed of *bona fide* residents of this State.

Given under my hand, at....., this.....day of.....
A. D. 19.....

.....
Collector of Oyster Revenue.

Whenever such boat or vessel shall not be wholly manned by *bona fide* residents of this State as aforesaid for at least six months, or at any time less than one-half part thereof shall be *bona fide* owned by *bona fide* residents of this State, as aforesaid, thereupon all privileges conferred by said certificate shall immediately cease and terminate and the license hereinafter provided for shall be forfeited and become null and void.

When such certificate shall be issued as aforesaid the captain or master of the boat or vessel to be employed in the business of dredging upon any of the natural oyster beds of this State, before exercising the privilege of dredging as aforesaid, shall obtain from said collector a license. The fee for license to dredge on natural beds shall be three dollars and fifty cents per ton (custom-house measurement), for the boat or vessel to be employed in the business, to be demanded by and paid to the aforesaid collector before the said license is delivered, but such license shall not be taken to authorize the planting of oysters nor of dredging for oysters on any of the natural oyster beds only from the fifteenth day of April until the thirtieth day of June, inclusive, of the year in which said certificate and license were issued. The said license and any oyster license under this Chapter may be demanded at any time for inspection by the Collector aforesaid or the person then in command of the watch boat, and failure to produce it shall be evidence that it does not exist. Provided that nothing contained in this section shall be so deemed or construed as to require a regular licensed planter, who is a resident of this State as aforesaid, and using a boat or vessel one-half of which is *bona fide* owned by *bona fide* residents of this State as aforesaid and manned by a crew who are all *bona fide* residents of this State as aforesaid, to take out a license to dredge on the natural oyster beds of this State, but such regular licensed resident planters as aforesaid shall be required to obtain the certificate mentioned in this section, and such certificate alone obtained shall confer upon such regular licensed resident planter of this State the right to dredge upon the natural oyster beds

of this State from the fifteenth day of April until the thirtieth day of June, inclusive, only in the year in which said certificate is issued. Any person who shall swear falsely in making any of the oaths or affirmations required by this section shall be guilty of wilful perjury and shall be prosecuted and punished accordingly.

Provided, however, that the provisions of this Section, with reference to the manning of any boat or with reference to the residence of the crew thereof, shall not apply to cooks or deck-hands on board any dredge boat.

No person or persons licensed or authorized, as aforesaid, shall dredge for oysters on any of the natural oyster beds of the Delaware Bay with dredge bags made of rings of a smaller size than one and one-half inches inside measurement, nor with dredge bags that have been lined with screening, roping or any other material that will reduce the size of the openings in the rings of said dredge bags.

19 Del. Laws, Ch. 653, § 13; 20 Del. Laws, Ch. 466, § 1; 25 Del. Laws, Ch. 132, § 1, 2, 3 & 4.

Section 13. Owner's Consent Necessary to Take Oysters from Plantation.

That no person or persons shall dredge for or otherwise take any oysters from the plantation of another without the consent of the person or persons owning said plantation.

19 Del. Laws, Ch. 653, § 14.

Section 14. Dredging on Natural Beds, License Necessary—in what Months, not after Sunset, before Sunrise, or on Sunday—Planter may not Dredge from Plantation in July or August—Oyster Boats may not Remain on Beds After Sunset. It shall be unlawful for any person or persons whomsoever, having no license to dredge for oysters on any of the natural oyster beds of this State, or having no license to plant oysters, to dredge for any oysters from any of the natural oyster beds of this State. And it shall be unlawful for any person or persons having a license to dredge for oysters on any of the natural beds of this State, or being a resident planter and having a license to plant oysters and having the proper certificate as hereinbefore required, to dredge for oysters from any of the natural oyster beds of this State at any time excepting from the fifteenth day of April until the thirtieth day of June, inclusive, of the year in which such certificate and license were issued; and it shall be unlawful for any person or persons whomsoever to dredge for or otherwise catch or take up oysters either on their own plantations or on the natural oyster beds of this State at any time after sunset and before sunrise, or on the Lord's Day, commonly called Sunday, and it shall be unlawful for any licensed planter of oysters to dredge for or otherwise catch or take any oysters from his own plantation during the months of July and August of any year.

It shall be unlawful for any boat or vessel used in virtue of any oyster license to plant or dredge, to remain on or near the plantation or natural oyster beds in the bay after sunset, and all oyster boats or vessels used in planting and dredging for oysters under this Chapter shall not only be retired from their

occupation or business at or before sunset, but shall be taken within the land by that time if the wind and tide will allow, and no accident prevent.

19 Del. Laws, Ch. 653, § 15; 25 Del. Laws, Ch. 132, § 5.

Section 15. Signal for Beginning or Retiring from Work—Signal Flag—Failure to get Signal no Excuse for Remaining on Beds—Duty of Watch Boat. A signal for commencing work by the boats or vessels licensed under this Chapter, in the morning, and for retiring from work in the evening shall be given from the watch boat; such signal for commencing work shall be the hoisting of the flag of the watch boat in the morning at sunrise and keeping the same displayed for one hour at least thereafter, and the signal for retiring in the evening shall be the lowering of the said flag at sunset, which previously to the lowering thereof at sunset, shall be displayed at least one hour. This flag shall be of drilling of navy blue color, six feet by four in length, with a diamond of white in the centre, having a diameter of two feet between the points furthest apart; it shall be displayed, as aforesaid, at least one hour at her main topmast head in the morning during the working days, commencing at sunrise, and shall also be displayed one hour as aforesaid before sunset.

The failure or neglect of the giving of the signals from the watch boat for retiring shall be no excuse for any boat or vessel to remain on or near the plantations or natural beds in the bay after sunset. The watch boat shall not leave the planting grounds and natural oyster beds, but shall cruise up and down the same if the wind will allow except when she is compelled by floating ice, severe stress of weather, accident or want of repairs or supplies from remaining in the bay.

19 Del. Laws, Ch. 653, § 16.

Section 16. Violations of Sections 12, 13 and 14 How Punished—Jurisdiction of Justice of the Peace. Any person or persons who shall violate any of the provisions of Sections Twelve, Thirteen and Fourteen of this Chapter shall be fined the sum of one hundred dollars, and if more than one, each of the said persons shall be fined one hundred dollars, which said fines, with the costs of prosecution, shall be a lien upon the boat or vessel used by such offenders from the time of the seizure thereof as hereafter in this Chapter provided; and the proceedings for such violation shall be before any justice of the peace of Kent County as provided in Section Eighteen of this Chapter, and the offender or offenders shall be imprisoned until said fines and costs are paid, or until such boat or vessel shall be sold as hereafter in this Chapter provided.

19 Del. Laws, Ch. 653, § 17.

Section 17. Certain Maneuvers of Vessel and Crew Conclusive Evidence of Dredging—Working Boat with Dredges Overboard on Plantation of Another, Evidence of Dredging Without Owner's Consent. When an oyster boat or vessel is sailing over a plantation or oyster grounds with dredges overboard and the men or crew, or part of them, at the winders on board of such boat or vessel handling or working the dredges, it shall be conclusive evidence that the

parties on board of such boat or vessel are dredging for oysters; and when a boat or vessel is discovered on the plantation or ground of another, so working his boat or vessel with dredges overboard, without the owner's permission, it shall be conclusive evidence that such person or persons are violating the provisions of Section Thirteen of this Chapter.

19 Del. Laws, Ch. 653, § 18.

Section 18. Watch Boat, How Maintained, Manned and Employed—Log Book—Crew of Oyster Boats shall Aid Watch Boat to Enforce Law—Duty of Watch Boat Captain—May Seize Boat Violating Law—Hearing, Time of, Postponement—Bail—Penalties—Fine—Seizure of Boat—Sale—Application of Proceeds—Persons Discharged—Appeal, Security, How Tried, Limitation. For the purposes of protecting the oyster beds in the Delaware Bay, and those who plant oysters under this Chapter in the enjoyment of the privileges thereby secured to them, the aforesaid Collector shall, with the monies paid under the provisions of this Chapter, keep and maintain a suitable vessel as a watch boat, not less than twenty-five tons (custom-house measurement) which shall be of the best quality, well found in all respects, and able to keep watch in all weathers. There shall be a crew of said boat consisting of four men, one of whom shall be captain, one of whom shall be mate, and the other two of whom shall be sailors. The captain shall have charge of said boat and the other members of the crew shall be subject to his orders. In the absence for any cause of said captain the mate shall have charge and the others shall be subject to his orders. The Collector of the Oyster Revenue shall appoint the captain of the watch boat and may for cause remove him from office, and the said captain shall name and appoint the other members of the crew. The said captain shall receive a salary of sixty-five dollars per month, the mate fifty dollars per month, and the other two members of the crew forty dollars per month, they finding their own board. The said salaries shall be paid by the State Treasurer at the end of every month. The watch boat shall be employed at all times in the protection of the natural oyster beds of this State and the plantations of the several planters from depredation by trespassers, and shall cruise at all times, when the weather will allow, over the oyster plantations and natural beds from one end of them to the other, that no depredation upon any of them may be unseen, and shall not go to harbor except when stress of weather or when accident or some urgent necessity requires it. On board of this boat shall be kept a log book, in which shall be entered the names of every person licensed to plant or dredge for oysters, with the number of his license and the time when the same was taken out, and also the name of each person constituting the crew of the different boats or vessels used in dredging for oysters on the natural beds; and upon the command of her captain or (if he be sick or absent), upon the command of the person at the time in charge of her, any other boat or boats, vessel or vessels, together with their crew, shall aid and assist the watch boat and her crew as a *posse comitatus* in the enforcement of the several provisions of this act. Such enforcement shall be the seizure of the boat or vessel used in the violations of the provisions of this Chapter, and everything in and belonging to her, including the master or captain as hereinbefore provided.

And it shall be the duty of the captain of the said watch boat to keep a strict and vigilant watch and to see that no violations are made of any of the provisions of this act, and whenever, upon his own view, or upon reliable information, he has good grounds to believe that any boat or vessel is being used in violation of any of the provisions of this act, he shall forthwith seize such boat or vessel and take her to Little Creek Landing and safely keep the same until sold or discharged by due course of law, and to arrest all the crew, including the captain or master, and take them before a justice of the peace of Kent County, who shall have full jurisdiction over every violation of Sections 12, 13 and 14 of this Chapter.

In order to give the defendants an opportunity for a fair trial, it shall be the duty of the said justice to fix a day for the hearing, which shall not be more than five days from the time of the arrest, and may be earlier if the defendants so desire.

If from any cause the justice shall be satisfied that the defendants cannot be prepared for trial by the day fixed by him, he may postpone the hearing to a day not exceeding five days from the day first fixed; the person or persons so arrested shall be required to give bail for their appearance on the day fixed for trial, in a sum to be fixed by the said justice, and in default thereof shall be committed to the jail of Kent County; upon proof to the satisfaction of the justice that the defendants or any of them are guilty, the said justice shall impose upon the defendant or defendants, severally so found guilty, a fine of one hundred dollars for such violations, together with the costs of proceedings, including costs of seizure and detaining the said boat or vessel, and the said defendants so found guilty shall be imprisoned until said fines and costs be paid, or until such boat or vessel shall be sold as hereinafter provided; said fine and costs shall also be a lien upon said boat or vessel from the time of her seizure, and the said boat or vessel, and everything in or belonging to her, shall be detained until said fines and costs be paid; and in case said fines and costs be not paid within fifteen days from the time the same were adjudged by the said justice, then the said justice, or any other justice of the peace of Kent County, shall issue an order to any constable of Kent County, commanding the said constable to sell the said boat or vessel, and all and everything in and belonging to her, to the highest bidder, at public sale, on ten days' notice, by advertisements posted in six of the most public places in East Dover and Little Creek hundreds, and the proceeds, after deducting the fines and costs, shall be paid to the owner or owners of such boat or vessel; but if said proceeds shall not be sufficient to pay the whole of said fines and costs, the proceeds shall be first applied to the costs, and the balance thereof to the fines, and thereupon any persons who may have been imprisoned by reason of non-payment of said fines and costs shall thereupon be discharged from imprisonment.

The parties defendant in the proceedings may appeal to the Court of General Sessions, upon giving security by bond with surety before the justice of the peace, to the State of Delaware, in a sum double the amount of the fine imposed, to prosecute the said appeal with effect at the next term of the said Court. The appeal shall be tried at said term by jury, unless the Court continue it, and, upon certificate by the clerk that the appeal was not prosecuted in due

time, or was decided against the appellant, the bond shall be forfeited and be at once proceeded upon at the instance of the collector. The appeal shall be a supersedeas; but it shall not be granted after an expiration of fifteen days from the time of the imposition of the fine.

19 Del. Laws, Ch. 653, § 19, 39; 22 Del. Laws, Ch. 147, § 1; 25 Del. Laws, Ch. 134, § 1.

Section 19. Duty of Justice Upon Complaint—Warrant to Captain of Watch Boat—Procedure—Duty of Collector Upon Information of Violation—Seizure of Boat—In Absence of Watch Boat Captain, Person in Charge to Act. Upon complaint made by any person before any justice of the peace of Kent County, supported by oath or affirmation, that any boat or vessel has been used or is being used in violation of any of the provisions of Sections 12, 13 and 14 of this Chapter, it shall be the duty of the said justice to issue a warrant under his hand and seal, directed to the captain of the watch boat, commanding him to seize such boat or vessel and to arrest all her crew, including the captain or master, and the said captain of the watch boat shall forthwith proceed as provided in Section 18 of this Chapter, and the proceeding before the justice of the peace shall be the same as therein provided, with the right to appeal as aforesaid. When the collector shall have knowledge or reliable information that any boat or vessel has been used or is being used in violation of the provisions of Sections 12, 13 and 14 of this Chapter, it shall be his duty forthwith to order the captain of the said watch boat to seize such boat or vessel and arrest all her crew, including her captain or master, and thereupon the said captain of the watch boat shall proceed in the same way as is provided in the aforesaid Section 18 of this Chapter, and the proceedings before the justice shall be the same as therein provided, with a right of appeal as aforesaid. If the captain of the watch boat shall be absent or incapable of acting in the premises, the person at the time in charge of the said watch boat shall do and perform all matters and things herein required of the captain of the watch boat.

19 Del. Laws, Ch. 653, § 20.

Section 20. Names of Persons Charged, Duty of Justice—Form of Proceedings for Seizure and Sale. Upon parties charged with violations of any of the provisions of Sections 12, 13 and 14 of this Chapter being brought before the justice, he shall inquire their names, and upon refusal to give them, he may assign to them in his own proceedings any names he may choose, which shall be taken to be their true names, and they shall be further described as belonging to the boat or vessel seized, which shall be named also.

The proceedings may be according to the following form :

<p>THE STATE OF DELAWARE,</p> <p style="text-align: center;">vs.</p> <p>A, B, C, D, E, F, belonging to the boat or vessel.....</p>	}	<p>Proceedings for violation of Section..... of the Act entitled "An Act to repeal all statutes relating to planting, propagat- ing, dredging, tonging, or taking oysters from the natural beds or plantations in the Delaware Bay and its tributaries, and to re-enact the same or parts there- of with amendments.</p>
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And now to wit, this.....day of....., A. D....., the parties defendant being brought forward and the said boat or vessel being in custody, and the parties being ready for trial, and the testimony having been heard and considered, it is hereby adjudged that the said A, B, C, D, E, F (or such of them as were guilty), are guilty of violating, on the.....day of..... last, Section.....of Chapter..... of the Revised Code aforesaid. ' the use of the said boat or vessel and the implements on her for that purpose, and they are hereby ordered to pay each severally a fine of one hundred dollars, and jointly to pay the costs of prosecution and the costs of seizing and detaining said vessel, and are committed to the custody of the Sheriff of Kent County until the said fines and costs be paid, or until the said boat or vessel be sold. It is further ordered that if the said costs and fines be not paid in fifteen days that the said boat or vessel and her implements as aforesaid and all her appurtenances be sold by M. W., Constable, to the highest bidder, on ten days' notice by advertisements in six of the most public places in East Dover and Little Creek hundreds.

J. D., J. P.

19 Del. Laws, Ch. 653, § 21.

Section 21. Force Used By Watch Boat Crew and Persons in Enforcement of Law—Right to Plead Statute. In the performance of the duties enjoined by this Chapter the crew of the watch boat and those aiding them voluntarily, or upon requisition as aforesaid, may use any force necessary for that purpose, and in any proceedings against them, either criminal or civil, they may plead this Chapter in justification or give it in evidence under the general issue.

19 Del. Laws, Ch. 653, § 22.

Section 22. Resistance to Crew of Watch Boat—Nature of Offense—Penalties. If any person shall resist the crew of the watch boat and those who may be acting in aid of them, or any of such persons in the enforcement of this Chapter, he shall, if such resistance do not endanger life, be guilty of a misdemeanor, and upon conviction, by indictment, shall be fined one hundred dollars; if life be endangered, but not taken, he shall be deemed guilty of felony, and upon conviction by indictment shall be fined five hundred dollars and imprisoned one year; if life be taken by the resisting party he shall be guilty of murder in the first degree.

19 Del. Laws, Ch. 653, § 23; 23 Del. Laws, Ch. 213, § 1.

Section 23. Non-Residents— License to Plant Under Section 11—Fees— Application. Any non-resident desiring to plant or continue to plant oysters in the Delaware Bay, and prohibited under this act from dredging for oysters on the natural oyster beds of this State, may obtain a license under Section 11 of this Chapter for planting oysters and taking up the same by paying the usual fee for ground rent, as prescribed in this Chapter, and the further sum of two dollars and fifty cents per ton (custom-house measurement), for the boat or vessel to be used in the business of working the plantation, as is also prescribed in said Section 11 of this Chapter; and the person taking a license for himself under the provisions of this section shall take an oath, to be administered by the collector, hereinafter provided for, before the license is delivered, that he will not violate, or consent to the violation, or allow the boat or vessel used by him in the prosecution of the business for which said license is granted to be employed in the violation of this Chapter.

19 Del. Laws, Ch. 653, § 24; 20 Del. Laws, Ch. 466, § 1.

Section 24. License to Plant and Dredge Allows Use of One Boat Only— Name of Boat in License—No Right Except After License Issued and Paid For. A license to plant under this Chapter and to dredge merely, shall be taken to allow the use of one boat or vessel only in the business, and, in every case of license granted, the applicant shall state the name of such vessel, and the license shall have her name inserted therein. No right to plant or dredge for oysters under any circumstances shall exist or be exercised until a license in due form is issued and paid for.

19 Del. Laws, Ch. 653, § 25.

Section 25. Plantation to Be Restaked Before May 1st—On Failure, Plantation to Revert to State. All persons having plantations, the stakes having been carried off by ice or otherwise, shall be required to re-stake them in the same manner as required by Section 11 of this Chapter, by the first day of May in each and every year. A failure to comply with this section within three months after the first day of May shall forfeit all right or claim to such plantation and it shall revert to the State, and it may be at any time thereafter staked off as new ground in accordance with the provisions of this Chapter.

19 Del. Laws, Ch. 653, § 26.

Section 26: New Ground, Notice For—Notice to Other Adjacent Owners— Objections—Hearing and Decision By Collector. Any person desiring to take up new ground, shall notify the collector of the location that he has chosen, and if it be within three hundred yards of the plantation of another or the plantations of others, it shall be the duty of the collector to notify the owner or owners of said plantations; and if such owner or owners or any of them object, he or they must make their objections in writing to the said collector, and it shall be the duty of the said collector to hear the objections, and if it should appear that the persons so objecting had good reasonable grounds for

such objections, and that their property would be thereby endangered, then he shall refuse to allow the person so desiring to take up new ground to stake up the ground so selected by him.

19 Del. Laws, Ch. 653, § 27.

Section 27. No Boat Allowed to Work Except on Compliance With Law as to Letter and Number—Penalty for Violation. No boat or vessel whatsoever shall be allowed to work until her owner has complied with the law in regard to wearing her number, of legal dimensions, upon her mainsail; and no boat or vessel having a license to dredge for oysters on the natural oyster beds of this State shall be allowed to do so until her owner or owners have complied with the law in regard to wearing the letter in or on her mainsail as provided by this Chapter; if any boat or vessel shall be used without having such number or letter, as the case may be, she shall be seized by the captain of the watch boat and detained by him until her owner or owners shall have complied with the law in regard to such number or letter, as the case may be, and before she shall be allowed again to work or dredge for oysters her owner or owners shall pay the collector the costs and expenses of her seizure and detention.

19 Del. Laws, Ch. 653, § 28.

Section 28. Dredge Regulation—Penalties for Violation. It shall be unlawful for any boat or vessel licensed to dredge on the natural oyster beds of this State to use a dredge that has a tooth bar over forty inches in length between the shoulders; any violation of the provisions of this section shall *ipso facto* work a forfeiture of the license issued for the use of such boat or vessel, and all right to work such boat or vessel under such license shall immediately cease; and another license shall not be granted for the said boat or vessel until the expiration of the year for which the license so forfeited was issued.

19 Del. Laws, Ch. 653, § 29.

Section 29. Name of Boat on Stern, in What Way—Penalties for Violation. Every boat or vessel used or employed in planting or dredging for oysters under the provisions of this Chapter shall have her name plainly painted on her stern at the usual place, in white letters upon a black ground, or black letters upon a white ground, so that the same may at all times be visible; any boat or vessel used for planting or dredging for oysters under the provisions of this Chapter, and not having her name plainly painted upon her stern as aforesaid, shall be seized by the captain of the watch boat and detained by him until her owner or owners shall have complied with the law in regard to her name being plainly painted on her stern as aforesaid, and before she shall be allowed again to work or dredge for oysters her owner or owners shall pay to the collector the costs and expenses of her seizure and detention.

19 Del. Laws, Ch. 653, § 30.

Section 30. Penalty if Captain of Watch Boat or Collector Refuse or Neglect to Perform Their Duties. If the said captain of the watch boat, or the collector provided for by this Chapter, shall refuse or neglect to perform

any of the duties required of them, respectively, under this Chapter, he shall be deemed guilty of a misdemeanor, and upon conviction thereof by indictment shall be fined not less than fifty dollars nor more than one hundred dollars, together with the costs of prosecution.

19 Del. Laws, Ch. 653, § 31.

Section 31. Captain and Crew of Watch Boat Paid Only for Time Employed. Neither the captain of the watch boat nor any of her crew shall receive any pay for the time not actually and actively spent in the discharge of the duties required by this Chapter; but such time shall be deducted in the computation of their wages.

19 Del. Laws, Ch. 653, § 32.

Section 32. Appropriation for Certain Roads—Road Overseer to Be Appointed. The sum of four hundred dollars annually is hereby set apart and appropriated out of the oyster fund to the Levy Court of Kent County; and the said Levy Court is hereby authorized and directed to appropriate the whole of said sum in improving that part of the road from Little Creek Landing to Mahon's River which lies between the run and fast land, and also the road leading from what is known as "The Smith Shop" in Mahon's River to the said road at a point near Indian Gut, and for that purpose shall appoint annually, in the month of March, some skillful and judicious road overseer to superintend and make such repairs, and said overseer shall be subject in all respects to the general laws governing said road overseers.

19 Del. Laws, Ch. 653, § 33.

Section 33. Watch Boat Furnished With Coal, Wood and Flag. The collector is hereby authorized and required to furnish the watch boat with six tons of coal and one cord of wood in each and every year; he shall also keep the watch boat supplied with a proper flag as hereinbefore mentioned, and when the said flag shall be lost or destroyed, or worn out, he shall supply the said watch boat with a new flag in accordance with the provisions of this Chapter, and the expense of such flag, wood and coal shall be paid out of any funds he, the said collector, may have in hand belonging to the State.

19 Del. Laws, Ch. 653, § 34.

Section 34. Justice of the Peace to Have Jurisdiction of Violations of Sections 13, 14 and 15—Proceedings in Name of State—Fees—Fines Paid to Collector—Procedure on Constable's Bond—May Employ Attorney. Any justice of the peace of this State, resident in Kent County, shall have jurisdiction over every violation of the provisions of Sections 13, 14 and 15 of this act, and the proceedings for every violation of the provisions of Sections 13, 14 and 15 of this act shall be before a justice of the peace resident of Kent County, with right of appeal as aforesaid; and all proceedings against any offender or offenders under this act shall be in the name of the State of Delaware.

The fees to the justice, any officer rendering service under this act for violations thereof, shall be the same as now provided by law for like or similar cases; and any or all fines which may be imposed under the provisions of this act and which may be collected and received by any constable of Kent County, shall be forthwith paid by said constable to the collector, and the failure to pay over such fine or fines to the collector within ten days after the same may be received or collected by any constable shall be a breach of his official obligation, and it shall be the duty of the collector forthwith to bring suit on such official obligation of such constable so failing to pay such fine within the time aforesaid; and for this purpose the said collector may employ any attorney at law to prosecute such suit, and the expenses of such employment shall be paid out of any funds he may have in hand belonging to the State.

19 Del. Laws, Ch. 653, § 35.

Section 35. Collector of Oyster Revenue—Appointment—Residence—Term—Salary—Removal—Vacancy—Bond—Liability. In order to carry into effect the provisions of this act, there shall be an officer known as Collector of the Oyster Revenue, who shall be appointed by the Governor, shall hold said office for the term of two years from the third Tuesday in February next following such appointment, or until the successor in office is duly appointed and qualified, and shall reside in Kent County; in case of a vacancy happening in said office a person shall be appointed to fill said vacancy for the unexpired term; the Governor may at any time within that term remove the Collector and appoint another in his stead upon sufficient cause shown him therefor; before the Collector shall enter upon the duties of his office he shall give bond with surety to be approved by the Governor, in the penal sum of ten thousand dollars, conditioned for the faithful performance of the duties of his office, and he shall also be sworn or affirmed that he will faithfully and impartially perform the duties of his office. The official bond of the Collector shall be recorded in the Recorder's Office of Kent County, and the original (which shall be filed in the office of the Secretary of State), or a copy thereof from the Record, duly certified, shall be evidence. The official bond of every Collector of the Oyster Revenue shall continue in force after the end of his term of office, his removal therefrom, or after the occurring of any vacancy in said office. And he and his sureties therein shall be liable thereon for any breach by him of the duties of his said office. The said Collector of the Oyster Revenue shall receive a salary of seven hundred dollars per annum, to be paid by the State Treasurer as other salaries of State officers are now paid.

19 Del. Laws, Ch. 653, § 36; 22 Del. Laws, Ch. 106, § 1 & 2; 25 Del. Laws, Ch. 133, § 1. For certain duties of the Collector of Oyster Revenue and provision for appointment of policemen to enforce the oyster laws, see Section 114 of this Chapter.

Section 36. Licenses, Preparation, Form. The Governor shall cause the the necessary licenses under this Chapter to be prepared and supplied to the Collector aforesaid, to be dispensed by him when called for under this Chapter;

they shall be in the usual form, except they shall be adapted to the nature of the privilege granted.

19 Del. Laws, Ch. 653, § 37.

Section 37. License Fees to be Paid Before Issuance—Penalties. The Collector shall issue no license nor permit any boat or vessel to dredge until the price or fee for said licenses has been actually paid, and the collector violating this provision shall not only be responsible for said license fee, but in addition thereto forfeit a like sum to the State, which shall be sued for and collected by action on his official bond as in other cases of a breach of a condition thereof.

19 Del. Laws, Ch. 653, § 38.

Section 38. Collector’s Accounts—Deposits—Cheques. The collector shall keep a separate account in the Farmers’ Bank, at Dover, of all monies received by him for licenses issued and fines imposed under this Chapter, and shall deposit weekly all monies received therefor, and all disbursements which he is or may be authorized by law to make shall be by cheques drawn on said funds in his official capacity, which shall be indicated by the written or printed word “Collector” immediately after his name. The cheques shall be numbered consecutively from first to last during his continuance in office, shall state briefly what they are for, and the bills for which they are given shall have a corresponding number, and shall be filed in order in the office of the collector, and shall be subject to the inspection of any citizen and taxpayer who may wish to examine the same, and no disbursement shall be made in any other way.

19 Del. Laws, Ch. 653, § 40.

Section 39. Monies Paid to State Treasurer—When—Accompanying Accounts Sworn To—Penalties for Fraudulent Statement of Account. That the said Collector shall, in the month of June and the month of December in each and every year, pay over to the State Treasurer all monies by him collected after deducting the amount set apart and appropriated out of the oyster funds to the Levy Court of Kent County and the expenditures provided for by this Chapter. He shall at the same time make and deliver to said State Treasurer an itemized account or statement of all monies received by him from all sources under this Chapter, and the name of the person or persons, and of the boat or vessel used by him or them, from whom he received said money, and also paid out under this Chapter, and to whom, with the proper vouchers for the same, under his oath thereto attached to the said account or statement, in the following words, to wit:

STATE OF DELAWARE,
KENT COUNTY, ss:

Be it remembered that on this.....day of..... A. D..... personally came before me A. B., a notary public for the State of Delaware, C. D., Collector of the Oyster Revenue, and being by me duly sworn (or

affirmed) upon the Holy Evangels of Almighty God, deposes and says that the foregoing is a just and true account of all the monies received and paid over to him under and by virtue of the Laws of the State of Delaware in relation to oysters, and the disbursements of the same, from the.....day of....., A. D....., to the..... day of....., A. D.....; and he further deposes and says that there is no item or matter charged in said account and paid for by him except what is authorized by law.

C. D., Collector.

Sworn and subscribed before me, the day and year aforesaid,

(Seal)

A. B., Notary Public.

If the said collector, in rendering such account or statement to the said State Treasurer, shall make any false or fraudulent statement of the amount received by him, or shall, in drawing checks (the checks as prescribed to be drawn in this section) for the payment of the expenses incurred and other bills authorized to be paid by law, specify therein a greater amount than was contracted to be paid for the services or items for which any such check may be drawn, or which shall not be the true amount which the person in whose favor any such check may be drawn is entitled to receive, he shall be deemed guilty of a misdemeanor, and on conviction thereof by indictment shall be fined one hundred dollars, one-half for the use of the informer and the residue for the use of the State, and such conviction shall *ipso facto* work a forfeiture of his office.

19 Del. Laws, Ch. 653, § 41; 22 Del. Laws, Ch. 106, § 3.

Section 40. Annual Publication of Collector's Account. It shall be the duty of the collector to have his annual statement or account published in two newspapers printed in the Town of Dover, in the month of April, in each and every year.

19 Del. Laws, Ch. 653, § 42.

Section 41. Monies Paid to State Treasurer, How Applied. The money paid over to the State Treasurer, directed under this Chapter, shall be kept as a separate fund, and when the amount is sufficient, it shall be applied by him to the purchase of a State bond or bonds, which said fund thenceforth shall constitute part of a sinking fund for the payment of the public debt.

19 Del. Laws, Ch. 653, § 43.

Section 42. Portion of Delaware Bay Reserved for Fishing and Domestic Oyster Purposes. There shall be reserved for fishing, and for domestic oyster purposes, the following described portion of the Delaware Bay in this State:

That portion lying between two parallel lines and running due east to the middle of the ship channel, the first point to commence three miles south of the middle of the mouth of Murderkill Creek and to run due east, and the second point to commence in the middle of the mouth of Mispillion Creek and run a like due east course, and there shall not, within the herein described limits, be any oysters planted in the land staked up for such purposes except as in

this Chapter provided, and in case any such oysters should be planted within these described limits they shall have no protection in law, and shall be forfeited for the use of the public, and the section here described shall be reserved for general fishing purposes.

19 Del. Laws, Ch. 653, § 44.

Section 43. Taking Oysters for Planting Purposes in Certain Rivers, Etc.—Unlawful—Penalties. It shall be unlawful to take or catch by means of tongs, or in any manner whatsoever, for the purpose of planting in Delaware Bay, or for the purpose of selling for planting purposes in the Delaware Bay, any oysters from Leipsic River, formerly called Leipsic Creek, Dona River, also called Dona Creek, Mahon's River, St. Jones Rives, Little Creek, Murderkill River, Mispillion River, Broadkilm River and Sound. For the purposes of this Section the fast land on either side of a creek or river shall be considered to be and to form the mouth of such creek or river.

It shall be unlawful for any person or persons to catch any oysters whatever, at any season of the year, in Broadkilm River or Sound or in Mispillion River, for the purpose of planting the said oysters in said rivers or sound or in any other place. Any person or persons violating this paragraph shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than twenty-five nor more than fifty dollars. Upon failure to pay the fine he or they shall be committed to the County Jail for a term not less than twenty days nor more than thirty days; the prosecutor to be paid one-half of the fine, the other half to be paid to the Collector of Oyster Revenue for the use of the State. The Justices of the Peace of Kent and Sussex Counties, as the case may be, are clothed with jurisdiction to hear and determine all violations of this paragraph, with power to enforce the same.

19 Del. Laws, Ch. 653, § 53; 20 Del. Laws, Ch. 44, § 1; 21 Del. Laws, Ch. 87, § 2; 22 Del. Laws, Ch. 148, § 2.

Section 44. Taking Oysters from Natural Oyster Beds, License for, Violation, Penalty—Taking Oysters from Broadkilm River, Etc., Regulated, License, Violation, Penalty—Catching Oysters for Market in Broadkilm River or Sound or Mispillion River—License—Violation Penalties. It shall be unlawful for any person to catch or take by any means (excepting by dredges, the requirement for licenses for which are hereinbefore provided), any oysters from any of the natural beds in the Delaware Bay or from any of the creeks or rivers that are tributary thereto, unless he shall have paid to the Collector of the Oyster Revenue the sum of five dollars for a license to take or catch oysters from the natural beds of the said bay and its tributaries, together with the further sum of fifty cents to the Collector as a fee for issuing the same, and has received from the said Collector a license therefor. Provided, however, that persons catching or taking oysters for family use shall not be compelled to take out a license therefor; and persons catching or taking oysters for family use, shall not take or catch for such use more than five bushels in any one day. Any person violating the provisions of this paragraph, upon conviction before any Justice of the Peace in Kent or Sussex Counties, as the

case may be, shall be fined for each offense an amount not more than fifty dollars nor less than twenty-five dollars, and in default of payment of the said fine, together with the costs of the suit, the person so convicted shall be committed to the County Jail for a period of thirty days. One-half of the said fine, when collected, shall be paid to the informant, and the other half paid to the collector, as part of the oyster revenue of the State.

It shall be unlawful for any person or persons in any one day to take, catch or carry away in any boat, cart or wagon, or vehicle of any kind whatever, from Broadkilm River or Sound or Leipsic River or Simons Creek more than twelve bushels of oysters, nor from Mispillion River more than nine bushels of oysters for market or home consumption, and any person or persons having in his or their possession a quantity of oysters caught or taken from said rivers or sound exceeding twelve bushels on any one day shall be presumed to have caught them in one day and shall be deemed guilty of violating the provisions of this paragraph. Each and every person shall be prepared to tell the quantity of oysters that he has in his possession when called upon. Each and every person who catches oysters for market shall pay a license of three dollars to the Collector of Oyster Revenue, which license shall be good for one year only. Any person or persons who shall violate this paragraph shall be guilty of a misdemeanor, and upon conviction thereof shall be fined twenty dollars and costs, and shall forfeit his boat, cart or wagon. Such person or persons upon failure to pay said fine shall be imprisoned for a term of not less than twenty days nor more than thirty days in the County Jail. The boat, cart or wagon shall be sold to the highest bidder, within ten days after the conviction of the owner thereof, by the Constable of the Hundred in which the case is tried. The prosecutor shall have one-half the fine, together with one-half of the proceeds of the sale of the boat, cart or wagon, the other half to be paid to the Collector of Oyster Revenue for the use of the State.

Any person or persons who come into Broadkilm River or Sound or Mispillion River and living in their boat, vessels or shanties on the said rivers or sound, for the purpose of catching oysters for market, and making a business of it during the oyster season, shall first pay a license of twenty dollars, and be compelled to show their license to any one who calls for it. Any person or persons who violate this paragraph shall be guilty of a misdemeanor, and upon conviction thereof shall be fined not less than twenty dollars nor more than forty dollars and costs. Upon failure to pay the fine he or they shall be committed to the County Jail for a term of not less than thirty nor more than forty days, the prosecutor to be paid one-half of the fine, the other half to be paid to the Collector of Oyster Revenue for the use of the State. The Justices of the Peace of Kent and Sussex Counties are clothed with jurisdiction to hear and determine all violations of this Act, with power to enforce them.

19 Del. Laws, Ch. 653, § 54; 21 Del. Laws, Ch. 87, §§ 1 & 3; 22 Del. Laws, Ch. 148, §§ 1 & 3; 26 Del. Laws, Ch. 157, § 1.

Section 45. Unlawful to Take More Than Twelve Bushels of Oysters in One Day, and Not to Be Sold to Be Transported Through the Mouths of Broadkilm River or Sound Into Delaware Bay. It shall be unlawful for any

person to catch in one day, for the purpose of sale or otherwise, from any of the aforesaid creeks and rivers, excepting Mispillion River, any quantity of oysters exceeding twelve bushels; in case of the sale or disposal of said quantity of twelve bushels or any part thereof taken or caught from the waters of Broadkilm River or Broadkilm Sound, it shall not be lawful to sell or dispose of the same or any part thereof to be transported or carried away through the mouth of said Broadkilm Sound into the Delaware Bay by any boat or vessel, whether for planting or for consumption as food, or for any other purpose.

It shall be unlawful for any person to catch in one day for the purposes of sale or otherwise, from the waters of the Mispillion River any quantity of oysters exceeding nine bushels. This provision shall not apply to persons taking oysters for family use, who shall be allowed to take five bushels as otherwise provided by law. Whoever shall violate the provisions of this paragraph shall be deemed guilty of a misdemeanor, and upon conviction thereof in the Court of General Sessions, shall be fined in a sum not exceeding Fifty Dollars, or imprisoned for a term of ten days, or both fined and imprisoned, in the discretion of the Court.

19 Del. Laws, Ch. 653, § 55; 20 Del. Laws, Ch. 44, § 2; 26 Del. Laws, Ch. 157, § 1.

Section 46. Unlawful to Take Oysters From Creeks or Rivers After Sunset and Before Sunrise—Penalty. It shall be unlawful for any person to take or catch, in any manner whatsoever, for any purpose whatsoever, any oysters from any of the creeks or rivers of this State at any time after sunset and before sunrise.

Any person violating the provisions of this Section shall be liable to the penalty provided for a like offense in Section 16 of this Chapter.

19 Del. Laws, Ch. 653, § 56.

Section 47. Dredging for Oysters in Creeks and Rivers, Etc., and Use of One-Handled Rakes Unlawful—Penalties—Use of Certain Dredges and Tongs in Tributaries of Delaware Bay Unlawful—Penalty—Use of Power Boats Unlawful on Natural Beds—Penalty. It shall be unlawful to dredge for oysters at any time of the year in any of the creeks and rivers tributary to the Delaware Bay, or in Broadkilm Sound. It shall be unlawful to catch, gather, rake or dredge for oysters in Broadkilm River and Sound by means or with the use of one-handed rakes. Any person convicted before any Justice of the Peace for violating the provisions of this paragraph in relation to dredging shall be fined not more than fifty nor less than twenty-five dollars; and any one convicted of violating the provisions of this paragraph in relation to raking shall in like manner be fined ten dollars for every such offense; in each case one-half of the fine imposed to be paid to the informant and the other half to the Collector.

It shall be unlawful for any person or persons to dredge for oysters with dredges or tongs operated by means of rope, line or chains in the tributaries of the Delaware Bay. Any person or persons violating the provisions of this paragraph shall be deemed guilty of a misdemeanor and upon conviction

thereof shall be fined not less than twenty dollars nor more than fifty dollars and costs, and upon failure to pay such fine shall be committed to the County Jail for a term of not less than thirty nor more than forty days. One-half of said fine shall go to the prosecutor, the other half to the Collector of the Oyster Revenue for the use of the State.

It shall be unlawful for any person or persons to use a boat propelled by steam, gasoline, naphthaline or any other motor power, for the purpose of taking any oysters from the natural beds of the State; any person or persons violating the provisions of this paragraph shall be guilty of a misdemeanor, and upon conviction thereof shall be fined a sum not less than three hundred dollars nor more than five hundred dollars and be imprisoned for a term of not more than three months, at the discretion of the Court.

19 Del. Laws, Ch. 653, § 57; 21 Del. Laws, Ch. 87, §§ 4, 5; 23 Del. Laws, Ch. 130, § 1; 22 Del. Laws, Ch. 148, §§ 4, 5.

Section 48. Taking Oysters in Certain Rivers and Creeks Unlawful—Exception for Home Consumption—Transportation from Certain Rivers for Planting or Consumption, Unlawful—Penalty. It shall be unlawful for any person to catch or take any oysters in the following named creeks or rivers, to wit: Dona River or Dona Creek, Simon's Creek, Mahon's River, Leipsic River and Little Creek, between the last day of June and the first day of September; provided, however, that the citizens of this State, between the days specified, may take or catch for home consumption, from Dona River or Dona Creek, Simon's Creek, Mahon's River, Leipsic River and Little Creek, a quantity of oysters not exceeding five bushels in any one day.

It shall not be lawful for any person or persons to take or catch any oysters for any purpose whatsoever from Murderkill River, St. Jones River, Mispillion River, the "mouth of the cut" in Mispillion River, or Broadkilm River or Sound at any time between the first day of April and the first day of October in any year. The "mouth of the cut" shall be considered all that portion of the Delaware Bay extending from the mouth of said Mispillion River into said Bay along the jetty, which has been recently built, to the other end of said jetty, and running between parallel lines from the mouth of said river to said outer end of the jetty. It shall be unlawful for any person or persons to sell or dispose of any oysters to be transported or carried through the mouth of Murderkill River, St. Jones River, Mispillion River or Broadkilm River or Sound into the Delaware Bay by boat, vessel or otherwise, whether the said oysters shall be intended for planting or for consumption as food, or for any other purpose. Any person or persons violating any of the provisions of this paragraph shall, upon complaint under the oath or affirmation of any person, be arrested and forthwith brought before any Justice of the Peace in Kent or Sussex County, as the case may be, and upon proof and conviction thereof the said person or persons shall be fined a sum not less than twenty dollars nor more than thirty dollars, together with the costs of his or their arrest and trial; and upon failure to pay said fine and costs he or they shall be committed by said Justice of the Peace to the custody of the Sheriff of Kent or Sussex County, as the case may be, until such fine and costs be paid. One-half of said fine shall be by the said

Justice paid to the informer, the other half shall be by him paid to the Collector of Oyster Revenue for the use of the State.

19 Del. Laws, Ch. 653, § 58; 20 Del. Laws, Ch. 464, §§ 1, 2 & 3; 21 Del. Laws, Ch. 88, § 1; 22 Del. Laws, Ch. 377, § 1; 23 Del. Laws, Ch. 133; § 1, 2 & 3, and Ch. 134, § 1, 2 & 3; 26 Del. Laws, Ch. 156, § 1.

Section 49. License Number—Boat Number—License for One Boat, to One Person, for One Year. Each license issued by the Collector aforesaid for the purpose aforesaid shall be numbered and contain the name of the person to whom said license is issued, and the boat used for the purpose of catching or tonging oysters for the purpose aforesaid shall have a number corresponding with the number of said license issued to the owner of said boat painted in black upon the side of the said boat above the water line in figures at least six inches long and one-half inch wide. The license so issued by the collector shall authorize the use of one boat, and but one license shall be issued to one and the same person. The said license shall last only one year and shall be renewed annually, and the like sum, as provided in Section 44 of this Chapter, must be paid at the time of each renewal.

19 Del. Laws, Ch. 653, § 59.

Section 50. Sale of Oysters from Certain Places to be Planted in Bay, Unlawful—Penalty. It shall be unlawful for any person, directly or indirectly, by himself, agent, employee, or any person whomsoever, to sell, or in any manner dispose of any oysters taken or caught from any of the creeks or rivers, or within the limits named by Section 43 of this Chapter, to any person, his agent or employee, for the purpose of planting the same in Delaware Bay. Any person so offending shall be deemed guilty of a misdemeanor, and upon conviction thereof, before any justice of the peace in Kent or Sussex Counties, as the case may be, who are hereby clothed with jurisdiction to hear and determine all violations of this section, and to impose fines and imprisonments, shall be fined not less than twenty-five dollars, nor more than fifty dollars, and upon failure to pay said fine and the costs imposed shall be imprisoned for a term not less than three months nor more than six months, for each and every offense.

19 Del. Laws, Ch. 653, § 61.

Section 51. Rough Culling in Tributaries of Delaware Bay—Size of Oysters Taken—Penalties—Rough Culling on Natural Beds in Delaware Bay—Penalty—Boats Shall Submit to Inspection of Guard Boat—Oyster Revenue Collector to Enforce Provisions of Section. All oysters caught in any river, creek or pond (excepting Simon's Creek) tributary to the Delaware Bay, shall be culled at the place where they are caught, and it shall be unlawful for any person entitled under the provisions of this Chapter to take oysters from any river, creek or pond aforesaid, to take therefrom oysters less than two and one-half inches in length, and any person violating the provisions of this paragraph shall, upon conviction before any justice of the peace of Kent or Sussex Counties, as the case may be, be fined ten dollars for every such violation, one-

half of said fine to be paid to the informant and the other half to be paid to the collector, to be by him accounted for as a part of the oyster revenue of the State.

All oysters, oyster shells and other material, dredged, tonged or in any manner raised or taken from the natural oyster beds of the Delaware Bay within the jurisdiction of the State of Delaware shall be culled as soon as the same are emptied out of the dredges or tongs on the deck of the boat or vessel employed for the purpose, and before the same are shoveled back from that portion of the deck used for emptying the dredges; and all shells and other material, except oysters, shall be immediately thrown back upon the beds or ground from which the same shall have been taken. All such oysters, oyster shells and other material shall be culled as aforesaid so closely that ten bushels thereof taken from any portion of a deck load of oysters, after the same shall have been shoveled back from that part of the deck used for emptying the dredges and tongs aforesaid, shall not contain more than twenty per centum of shells and other material; if any person or persons shall neglect or refuse to cull as in this paragraph provided, such oysters, oyster shells and other material, he or they shall be deemed guilty of a misdemeanor, and upon conviction thereof in the Court of General Sessions, shall be fined in a sum not exceeding two hundred dollars, or imprisoned for a term not exceeding sixty days, or both, at the discretion of the Court.

When the master, commander, captain or person in charge of any boat, vessel or other craft, licensed under the provisions of the laws of this State, is hailed or signaled by the Oyster Revenue Collector, or the captain of the Guard Boat, or any one of the crew thereof, and refuses to stop and permit the Oyster Revenue Collector, or the captain or crew of the Guard Boat aforesaid, to board said boat, vessel or other craft and examine the oysters, oyster shells and other material on such boat, vessel or other craft as aforesaid, the said Oyster Revenue Collector shall have power to revoke the license of the boat, vessel or other craft so refusing as aforesaid.

It shall be the duty of the Oyster Revenue Collector to enforce the provisions of this Section and he shall forthwith furnish the captain of the Guard Boat with a bushel measure and a peck measure which shall be used for carrying into effect said provisions.

19 Del. Laws, Ch. 653, § 64; 26 Del. Laws, Ch. 160, § 1, 2 & 3.

Section 52. Catching or Selling Certain Oysters Less than Two and One-Half Inches in Length, Except for Planting, Unlawful—Penalty. It shall be unlawful for any person to catch, by means of tongs or otherwise, on any of the natural beds of the Delaware Bay, oysters less than two and one-half inches in length, except for the purpose of planting; and it shall be unlawful for any person to sell oysters caught or taken from the natural beds of the Delaware Bay, less than two and one-half inches in length, for any other purpose than planting. Any person violating either of the provisions of this Section, upon conviction thereof before any justice of the peace in the State, shall be fined a sum not less than ten dollars nor more than fifty, one-half of

the said fine to be paid to the informant and the other half to be paid to the collector, to be by him accounted for in the manner hereinbefore provided.

19 Del. Laws, Ch. 653, § 65.

Section 53. Citizens May appropriate One Acre for Planting Oysters, to be Staked—Penalty for Other Person to Take Oysters Therefrom—Limitations as to Place. Any citizen of this State may appropriate to his own use a part, not exceeding one acre, of the bottom of any of the streams or waters of this State for planting oysters; and having marked the same by stakes or other visible boundaries and planted oysters therein, it shall be unlawful for any other person to catch or take the oysters therein growing under penalty of forfeiting fifty dollars to the owner of such plantation. But no place shall be appropriated where oysters are already growing, or so as to impede navigation; nor shall more than forty feet square of Lewes River, opposite Lewes, be appropriated by any person

19 Del. Laws, Ch. 653, § 66.

Section 54. Violation of Oyster Laws a Misdemeanor—Penalty—Jurisdiction—Procedure—Appeal—Attorney-General to Appear for State. Any person or persons who shall violate any of the provisions of this act, except as otherwise provided, shall be deemed guilty of a misdemeanor, and upon conviction thereof except as otherwise provided shall be fined not less than twenty-five dollars nor more than fifty dollars, and upon failure to pay said fine shall be imprisoned for a term of not less than three nor more than six months. The Justices of the Peace of Kent and Sussex Counties, as the case may be, are clothed with jurisdiction to hear and determine all violations of this act, and the method and manner of procedure shall be the same as hereinbefore prescribed in similar cases.

Any person convicted before a justice of the Peace for the violation of any of the provisions of this Act shall have the right to appeal to the Court of General Sessions for the County in which the conviction occurred; provided that said appeal shall be taken in five days, and that security shall be taken to be approved by the Justice in double the amount of the fines and costs imposed by the said Justice, and upon such appeal being duly entered as in the case of other appeals in like cases it shall be the duty of the Attorney-General to appear for the State and prosecute such case.

19 Del. Laws, Ch. 653, § 60 & 62.

Section 55. Planting Oysters in Indian River or Rehoboth Bay by Non-Citizens, Unlawful—Penalties. It shall be unlawful for any person who is not a citizen of this State to lay out or plant oysters in any of the waters of Indian River or Rehoboth Bay, and any one so offending shall be deemed guilty of a misdemeanor, and on conviction thereof before any Justice of the Peace of Sussex County shall be fined for each offense the sum of one hundred dollars, and shall forfeit all oysters planted by him or them, the vessel used by him or them in the planting of said oysters and all and everything in and belonging

to her. The one-half of said fine shall be paid to the informer, and the other half to the commissioner hereinafter appointed.

19 Del. Laws, Ch. 653, § 67.

Section 56. Complaint, Warrant, Arrest and Seizure for Violations of Section 55. When an affidavit is filed before said Justice, charging that a violation of this statute has been committed by any one, and setting forth a description of the boat or vessel used by him or them so charged, the said Justice shall issue a warrant directed to any constable of said county authorizing him to arrest the person or persons therein charged, and also to seize and hold said boat or vessel, and all and everything in and belonging to her, until the final order of the Justice of the Peace in the premises,

19 Del. Laws, Ch. 653, § 68.

Section 57. Offenders Against Section 55 Committed to Jail—Order for Seizure of Boat—Notice, Sale, Title. Upon such conviction the said Justice of the Peace shall have the power and authority to commit any one so offending to the jail of Sussex County until said fine and all costs are paid, and also to issue an order to any constable of said county empowering and directing him to seize and sell said boat or vessel used by such offender in the planting of oysters in the waters aforesaid, and all and everything in and belonging to her, on ten days' notice, posted in two of the most public places in each of the hundreds of Indian River, Dagsboro and Baltimore; and such sale shall convey to the purchaser or purchasers of said boat or vessel, and all and everything in and belonging to her, a good and valid title thereto.

19 Del. Laws, Ch. 653, § 69.

Section 58. Proceeds of Sale How Applied—Appeal—Bond—Attorney-General to Prosecute Appeal. The proceeds of said sale so as aforesaid made by the constable, after deducting the costs, which shall be retained by the said officer and paid to the parties entitled, shall be paid over to the commissioner hereinafter appointed. Provided that the parties defendant may appeal to the Court of General Sessions within ten days from the time when judgment was rendered, upon giving bond to the State, with security to be approved by the Justice of the Peace, in a sum double the amount of the fine imposed and the value of the property seized by the constable, conditioned that if the said appeal shall be prosecuted with effect then the same shall be void, otherwise to be in full force and effect. The proceedings shall be in the name of the State of Delaware, and upon the docketing of the appeal in the Court of General Sessions, the Attorney-General shall answer to the appeal and conduct the case for the State.

19 Del. Laws, Ch. 653, § 70.

Section 59. Citizens May Plant Twenty Acres in Indian River or Rehoboth Bay—Fees—Plantations, How Marked—Oysters Property of Planter. It shall be lawful for any citizen of the State to lay out or plant oysters in any or the waters of Indian River or Rehoboth Bay, over an area not exceeding twenty

acres, for which he shall pay to the commissioner hereinafter appointed, annually, the sum of fifty cents for each acre as rent for the ground so held by him, the first payment of the said tax to be made within one month after he shall stake off the area aforesaid. The said area shall be marked or designated by stakes as provided in the next section of this Chapter, and the oysters deposited within said stakes, and their increase, shall be the private property of the said planter, and shall be protected as is hereinafter in this Chapter provided.

19 Del. Laws, Ch. 653, § 71.

Section 60. Citizens May Appropriate Twenty Acres in Indian River or Rehoboth Bay for Oyster Planting—Oysters Property—Staking—Plot to be Filed—Fifty Bushels to be Planted on Each Acre Within Six Months—Forfeiture. Any citizen of the State may appropriate to his own use a part not exceeding twenty acres of the bottom of Indian River or Rehoboth Bay for planting oysters, which part he shall designate by corner stakes to show at least two feet above the ordinary high-water mark and not to be obstructive of navigation. It shall be the possession of the planter or planters, and the oysters to be deposited therein and their increase shall be his or their private property. Provided that any such citizen so intending to appropriate any such part of the bottom of said Indian River or Rehoboth Bay shall, within thirty days after he has so as aforesaid staked off the area which he intends to use for planting oysters, file with the commissioner hereinafter appointed, a sufficient plot and description of said area whereby the same may be known and located, reference being made in plot and description to natural objects, or to artificial boundaries erected or fixed on the shore or shores of said Indian River or Rehoboth Bay; and provided he shall, within six months after he has so as aforesaid staked off the area as aforesaid, plant therein fifty bushels of oysters on each acre of his area and make affidavit that he has so deposited or planted said quantity of oysters within said area; said affidavit to be appended to the aforesaid plot or description and recorded therewith in the office aforesaid. If he shall fail to file a plot and description and affidavit, or deposit or plant said quantity of oysters within the time aforesaid, he shall forfeit all right, title and claim to the area aforesaid, and the same may be appropriated for the purposes aforesaid by any other citizen of said State.

19 Del. Laws, Ch. 653, § 72.

Section 61. Nature of Privilege Granted—Liability for Debts—Levy—Sale—Title. The privilege granted by Sections 59 and 60 of this Chapter shall not be construed to convey any other right than that to plant oysters or hold them as property, which shall be liable for the debts of the person so as aforesaid appropriating any of said area aforesaid, and any levy and sale under execution process of the area of any defendant in such process shall convey to the purchaser the same right to use the said area for oyster planting purposes that the defendant had and owned and all the oysters thereon planted at the time of said sale.

19 Del. Laws, Ch. 653, § 73.

Section 62. Carrying Away Oysters of Another from Area so Appropriated, Larceny. If any person or persons shall take and carry away from the area or plantation of another, so as aforesaid appropriated to his use, any oysters being within the limits thereof without the consent of the owner thereof, he shall be deemed guilty of larceny, and upon conviction thereof be punished accordingly, and it shall be no objection to a prosecution for larceny in such a case that the act was done openly.

19 Del. Laws, Ch. 653, § 74.

Section 63. Territory, Charters and Rights of Certain Oyster Planting, Etc., Companies Exempt from General Law. Nothing in this Act shall be construed to give any one the right to plant oysters within the territory of "The Frankford Oyster Planting Company," a corporation created by an Act of the General Assembly of this State, passed at Dover, March 31, 1881, or of "The Indian River and Rehoboth Bay Oyster Planting Company," a corporation created by an Act of the General Assembly of this State, passed at Dover, March 23, 1875, and amended March 1, 1877, or in any way to alter, amend, revoke or abridge any of the rights and privileges granted to the aforesaid companies or any other companies duly incorporated by the Legislature and under the laws of the State of Delaware.

Nothing in this Act shall be construed to revoke, alter or amend the charters, rights or privileges of any company heretofore incorporated by this State for the purpose of planting, dredging or otherwise dealing in oysters.

19 Del. Laws, Ch. 653, § 75, 78.

Section 64. Commissioner of Oyster Planting in Indian River and Rehoboth Bay to be Appointed—Duties—Term—Fees—Compensation—Payments to State Treasurer. In order to carry into effect the provisions of this Chapter in relation to Indian River and Rehoboth Bay there shall be an officer known as Commissioner of Oyster Planting in Indian River and Rehoboth Bay, to be appointed by the Governor. It shall be his duty to collect and receive from each person who has appropriated any portion of the bottom of Indian River or Rehoboth Bay, as is hereinbefore provided, each and every year, the sum of fifty cents for each and every acre so as aforesaid appropriated for oyster planting purposes; to keep a proper record, in which he shall record all the plots and descriptions of the different areas appropriated under the said provisions of this Chapter; said office shall continue for the term of two years; he shall receive for recording each plot and description the sum of fifty cents, to be paid by the party requesting the same to be recorded; he shall retain as compensation for his services the one-half of the revenue paid him by those who take up or appropriate certain areas for oyster planting purposes, and shall annually pay over to the State Treasurer all other monies so as aforesaid received by him.

19 Del. Laws, Ch. 653, § 76.

Section 65. Oysters on Certain Flats of Delaware Bay Protected—Penalty. It shall be unlawful for any person or persons to take oysters from any of the flats or rocks along the shores of the Delaware Bay within the jurisdiction

of Delaware, beginning at a point at the mouth of Lewes' Ditch and extending therefrom in a straight line to the mouth of Mispillion River, the same to be used for planting purposes.

Any person violating the provisions of this Section, upon conviction in the Court of General Sessions, shall forfeit and pay a fine not exceeding one hundred dollars, or be imprisoned for a term not exceeding thirty days, or both fine and imprisoned, in the discretion of the Court.

26 Del. Laws, Ch. 159, § 1 & 2.

Section 66. Measure for Oysters Sold in Shell—Penalty. All oysters sold in the shell by the bushel measure in this State, shall be measured in a circular bushel tub with straight sides and straight solid bottom, and said tub shall have the following dimensions, viz: Fifteen inches in diameter across the top from inside to inside, and thirteen inches and three-quarters across the bottom from inside to inside, and twenty inches diagonal from inside chime to top. Any person or persons engaged in buying or selling oysters in this State and measuring the same in any measure contrary to the provisions of this section shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined ten dollars and costs. The person or persons upon failure to pay said fine shall be imprisoned for a term of not less than twenty days nor more than thirty days in the county jail. The proceeds to go one-half to the informer and one-half to be paid over to the Collector of Oyster Revenue, for the use of the State. Any Justice of the Peace in any county of this State shall have jurisdiction to hear and determine all violations of this Section with the power to enforce its provisions.

21 Del. Laws, Ch. 248, § 1 & 2.

Section 66A. Official Chart of Oyster Grounds—Requirements for Permanent Leases—Temporary Licence—Annual Survey—Marking Fees—Preservation of Monuments—Penalty for Destroying—Future Leasing Regulations—Maintenance of Chart—Record of Leases—Power to Change Shape and Locations of Bottom, When—Additional Taxes. The survey and chart made under the direction of the commission created by Act of the General Assembly, approved April fifth, 1909, which chart bears date the first day of July, 1910, is hereby made the official chart of the survey of the Oyster Grounds of the Delaware Bay, including bottoms occupied on the date last aforesaid; and all new licenses issued by the Oyster Revenue Collector shall be issued and prepared in accordance with said official chart.

No permanent lease for bottom within the boundaries described in Sect. 12, Ch. 653, Volume 19, Laws of Delaware, as the same has been or may hereafter be amended, shall be granted, nor shall a license be issued, unless the boundaries of the same are laid out and established and clearly marked on the official chart. When application is made for a license, however, the Oyster Revenue Collector shall issue a temporary license which shall give the licensee the same rights as a permanent license; said temporary license shall be good only until a survey of said leased bottom can be made as hereinafter provided. Such

temporary license shall be based upon approximate location of new bottom as marked out on the official chart.

For the purpose of keeping the official chart up to date, the Oyster Revenue Collector shall, in the months of June, July and August, of the year 1911, cause a survey to be made of all portions of the bottom leased since July the first, 1910, and shall cause the location of the same to be marked on the official chart, together with the date of such revision of the official chart; a like survey of all new portions of the bottom leased since the day of the revision of the official chart shall be made in the months of June, July or August of each and every year, and a like revision shall be made in the official chart.

The Oyster Revenue Collector shall charge in addition to the fees now provided by law, the sum of two dollars and fifty cents for each corner necessarily made in marking out the plot of new portions of the bottom desired to be leased, and the sum so charged by him shall be used in paying the expenses of the surveys provided for in the preceding paragraph.

The Oyster Revenue Collector, for the purpose of assisting the making of any additional surveys, shall keep and maintain the survey monuments, signal towers, etc., established in the survey of 1910, above referred to, and any person who shall wilfully injure or destroy any of such monuments or towers or other property used for the purpose aforesaid shall be guilty of a misdemeanor and shall be punished by a fine or imprisonment within the discretion of the Court.

No future lease, or modification of any existing lease resulting from the survey of 1910, shall be granted for oyster bottoms, the boundaries of which are so placed that the adjacent "turn rows" will be greater than twenty yards, if the adjacent vacant space remaining for licensing be less than two hundred and fifty yards.

The Oyster Revenue Collector shall keep and maintain the official chart and shall permit the same to be examined and copied by any person upon request. He shall also keep a book in which shall be recorded the leases made by him.

If a person holding a license which is about to expire desires the bottom occupied by him licensed to another person, the Oyster Revenue Collector may compel that the shape and location of such bottom be changed, as far as may be practicable, to comply with paragraph six of this Section. Any license granted may be transferred by the licensee to any other person, provided the same shall not become effective until approved by the Oyster Revenue Collector; and provided further that the said Oyster Revenue Collector shall have the same authority to compel a change in the shape and location of the bottom as in this paragraph provided.

In addition to the rental for Oyster Bottoms and for tonnage tax now provided for under existing law, on and after the first day of April next there shall be an additional annual tax of one dollar for each and every corner more than four in number of plots of bottom licensed as aforesaid for any one oyster plantation held by one lessee, which said sum shall be paid to the Oyster Revenue Collector; provided that two or more plantations held by one lessee, which are not separated at their nearest point by the distance of two

hundred and fifty yards shall be considered as one lot in fixing the tax on corners.

26 Del. Laws, Ch. 154, §§ 1, 2, 3, 4, 5, 6, 7, 8 & 9.

Section 67. Terrapin Eggs Protected—Penalty. No person shall take or destroy any terrapin eggs found, or collected, on or near the shore of any bay, river or stream in this State, where the water is salt, or upon any salt marsh, or beach, under penalty of forfeiting ten dollars; and any one having possession of such eggs, shall be deemed to have taken them there, unless he proves the contrary.

Code 1852, § 969; 12 Del. Laws, Ch. 329, § 9; 14 Del. Laws, Ch. 422, § 9.

Section 68. Terrapin in Indian River and Rehoboth Bay—Size Lawful to be Taken, Bought, Sold, &c.—Penalty—Unlawful to Use Dredges—Penalty. It shall be unlawful for any person or persons to take, carry away, use, sell, or in anywise dispose of or buy or receive, any terrapin or terrapins taken or caught in or along Indian River and Rehoboth Bay or waters adjacent thereto, of less size than six inches on the lower or under shell, measuring lengthwise; but it is and shall be the duty of all and every such person or persons so catching or taking any such terrapin or terrapins of less size than six inches on the lower or under shell, measuring as aforesaid, to put into or return back to said waters any such terrapin or terrapins so caught or taken; and any person or persons violating any of the provisions of this section shall forfeit and pay for each and every offense fifteen dollars, one-half for the use of the State and one-half to the person who may sue for the same, to be recovered with cost of suit as other debts of like amount are recoverable before any Justice of the Peace in Sussex County.

It shall be unlawful for any person or persons to use any dredge or dredges for the purpose of catching or taking any terrapin or terrapins in said Indian River or Rehoboth Bay, or waters adjacent thereto; any person or persons violating this section shall forfeit and pay twenty dollars for each and every offense, one-half for the use of the State and one-half to any person who may sue for the same, to be recovered with cost of suit as debts of like amount are recoverable before any justice of the peace in Sussex County.

13 Del. Laws, Ch. 435, § 1 & 2; 14 Del. Laws, Ch. 420, § 1.

Section 69. Undersized Diamond Back Terrapin Unlawful to Catch or Have in Possession Between March 1 and August 1 in Sussex County. It shall not be lawful for any person or persons in Sussex County to catch or take or have in his, her or their possession any diamond back terrapin, which shall measure less than four lineal inches in the middle of its under shell, nor shall it be lawful for any person or persons in Sussex County to have in his, her or their possession any diamond back terrapin at any time between the first day of March and the first day of August in any year. And any person or persons who shall catch, take or have in his, her or their possession any diamond back terrapin which shall measure less than four lineal inches in the middle of its

under shell or shall have in his, her or their possession any diamond back terrapin between the first day of March and the first day of August in any year, or who having caught or taken any diamond back terrapin in any seine, net, fyke, weir or fish pound or by means of any other device or in any other way between the first day of March and the first day of August in any year, and shall not have returned at once such terrapin so taken to the waters from which said terrapin were taken, shall be guilty of a misdemeanor, and upon conviction thereof before any Justice of the Peace in the State of Delaware shall be fined not more than five dollars, and for each and every terrapin so taken or had in possession shall be fined not more than five dollars.

24 Del. Laws, Ch. 151, § 1.

Section 70. Snappers, Unlawful to Catch or Have in Possession Between March 1 and July 1 in Sussex County. It shall not be lawful for any person or persons in Sussex County to take by any means or device or manner or have in his, her or their possession at any time between the first day of March and the first day of July in any year any turtle commonly known as snappers, and any person or persons who shall catch or take or have in his, her or their possession any such turtle between the said first day of March and the first day of July in any year shall be guilty of a misdemeanor, and upon conviction thereof before any Justice of the Peace in Sussex County shall be fined not more than five dollars, and for each and every turtle so taken or had in possession shall be fined not more than five dollars.

24 Del. Laws, Ch. 151, § 2.

Section 71. Diamond Terrapin, Taking between October 1 and July 1, Prohibited—Heifer, Unlawful to Catch or Keep Under 4½ Inches Long—Penalty—Private Ponds Exempt. It shall be unlawful for any person or persons to catch or take, by any means whatsoever in this State, any diamond back terrapin from the first day of October until the first day of the following July, in each and every year.

It shall be unlawful for any person or persons to catch or keep any heifer diamond back terrapin which measures less than four and one-half inches lengthwise on the bottom shell.

Any person or persons violating any of the provisions of this section shall be deemed guilty of a misdemeanor and upon conviction thereof shall pay a fine of not less than Five Dollars and not more than Ten Dollars for each terrapin so caught or taken, one-half of said fine to be paid to the person or persons securing the arrest and conviction, and in default of the payment of such fine together with costs, shall be imprisoned for a term not exceeding ten days.

Nothing herein contained shall prevent any person raising terrapin in a private pond.

25 Del. Laws, Ch. 128, §§ 1, 2, 3 & 4.

Section 72. Clams Protected—Penalty. It shall be unlawful to catch or take any clam or clams measuring less than two inches from hinge to mouth.

Any person violating the provisions of this Section shall be guilty of a misdemeanor and upon conviction shall forfeit and pay a fine of Ten Dollars for each offense, and in default of the payment of said fine shall be imprisoned for a period not exceeding thirty days, at the discretion of the Court.

25 Del. Laws, Ch. 130, §§ 1 & 2.

Section 73. Lobsters Protected—Penalty. No person shall take or catch or have in his possession for sale after the same shall have been taken or caught any lobster weighing less than one pound, and it shall be the duty of any person who shall inadvertently take or catch any lobster of less weight than one pound to immediately return the same to the water.

Any person violating the provisions of this Section shall be guilty of a misdemeanor and upon conviction shall be fined not exceeding Ten Dollars for every lobster taken or caught or found in his possession for sale as aforesaid, and in default of the payment of said fine, together with costs, may be imprisoned for a term not exceeding thirty days, at the discretion of the Court.

25 Del. Laws, Ch. 129, §§ 1 & 2.

REPORT OF SURVEY OF LEASED OYSTER BOTTOMS.

BY CHARLES YATES,
U. S. Coast and Geodetic Survey,
Consulting Engineer of Commission.

INTRODUCTION.

EXPLANATION.

In view of the unusual character of the co-operation of the U. S. Coast and Geodetic Survey with the Delaware Oyster Survey Commission in making the survey of the leased oyster bottoms of Delaware, it seems advisable to add certain details of explanation not contained in the "Report of Commission" in the first part of this publication.

In the spring of 1909 while looking about for a solution of the problem of how the survey of the leased oyster bottoms of Delaware was to be made, a member* of the Delaware Oyster Survey Commission was referred to the representative of the U. S. Coast and Geodetic Survey on the work of the "Maryland Oyster Survey."

This brought about considerable correspondence and several personal interviews between various officials of the Government and representatives of Delaware which finally resulted on October 16, 1909, in a letter from Hon. Simeon S. Pennewill, Governor of Delaware and Chairman of the Delaware Oyster Commission, to the Hon. Charles Nagel, Secretary of the Department of Commerce and Labor, asking for the co-operation of the U. S. Coast and Geodetic Survey on the work of the "Delaware Oyster Survey." This letter after a preliminary explanation of its object stated in part:—

" * * * it is asked that you grant authority to the Superintendent of the Coast and Geodetic Survey to designate an officer of his Service as 'Consulting Engineer' to supervise the proposed survey, and to employ such experts * * * of the Survey * * * from time to time * * * as they can be spared without detriment to their regular work.

*Representative Waller Donoho.

"The officer designated for this work and his assistants to be supplied with the necessary instruments * * * and granted 'furlough without pay' for such limited periods as they may be voluntarily employed on the Delaware Oyster Survey, with the understanding that their compensation shall be such as mutually arranged and provided for by the State of Delaware.

" * * * it is understood that the triangulation and other work to be done in connection with the proposed operations will be an addition to the survey data of the Government which can be used in the future chart making surveys of the Coast and Geodetic Survey, and in any harbor or channel improvement surveys that may be made under the direction of the U. S. Engineers in the locality covered by the triangulation.

"It is not apparent how the proposed (oyster) survey can be made with the desired permanency and accuracy * * * without the co-operation of the Coast and Geodetic Survey in some form. It is understood that this has been proven to be the case in other oyster surveys of other states, and it is hoped that you will give this request your favorable consideration."

Prompt action was taken by the Department in reply to the above communication, and a few days later the following letters were written which designated the officer of the Coast and Geodetic Survey who was to act as "Consulting Engineer of the Delaware Oyster Commission" and which constituted his sole "orders" for that work:—

DEPARTMENT OF COMMERCE AND LABOR,
OFFICE OF THE SECRETARY,

WASHINGTON, October 21, 1909.

SIR:

I enclose a letter from the Governor of Delaware and Chairman of the Delaware Oyster Survey Commission of October 16th, requesting a survey under Coast and Geodetic Survey supervision, of certain oyster grounds in the State of Delaware.

You will please direct an officer with suitable qualifications to put himself in communication with Governor Simeon S. Pennewill, Chairman of the Delaware Oyster Survey Commission, at as early a date as practicable to take up the work, which, however, must be without expense to the National Government.

I will authorize the detail for short periods of such officers and employees as are necessary for the prosecution of the work, provided they can be spared without detriment to the Service; and you are authorized to issue for use in the work such instruments, forms, etc., as may be necessary and can be spared without inconvenience to the Service.

Respectfully,

ORMSBY MCHARG,
Acting Secretary.

To
The Superintendent
Coast and Geodetic Survey,
Washington, D. C.

DEPARTMENT OF COMMERCE AND LABOR,
COAST AND GEODETIC SURVEY.

WASHINGTON, October 22, 1909.

SIR:

In conformity with the request of the Governor of the State of Delaware and as directed by the Honorable Secretary of Commerce and Labor, you will place yourself in communication with Governor Simeon S. Pennewill, Chairman of the Delaware Oyster Survey Commission, at as early date as practicable and arrange to supervise the proposed survey of the oyster beds of the State of Delaware.

The survey is to be conducted without expense to the National Government, and you will apply for leave without pay for yourself and others who may be employed on the field work during such periods as are necessary and can be arranged for without interfering with other duties.

All the expense of this work will be defrayed by the State interested, and you will please render all accounts in the manner customary in this Service and through the Disbursing Agent of the Coast and Geodetic Survey.

Respectfully,

F. W. PERKINS,
Acting Superintendent.

To
Mr. C. C. Yates,
Assistant, Coast and Geodetic Survey,
Custom House, Baltimore, Md.

GENERAL STATEMENT OF WORK.

It being desirable to confine a publication of this sort to matters of public interest as far as is compatible with its use as a record and a document of reference in connection with future work of similiar character, an attempt has been made to obtain this end in this particular

case by a series of a summary statements accompanied by references to sources of information available to any one who may require the omitted details.

The Object of the Survey was to obtain exact information as to the location and extent of the leased oyster bottoms of Delaware in order to insure the collection of the correct amount of revenue derived from this source, and to provide for the survey and rental of the unoccupied bottoms suitable for oyster culture (*see text of original Act on page 5 of this publication*).

The Results of the Survey entirely fulfilled its object as stated in the preceding paragraph; *first*, by publication of the "Chart of Leased Oyster Bottoms" (*see folded chart at end of this publication*); *second*, by technical engineering descriptions of the boundaries of the leased oyster bottoms (*see pages 69 to 108 of this publication*); *third*, by nearly doubling the revenue received from the leased oyster bottoms (*see Auditor's statement on page 10 of this publication*); *fourth*, by the recommendation of amendments to the oyster laws of the State of Delaware providing for the future method of controlling and leasing oyster bottoms (*see text of amendments on pages 8 and 9 of this publication*).

The Surveys of New Leased Oyster Bottoms of 1911 and 1912 provided for by the amendments to the oyster laws mentioned in the preceding paragraph were under the indirect supervision of the Consulting Engineer but results of this work are not covered by the "Chart of Leased Oyster Bottoms" or the "Description of the Boundaries of Leased Oyster Bottoms" of this publication.

Complete duplicate drawings showing the results of these two surveys were made by Mr. Tempelton Van de Bogert, the hydrographic engineer who had immediate charge of this work, and one of these has been filed in the Library of the State of Delaware in the State House at Dover, and the other in the archives of the Coast and Geodetic Survey at Washington.

The technical engineering description of the boundaries of the new leased oyster bottoms included in these surveys has been prepared by Mr. Van de Bogert in similiar form to those given in this publication and filed in the Library of the State of Delaware.

The Chronology of the Survey covers the years 1909 to 1912, and complete details of the history of this work including full notes of all meetings of the Commission attended by the Consulting Engineer, are contained in the annual reports of the Consulting Engineer for years ending July 1st, 1911, 1912 and 1913, on file in the office of the Coast and Geodetic Survey at Washington.

The active field work of the original survey began November 29, 1909, but was discontinued on account of the weather on January 10, 1910. It was resumed again on May 18, 1910, and finally closed October 19, 1910.

July 1st, 1910, was adopted as the official date for fixing the status of the leased oyster bottoms to be shown on the "Chart of Leased Oyster Bottoms" (*see Section 1 of the amendments to oyster laws on page 8 of this publication*).

The field work of the surveys of the oyster bottoms leased subsequent to July 1, 1910, was carried on during the summer months of 1911 and 1912.

The office work connected with the survey, including the preparation of the drawing for the "Chart of Leased Oyster Bottoms," and the compilation of the data required for the "Description of the Boundaries of the Leased Oyster Bottoms" has been irregularly scattered through the entire period from the beginning of the survey to the date of this publication.

The Organization of the Survey was somewhat complicated by the conditions which made it necessary to carry on the work at such times as would not be detrimental to the regular work of the government under the charge of the Consulting Engineer. Changes in personnel were frequent, and all told there were about a dozen different technical experts in engineering and drafting employed on the work. This subject is fully covered by the previously mentioned annual reports of the Consulting Engineer on file in the office of the Coast and Geodetic Survey at Washington, and partly covered by the statements made under the heading of "Appreciation" (*see page 56 of this publication*), and by the "Notes" on the face of the "Chart of Leased Oyster Bottoms" (*see folded chart at end of this publication*).

The Methods Employed on the Survey, briefly stated, were: *first*, the establishment of a framework of triangulation based on the standard datum of the U. S. Coast and Geodetic Survey; *second*, the construction of a large scale chart with a projection based on the triangulation;

third, the marking of the boundary corners of the leased oyster bottoms by stakes and tags; *fourth*, the location of the boundary corners by sextant angles and the plotting of their positions on the chart by hydrographic methods; *fifth*, the graphic determination of the latitudes and longitudes defining the positions of the boundary corners required for their technical description; *sixth*, the preparation of the drawings and *seventh*, the necessary computations and other work leading to the preparation of the technical data contained in this publication. (*For additional description of methods see text of this publication under heading of "Triangulation" on page 59, and under heading of "Boundaries of Leased Oyster Bottoms" on page 69.*)

The Cost of the Survey was entirely borne by the State of Delaware but in conformity with his orders, all accounts of the Consulting Engineer were rendered in the manner customary in the Coast and Geodetic Survey and through the Disbursing Agent of that Service. These accounts were made in duplicate, the originals being forwarded to the Governor of Delaware, and the duplicates retained in the office of the Coast and Geodetic Survey.

The estimates of cost of the Survey submitted to the Commission on February 8, 1910 (*see pages 34 and 35 of the annual report of the Consulting Engineer to the Superintendent of the Coast and Geodetic Survey for the year ending June 30, 1911*), amounted to \$4,500, and the total expenditures including those of the preparation and publication of the "Chart of Leased Oyster Bottoms" and of this document will not exceed that sum.

APPRECIATION.

The following statement is quoted from a report to the Superintendent of the Coast and Geodetic Survey made by the Consulting Engineer. It was not written with the thought that it would be published, as is evident from its personal tone.

" * * * the Delaware Oyster Survey as a whole has been a much more complicated and difficult undertaking than originally estimated, and it has occupied much more of my time and energy as a government official than would have been warranted if the difficulties of the survey could have been foreseen.

"Although these difficulties were chiefly due to weather and the abandoning of the work by the engineer trained to do it, and could not have been anticipated, my obligation to complete the work in

accordance with my original plans submitted to the Delaware Oyster Survey Commission was not removed.

"Under these conditions, it was to be expected that I should devote much extra time to the Delaware Oyster Survey, including some holidays and Sundays, but this is not the case of others who were connected with this work whom I shall mention below :

"To Dr. H. F. Moore of the U. S. Bureau of Fisheries I owe many thanks, not only for his successful efforts to economize on his part of the work so as to leave my funds as large as possible, but also for obtaining for me the services of the new engineer who was to carry on the work. Dr. Moore has displayed time and again the true spirit of co-operation in the work of his Bureau as it comes in contact with the work of the Coast and Goedetic Survey, and I take pleasure in expressing my appreciation of this fact.

"To Miss A. Louise McCrone, the Coast and Goedetic Survey stenographer on the work of the Maryland Oyster Survey, who most cheerfully and with exceptional efficiency did a greater part of the work of preparing letters to all the lessees of oyster grounds in Delaware, the making of sketches of the lots to show the lot holders how their corners were to be staked and marked, the preparation of hundreds of tags to be secured to the stakes, etc., etc. All of which work was done voluntarily and at such times in office hours or over time as could be spared without detriment to her regular duties. In the latter part of the work Miss McCrone also rendered very valuable services in connection with the accurate plotting of the boundaries of the leased oyster plantations, which work was done with remarkable efficiency after very little training.

"To Mr. Frank W. Seth, Surveyman in the Coast and Goedetic Survey, engaged on work of the Maryland Oyster Survey, for much valuable and generous assistance in the triangulation computations and in compilation of data required for the Delaware Oyster Revenue Collector. This work was done voluntarily and without cost to either the government or the State of Delaware. Such public spirited and kindly actions are characteristics of Mr. Seth.

"To Messrs. Hildreth, Torrey and Moore of the Office of the Coast and Goedetic Survey at Washington, for very zealous and efficient services in preparing the 'Chart of Leased Oyster Bottoms' for publication. The special interest taken by these gentlemen in the preparation of this chart and the excellent results they obtained is greatly appreciated.

"To Mr. Van De Bogert, who came to the work through the courtesy of Dr. Moore, for most excellent services in taking up the

field work of Mr. Borst and carrying it to a successful finish. Mr. Van De Bogert was not an experienced hydrographic engineer when he commenced the work, but I feel now I can safely say that he is one. Mr. Van De Bogert's work on the survey of new leased oyster bottoms in 1911 and 1912 was well done, and I believe the State of Delaware was fortunate in securing his services for those surveys.

"I also desire to express my appreciation of the many courtesies extended to me by Governor Pennewill, and the other members of the Delaware Oyster Survey Commission, Senator Connor, Senator Sheldrake, Representative Donoho and Representative Ainscow.

"To Mr. J. Burton Wharton, Delaware Oyster Revenue Collector, who assisted the work of the survey in every way practicable.

"To ex-Judge Daniel C. Hastings for his very courteous attention to my ideas as to the needs of the State of Delaware in the way of amendments to her oyster laws, and especially for his clear comprehension of the subject as demonstrated by the efficient way in which he brought about their enactment.

"And to many others, whom I met in Delaware in connection with my work, who as employees rendered good service on the survey, or who as citizens voluntarily furnished important information and other assistance."

TRIANGULATION.

EXPLANATION.

The triangulation operations carried on in connection with the work of the Delaware Oyster Survey Commission had for their object the establishment of a surveying foundation suitable for the three more or less independent surveys classified as follows:

1. *Survey of private oyster plantations* involving the hydrographic location and technical geographic definition of the boundaries of these leased oyster bottoms.

2. *Survey of public natural oyster beds* involving hydrographic locations required for the surveys of the U. S. Bureau of Fisheries in determining the "condition and extent of the natural oyster beds of Delaware."

3. *Future survey operations* of the Government, or the State, that may be required for the preparation and publication of charts and maps, for improvement of waterways, for reclamation of swamp lands, or for other survey purposes which can not be foreseen.

The methods employed on this work were those of the U. S. Coast and Geodetic Survey. The results obtained were the geodetic location, or re-location, of *sixteen* prominent objects on land or water, *eight* of which were large signal towers erected by the Delaware Oyster Survey Commission.

This means that each of these sixteen land and water marks are standard triangulation stations of the United States of known geodetic location which fixes their geographic relation to all other triangulation stations of the continent. It means also, that the actual positions of these sixteen triangulation stations can be definitely re-determined at any time, even though all monuments and other marks indicating their positions are entirely destroyed. Consequently, all surveying data obtained from the surveys based on the foundation of triangulation established for the Delaware Oyster Survey Commission has a standard status in this respect which should be beyond dispute for all time.

GEOGRAPHIC POSITIONS OF THE TRIANGULATION STATIONS.

New standard triangulation stations are likely to be established in the locality covered by the surveys connected with the work of the Delaware Oyster Survey Commission, and new and more accurate determinations of the geodetic co-ordinates of the old triangulation stations are likely to be secured. Therefore, it does not seem advisable to give geographic positions in this publication, *especially, as this information, together with any new geodetic data that may have been acquired in the mean time, can be obtained by applying to the U. S. Coast and Geodetic Survey at Washington.*

DESCRIPTION OF LOCATION OF TRIANGULATION STATIONS.

In plotting and defining the boundaries of new leased oyster plantations by use of the official drawing of the chart of leased oyster bottoms filed in the Library of the State of Delaware, or in the use for any engineering purpose of the "Chart of Leased Oyster Bottoms" in this publication, or the map in the publication of the U. S. Bureau of Fisheries on the "Condition and Extent of the Natural Oyster Beds of Delaware," it may become necessary to erect new triangulation signal towers in the place of those which may have been destroyed. And in order that this can be done accurately, and also as a matter of convenient record of the engineering basis used in the work of the Delaware Oyster Survey Commission, full description of the locations of these triangulation stations are given under this heading. However, in this connection, attention is called to the fact that *descriptions of location of any new United States standard triangulation stations established in the vicinity of the work of the Delaware Oyster Survey Commission after the date of this publication, can be obtained by application to the U. S. Coast and Geodetic Survey at Washington.*

The method of describing these triangulation stations requires no explanation other than a few comments as to the meaning of the data given under "References." In the first column under this sub-heading, the quotation marks indicate triangulation stations. In the second column, the angles given indicate directions measured from left to right (clockwise) from a zero direction adopted as an initial, and have no reference to geographic bearings. And in the last column, the distances given are approximate unless stated in meters when they can be accepted as having been carefully measured.

AINSCOW SIGNAL TOWER.

General Locality.—Western shore of Delaware Bay about 3 miles southeast of Bowers Beach and ¼ mile southeast of Sandy Point (*see arrows on "Chart of Leased Oyster Bottoms" pointing to position outside of limits of chart.*)

Immediate Locality.—Triangulation station is on a sandy beach about 1 foot above high water, 55 yards southwest of shore at low water, 300 yards southeast of a shack at Bennetts Pier, and in center of square formed by cement piers supporting legs of signal tower.

Marks.—Triangulation station is marked by center point of triangle on cement monument about 2 feet long and 8 inches square projecting 6 inches above surface. Top of monument is marked with letters D. O. S. C. arranged around vertex of triangle and letters U. S. C. S. underneath base of triangle. Sub-surface mark is center of 3-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Fourteen Foot Bank Light".....	0	00	00	..... 9 miles.
Chimney of shack near shore.....	51	30	..	..... ¾ mile.
East chimney of house.....	124	49	..	..... 1 mile.
Right tangent of Beach Hotel at Bowers Beach.....	229	29	..	..... 3½ miles.
Right tangent of shack at Ben- netts Pier.....	230	02	..	..... 300 yards.
"Donoho Signal Tower".....	230	10	10	..... 3½ miles.
"Elbow of Cross Ledge Light"....	301	09	45	..... 11¼ miles.
"Old Cross Ledge Light".....	320	05	55	..... 10⅞ miles.

BOMBAY (1910).

General locality.—Western shore of Delaware Bay on Bombay Hook Point about 2½ miles southeast of Woodland Beach (*see map in publication of U. S. Bureau of Fisheries on "Condition and Extent of Natural Oyster Beds of Delaware"*).

Immediate Locality.—Triangulation station is on a sand beach about 1 foot above high water, 30 yards west of shore, and 50 yards north of a ditch.

Marks.—Triangulation station is marked by center point of triangle on cement monument about 2 feet long and 8 inches square projecting 6 inches above surface. Top of monument is marked with letters D. O. S. C. arranged around vertex of triangle and letters U. S. C. S. underneath base of triangle. Sub-surface mark is center of 3-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Cohansey Light".....	0	00	00	..... 4½ miles.
"Ship John Shoal Light".....	35	30	00	..... ¾ miles.
"Leipsic (1910)".....	91	18	10	..... 4⅞ miles.
Fishing shack.....	107	31	..	..... 2 miles.
East chimney of house.....	136	53	..	..... ½ mile.
Pole on merry-go-round at Wood-				
land Beach.....	246	53	..	..... 2½ miles.

CONNER SIGNAL TOWER.

General Locality.—Western shore of Delaware Bay at Pickerings Beach about ¾ miles south of Mahon River Light, ½ miles north of Kitts Hummock, and ⅝ miles south of mouth of Little Creek (*see "Chart of Leased Oyster Bottoms"*).

Immediate Locality.—Triangulation station is on marsh just west of sand beach about on level with high water, 70 yards west of shore, 25 yards northeast of road near several small buildings, and is center of square formed by cement piers supporting legs of signal tower.

Marks.—Triangulation station is marked by center point of triangle on cement monument about 2 feet long and 8 inches square projecting 7 inches above surface of ground. Top of monument is marked with letters D. O. S. C. arranged around vertex of triangle and letters U. S. C. S. underneath base of triangle. Sub-surface mark is center of 3-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Old Cross Ledge Light".....	00	00	00	..... 9¼ mles.
Southwest corner of shack.....	7	39	10	..... 19.25 meters.
"Fourteen Foot Bank Light".....	37	30	50	..... 13¼ miles.
Northwest corner of barn.....	46	00	..	..... 15.22 meters.
"Sheldrake Signal Tower".....	90	15	00	..... 2½ miles.
North gable of hotel at Kitts				
Hummock.....	91	02	..	..... 2⅛ miles.
East cupola of barn.....	160	22	..	..... ¾ miles.
West chimney of house.....	167	19	..	..... 1⅛ miles.
Chimney of small house.....	187	13	..	..... ⅞ miles.
Church cupola at Little Creek.....	233	05	..	..... 2½ miles.
"Pennewill Signal Tower".....	282	18	40	..... 1⅞ miles.
"Mahon River Light".....	288	49	10	..... ¾ miles.
"Elbow of Cross Ledge Light"....	348	34	00	..... 8¼ miles.

COHANSEY LIGHT.

General Locality.—Eastern shore of Delaware Bay on western shore of Cohansey Creek about $2\frac{5}{8}$ miles north-northeast of Ship John Shoal Light, and nearly opposite Bombay Hook Point (*see map in publication of U. S. Bureau of Fisheries on "Condition and Extent of Natural Oyster Beds of Delaware"*).

Immediate Locality.—Triangulation station is on a frame dwelling on iron piles known as Cohansey Light House.

Marks.—Triangulation station is center point of lantern on Cohansey Light House.

References.—None necessary.

DONOHO SIGNAL TOWER.

General Locality.—Western shore of Delaware Bay at Bowers Beach on south side of entrance to St. Jones River (*see "Chart of Leased Oyster Bottoms"*).

Immediate Locality.—Triangulation station is on a marsh meadow about 2 feet above high water, 300 yards west of shore, 100 yards south of St. Jones River, 300 yards southeast of St. Jones Wharf, 56 yards northeast of road, and in center of square formed by cement piers supporting legs of signal tower.

Marks.—Triangulation station is marked by center point of triangle on cement monument about 2 feet long and 8 inches square projecting 6 inches above surface. Top of monument is marked with letters D. O. S. C. arranged around vertex of triangle and letters U. S. C. S. underneath base of triangle. Sub-surface mark is center of 3-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Old Cross Ledge Light".....	0	00	00	.....$10\frac{3}{4}$ miles.
Chimney of Flack cottage.....	75	47	..	..... 400 yards.
"Ainseow Signal Tower".....	80	27	20	..... $3\frac{1}{2}$ miles.
Broken flagstaff on Beach Hotel..	88	42	10'	..... $\frac{1}{4}$ mile.
Chimney of Flack cottage on west side of road.....	109	15	..	..... 300 yards.
Methodist Church spire.....	145	10	50	..... $\frac{1}{2}$ mile.
Cupola on Hubbard barn.....	158	09	..	..... $\frac{3}{4}$ mile.
East gable of St. Jones Wharf House.....	257	01	..	..... 300 yards.
"Sheldrake Signal Tower".....	308	02	10	..... $2\frac{3}{8}$ miles.
"Elbow of Cross Ledge Light".....	348	48	20	.....$10\frac{1}{2}$ miles.

ELBOW OF CROSS LEDGE LIGHT.

Immediate Locality.—Eastern side of main ship channel in Delaware Bay about $6\frac{7}{8}$ miles east of Mahons River Light and $6\frac{7}{8}$ miles west of Egg Island Light (see "*Chart of Leased Oyster Bottoms*").

Immediate Locality.—Triangulation station is on an octagonal dwelling on a cylindrical foundation known as the new Elbow of Cross Ledge Light House.

Marks.—Triangulation station is center point of lantern on Elbow of Cross Ledge Light House.

References.—None necessary.

FOURTEEN FOOT BANK LIGHT.

General Locality.—Western side of main ship channel of Delaware Bay about $11\frac{1}{2}$ miles east of Bowers Beach (see "*Chart of Leased Oyster Bottoms*").

Immediate Locality.—Triangulation station is on a tower on eastern side of dwelling on cylindrical foundation known as Fourteen Foot Bank Light House.

Marks.—Triangulation station is center point of lantern on Fourteen Foot Bank Light House.

References.—None necessary.

LEIPSIC (1910).

General Locality.—Western shore of Delaware Bay on Goose Point about $\frac{5}{8}$ mile north of entrance to Leipsiz Creek (see map in publication of U. S. Bureau of Fisheries on "*Condition and Extent of Natural Oyster Beds in Delaware*").

Immediate Locality.—Triangulation station is about 2 feet above high water, 100 yards west of shore, and 300 yards northeast of a pond in marsh.

Marks.—Triangulation station is marked by center point of triangle on cement monument about 2 feet long and 8 inches square projecting 8 inches above surface of ground. Top of monument is marked with letters D. O. S. C. arranged around vertex of triangle and letters U. S. C. S. underneath base of triangle. Sub-surface mark is center of 3-inch tile pipe buried with top 2 inches below base of monument.

<i>References.</i> —	°	'	"	
"Cohansey Light".....	0	00	00	..... 6 $\frac{3}{8}$ miles.
"Ship John Shoal Light".....	1	03	50	..... 3 $\frac{3}{4}$ miles.
"Elbow of Cross Ledge Light".....	105	34	50	..... 10 $\frac{1}{2}$ miles.
Chimney of fishing shack.....	304	40	..	..... 4 miles.
"Bombay (1910)".....	315	12	10	..... 4 $\frac{7}{8}$ miles.

MAHON.

General Locality.—Western shore of Delaware Bay about $\frac{1}{4}$ mile south of Mahons River Light (see "Chart of Leased Oyster Bottoms".)

Immediate Locality.—Triangulation station is on marsh about on level with high water, 250 yards west of shore, 25 yards northwest of wagon road, and 100 yards south-southwest of fork of road, and in center of triangle formed by cement piers supporting legs of tripod signal.

Marks.—Triangulation station is marked by center of drift pin in center of a concrete block about 4 feet square, with top about 4 inches below on surface.

<i>References.</i> —	°	'	"	
"Mahons River Light".....	0	00	00	..... $\frac{1}{4}$ mile.
Chimney of Hendrickson store....	35	31	..	..... $\frac{1}{4}$ mile.
"Elbow of Cross Ledge Light"....	91	49	10	..... 7 miles.
"Cross Ledge Light".....	100	38	00	..... 8 $\frac{3}{4}$ miles.
"Old Light House Tower".....	163	38	00	..... 1 $\frac{1}{8}$ mile.
East chimney of house.....	258	17	..	..... 1 $\frac{1}{2}$ miles.
Chimney of small fishing shack....	344	33	..	..... $\frac{3}{4}$ miles.

MIAH MAUL LIGHT FOUNDATION.

General Locality.—Eastern side of main ship channel in Delaware Bay about 2 $\frac{5}{8}$ miles south-southeast of Old Cross Ledge Light (see "Chart of Leased Oyster Bottoms".)

Immediate Locality.—Triangulation station is on a cylindrical foundation of unfinished structure to be known as Miah Maul Light House.

Marks.—Triangulation station is vertical staff erected in center of foundation in proposed position of light.

References.—None necessary.

MAHON RIVER LIGHT.

General Locality.—Western side of Delaware Bay on western shore of Mahon River about $\frac{1}{4}$ mile northwest of entrance to Mahon River (see "*Chart of Leased Oyster Bottoms*").

Immediate Locality.—Triangulation station is on a frame dwelling on iron columns known as Mahon River Light House.

Marks.—Triangulation station is center point of lantern on Mahon River Light House.

References.—None necessary.

 OLD LIGHT HOUSE TOWER.

General Locality.—Western shore of Delaware Bay about $\frac{1}{2}$ mile south of Mahon River Light and $1\frac{1}{4}$ miles north-northeast of entrance to Little Creek (see "*Chart of Leased Oyster Bottoms*").

Immediate Locality.—Triangulation station is on an old abandoned frame light house about 20 yards off shore, in the approximate position occupied by the original light tower, and is situated in center of square formed by four upright posts.

Marks.—Triangulation station is a nail in the center of four upright posts which were the corner posts of the light tower.

References.—None necessary.

 OLD CROSS LEDGE LIGHT.

General Locality.—Eastern side of main ship channel of Delaware Bay about $2\frac{1}{8}$ miles southeast of Elbow of Cross Ledge Light and $2\frac{5}{8}$ miles north-northwest of Miah Maul Light (see "*Chart of Leased Oyster Bottoms*").

Immediate Locality.—Triangulation station is on mansard roof dwelling on a granite foundation known as Old Cross Ledge Light House.

Marks.—Triangulation station is center point of lantern on Old Cross Ledge Light House.

References.—None necessary.

PENNEWILL SIGNAL TOWER.

General Locality.—Western shore of Delaware Bay near mouth of Little Creek about $1\frac{3}{4}$ miles south-southwest of Mahon River Light (see "Chart of Leased Oyster Bottoms").

Immediate Locality.—Triangulation station is on marsh at northern side of entrance to Little Creek about 1 foot above high water, 55 yards northwest of shore, 400 yards northwest of point between Delaware Bay and Little Creek, and in center of square formed by cement piers supporting legs of signal tower.

Marks.—Triangulation station is marked by center point of triangle on cement monument about 2 feet long and 8 inches square projecting 6 inches above surface of ground. Top of monument is marked with letters D. O. S. C. arranged around vertex of triangle and letters U. S. C. S. underneath base of triangle. Sub-surface mark is center of 3-inch tile pipe buried with top 2 inches below base of monument.

<i>References.</i> —	°	'	"	
"Mahon River Light".....	0	00	00	..... $1\frac{3}{4}$ miles.
Chimney of Hendrickson store....	1	57	..	..... $1\frac{5}{8}$ miles.
"Elbow of Cross Ledge Light"....	64	47	10	..... $7\frac{1}{2}$ miles.
"Old Cross Ledge Light".....	74	54	00	..... 9 miles.
Chimney of small house.....	194	02	..	..... 2 miles.
East chimney of house.....	223	27	..	..... $1\frac{1}{2}$ miles.
Windmill at Little Creek.....	250	20	..	..... $2\frac{1}{2}$ miles.
North chimney of house.....	290	14	..	..... $1\frac{1}{2}$ miles.

SHIP JOHN SHOAL LIGHT.

General Locality.—On eastern side of main ship channel in Delaware Bay about $2\frac{5}{8}$ miles south-southwest of Cohansey Creek, and $3\frac{3}{8}$ miles east of Bombay Hook Point (see map in publication of U. S. Bureau of Fisheries on "Condition and Extent of Natural Oyster Beds in Delaware").

Immediate Locality.—Triangulation station is on a 1-story octagonal dwelling on a cylindrical foundation known as Ship John Shoal Light House.

Marks.—Triangulation station is center point of lantern on Ship John Shoal Light House.

References.—None necessary.

SHELDRAKE SIGNAL TOWER.

General Locality.—Western shore of Delaware Bay at Kitts Hummock about 2½ miles north of Bowers Beach (see "Chart of Leased Oyster Bottoms").

Immediate Locality.—Triangulation station is on sand beach about 2 feet above high water, 25 yards west of shore, 8 yards west of sand ridge 3 feet higher than station, 30 yards south of a summer cottage, about on line with center of row of cottages, and in center of square formed by cement piers supporting legs of signal tower.

Marks.—Triangulation station is marked by center point of triangle on cement monument about 2 feet long and 8 inches square projecting 2 inches above surface of ground. Top of monument is marked with letters D. O. S. C. arranged around vertex of triangle and letters U. S. C. S. underneath base of triangle. Sub-surface mark is center of a 3-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Old Cross Ledge Light".....	0	00	00	..... 9¾ miles.
"Fourteen Foot Bank Light".....	43	13	00	..... 12 miles.
South chimney of house.....	211	47	..	..... 1 mile.
"Conner Signal Tower".....	285	46	50	..... 2½ miles.
"Mahon River Light".....	296	09	..	..... 5¾ miles.
"Elbow of Cross Ledge Light".....	347	38	00	..... 8⅞ miles.

BOUNDARIES OF LEASED OYSTER BOTTOMS.

EXPLANATION.

The difficulties of accurately locating and permanently defining the boundaries of a farmer's plantation on land, even with the aid of monuments, public roads, streams of water, and other points of reference, are often great, judging from the disputes arising from this source. But be that as it may, there can be doubt as to the difficulties of *accurately locating and permanently defining* the boundaries of an oysterman's plantation situated under water at a distance off shore from one to six miles as is the case with the leased oyster bottoms of Delaware.*

There is only one point on the earth's surface at the intersection of any one parallel of latitude and any one meridian of longitude, and therefore, there can be no dispute as to the meaning of such a geographic definition of the location of a point, even though all the original triangulation station marks used in its determination together with the chart on which its position was originally plotted have been totally destroyed.

In the case of the destruction of an original triangulation station mark, or any other point defined by a geographic position, a competent geodetic engineer can re-establish its exact location by means of a new system of triangulation connecting with other distant triangulation station marks which have not been destroyed. In the case of the destruction of the chart on which the position of any point on the earth's surface was originally plotted, this point can be re-plotted by its geographic position with any degree of accuracy permitted by the scale of any new chart constructed for that purpose.

If there be no question at the time of the original location and legal adoption of a geographic definition of the location of a point by a given latitude and longitude, there can be no technical or legal question afterwards as to its exact meaning, or as to the exact re-determination of the location of this point, be it either on land or water at its newly determined position, or on a new chart in its newly plotted position.

For these reasons, the method of defining the location of boundary points by latitudes and longitudes (geographic positions) was adopted in the survey of the leased oyster bottoms of Delaware. This method is

*See "Chart of Leased Oyster Bottoms" at end of this publication. Also see page 55 of this publication for a brief statement of "the methods employed on the survey.

more or less an innovation in oyster surveys which was first used in connection with the work of the Maryland Oyster Survey. It possesses so many undoubted advantages, and at the same time is so simple in principle and application when once understood, that its adoption by other oyster surveys of other States than Maryland and Delaware seems probable.

SURVEYING METHODS FOR RE-LOCATION OF BOUNDARIES.

There are two problems that are likely to present themselves to those interested in the boundaries of leased oyster bottoms, one, to determine whether the stakes or buoys marking the boundary corners have been dragged or otherwise moved from their correct positions, and the other, to re-locate or re-establish a stake or buoy at the point from which it was removed.

There are a number of different ways that can be used in solving these two problems, and the one which should be selected will partly depend upon the instruments possessed by the engineer and partly on his training and experience, but only two of these methods which seem to be the most practical in application will be described.

The first method involves the measurement of sextant angles between three or more triangulation station marks. These angles being observed from the actual position on the water of the point of the boundary to be re-located. This is often called the hydrographic method, and is the one which is best suited for the purpose of re-location of the boundary points. Besides it has the advantage of being available whenever three triangulation station marks of proper relative positions are visible from the off-shore point needing re-location.

Most engineers and others familiar with the use of the sextant are well acquainted with the graphic three-point method of fixing a position on water, and only a brief description of the operation will be given.

In case there is only one engineer having a single sextant, the three-point method can be used if the two angles which are formed at the point of the boundary to be re-located by the three selected triangulation station marks are known. (*Note.—See page 72 for method of calculating these angles.*) Having these two angles, the engineer proceeds to the stake or buoy of doubtful location and measures the actual sextant angles between the three selected marks. If the measured and calculated angles do not agree, the stake or buoy is not in its correct position and the boundary corner must be re-located. This is accomplished by moving the boat about until a point is reached where the angles do agree,

and this point being the desired location, the stake or buoy can be placed in its correct position.

If the engineer can obtain the use of both a sextant and a three-arm protractor (position finder), the availability of the hydrographic method is increased. For example, the engineer can proceed to the stake or buoy of doubtful position and measure the two adjacent sextant angles between the three triangulation marks selected. These two angles are set off on the three-arm protractor and the actual position of the stake or buoy plotted on the chart by shifting the protractor about until the edge of each of the three arms passes through the center of the symbols on the chart marking the position of the three triangulation station marks. The center of the hub of the protractor will indicate on the chart the actual position of the stake or buoy, and if the point thus obtained does not coincide with the true position of the corner of the boundary as given on the chart, the surveyor can proceed to locate the stake or buoy correctly by reversing the operation.

This is done by placing the center point of the hub of the protractor over the corner of the boundary in question and measuring on the chart the two adjacent angles between the three selected triangulation station marks. One of the angles thus obtained is set on the sextant and the boat moved about until the two land marks are shown by the sextant to subtend the same angle obtained from the protractor. The second angle is then placed on the sextant and the same operation gone through, and so on, first using one angle on the sextant, then the other, until a point is reached where both observed sextant angles are practically identical with the protractor angles. The point thus located is the desired one and the stake or buoy can be placed to mark the true position of the corner of the boundary in question.

If the engineer possesses two sextants and a protractor, this problem is far easier of solution, as the two angles can be set off on separate sextants and the observer can quickly find the desired point where they agree with the protractor angles by using one sextant after the other without the need of re-setting either.

If there are two observers, two sextants, and a protractor, it can be seen that the best condition for both a rapid and an accurate hydrographic location of a point is attained.

The second method involves the measurement of angular directions which intersect on the water at the point of the boundary to be re-located. These directions being observed at two or more triangulation station marks.

This method will be readily understood by engineers accustomed to the use of a transit or a theodolite. The instrument is set over a triangulation station mark and the angle of the direction of the point of the boundary to be located is laid off. (*Note: See page 72 for method of calculating these angular directions.*) This establishes a range line on which the desired point must be located, and on which a stake or other mark can be placed in the water near the position it is desired to re-locate. A similar process is then carried on at a second triangulation station, and so on, until the position of the desired point is satisfactorily fixed.

If there are two engineers with instruments at two suitably selected triangulation stations, and a third person on the water in a boat who understands certain pre-arranged signals from the two observers at the triangulation stations, a stake or other mark can be placed at the desired point with very little difficulty.

Although the method just described may appear more simple than the *first method*, it is not the case as is well known by engineers familiar with both methods. In fact, the *first method* requires only one hydrographic engineer on a launch, while the *second method* requires two engineers at triangulation stations and one on a launch to obtain results that will compare in speed and accuracy with those that can be obtained by the one hydrographic engineer.

There are *two methods of obtaining the angles and directions* required by the two surveying operations described in the preceding. One, being the graphic method which is sufficiently accurate for ordinary purposes, and the other, being the computation method which gives absolutely accurate results but which on account of the additional labor involved is not so convenient as the former.

The graphic method involves the use of the published "Chart of Leased Oyster Bottoms," (or preferable the use of the official drawing of the leased oyster bottoms of Delaware on file in the Library of the State of Delaware), for the purpose of the graphic measuring of the required angles by means of a protractor.

The computation method involves the calculation of the desired angles by means of azimuths (geographic directions) computed from the known geographic positions of the triangulation station marks and the boundary points involved. This method besides being accurate is easily carried out by any one trained in geodetic computations. However, as it presents certain difficulties to those not trained in this class of work, it is recommended only in cases of dispute requiring great accuracy for their settlement.

METHOD OF DESCRIBING BOUNDARIES.

The method adopted for the description of the boundaries of the leased oyster bottoms of Delaware is very simple as each description is arranged in a tabular form thus avoiding many hundred repetitions of the same words by one explanation which applies to all the leased oyster plantations of the State.

Heading.—At the top of each tabular description is given the name of the lessee of this property on the date of July 1, 1910. On the left hand end of the first line in parenthesis under the name of the lessee and after the sub-heading of *Location*, is given the distance in statute miles and the compass direction *from* Mahons River Light of Corner No. 1 of the particular leased oyster plantation being described.* And on this same line on its right-hand end after the sub-heading of *Area*, is given the number of acres in the leased oyster bottom being described. As several entirely separate leased oyster plantations often belong to the same person, the *Location* and *Area* given in the heading will often be useful in determining which leased bottom of the lessee is being described without the trouble of obtaining this fact by plotting the geographic positions of its corners.

First Column.—The first column of the tabular form under the heading of *Corner Number* contains the adopted numbers designating the corners of the leased oyster bottom being described. These numbers were usually assigned by calling the upper northwest corner No. 1, and then proceeding in a clock-wise direction around the leased area.

Second and Third Columns.—The second and third columns of the tabular form under the headings of *Latitude* and *Longitude*, give the geographic position of the corresponding corner indicated on the same line by the number in the first column.

These geographic positions have been adopted by the Delaware Oyster Survey Commission as the primary technical definition of the location of the corners, and should be considered as final in case of a dispute arising from discrepancies caused by other means of location. The latitudes and longitudes given in these columns are based on the United States standard datum of the Coast and Geodetic Survey, and the points thus defined can be re-located from distant triangulation stations of the Survey, even though all the triangulation marks originally used for their location have been destroyed.

*See "Chart of Leased Oyster Bottoms" at end of this publication.

Two methods can be used in calculating the geographic positions required for the description of the boundaries of the leased oyster bottoms. One, by graphic measurement of the latitudes and longitudes of the position of the boundary points as plotted on any chart having a standard latitude and longitude projection, and the other, by the geodetic computation of the latitudes and longitudes desired. But it does not matter technically or legally which method is used as long as the resulting geographic positions are legally adopted because these adopted definitions then become indisputable and possess all the permanency and accuracy obtainable, even though it should happen to be the fact that the actual positions of these points were not exactly identical with the points as actually defined by the adopted geographic positions.

BOUNDARIES LOCATED IN 1911 AND 1912.

The leased oyster bottoms described in this publication include only those boundaries of oyster plantations held by lessees on July 1, 1910. (*See Section No. 1 of text of "Act in relation to the leasing of oyster bottoms" on page 8 of this publication.*)

After that date a large number of new oyster bottoms were leased and many changes made in the boundaries of the old oyster plantations.

These new boundaries were surveyed in the summers of 1911 and 1912 by Mr. Templeton Van de Bogert, the hydrographic engineer who did a greater part of the hydrographic work of the original survey. Mr. Van de Bogert has defined all the new boundaries surveyed by him in the same manner adopted in defining the leased bottoms of the original surveys recorded in this publication. And he has filed the manuscript of these descriptions of new boundaries in the Library of the State of Delaware, along with the official drawing of the chart of the leased oyster bottoms which he has corrected for the surveys of 1911 and 1912.

DESCRIPTION OF BOUNDARIES OF OYSTER BOTTOMS UNDER LEASE ON JULY 1, 1910.

Explanation.—The following descriptions are arranged alphabetically according to the name of the lessee of the bottoms being described. Where one lessee has two or more lots they are arranged according to their acreage, the larger ones being placed first. (*See the "Chart of Leased Oyster Bottoms" at the end of this publication for the plotted positions of the areas described, and see page 73 for an explanation of the "Method of Describing Boundaries."*)

RICHARD BUCKALOO.

(Location: $3\frac{1}{2}$ miles S. E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 48 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	31.48.....	75	20	42.96
2.....	39	09	38.04.....	75	20	22.28
3.....	39	09	27.48.....	75	20	14.40
4.....	39	09	23.04.....	75	20	29.76
5.....	39	09	22.40.....	75	20	35.88

RICHARD BUCKALOO.

(Location: 4 miles S. by E.— $\frac{7}{8}$ E. of Mahons River Light. Area: 12 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	01.72.....	75	22	00.20
2.....	39	08	05.96.....	75	21	53.52
3.....	39	08	00.96.....	75	21	48.08
4.....	39	07	55.64.....	75	21	53.60

RICHARD BUCKALOO.

(Location: $2\frac{1}{2}$ miles S. E. of Mahons River Light. Area: 11 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	42.81.....	75	21	51.60
2.....	39	09	43.72.....	75	21	47.28
3.....	39	09	32.36.....	75	21	43.92
4.....	39	09	31.16.....	75	21	50.32

RICHARD BUCKALOO.

(Location: $4\frac{1}{8}$ miles S. by E.— $\frac{3}{4}$ E. of Mahons River Light. Area: 10 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	50.88.....	75	21	58.76
2.....	39	07	53.88.....	75	21	48.72
3.....	39	07	49.48.....	75	21	45.24
4.....	39	07	45.48.....	75	21	56.28

REPORT OF SURVEY.

JOHN T. BUCKSON.

(Location: 2 miles S. E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 61 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	12.20.....	75	22	09.48
2.....	39	10	12.28.....	75	21	57.40
3.....	39	10	07.88.....	75	21	56.04
4.....	39	09	43.32.....	75	21	53.28
5.....	39	09	43.86.....	75	22	04.36
6.....	39	10	05.64.....	75	22	07.96

JOHN T. BUCKSON.

(Location: $3\frac{5}{8}$ miles S. E.— $\frac{3}{8}$ E. of Mahons River Light. Area: 20 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	20.84.....	75	20	41.16
2.....	39	09	23.04.....	75	20	25.64
3.....	39	09	16.64.....	75	20	23.32
4.....	39	09	13.32.....	75	20	36.44

BOULD & McLAUGHLIN.

(Location: $5\frac{1}{2}$ miles S.— $\frac{1}{4}$ E. of Mahons River Light. Area: 139 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	06	22.36.....	75	23	05.40
2.....	39	06	24.68.....	75	22	43.88
3.....	39	05	53.96.....	75	22	32.76
4.....	39	05	50.92.....	75	22	58.76

BOULD & McLAUGHLIN.

(Location: $6\frac{7}{8}$ miles S. E.— $\frac{1}{4}$ S. of Mahons River Light. Area: 63 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	13.60.....	75	18	08.76
2.....	39	07	18.64.....	75	17	52.88
3.....	39	07	03.48.....	75	17	38.08
4.....	39	06	55.92.....	75	17	51.60

BOULD & McLAUGHLIN.

(Location: $6\frac{1}{4}$ miles S. E.— $\frac{1}{4}$ S. of Mahons River Light. Area: 44 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	32.08.....	75	18	44.04
2.....	39	07	34.92.....	75	18	31.36
3.....	39	07	18.92.....	75	18	22.80
4.....	39	07	14.52.....	75	18	36.16

BOULD & McLAUGHLIN.

(Location: $3\frac{7}{8}$ miles S. S. E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 42 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	18.80.....	75	21	31.16
2.....	39	08	16.92.....	75	21	12.88
3.....	39	08	07.68.....	75	21	08.72
4.....	39	08	00.48.....	75	21	22.28

ISAAC M. BURRIS.

(Location: $2\frac{3}{4}$ miles S. E.— $\frac{3}{4}$ E. of Mahons River Light. Area: 23 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	54.72.....	75	21	25.68
2.....	39	09	54.76.....	75	21	05.80
3.....	39	09	48.32.....	75	21	04.64
4.....	39	09	48.88.....	75	21	24.92

REPORT OF SURVEY.

ISAAC M. BURRIS.

(Location: $3\frac{1}{2}$ miles S.— $\frac{1}{4}$ E. of Mahons River Light. Area: 15 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	06.00.....	75	23	26.12
2.....	39	08	08.12.....	75	23	12.68
3.....	39	08	02.44.....	75	23	10.28
4.....	39	08	00.48.....	75	23	23.84

WM. L. BURRIS.

(Location: $1\frac{7}{8}$ miles S. S. E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 20 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	45.12.....	75	22	57.28
2.....	39	09	45.40.....	75	22	51.08
3.....	39	09	28.92.....	75	22	49.56
4.....	39	09	28.68.....	75	22	56.32

WM. L. BURRIS.

(Location: $2\frac{7}{8}$ miles S. E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 18 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	47.84.....	75	21	18.48
2.....	39	09	47.48.....	75	21	04.12
3.....	39	09	40.92.....	75	21	03.40
4.....	39	09	40.20.....	75	21	16.52

OSCAR CANNON.

(Location: 4 miles S. E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 24 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	06.12.....	75	20	24.24
2.....	39	09	06.84.....	75	20	15.60
3.....	39	08	54.28.....	75	20	04.76
4.....	39	08	51.68.....	75	20	13.12

CAREY & HALL.

(Location: $2\frac{5}{8}$ miles S. by E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 26 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	58.92.....	75	23	04.64
2.....	39	08	59.88.....	75	22	53.12
3.....	39	08	49.96.....	75	22	47.32
4.....	39	08	47.60.....	75	23	00.76

CAREY & HALL.

(Location: $3\frac{3}{4}$ miles S. S. E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 26 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	30.12.....	75	21	36.48
2.....	39	08	31.92.....	75	21	27.60
3.....	39	08	20.72.....	75	21	25.12
4.....	39	08	18.16.....	75	21	41.88

CAREY & HALL.

(Location: $2\frac{5}{8}$ miles S. E. by E. of Mahons River Light. Area: 23 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	05.64.....	75	21	30.08
2.....	39	10	04.88.....	75	21	17.36
3.....	39	09	55.04.....	75	21	13.44
4.....	39	09	55.04.....	75	21	25.72

CAREY & HALL.

(Location: $2\frac{1}{8}$ miles S. S. E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 12 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	37.28.....	75	22	40.48
2.....	39	09	37.48.....	75	22	29.16
3.....	39	09	31.88.....	75	22	29.68
4.....	39	09	30.80.....	75	22	40.80

REPORT OF SURVEY.

CAREY & TARBURTON.

(Location: $4\frac{1}{8}$ miles E. S. E.— $\frac{5}{8}$ E. of Mahons River Light, Area: 127 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	34.84.....	75	19	32.88
2.....	39	10	35.48.....	75	19	21.68
3.....	39	10	08.56.....	75	19	10.36
4.....	39	10	01.88.....	75	19	33.20
5.....	39	10	23.88.....	75	19	48.04
6.....	39	10	23.52.....	75	19	32.16

CAREY & TARBURTON.

(Location: 3 miles S. S. E.— $\frac{7}{8}$ E. of Mahons River Light, Area: 19 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	02.88.....	75	21	58.92
2.....	39	09	03.80.....	75	21	50.80
3.....	39	08	51.88.....	75	21	49.04
4.....	39	08	50.76.....	75	21	58.40

JOHN COONEY.

(Location: $5\frac{1}{4}$ miles S.— $\frac{5}{8}$ E. of Mahons River Light, Area: 537 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	06	41.68.....	75	22	44.32
2.....	39	06	47.12.....	75	22	22.28
3.....	39	06	19.24.....	75	22	06.80
4.....	39	06	20.24.....	75	21	51.40
5.....	39	05	43.52.....	75	21	27.92
6.....	39	05	26.84.....	75	22	10.80
7.....	39	05	54.44.....	75	22	19.44
8.....	39	05	53.52.....	75	22	31.84

CUMMINS & WILSON.

(Location: $3\frac{7}{8}$ miles E. S. E.— $\frac{3}{4}$ E. of Mahons River Light. Area: 67 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	40.72.....	75	19	48.88
2.....	39	10	48.52.....	75	19	32.68
3.....	39	10	35.76.....	75	19	24.48
4.....	39	10	35.40.....	75	19	33.52
5.....	39	10	24.20.....	75	19	33.60
6.....	39	10	24.80.....	75	19	48.04

CUMMINS & WILSON.

(Location: $4\frac{1}{8}$ miles S.— $\frac{1}{8}$ E. of Mahons River Light. Area: 24 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	32.64.....	75	23	22.44
2.....	39	07	34.84.....	75	23	12.48
3.....	39	07	24.52.....	75	23	07.16
4.....	39	07	21.48.....	75	23	19.28

CALEB T. DAVIS.

(Location: $3\frac{1}{8}$ miles S. E.— $\frac{1}{8}$ E. of Mahons River Light. Area: 11 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	29.40.....	75	21	19.62
2.....	39	09	32.32.....	75	21	12.44
3.....	39	09	25.00.....	75	21	07.40
4.....	39	09	23.24.....	75	21	14.40

REPORT OF SURVEY.

C. T. DAVIS.

(Location: $2\frac{1}{4}$ miles S. by E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 3 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	19.28.....	75	22	58.76
2.....	39	09	19.68.....	75	22	55.20
3.....	39	09	16.88.....	75	22	53.36
4.....	39	09	14.40.....	75	22	57.68

JOHN W. DAVIS

(Location: $3\frac{1}{8}$ miles S. E. by S. of Mahons River Light. Area: 21 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	04.08.....	75	21	50.28
2.....	39	09	05.21.....	75	21	42.48
3.....	39	08	53.48.....	75	21	38.80
4.....	39	08	52.00.....	75	21	48.72

JOHN W. DAVIS.

(Location: $2\frac{3}{4}$ miles S. E.— $\frac{1}{2}$ S. of Mahons River Light. Area: 12 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	26.40.....	75	21	49.12
2.....	39	09	28.20.....	75	21	41.60
3.....	39	09	19.28.....	75	21	39.24
4.....	39	09	19.20.....	75	21	48.00

JOHN W. DAVIS.

(Location: 3 miles S. E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 9 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	34.64.....	75	21	23.68
2.....	39	09	37.52.....	75	21	15.72
3.....	39	09	32.32.....	75	21	12.44
4.....	39	09	29.40.....	75	21	19.62

MARTIN B. DEVEREAUX.

(Location: $2\frac{7}{8}$ miles S. E.— $\frac{1}{8}$ E. of Mahons River Light. Area: 43 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	44.36.....	75	21	45.52
2.....	39	09	45.75.....	75	21	34.58
3.....	39	09	40.48.....	75	21	32.40
4.....	39	09	42.20.....	75	21	22.16
5.....	39	09	36.56.....	75	21	20.84
6.....	39	09	33.96.....	75	21	30.28
7.....	39	09	31.00.....	75	21	28.08
8.....	39	09	30.52.....	75	21	42.16

DONOHO & ROBINSON.

(Location: $2\frac{7}{8}$ miles S. by E.— $\frac{5}{8}$ E. of Mahon River Light. Area: 13 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	49.28.....	75	22	42.92
2.....	39	08	50.68.....	75	22	33.88
3.....	39	08	42.56.....	75	22	31.92
4.....	39	08	41.64.....	75	22	40.12

MILTON A. DUFFIELD.

(Location: $1\frac{5}{8}$ miles S. E. by E. of Mahons River Light. Area: 7 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	27.76.....	75	22	30.36
2.....	39	10	29.60.....	75	22	23.60
3.....	39	10	22.72.....	75	22	22.60
4.....	39	10	23.68.....	75	22	29.96

REPORT OF SURVEY.

MILTON A. DUFFIELD.

(Location: $2\frac{1}{2}$ miles S. E. by E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 7 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	12.04.....	75	21	31.52
2.....	39	10	12.20.....	75	21	24.32
3.....	39	10	06.08.....	75	21	22.48
4.....	39	10	06.40.....	75	21	28.44

C. W. ELTONHEAD.

(Location: $3\frac{7}{8}$ miles S. E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 54 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	23.52.....	75	20	25.16
2.....	39	09	26.56.....	75	20	11.68
3.....	39	09	10.12.....	75	19	59.12
4.....	39	09	07.34.....	75	20	18.64

C. W. ELTONHEAD.

(Location: $3\frac{7}{8}$ miles S. by E. of Mahons River Light. Area: 49 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	51.24.....	75	22	40.52
2.....	39	07	52.76.....	75	22	28.72
3.....	39	07	32.60.....	75	22	21.20
4.....	39	07	29.72.....	75	22	32.92

FENEMORE & PARKER.

(Location: 3 miles S.— $\frac{7}{8}$ E. of Mahons River Light. Area: 18 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	34.96.....	75	23	05.56
2.....	39	08	36.27.....	75	22	58.84
3.....	39	08	24.88.....	75	22	54.72
4.....	39	08	22.32.....	75	23	03.32

FENEMORE & PARKER.

(Location: $3\frac{7}{8}$ miles E.— $\frac{7}{8}$ S. of Mahons River Light. Area: 13 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	54.92.....	75	19	44.08
2.....	39	10	57.28.....	75	19	37.32
3.....	39	10	48.92.....	75	19	32.92
4.....	39	10	45.68.....	75	19	39.76

GEO. W. FLACH.

(Location: $6\frac{3}{4}$ miles S.— $\frac{3}{8}$ E. of Mahons River Light. Area: 33 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	05	21.72.....	75	22	34.32
2.....	39	05	23.80.....	75	22	19.68
3.....	39	05	11.88.....	75	22	16.88
4.....	39	05	09.96.....	75	22	33.12

GEO. W. FLACH.

(Location: $6\frac{3}{4}$ miles S.— $\frac{1}{4}$ E. of Mahons River Light. Area: 30 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	05	18.88.....	75	22	53.56
2.....	39	05	20.76.....	75	22	41.56
3.....	39	05	09.28.....	75	22	38.40
4.....	39	05	07.40.....	75	22	53.36

JOS. M. GARRISON.

(Location: $4\frac{1}{8}$ miles S. E.— $\frac{3}{8}$ E. of Mahons River Light. Area: 107 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	06.84.....	75	20	15.60
2.....	39	09	09.24.....	75	19	57.56
3.....	39	08	39.48.....	75	19	33.60
4.....	39	08	32.48.....	75	19	44.48

REPORT OF SURVEY.

JOS. M. GARRISON.

(Location: 2 $\frac{7}{8}$ miles E. S. E.— $\frac{1}{2}$ E. of Mahons River Light. Area: 42 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	41.32.....	75	20	51.96
2.....	39	10	44.76.....	75	20	39.52
3.....	39	10	25.88.....	75	20	34.8 $\frac{1}{2}$
4.....	39	10	25.32.....	75	20	47.92

JOS. M. GARRISON.

(Location: 2 $\frac{5}{8}$ miles E. by S. of Mahons River Light. Area: 38 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	55.40.....	75	21	06.40
2.....	39	10	56.32.....	75	20	54.48
3.....	39	10	41.32.....	75	20	51.96
4.....	39	10	39.24.....	75	21	06.52

HARRY HAGERTY, JR.

(Location: 4 $\frac{1}{4}$ miles S. E. by E.— $\frac{7}{8}$ E. of Mahons River Light. Area: 75 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	01.28.....	75	19	32.88
2.....	39	10	05.28.....	75	19	19.12
3.....	39	09	45.60.....	75	19	13.44
4.....	39	09	42.20.....	75	19	15.60
5.....	39	09	39.56.....	75	19	10.12
6.....	39	09	29.44.....	75	19	19.6 $\frac{1}{2}$

HAGERTY & JOHNSON.

(Location: 4 $\frac{1}{8}$ miles S. S. E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 27 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	04.28.....	75	21	39.76
2.....	39	08	12.12.....	75	21	28.24
3.....	39	07	59.92.....	75	21	23.20
4.....	39	07	54.72.....	75	21	31.08

M. P. HOWLETT.

(Location: $5\frac{1}{8}$ miles S. E. by E. of Mahons River Light. Area: 202 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	04.62.....	75	18	57.12
2.....	39	09	13.26.....	75	18	27.92
3.....	39	08	46.48.....	75	18	20.28
4.....	39	08	34.64.....	75	19	04.52
5.....	39	08	52.54.....	75	19	11.28
6.....	39	08	58.26.....	75	18	53.72

M. P. HOWLETT.

(Location: $5\frac{3}{8}$ miles S. by E.— $\frac{1}{2}$ E. of Mahons River Light. Area: 124 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	06	47.20.....	75	21	39.68
2.....	39	06	49.60.....	75	21	22.76
3.....	39	06	42.28.....	75	21	21.88
4.....	39	06	30.72.....	75	21	21.04
5.....	39	06	31.80.....	75	21	11.88
6.....	39	06	15.56.....	75	21	06.96
7.....	39	06	10.80.....	75	21	23.88
8.....	39	06	25.48.....	75	21	31.24
9.....	39	06	24.12.....	75	21	35.64

M. P. HOWLETT.

(Location: 4 miles S. by E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 42 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	52.88.....	75	22	28.20
2.....	39	07	53.68.....	75	22	12.32
3.....	39	07	35.16.....	75	22	13.84
4.....	39	07	32.60.....	75	22	21.20

M. P. HOWLETT.

(Location: $5\frac{1}{8}$ miles S. by E. of Mahons River Light. Area: 30 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	06	49.20.....	75	22	19.68
2.....	39	06	53.12.....	75	22	07.72
3.....	39	06	40.76.....	75	22	03.32
4.....	39	06	36.20.....	75	22	15.56

M. P. HOWLETT.

(Location: $2\frac{3}{8}$ miles S. S. E.— $\frac{1}{2}$ E. of Mahons River Light. Area: 25 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	09	24.24.....	75	22	33.96
2.....	39	09	26.80.....	75	22	20.72
3.....	39	09	15.60.....	75	22	19.08
4.....	39	09	12.88.....	75	22	28.76

M. HUTHMACHER.

(Location: $6\frac{1}{2}$ miles S. E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 180 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	07	46.92.....	75	18	14.36
2.....	39	08	00.88.....	75	17	48.92
3.....	39	07	47.92.....	75	17	39.84
4.....	39	07	42.72.....	75	17	53.64
5.....	39	07	22.08.....	75	17	44.24
6.....	39	07	14.72.....	75	18	07.68
7.....	39	07	32.04.....	75	18	21.12
8.....	39	07	36.28.....	75	18	07.68

M. HUTHMACHER.

(Location: 5 miles S. E. by E.— $\frac{1}{2}$ E. of Mahons River Light. Area: 60 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	30.28.....	75	18	52.72
2.....	39	09	32.55.....	75	18	38.04
3.....	39	09	13.36.....	75	18	34.60
4.....	39	09	08.72.....	75	18	52.04

CHRISTIAN JOHNSON.

(Location: 6 miles S. by E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 104 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	06	09.90.....	75	21	42.60
2.....	39	06	15.08.....	75	21	27.60
3.....	39	06	09.68.....	75	21	24.28
4.....	39	06	11.84.....	75	21	18.08
5.....	39	05	51.84.....	75	21	06.36
6.....	39	05	47.40.....	75	21	29.20

ELIZABETH JOHNSON.

(Location: 5 $\frac{1}{2}$ miles S. S. E.— $\frac{3}{8}$ E. of Mahons River Light. Area: 74 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	06.16.....	75	20	36.88
2.....	39	07	11.28.....	75	20	23.72
3.....	39	06	56.48.....	75	20	16.52
4.....	39	06	52.12.....	75	20	33.92
5.....	39	06	39.30.....	75	20	32.48
6.....	39	06	37.44.....	75	20	41.44
7.....	39	06	56.68.....	75	20	43.16
8.....	39	06	58.92.....	75	20	34.42

REPORT OF SURVEY.

WM. JOSLIN.

(Location: $7\frac{1}{8}$ miles S.— $\frac{3}{8}$ E. of Mahons River Light. Area: 10 acres.)

Corner Number.	Latitude.	Longitude.
	° ' "	° ' "
1.....	39 05 01.48.....	75 22 32.84
2.....	39 05 03.52.....	75 22 26.84
3.....	39 04 58.48.....	75 22 20.72
4.....	39 04 54.52.....	75 22 28.48

WM. JOSLIN.

(Location: $7\frac{3}{4}$ miles S.— $\frac{1}{4}$ E. of Mahons River Light. Area: 8 acres.)

Corner Number.	Latitude.	Longitude.
	° ' "	° ' "
1.....	39 04 27.32.....	75 22 33.16
2.....	39 04 31.00.....	75 22 25.92
3.....	39 04 27.12.....	75 22 22.44
4.....	39 04 23.28.....	75 22 30.84

ROBT. KNIGHT.

(Location: $4\frac{5}{8}$ miles S. of Mahons River Light. Area: 30 acres.)

Corner Number.	Latitude.	Longitude.
	° ' "	° ' "
1.....	39 07 08.72.....	75 23 29.36
2.....	39 07 11.52.....	75 23 18.20
3.....	39 07 00.20.....	75 23 13.12
4.....	39 06 55.68.....	75 23 26.04

HARRY McGONIGAL.

(Location: $2\frac{3}{4}$ miles E. S. E.— $\frac{1}{2}$ E. of Mahons River Light. Area: 18 acres.)

Corner Number.	Latitude.	Longitude.
	° ' "	° ' "
1.....	39 10 39.96.....	75 21 00.52
2.....	39 10 41.32.....	75 20 51.96
3.....	39 10 31.92.....	75 20 49.88
4.....	39 10 29.96.....	75 21 01.64

A. S. MOOR, BRO. & CARROW.

(Location: $2\frac{7}{8}$ miles S. E.— $\frac{3}{4}$ S. of Mahons River Light. Area: 38 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	17.60.....	75	21	51.68
2.....	39	09	18.04.....	75	21	38.76
3.....	39	09	08.36.....	75	21	35.16
4.....	39	09	04.68.....	75	21	57.72
5.....	39	09	13.52.....	75	21	57.76
6.....	39	09	14.32.....	75	21	50.24

A. S. MOOR, BRO. & CARROW.

(Location: $1\frac{7}{8}$ miles S. E.— $\frac{3}{8}$ E. of Mahons River Light. Area: 21 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	10.96.....	75	22	20.12
2.....	39	10	12.08.....	75	22	12.56
3.....	39	09	58.08.....	75	22	09.48
4.....	39	09	57.60.....	75	22	18.40

A. S. MOOR, BRO. & CARROW.

(Location: $2\frac{7}{8}$ miles S. E. by E.— $\frac{7}{8}$ E. of Mahons River Light. Area: 14 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	23.96.....	75	20	59.92
2.....	39	10	24.76.....	75	20	51.12
3.....	39	10	15.52.....	75	20	51.12
4.....	39	10	15.34.....	75	20	59.32

AARON MORRIS.

(Location: 4 miles S. by E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 40 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	54.00.....	75	22	11.96
2.....	39	07	55.84.....	75	22	01.60
3.....	39	07	42.40.....	75	21	55.88
4.....	39	07	35.64.....	75	22	12.00

REPORT OF SURVEY.

JAS. MUNCEY.

(Location: $2\frac{7}{8}$ miles S. E.— $\frac{1}{4}$ S. of Mahons River Light. Area: 36 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	29.24.....75	21	40.80	
2.....	39	09	30.72.....75	21	21.36	
3.....	39	09	23.20.....75	21	14.80	
4.....	39	09	19.36.....75	21	38.40	

JAS. MUNCEY.

(Location: $2\frac{3}{4}$ miles S. E.— $\frac{7}{8}$ S. of Mahons River Light. Area: 9 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	22.36.....75	22	02.92	
2.....	39	09	24.00.....75	21	58.64	
3.....	39	09	18.92.....75	21	55.68	
4.....	39	09	18.28.....75	22	02.24	
5.....	39	09	13.24.....75	22	01.44	
6.....	39	09	13.80.....75	22	06.28	
7.....	39	09	17.64.....75	22	07.04	

WM. J. MUNCEY.

(Location: $2\frac{5}{8}$ miles S. S. E.— $\frac{1}{8}$ E. of Mahons River Light. Area: 8 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	10.56.....75	22	37.16	
2.....	39	09	12.12.....75	22	31.64	
3.....	39	09	05.44.....75	22	29.16	
4.....	39	09	04.40.....75	22	36.12	

JAS. P. NIEUKIRK.

(Location: 3 miles E. S. E. of Mahons River Light. Area: 122 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	25.08.....75	20	47.12	
2.....	39	10	24.84.....75	20	15.56	
3.....	39	10	01.64.....75	20	08.56	
4.....	39	10	05.84.....75	20	41.08	

PETER R. PAYNTER.

(Location: $6\frac{1}{8}$ miles S.— $\frac{1}{4}$ E. of Mahons River Light. Area: 185 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	05	50.32.....	75	22	59.60
2.....	39	05	52.24.....	75	22	20.08
3.....	39	05	28.48.....	75	22	13.40
4.....	39	05	27.44.....	75	23	00.72

JOHN C. PETERSON.

(Location: $6\frac{1}{8}$ miles S. E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 124 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	57.12.....	75	18	35.88
2.....	39	08	07.80.....	75	18	00.36
3.....	39	07	56.72.....	75	17	57.32
4.....	39	07	46.92.....	75	18	14.96
5.....	39	07	36.48.....	75	18	08.36
6.....	39	07	32.40.....	75	18	21.52

JOHN C. PETERSON.

(Location: $5\frac{3}{8}$ miles S. by E.— $\frac{3}{8}$ E. of Mahons River Light. Area: 87 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	06	43.72.....	75	21	51.36
2.....	39	06	46.64.....	75	21	45.96
3.....	39	06	47.16.....	75	21	40.08
4.....	39	06	23.84.....	75	21	36.00
5.....	39	06	25.00.....	75	21	31.52
6.....	39	06	15.64.....	75	21	28.12
7.....	39	06	10.48.....	75	21	43.20
8.....	39	06	20.36.....	75	21	50.88
9.....	39	06	31.44.....	75	21	49.00
10.....	39	06	31.52.....	75	21	47.88

REPORT OF SURVEY.

LIZZIE PETERSON.

(Location: $4\frac{3}{4}$ miles S. E. by E.— $\frac{3}{8}$ E. of Mahons Riven Light. Area: 60 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	09	29.16.....	75	19	15.88
2.....	39	09	29.62.....	75	19	09.12
3.....	39	08	58.28.....	75	18	55.24
4.....	39	08	55.24.....	75	19	06.90

LIZZIE PETERSON.

(Location: $4\frac{1}{8}$ miles S.— $\frac{7}{8}$ E. of Mahons River Light. Area: 20 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	07	40.72.....	75	22	46.96
2.....	39	07	42.80.....	75	22	38.40
3.....	39	07	39.28.....	75	22	33.84
4.....	39	07	28.48.....	75	22	41.48

HARVEY RAWLEY.

(Location: $4\frac{3}{8}$ miles S.— $\frac{1}{4}$ E. of Mahons River Light. Area: 3 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	07	21.68.....	75	23	16.36
2.....	39	07	22.92.....	75	23	11.84
3.....	39	07	19.28.....	75	23	11.08
4.....	39	07	18.48.....	75	23	16.56

ROBERT B. REYNOLDS.

(Location: $2\frac{7}{8}$ miles E. S. E.— $\frac{1}{8}$ E. of Mahons River Light. Area: 12 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	10	29.88.....	75	21	01.12
2.....	39	10	31.52.....	75	20	49.92
3.....	39	10	25.44.....	75	20	49.16
4.....	39	10	24.76.....	75	21	00.76

ROBERT B. REYNOLDS.

(Location: $1\frac{5}{8}$ miles E. S. E. of Mahons River Light. Area: 1 acre.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	43.52.....	75	22	24.20
2.....	39	10	42.24.....	75	22	22.12
3.....	39	10	41.52.....	75	22	24.40
4.....	39	10	42.40.....	75	22	25.56

GEO. S. RICHARDSON.

(Location: $1\frac{7}{8}$ miles S. E. of Mahons River Light. Area: 17 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	07.52.....	75	22	30.76
2.....	39	10	06.48.....	75	22	22.40
3.....	39	09	57.84.....	75	22	22.32
4.....	39	09	56.80.....	75	22	33.52

GEO. S. RICHARDSON.

(Location: $2\frac{3}{4}$ miles S. E. by E.— $\frac{1}{8}$ E. of Mahons River Light. Area: 13 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	05.04.....	75	21	16.96
2.....	39	10	05.16.....	75	21	10.20
3.....	39	09	55.16.....	75	21	06.16
4.....	39	09	55.16.....	75	21	13.08

RICKARDS & EARL.

(Location: $2\frac{1}{8}$ miles S. E. by E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 9 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	28.88.....	75	21	49.56
2.....	39	10	28.84.....	75	21	41.84
3.....	39	10	23.08.....	75	21	40.52
4.....	39	10	23.12.....	75	21	49.56

FRANK B. ROBBINS.

(Location: $2\frac{1}{4}$ miles S. E. by E.— $\frac{3}{8}$ E. of Mahons River Light. Area: 58 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	22.50.....	75	21	49.40
2.....	39	10	22.32.....	75	21	36.92
3.....	39	09	59.52.....	75	21	27.96
4.....	39	09	57.28.....	75	21	41.20

FRANK B. ROBBINS.

(Location: $3\frac{5}{8}$ miles E.— $\frac{5}{8}$ S. of Mahons River Light. Area: 40 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	11	03.28.....	75	20	01.08
2.....	39	11	04.68.....	75	19	50.32
3.....	39	10	45.76.....	75	19	40.56
4.....	39	10	42.60.....	75	19	50.40

FRANK B. ROBBINS.

(Location: $3\frac{3}{8}$ miles S. E. by S. of Mahons River Light. Area: 38 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	53.28.....	75	21	38.00
2.....	39	08	56.52.....	75	21	20.32
3.....	39	08	45.04.....	75	21	20.60
4.....	39	08	39.72.....	75	21	35.96

T. A. ROGERS, SON & CAREY.

(Location: 4 $\frac{7}{8}$ miles S. by E.— $\frac{1}{2}$ E. of Mahons River Light. Area: 140 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	12.32.....	75	21	57.84
2.....	39	07	14.60.....	75	21	49.68
3.....	39	07	00.24.....	75	21	45.16
4.....	39	07	02.72.....	75	21	25.60
5.....	39	07	00.72.....	75	21	24.44
6.....	39	07	05.52.....	75	21	11.84
7.....	39	06	58.68.....	75	21	08.88
8.....	39	07	01.56.....	75	21	01.68
9.....	39	06	54.36.....	75	20	58.68
10.....	39	06	50.68.....	75	21	10.72
11.....	39	06	45.56.....	75	21	07.72
12.....	39	06	42.48.....	75	21	21.36
13.....	39	06	50.80.....	75	21	22.60
14.....	39	06	46.88.....	75	21	46.28
15.....	39	06	59.88.....	75	21	47.68
16.....	39	06	58.08.....	75	21	54.48

T. A. ROGERS, SON & CAREY.

(Location: 2 $\frac{1}{2}$ miles E. S. E. of Mahons River Light. Area: 73 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	32.20.....	75	21	20.88
2.....	39	10	32.48.....	75	21	10.72
3.....	39	10	25.84.....	75	21	10.12
4.....	39	10	27.08.....	75	21	06.34
5.....	39	10	07.24.....	75	20	57.20
6.....	39	10	05.32.....	75	21	21.28
7.....	39	10	13.84.....	75	21	23.76
8.....	39	10	14.52.....	75	21	13.28
9.....	39	10	24.44.....	75	21	15.00
10.....	39	10	23.52.....	75	21	19.20

T. A. ROGERS, SON & CAREY.

(Location: 3 miles S. S. by E. of Mahons River Light. Area: 51 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	54.20.....	75	21	03.32
2.....	39	09	57.48.....	75	20	43.56
3.....	39	09	43.56.....	75	20	37.32
4.....	39	09	41.12.....	75	20	51.16
5.....	39	09	45.08.....	75	20	58.88

T. A. ROGERS, SON & CAREY.

(Location: 5¼ miles S.—¾ E. of Mahons River Light. Area: 33 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	06	39.00.....	75	22	58.44
2.....	39	06	40.08.....	75	22	46.72
3.....	39	06	25.24.....	75	22	43.84
4.....	39	06	23.88.....	75	22	56.04

T. A. ROGERS, SON & CAREY.

(Location: 2¾ miles S. E.—¼ S. of Mahons River Light. Area: 30 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	56.88.....	75	22	18.52
2.....	39	09	57.16.....	75	22	07.88
3.....	39	09	44.20.....	75	22	05.52
4.....	39	09	42.40.....	75	22	19.24

T. A. ROGERS, SON & CAREY.

(Location: 1¾ miles S. E.—¾ S. of Mahons River Light. Area: 29 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	54.76.....	75	22	38.32
2.....	39	09	54.48.....	75	22	29.48
3.....	39	09	38.40.....	75	22	29.88
4.....	39	09	37.76.....	75	22	40.40

T. A. ROGERS, SON & CAREY.

(Location: $4\frac{3}{8}$ miles S.— $\frac{3}{8}$ E. of Mahons River Light. Area: 28 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	23.16.....	75	23	11.40
2.....	39	07	26.72.....	75	22	51.92
3.....	39	07	18.92.....	75	22	51.04
4.....	39	07	15.48.....	75	23	09.80

T. A. ROGERS, SON & CAREY.

(Location: $5\frac{1}{2}$ miles S. E.— $\frac{1}{8}$ S. of Mahons River Light. Area: 26 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	02.48.....	75	19	17.08
2.....	39	08	04.95.....	75	18	58.00
3.....	39	07	57.27.....	75	18	52.00
4.....	39	07	56.00.....	75	19	10.52

SCHOCH & ANOLD.

(Location: $5\frac{1}{4}$ miles S. S. E. of Mahons River Light. Area: 249 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	09.56.....	75	21	11.88
2.....	39	07	20.84.....	75	20	24.72
3.....	39	07	13.48.....	75	20	19.80
4.....	39	07	06.40.....	75	20	37.44
5.....	39	06	58.92.....	75	20	34.24
6.....	39	06	57.36.....	75	20	44.36
7.....	39	06	47.12.....	75	20	45.52
8.....	39	06	47.12.....	75	20	46.72
9.....	39	06	37.48.....	75	20	41.88
10.....	39	06	36.52.....	75	20	50.64
11.....	39	06	27.52.....	75	20	48.84
12.....	39	06	27.40.....	75	20	58.40
13.....	39	06	35.08.....	75	21	00.72
14.....	39	06	31.50.....	75	21	20.32
15.....	39	06	41.88.....	75	21	21.20
16.....	39	06	45.12.....	75	21	06.64
17.....	39	06	50.40.....	75	21	09.80
18.....	39	06	54.00.....	75	20	57.52
19.....	39	07	02.32.....	75	21	01.24
20.....	39	06	59.12.....	75	21	08.48

SCHOCH & ANOLD.

(Location: $2\frac{3}{4}$ miles E. by S. of Mahons River Light. Area: 56 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	10	56.32.....	75	20	54.48
2.....	39	10	58.44.....	75	20	30.00
3.....	39	10	48.16.....	75	20	29.20
4.....	39	10	41.32.....	75	20	51.96

SCHOCH & ANOLD.

(Location: $3\frac{3}{4}$ miles S.— $\frac{1}{8}$ W. of Mahons River Light. Area: 53 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	07	47.48.....	75	23	38.88
2.....	39	07	51.60.....	75	23	18.36
3.....	39	07	34.36.....	75	23	16.04
4.....	39	07	31.64.....	75	23	30.24
5.....	39	07	41.76.....	75	23	31.00
6.....	39	07	41.24.....	75	23	38.48

SCHOCH & ANOLD.

(Location: $4\frac{3}{8}$ miles S. by E.— $\frac{1}{2}$ E. of Mahons River Light. Area: 52 acres.)

<i>Corner Number.</i>	<i>Latitude.</i>			<i>Longitude.</i>		
	°	'	"	°	'	"
1.....	39	07	34.32.....	75	22	08.52
2.....	39	07	37.32.....	75	21	59.60
3.....	39	07	17.88.....	75	21	44.40
4.....	39	07	12.56.....	75	21	57.72

SEMERTEEN & LODGE.

(Location: 2¼ miles S. E. - 7⁄8 E. of Mahons River Light. Area: 83 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	13.16.....	75	21	57.18
2.....	39	10	13.16.....	75	21	46.76
3.....	39	09	53.76.....	75	21	40.76
4.....	39	09	55.05.....	75	21	26.92
5.....	39	09	49.24.....	75	21	26.28
6.....	39	09	43.28.....	75	21	22.48
7.....	39	09	42.52.....	75	21	31.32
8.....	39	09	48.80.....	75	21	34.36
9.....	39	09	45.80.....	75	21	53.12
10.....	39	10	07.88.....	75	21	56.04

SEMERTEEN & LODGE.

(Location: 3 miles S. E.—½ E. of Mahons River Light. Area: 47 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	18.12.....	75	21	37.00
2.....	39	09	19.68.....	75	21	07.04
3.....	39	09	11.52.....	75	21	04.72
4.....	39	09	08.84.....	75	21	33.12

SEMERTEEN & LODGE.

(Location: 5¼ miles S. E. of Mahons River Light. Area: 25 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	15.24.....	75	19	24.44
2.....	39	08	17.96.....	75	19	11.96
3.....	39	08	06.16.....	75	19	08.00
4.....	39	08	04.96.....	75	19	18.04

REPORT OF SURVEY.

WM. SHILLINGSBURG.

(Location: $4\frac{3}{8}$ miles S. by E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 573 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	39.08.....	75	21	59.44
2.....	39	07	54.48.....	75	21	29.76
3.....	39	08	07.16.....	75	21	08.76
4.....	39	07	49.60.....	75	20	48.56
5.....	39	07	44.68.....	75	20	54.16
6.....	39	07	20.08.....	75	20	32.88
7.....	39	07	09.88.....	75	21	14.36
8.....	39	07	06.04.....	75	21	11.92
9.....	39	07	00.52.....	75	21	44.72
10.....	39	07	14.96.....	75	21	49.12
11.....	39	07	17.36.....	75	21	42.88

WM. SHILLINGSBURG.

(Location: $5\frac{3}{8}$ miles S. by E. of Mahons River Light. Area: 78 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	06	35.68.....	75	22	15.28
2.....	39	06	43.32.....	75	21	51.60
3.....	39	06	31.92.....	75	21	48.40
4.....	39	06	31.80.....	75	21	49.24
5.....	39	06	20.64.....	75	21	51.28
6.....	39	06	19.44.....	75	22	06.48

WM. SHILLINGSBURG.

(Location: $5\frac{3}{4}$ miles S. E.— $\frac{1}{8}$ S. of Mahons River Light. Area: 65 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	54.76.....	75	19	09.52
2.....	39	07	56.28.....	75	18	53.48
3.....	39	07	33.96.....	75	18	36.32
4.....	39	07	31.24.....	75	18	48.08

WM. SHILLINGSBURG.

(Location: $6\frac{5}{8}$ miles S. E.— $\frac{1}{4}$ S. of Mahons River Light. Area: 30 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	15.20.....	75	18	32.52
2.....	39	07	18.60.....	75	18	23.04
3.....	39	07	05.20.....	75	18	14.68
4.....	39	07	02.36.....	75	18	27.96

WM. SHILLINGSBURG.

(Location: $2\frac{3}{4}$ miles S. S. E.— $\frac{1}{2}$ E. of Mahons River Light. Area: 9 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	08.80.....	75	22	17.12
2.....	39	09	09.80.....	75	22	11.28
3.....	39	09	03.20.....	75	22	09.16
4.....	39	09	01.68.....	75	22	16.24

ROY SLAUGHTER.

(Location: $3\frac{1}{4}$ miles S. S. E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 41 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	50.20.....	75	21	58.04
2.....	39	08	51.12.....	75	21	47.40
3.....	39	08	28.24.....	75	21	50.16
4.....	39	08	28.92.....	75	22	00.32
5.....	39	08	36.48.....	75	22	01.52
6.....	39	08	39.92.....	75	21	58.32

ROY SLAUGHTER.

(Location: $3\frac{3}{8}$ miles S.— $\frac{3}{8}$ E. of Mahons River Light. Area: 4 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	11.72.....	75	23	19.00
2.....	39	08	14.08.....	75	23	13.60
3.....	39	08	09.44.....	75	23	12.88
4.....	39	08	08.56.....	75	23	17.24

REPORT OF SURVEY.

HOWARD W. SOCKWELL.

(Location: $3\frac{3}{4}$ miles S. by E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 52 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	08.52.....	75	22	15.96
2.....	39	08	19.52.....	75	21	56.52
3.....	39	08	09.36.....	75	21	49.12
4.....	39	07	57.76.....	75	22	06.72

HOWARD W. SOCKWELL.

(Location: $6\frac{7}{8}$ miles S. E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 48 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	38.04.....	75	17	49.64
2.....	39	07	39.76.....	75	17	40.20
3.....	39	07	18.40.....	75	17	33.56
4.....	39	07	12.32.....	75	17	45.68
5.....	39	07	18.80.....	75	17	52.08
6.....	39	07	21.64.....	75	17	43.20

ELMER E. TARBURTON.

(Location: 4 miles S.— $\frac{3}{8}$ E. of Mahons River Light. Area: 101 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	43.20.....	75	23	15.52
2.....	39	07	51.20.....	75	22	52.12
3.....	39	07	28.48.....	75	22	41.92
4.....	39	07	24.72.....	75	23	06.44

WM. TARBURTON.

(Location: 2 miles S.— $\frac{3}{4}$ E. of Mahons River Light. Area: 5 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	28.36.....	75	23	30.40
2.....	39	09	28.48.....	75	23	23.12
3.....	39	09	25.16.....	75	23	22.72
4.....	39	09	24.92.....	75	23	29.84

GEO. L. TURNER.

(Location: $3\frac{1}{4}$ miles S. E.— $\frac{3}{4}$ E. of Mahons River Light. Area: 34 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	39.40.....	75	20	55.72
2.....	39	09	43.72.....	75	20	34.28
3.....	39	09	35.64.....	75	20	29.64
4.....	39	09	31.48.....	75	20	42.96
5.....	39	09	35.52.....	75	20	46.60
6.....	39	09	33.80.....	75	20	53.56

GEO. L. TURNER.

(Location: $3\frac{1}{8}$ miles E. S. E.— $\frac{3}{4}$ E. of Mahons River Light. Area: 26 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	44.68.....	75	20	38.96
2.....	39	10	46.88.....	75	20	31.68
3.....	39	10	28.96.....	75	20	26.00
4.....	39	10	29.08.....	75	20	35.00

GEO. L. TURNER.

(Location: $2\frac{1}{4}$ miles S. S. E. of Mahons River Light. Area: 19 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	22.16.....	75	22	47.56
2.....	39	09	23.32.....	75	22	37.28
3.....	39	09	14.56.....	75	22	33.84
4.....	39	09	13.48.....	75	22	46.68

GEO. L. TURNER.

(Location: $2\frac{1}{4}$ miles S. E.— $\frac{1}{2}$ S. of Mahons River Light. Area: 10 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	42.48.....	75	22	15.12
2.....	39	09	43.68.....	75	22	06.00
3.....	39	09	37.72.....	75	22	04.68
4.....	39	09	36.60.....	75	22	12.48

WINSMORE & WALLS.

(Location: $5\frac{1}{2}$ miles S. E.— $\frac{5}{8}$ E. of Mahons River Light. Area: 242 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	37.48.....	75	18	49.64
2.....	39	08	45.28.....	75	18	19.32
3.....	39	08	11.52.....	75	18	06.36
4.....	39	07	57.12.....	75	18	40.84

WINSMORE & WALLS.

(Location: $4\frac{3}{4}$ miles S.— $\frac{7}{8}$ E. of Mahons River Light. Area: 162 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	10.92.....	75	22	32.04
2.....	39	07	12.40.....	75	21	58.32
3.....	39	06	57.76.....	75	21	54.80
4.....	39	06	59.20.....	75	21	48.00
5.....	39	06	46.72.....	75	21	46.64
6.....	39	06	41.12.....	75	22	02.28
7.....	39	06	53.88.....	75	22	07.12
8.....	39	06	47.80.....	75	22	26.84

WINSMORE & WALLS.

(Location: $4\frac{7}{8}$ miles S. E.— $\frac{1}{8}$ E. of Mahons River Light. Area: 61 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	32.48.....	75	19	41.40
2.....	39	08	40.28.....	75	19	27.12
3.....	39	08	19.56.....	75	19	14.72
4.....	39	08	16.08.....	75	19	29.20

WINSMORE & WALLS.

(Location: $2\frac{7}{8}$ miles S. E. by E.— $\frac{1}{4}$ E. of Mahons River Light. Area: 22 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	05.16.....	75	21	10.20
2.....	39	10	06.44.....	75	20	58.72
3.....	39	09	56.32.....	75	20	53.52
4.....	39	09	54.20.....	75	21	03.32

GEO. H. WOODALL.

(Location: $3\frac{1}{8}$ miles S. S. E.— $\frac{3}{8}$ E. of Mahons River Light. Area: 28 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	52.20.....	75	22	10.28
2.....	39	08	55.68.....	75	22	00.68
3.....	39	08	40.16.....	75	21	58.76
4.....	39	08	35.36.....	75	22	06.76

GEO. H. WOODALL.

(Location: $4\frac{3}{8}$ miles S.— $\frac{7}{8}$ E. of Mahons River Light. Area: 16 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	07	27.72.....	75	22	41.44
2.....	39	07	28.88.....	75	22	33.88
3.....	39	07	17.60.....	75	22	31.72
4.....	39	07	15.40.....	75	22	38.08

WM. B. WOODALL.

(Location: $3\frac{1}{4}$ miles S. S. E.— $\frac{7}{8}$ E. of Mahons River Light. Area: 44 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	08	51.52.....	75	21	47.04
2.....	39	08	53.00.....	75	21	38.72
3.....	39	08	30.52.....	75	21	36.52
4.....	39	08	28.52.....	75	21	49.76

FRANK S. YORK.

(Location: $3\frac{3}{8}$ miles S. E.— $\frac{3}{4}$ S. of Mahons River Light. Area: 40 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	09	06.84.....	75	21	41.32
2.....	39	09	09.12.....	75	21	26.72
3.....	39	08	57.24.....	75	21	20.36
4.....	39	08	53.64.....	75	21	38.32

L. E. YATES.

(Location: $3\frac{1}{4}$ miles S. E. by E.— $\frac{1}{2}$ E. of Mahons River Light. Area: 43 acres.)

Corner Number.	Latitude.			Longitude.		
	°	'	"	°	'	"
1.....	39	10	05.08.....	75	20	40.96
2.....	39	10	00.36.....	75	20	08.00
3.....	39	09	51.64.....	75	20	04.92
4.....	39	09	59.44.....	75	20	40.04

Guards for Pocket.

SH365

D3A4

1962



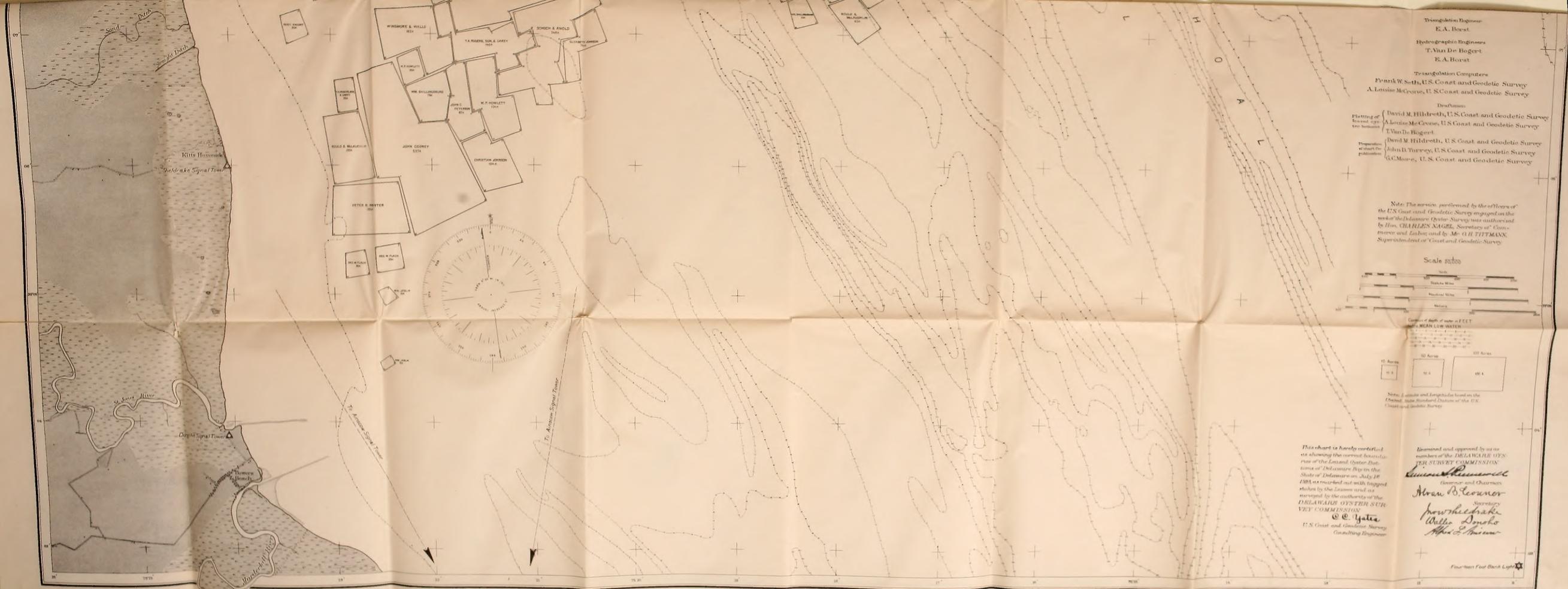
CHART OF
LEASED OYSTER BOTTOMS
 DELAWARE BAY
 STATE OF DELAWARE

SURVEYED BY
DELAWARE OYSTER SURVEY COMMISSION
 1910

Members of Commission
 Governor **SIMON S. PENNEWILL**, Chairman
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 Senator **JOHN W. SHELDRAKE**
 Representative **WALLER DONOHO**
 Representative **ALFRED L. AINSCOW**

1st-Grade Oyster Marman Collector
J. Burton Wharton

Wash. Mast Light
 Consulting Engineer:
C. C. YATES'S Coast and Geodetic Survey



Triangulation Diagram
E. A. Horst

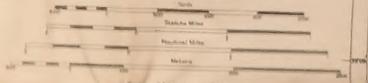
Hydrographic Engineer
T. Van De Bogert
E. A. Horst

Trigonulation Computers
Frank W. Smith, U.S. Coast and Geodetic Survey
A. Louis McGraw, U.S. Coast and Geodetic Survey

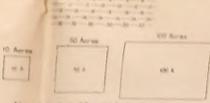
Drawn by:
David M. Hildreth, U.S. Coast and Geodetic Survey
A. Louis McGraw, U.S. Coast and Geodetic Survey
T. Van De Bogert
David M. Hildreth, U.S. Coast and Geodetic Survey
John H. Thayer, U.S. Coast and Geodetic Survey
G. C. Moore, U.S. Coast and Geodetic Survey

Note: The survey, performed by the officers of the U.S. Coast and Geodetic Survey engaged on the work of the Delaware Outer Survey was authorized by Hon. CHARLES ANGELO, Secretary of Commerce and Labor and by Mr. O. H. TITTMANN, Superintendent of Coast and Geodetic Survey.

Scale 1:62,500



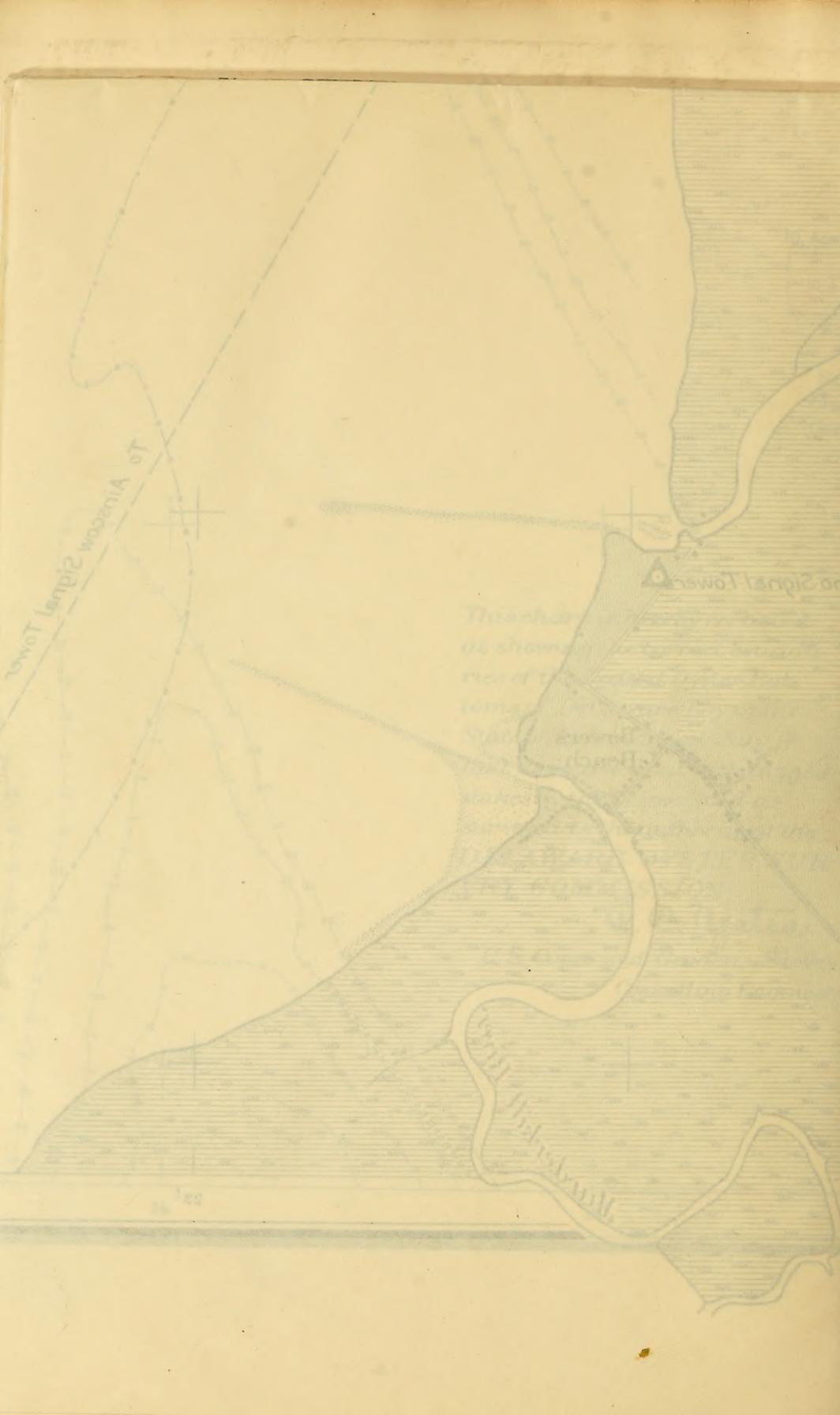
Contour of depth of water in FEET
MEAN LOW WATER



Note: Lengths and bearings based on the United States Standard Datum of the U.S. Coast and Geodetic Survey.

This chart is hereby certified as showing the correct bearings of the Leaman Outer Buoy in the State of Delaware on July 18 1933 as marked out with tripped stakes by the Leaman and as arranged by the authority of the DELAWARE OUTER BUOY COMMISSION
© E. Yates
U.S. Coast and Geodetic Survey
Consulting Engineer

Examined and approved by us as members of the DELAWARE OUTER BUOY SURVEY COMMISSION
Lincoln Russell
Governor and Chairman
Alan B. Coe
Secretary
John H. Donohue
Alfred E. Brown



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