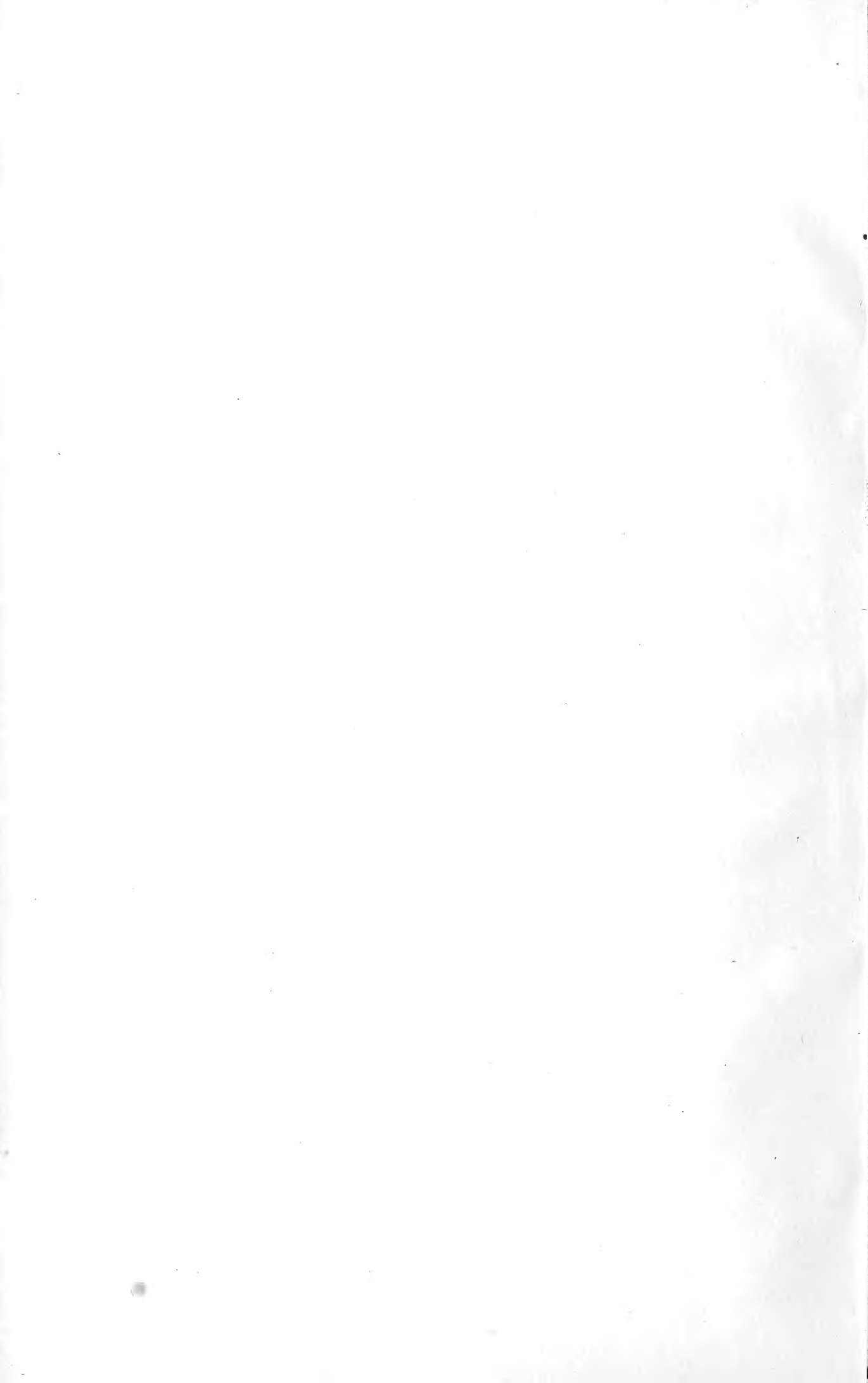




Class SH365

Book M3

1912d



DEPARTMENT OF COMMERCE AND LABOR

COAST AND GEODETIC SURVEY

O. H. TITTMANN Superintendent

SURVEY OF OYSTER BARS

DORCHESTER COUNTY MARYLAND

DESCRIPTION OF BOUNDARIES AND LANDMARKS AND
REPORT OF WORK OF UNITED STATES COAST
AND GEODETIC SURVEY IN COOPERATION
WITH UNITED STATES BUREAU OF
FISHERIES AND MARYLAND
SHELL FISH COMMISSION

By C. C. YATES

CHIEF OF COAST AND GEODETIC SURVEY PARTY
ASSISTANT, COAST AND GEODETIC SURVEY



WASHINGTON
GOVERNMENT PRINTING OFFICE

1912

29997



DEPARTMENT OF COMMERCE AND LABOR

U.S. COAST AND GEODETIC SURVEY

O. H. TITTMANN Superintendent

SURVEY OF OYSTER BARS

DORCHESTER COUNTY MARYLAND

600
24

DESCRIPTION OF BOUNDARIES AND LANDMARKS AND
REPORT OF WORK OF UNITED STATES COAST
AND GEODETIC SURVEY IN COOPERATION
WITH UNITED STATES BUREAU OF
FISHERIES AND MARYLAND
SHELL FISH COMMISSION

By C. C. YATES

CHIEF OF COAST AND GEODETIC SURVEY PARTY
ASSISTANT, COAST AND GEODETIC SURVEY



WASHINGTON
GOVERNMENT PRINTING OFFICE
1912

SH 365
MB
1912d

D. OF D.
JAN 25 1913

LETTER OF SUBMITTAL.

DEPARTMENT OF COMMERCE AND LABOR,
COAST AND GEODETIC SURVEY,
Washington, August 17, 1912.

SIR: I have the honor to transmit herewith a report of the officer detailed from the Coast and Geodetic Survey to cooperate with the Bureau of Fisheries and the Maryland Shell Fish Commission in surveying the oyster bars of the State of Maryland, together with certain technical results which are necessary for the interpretation and use of the plats of the survey made by the Government.

This work has been done under the provisions of the act of Congress entitled "An act to authorize the Secretary of Commerce and Labor to cooperate, through the Bureau of the Coast and Geodetic Survey and the Bureau of Fisheries, with the Shell Fish Commissioners of the State of Maryland in making surveys of the natural oyster beds, bars, and rocks in the waters within the State of Maryland," approved May 26, 1906, and of the acts of Congress making appropriations for sundry civil expenses of the Government for the fiscal years ending June 30, 1907, 1908, 1909, 1910, 1911, and 1912.

Respectfully,

O. H. TITTMANN, *Superintendent.*

To Hon. CHARLES NAGEL,
Secretary of Commerce and Labor.

CERTIFICATION.

BALTIMORE, MD., *May 4, 1912.*

The following publication is certified to contain correct technical descriptions of all boundaries and landmarks established in Dorchester County by the Maryland Shell Fish Commission in cooperation with the United States Coast and Geodetic Survey.

C. C. YATES,
Chief of Coast and Geodetic Survey Party,
Assistant, Coast and Geodetic Survey.

BALTIMORE, MD., *May 4, 1912.*

Examined and certified to be correct.

WALTER J. MITCHELL,
CASWELL GRAVE,
BENJAMIN K. GREEN,
Maryland Shell Fish Commission.
SWEPSON EARLE,
Hydrographic Engineer.

NOTE.—Certified copies of this publication and of the charts of the natural oyster bars of Dorchester County were filed in the office of the clerk of the circuit court of Dorchester County and in the office of the Board of Shell Fish Commissioners on August 17, 1912.

CONTENTS.

	Page-
PROGRESS MAP.....	follows 180
LETTER OF SUBMITTAL.....	3
CERTIFICATION.....	5
INTRODUCTION:	
Publications.....	17
Cooperation of the Coast and Geodetic Survey.....	18
Cooperation of the Bureau of Fisheries.....	18
General statement of work of Coast and Geodetic Survey.....	18
REPORT OF THE WORK OF THE COAST AND GEODETIC SURVEY:	
Instructions.....	21
Organization and equipment.....	21
Chronological statement of work.....	22
Statistics.....	23
General remarks.....	24
CHARTS AND MAPS:	
Charts of natural oyster bars.....	25
Leasing charts.....	26
Projections.....	27
Progress maps.....	27
BOUNDARIES OF THE COUNTY WATERS:	
Waters within territorial limits of county.....	28
Waters contiguous to county.....	30
LANDMARKS (U. S. COAST AND GEODETIC SURVEY TRIANGULATION STATIONS):	
Explanation.....	31
Method of describing triangulation stations.....	31
Descriptions of triangulation stations in county and adjacent waters—	
<i>Chart No. 35</i> (Upper Choptank River)—	
Weather Bureau staff.....	34
First.....	34
Bach.....	34
Boone.....	35
Enter.....	35
Landeye.....	35
Choptank River Light (<i>see also Chart No. 37</i>).....	36
Benoni 2 (<i>see Progress map</i>).....	36
Chlora.....	36
Trappe.....	37
Grubin.....	37
Black Beacon.....	38
Howells.....	38
Red.....	38
Double.....	39
Boling.....	39
Rear.....	40
Chancellor.....	40

LANDMARKS (U. S. COAST AND GEODETIC SURVEY TRIANGULATION STATIONS)—Continued.

Descriptions of triangulation stations in county and adjacent waters—Continued.

Chart No. 35 (Upper Choptank River)—Continued.

	Page.
Barber.....	41
Duck (Choptank River).....	41
Jam.....	42
Spindle.....	42
Bank.....	42
Raccoon.....	43
Blind.....	43
Up.....	44
Myrtle.....	44
Hut.....	44
House.....	45
Saw.....	45
Wick.....	45
War.....	46
Gander.....	47
Chief.....	47
Shell.....	48
Whitehall.....	48
Ferry.....	48
Shoal.....	49
E. Cambridge Tall Stack.....	49
E. Cambridge Spire.....	50
Cambridge Stand Pipe.....	50
Cambridge.....	50
Hambrooks Bar Beacon.....	50
Dicks Water Tank.....	50
Command.....	51
Howard.....	51
Toot.....	52
Le Compte.....	52
Large Water Tank.....	52
Castle.....	53
<i>Chart No. 36 (Chesapeake Bay, vicinity of Little Choptank River)—</i>	
Jere.....	53
Sharps Island Light.....	53
Black.....	53
Bar (<i>see</i> Progress map).....	54
Change 1910 (<i>see</i> Progress map).....	54
Chef (<i>see also</i> Chart No. 37).....	55
Cook Point Windmill (<i>see also</i> Chart No. 37).....	55
Brannock (<i>see also</i> Chart No. 37).....	56
Robins (<i>see also</i> Chart No. 37).....	56
Ragged Point 3 (<i>see also</i> Chart No. 37).....	57
Torrey (<i>see also</i> Charts Nos. 37 and 38).....	57
Maryland (<i>see also</i> Charts Nos. 37 and 38).....	58
Whitewash (<i>see also</i> Charts Nos. 37 and 38).....	58
Moore (<i>see also</i> Charts Nos. 37 and 38).....	59
Veith (<i>see also</i> Charts Nos. 37 and 38).....	59
Can (<i>see also</i> Charts Nos. 37 and 38).....	59
Skid (<i>see also</i> Charts Nos. 37 and 38).....	60
Rede (<i>see also</i> Chart. No. 37).....	60
James (<i>see also</i> Chart No. 37).....	61

LANDMARKS (U. S. COAST AND GEODETIC SURVEY TRIANGULATION STATIONS)—Continued.
 Descriptions of triangulation stations in county and adjacent waters—Continued.

Chart No. 37 (Little Choptank River and tributaries)—

	Page
Choptank River Light (<i>see also</i> Chart No. 35).....	36
Nelson 3 (<i>see</i> Progress map).....	61
Annette (<i>see</i> Progress map).....	62
Peary (<i>see</i> Progress map).....	62
Irish (<i>see</i> Progress map).....	62
Roys (<i>see</i> Progress map).....	63
Creek (<i>see</i> Progress map).....	63
Corner (Choptank River).....	64
Dot.....	64
Chef (<i>see also</i> Chart No. 36).....	55
Cook Point Windmill (<i>see also</i> Chart No. 36).....	55
Brannock (<i>see also</i> Chart No. 36).....	56
Robins (<i>see also</i> Chart No. 36).....	56
Ragged Point 3 (<i>see also</i> Chart No. 36).....	57
Hudson.....	65
Jenifer.....	65
Henry.....	66
Mitchell.....	66
Back.....	66
Bayly.....	67
Carric.....	67
Louise.....	68
Greenwell.....	68
Ross.....	68
Phil.....	69
Dupont.....	69
Beckwith.....	70
Cherry Island Water Tank.....	70
Lee.....	70
Solomon.....	70
Seth.....	71
Adam.....	71
Layton.....	72
David.....	72
Town.....	72
Swep.....	73
Hugh.....	73
Etta.....	74
Mary.....	74
Neil.....	74
Kirby.....	75
Paul (Little Choptank River) (<i>see</i> Progress map).....	75
Church Creek (No. 1 West).....	76
Austin.....	76
Tom.....	76
Brooks.....	77
Doctor.....	77
Eleanor.....	78
Laney.....	78
Mac.....	78
Madison Southern M. E. Church Spire.....	79
Tobacco Stick.....	79

LANDMARKS (U. S. COAST AND GEODETIC SURVEY TRIANGULATION STATIONS)—Continued.

Descriptions of triangulation stations in county and adjacent waters—Continued.

	Page.
<i>Chart No. 37 (Little Choptank River and tributaries)—Continued.</i>	
Wool.....	80
Pov (<i>see also</i> Chart No. 38).....	80
Torrey (<i>see also</i> Charts Nos. 36 and 38).....	57
Maryland (<i>see also</i> Charts Nos. 36 and 38).....	58
Whitewash (<i>see also</i> Charts Nos. 36 and 38).....	58
Moore (<i>see also</i> Charts Nos. 36 and 38).....	59
Veith (<i>see also</i> Charts Nos. 36 and 38).....	59
Can (<i>see also</i> Charts Charts Nos. 36 and 38).....	59
Skid (<i>see also</i> Charts Nos. 36 and 38).....	60
Rede (<i>see also</i> Chart No. 36).....	60
James (<i>see also</i> Chart No. 36).....	61
<i>Chart No. 38 (Chesapeake Bay, between James Island and Barren Island)—</i>	
Pov (<i>see also</i> Chart No. 37).....	80
Torrey (<i>see also</i> Charts Nos. 36 and 37).....	57
Maryland (<i>see also</i> Charts Nos. 36 and 37).....	58
Noblee.....	81
Finish.....	81
Taylor.....	82
Harrington.....	82
Whitewash (<i>see also</i> Charts Nos. 36 and 37).....	58
Moore (<i>see also</i> Charts Nos. 36 and 37).....	59
Veith (<i>see also</i> Charts Nos. 36 and 37).....	59
Can (<i>see also</i> Charts Nos. 36 and 37).....	59
Skid (<i>see also</i> Charts Nos. 36 and 37).....	60
Travers 2.....	83
Dunnock.....	83
Cove Point Light.....	84
Point of Rocks.....	84
<i>Chart No. 39 (Chesapeake Bay, vicinity of Barren Island)—</i>	
Cedar Point Light.....	84
Hooper Island Light.....	84
South.....	85
North.....	85
Mint.....	85
Keenes (<i>see also</i> Chart No. 40).....	86
Gunners (<i>see also</i> Chart No. 40).....	86
Hosier Memorial Church spire (<i>see also</i> Chart No. 40).....	87
Mount Zion M. E. Church spire (<i>see also</i> Chart No. 40).....	87
Bridge (<i>see also</i> Chart No. 40).....	87
<i>Chart No. 40 (Honga River)—</i>	
Applegarth.....	87
Hopkins Memorial Church cupola.....	88
Hoopersville Methodist Church cupola.....	88
Bentley.....	88
Bridge (<i>see also</i> Chart No. 39).....	87
Mount Zion M. E. Church Spire (<i>see also</i> Chart No. 39).....	87
Hosier Memorial Church Spire (<i>see also</i> Chart No. 39).....	87
Gunners (<i>see also</i> Chart No. 39).....	86
Keenes (<i>see also</i> Chart No. 39).....	86
Kerwin.....	89
Wroten.....	89

Contents.

II

LANDMARKS (U. S. COAST AND GEODETIC SURVEY TRIANGULATION STATIONS)—Continued.
 Descriptions of triangulation stations in county and adjacent waters—Continued.

	Page
<i>Chart No. 40 (Honga River)—Continued.</i>	
Charles.....	89
Lakes.....	90
Asquith.....	90
Windmill 2.....	91
Paul (Honga River).....	91
Toddville M. E. Church Spire.....	91
Duck (Honga River).....	92
St. Thomas Church Spire.....	92
Norman.....	92
Hooper Strait Light.....	93
<i>Chart No. 41 (Fishing Bay and Nanticoke River)—</i>	
Crab.....	93
Head.....	93
Croch.....	93
Roast.....	94
Farm.....	94
Thoro.....	95
High.....	95
Elliott.....	95
Ear.....	96
Fish.....	96
Frog.....	96
Cow.....	97
Okay.....	97
Ar.....	98
Gover (<i>see</i> Progress map).....	98
Streett (<i>see</i> Progress map).....	99
Earle (<i>see</i> Progress map).....	99
Juliet (<i>see</i> Progress map).....	99
Pole.....	100
Bivalve Church.....	100
Rag.....	100
Nanticoke Church.....	101
Roar.....	101
Nanti.....	101
White.....	102
Great Shoals Light (<i>see</i> Progress map).....	102
Room.....	102
Sharkfin Shoal Light.....	103
Haines.....	103
Deal Island Church.....	103
<i>Chart No. 42 (Chesapeake Bay, vicinity of Holland Island)—</i>	
Solomons Lump Light (<i>see</i> Progress map).....	103
Holland Island Bar Light.....	104
Holland Island Church Spire.....	104
Okahanikan.....	104
Senator (<i>see</i> Progress map).....	104
Miles (<i>see</i> Progress map).....	105
Fog 2 (<i>see</i> Progress map).....	105
Point No Point Light (<i>see</i> Progress map).....	105
Point Lookout Light (<i>see</i> Progress map).....	105

BOUNDARIES OF OYSTER BARS:	Page.
Explanation.....	106
Method of describing boundaries.....	107
Surveying methods for relocation of boundaries.....	108
Boundaries of natural oyster bars in county ¹	111
<i>Chart No. 35 (Upper Choptank River)—</i>	
Drum Point.....	111
Cabin Creek Entrance.....	111
Cabin Creek.....	112
Tanners Patch.....	112
Dixon.....	112
Oyster Shell Point.....	113
States Bank.....	113
Shoal Creek.....	113
Green Marsh.....	114
Hambrooks.....	114
Turtle Back.....	114
Sandy Hill Lumps.....	115
Sandy Hill.....	115
Commander.....	116
Horn Point.....	116
Le Compte.....	117
Castle Haven Creek.....	117
Castle Haven (<i>see also</i> Chart No. 37).....	118
<i>Chart No. 36 (Chesapeake Bay, vicinity of Little Choptank River)—</i>	
Cook Point (<i>see also</i> Chart No. 37).....	118
Red Buoy (<i>see also</i> Chart No. 37).....	119
Spedden (<i>see also</i> Chart No. 37).....	119
Dupont (<i>see also</i> Chart No. 37).....	120
Diamond (<i>see also</i> Chart No. 37).....	120
Brannock (<i>see also</i> Chart No. 37).....	120
Mill Point (<i>see also</i> Chart No. 37).....	121
Hills Point (<i>see also</i> Chart No. 37).....	121
Hills Point North (<i>see also</i> Chart No. 37).....	121
Hills Point South (<i>see also</i> Chart No. 37).....	122
James Point.....	122
Travers (<i>see also</i> Chart No. 38).....	123
Marshall (<i>see also</i> Charts Nos. 37 and 38).....	123
Oyster Creek (<i>see also</i> Charts Nos. 37 and 38).....	124
Granger (<i>see also</i> Charts Nos. 37 and 38).....	124
Cators (<i>see also</i> Charts Nos. 37 and 38).....	124
Henpeck (<i>see also</i> Charts Nos. 37 and 38).....	125
Slaughter Creek (<i>see also</i> Charts Nos. 37 and 38).....	125
Hooper (<i>see also</i> Charts Nos. 37 and 38).....	125
Nine Acres (<i>see also</i> Chart No. 37).....	126
Little Choptank (<i>see also</i> Chart No. 37).....	126
Ragged Point (<i>see also</i> Chart No. 37).....	127
Peanut Hill (<i>see also</i> Chart No. 37).....	127
Ragged Point Flats (<i>see also</i> Chart No. 37).....	128
Cow Island (<i>see also</i> Chart No. 37).....	128
Bald Eagle (<i>see also</i> Chart No. 37).....	129

¹See separate publications for boundaries of natural oyster bars in adjacent counties.

Contents.

13

BOUNDARIES OF OYSTER BARS—Continued.

Page.

Boundaries of natural oyster bars in county—Continued.

Chart No. 37 (Little Choptank River and tributaries)—

Castle Haven (<i>see also</i> Chart No. 35).....	118
Corners Wharf.....	129
Logans Hill.....	129
Todd Point.....	130
Cook Point (<i>see also</i> Chart No. 36).....	118
Red Buoy (<i>see also</i> Chart No. 36).....	119
Spedden (<i>see also</i> Chart No. 36).....	119
Dupont (<i>see also</i> Chart No. 36).....	120
Diamond (<i>see also</i> Chart No. 36).....	120
Brannock (<i>see also</i> Chart No. 36).....	120
Mill Point (<i>see also</i> Chart No. 36).....	121
Hills Point (<i>see also</i> Chart No. 36).....	121
Hills Point North (<i>see also</i> Chart No. 36).....	121
Hills Point South (<i>see also</i> Chart No. 36).....	122
Bald Eagle (<i>see also</i> Chart No. 36).....	129
Cow Island (<i>see also</i> Chart No. 36).....	128
Ragged Point Flats (<i>see also</i> Chart No. 36).....	128
Peanut Hill (<i>see also</i> Chart No. 36).....	127
Ragged Point (<i>see also</i> Chart No. 36).....	127
Little Choptank (<i>see also</i> Chart No. 36).....	126
Nine acres (<i>see also</i> Chart No. 36).....	126
Hooper (<i>see also</i> Charts Nos. 36 and 38).....	125
Slaughter Creek (<i>see also</i> Charts Nos. 36 and 38).....	125
Henpeck (<i>see also</i> Charts Nos. 36 and 38).....	125
Cators (<i>see also</i> Charts Nos. 36 and 38).....	124
Granger (<i>see also</i> Charts Nos. 36 and 38).....	124
Oyster Creek (<i>see also</i> Charts Nos. 36 and 38).....	124
Marshall (<i>see also</i> Charts Nos. 36 and 38).....	123
Along Shore (<i>see also</i> Chart No. 38).....	131
Susquehanna.....	132
Little Pollard.....	132
Cason.....	132
Tobacco Stick.....	133
Butterpot.....	133
Hudson.....	133
Ross.....	134
McKeils Point.....	134
Town.....	135
Brumell.....	135
Cherry Island.....	136
Jones.....	136
Pattison.....	137
Barn Point.....	137
Saltwork.....	137
Fishing Creek.....	138
Grapevine.....	138

Chart No. 38 (Chesapeake Bay, between James Island and Barren Island)—

Along Shore (<i>see also</i> Chart No. 37).....	131
Slaughter Creek (<i>see also</i> Charts Nos. 36 and 37).....	125
Bridge.....	138
Hooper (<i>see also</i> Charts Nos. 36 and 37).....	125

BOUNDARIES OF OYSTER BARS—Continued.

Boundaries of natural oyster bars in county—Continued.

<i>Chart No. 38</i> (Chesapeake Bay, between James Island and Barren Island)—Continued.	Page.
Henpeck (<i>see also</i> Charts Nos. 36 and 37).....	125
Cators (<i>see also</i> Charts Nos. 36 and 37).....	124
Granger (<i>see also</i> Charts Nos. 36 and 37).....	124
Oyster Creek (<i>see also</i> Charts Nos. 36 and 37).....	124
Marshall (<i>see also</i> Charts Nos. 36 and 37).....	123
Travers (<i>see also</i> Chart No. 36).....	123
Punch Island Creek.....	139
<i>Chart No. 39</i> (Chesapeake Bay, vicinity of Barren Island)—	
Stone Pile.....	139
New Discovery.....	139
Horse Point Channel (<i>see also</i> Chart No. 40).....	140
Ware (<i>see also</i> Chart No. 40).....	140
White Wood.....	141
Tar Bay.....	141
Tubbmans Drain (<i>see also</i> Chart No. 40).....	142
Peanut (<i>see also</i> Chart No. 40).....	142
Gum (<i>see also</i> Chart No. 40).....	142
Wrotten Island (<i>see also</i> Chart No. 40).....	143
<i>Chart No. 40</i> (Honga River)—	
Tubbmans Drain (<i>see also</i> Chart No. 39).....	142
Peanut (<i>see also</i> Chart No. 39).....	142
Gum (<i>see also</i> Chart No. 39).....	142
Wrotten Island (<i>see also</i> Chart No. 39).....	143
Horse Point Channel (<i>see also</i> Chart No. 39).....	140
Ware (<i>see also</i> Chart No. 39).....	140
Smoke Point.....	143
Dark Point.....	144
Lakes Cove.....	144
Windmill.....	145
Hickory.....	145
Lower Thoroughfare.....	146
Paul.....	146
Crab Point.....	147
Norman.....	147
Applegarth.....	147
Hooper Strait.....	148
Richland.....	148
Bloodsworth (<i>see also</i> Chart No. 41).....	149
<i>Chart No. 41</i> (Fishing Bay and Nanticoke River)—	
Bloodsworth (<i>see also</i> Chart No. 40).....	149
Hopkins Cove.....	149
Red Sector.....	150
Bell Buoy (<i>see also</i> Chart No. 42).....	150
Jane.....	151
Mud (Dorchester County).....	151
Sharkfin Shoal.....	152
Ware Sands.....	152
Sand Shoal.....	153
Clay Island.....	153
Evans.....	154
Goose Creek.....	154

BOUNDARIES OF OYSTER BARS—Continued.

Boundaries of natural oyster bars in county—Continued.

Chart No. 41 (Fishing Bay and Nanticoke River)—Continued.

	Page.
Duck Island.....	155
Bungay.....	155
Old House.....	156
Point.....	156
Hill.....	156
Thorough.....	157
Half Way Mark.....	157
Flat Rock.....	157
Frog Point.....	158
New.....	158
Hills and Holes.....	158
Roaring Point West.....	159
Bean Shoal.....	159
Outer Hole.....	159
Lower Newfoundland.....	160
Upper Newfoundland.....	160

Chart No. 42 (Chesapeake Bay, vicinity of Holland Island)—

Northwest Middleground.....	160
Southeast Middleground.....	161
Boundary.....	161
Holland Straits.....	162
Bell Buoy (<i>see also</i> Chart No. 41).....	150

BOUNDARIES OF CRAB BOTTOMS:

Explanation.....	163
Methods of describing boundaries.....	163
Surveying methods for relocation of boundaries.....	164
Boundaries of crab bottoms in county ¹	165

Chart No. 40 (Honga River)—

Fox Creek.....	165
Wingate.....	165
Duck Point Cove.....	166
Jenny Island (<i>see also</i> Chart No. 41).....	166
Okahanikan (<i>see also</i> Charts Nos. 41 and 42).....	167
Grassy (<i>see also</i> Chart No. 41).....	167

Chart No. 41. (Fishing Bay and Nanticoke River)—

Jenny Island (<i>see also</i> Chart No. 40).....	166
Okahanikan (<i>see also</i> Charts Nos. 40 and 42).....	167
Bishop Head.....	167
Grassy (<i>see also</i> Chart No. 40).....	167
Bloodsworth Island (<i>see also</i> Chart No. 42).....	168
Great Cove (<i>see also</i> Chart No. 42).....	169

Chart No. 42 (Chesapeake Bay, vicinity of Holland Island)—

Okahanikan (<i>see also</i> Charts Nos. 40 and 41).....	167
Bloodsworth Island (<i>see also</i> Chart No. 41).....	168
Great Cove (<i>see also</i> Chart No. 41).....	169
Northeast Island.....	169
Adam Island.....	170
Spring Island (Dorchester County).....	170
Holland Island.....	171
Pry Island.....	172

¹ See separate publications for boundaries of crab bottoms in adjacent counties.

APPENDIXES:	Page.
Appendix A.—Laws relating to the cooperation of the Coast and Geodetic Survey and Bureau of Fisheries with the Maryland Shell Fish Commission.....	173
Appendix B. —“The Haman Oyster Culture Law” (extract from Second Report of Shell Fish Commission).....	177
Appendix C.—Summary of the particular surveying operations which constitute an “oyster survey” as now being carried on in Maryland.....	178
Appendix D.—Statistics of results of the combined operations of the Government and State..	180

SURVEY OF OYSTER BARS, DORCHESTER COUNTY, MD.

INTRODUCTION.

PUBLICATIONS.

The preparation of publications relating to the survey of the oyster bars of Maryland has been divided between the Government and the State in accordance with the laws¹ authorizing the work and the natural division of the surveying operations² of the cooperating forces.

The publications prepared and issued by the Government under the direction of the Superintendent of the Coast and Geodetic Survey consist of a series of charts and a technical report for each county surveyed.³ The charts show all legal boundaries of oyster bars within the adopted boundaries of the waters opened up for leasing with each county, and the location of all landmarks (Coast and Geodetic Survey triangulation stations) used as a foundation for the delineation of these various boundaries. The technical report gives technical and legal descriptions of all oyster bar and other boundaries, and descriptions of all landmarks shown on the charts, and includes the report of the representative of the Coast and Geodetic Survey in charge of the work of that service in cooperation with the Bureau of Fisheries and the Maryland Shell Fish Commission. These charts and technical reports are prepared and certified for file with the courts and the Commission, as required by the laws of the State, and contain all information necessary to make a permanent record of the work of the Commission and the Government for all future requirements of the courts, or for any resurveys that may become necessary.⁴

The publications prepared and issued by the State under the direction of the Shell Fish Commission consist of annual reports⁵ of all the operations of the Commission performed under the provisions of the laws of Maryland,⁶ including results of biological and economic oyster investigations, methods and results of the hydrographic survey of

¹ See Appendix A for laws relating to the cooperation of the Coast and Geodetic Survey and Bureau of Fisheries with the Maryland Shell Fish Commission.

² See Appendix C for a summary of the particular surveying operations which constitute an "oyster survey" as now being carried on in Maryland.

³ These charts and technical reports can be obtained by application to the Superintendent of the Coast and Geodetic Survey at Washington, D. C. The publications now ready for issue are those for Anne Arundel, Somerset, Wicomico, Worcester, Calvert, Charles, St. Marys, Baltimore, Kent, Queen Annes, Talbot, and Dorchester Counties.

⁴ The technical records and charts for each county are published separately on account of the requirements of the oyster-culture laws of the State and the practical considerations which make it desirable to have each county "opened up" for oyster culture as soon as practicable after the completion of its survey. For these reasons and the fact that these reports are each arranged for distribution and use in one county only without reference to other published records, much of the text of this publication is of necessity identical with similar previous publications for other counties.

⁵ These reports can be obtained by application to the Shell Fish Commission, Marine Bank Building, Baltimore, Md. They are issued annually in October, and the first, second, third, and fourth reports are now available for distribution.

⁶ See Appendix B for an extract from the "Second Report of the Maryland Shell Fish Commission," giving a concise summary of the "Haman oyster culture law."

the boundaries of oyster bars and crab bottoms, the administrative report and financial statement of the Commission, information relating to oyster culture, methods of surveying and leasing of oyster lots, and much other important matter of legal and scientific value.

These two sets of publications are planned and arranged to supplement each other without unnecessary duplication, and when combined they form a complete report of operations, methods, and results of the work of both the Government and State.¹

COOPERATION OF THE COAST AND GEODETIC SURVEY.

The work of the Coast and Geodetic Survey, as the name of the service indicates, includes a survey of the coasts of the United States made on a geodetic basis. This has involved the gradual construction of a great framework of interstate triangulation for use as a foundation for detail hydrographic and topographic surveys, from which there has been compiled and published a complete set of charts of the coasts of the United States, including all waters of Maryland where oysters grow. This existing triangulation, hydrography, and topography is essential as a foundation for a correct and practical survey of natural oyster bars; and it being one of the fundamental functions of the Coast and Geodetic Survey to furnish such data, the cooperation of the Coast and Geodetic Survey with the Bureau of Fisheries and the Maryland Shell Fish Commission is a practical and natural development of Government work leading to the conservation and increase of the supply of food.

COOPERATION OF THE BUREAU OF FISHERIES.

The Bureau of Fisheries has cooperated with the Coast and Geodetic Survey and the Maryland Shell Fish Commission principally as an adviser in matters relating to the biological and economic survey of oyster bars and the methods to be employed for that purpose.² A steam launch, rowing boat, and certain apparatus have also been furnished.

The primary function of the Bureau of Fisheries is to increase the productiveness of marine and fresh waters by such measures as may be best suited to the purpose, and the services rendered in connection with the survey of the oyster bars of Maryland are strictly in line with the fundamental law under which it acts. In certain States other than Maryland similar work has been conducted by the bureau acting independently, the same ends being attained at greater expense to the Government.

GENERAL STATEMENT OF WORK OF COAST AND GEODETIC SURVEY.³

The results obtained from the work of the Coast and Geodetic Survey in cooperation with the Bureau of Fisheries and the Maryland Shell Fish Commission need very little other summary than is indicated by the published "Charts of Natural Oyster Bars" and the index of hydrographic projections and triangulation stations shown on the county progress maps attached to each report.

¹ See Appendix D of this publication for "Statistics of results of combined operations of the Government and State."

² Hon. George M. Bowers, Commissioner of Fisheries, has detailed for this service Dr. H. F. Moore, Assistant, Bureau of Fisheries.

³ For a detail statement of the very large amount of excellent oyster survey work of the Maryland Shell Fish Commission see the "Annual Reports of the Maryland Shell Fish Commission."

The triangulation has been carried on in accordance with the standard methods of the Coast and Geodetic Survey, making this work and that of the "Descriptions of Triangulation Stations" of permanent value, not only to the State of Maryland in the survey of her oyster bars, but also to the Government for any future work it may do in the regions covered by the oyster-survey operations.

The hydrographic projections and published charts are prepared with all the accuracy permitted by their large scale, especially as to the boundaries of the various shell-fish bottoms in relation to landmarks, but this accuracy of location on the charts is further added to and permanently fixed by published technical descriptions, which should minimize the probability of any future dispute as to either landmarks or boundaries.

Stated another way, and quoting from the report of the "Survey of Oyster Bars of Anne Arundel County":

The geographic positions of the permanent landmarks and signals have been determined with the usual precision of a trigonometric survey, and their locations at all points necessary to provide ample foundation for the surveying and charting operations permitted great accuracy of definition and location for the natural oyster bar and other boundaries established. At the same time, the very important element of permanency of the positions of boundaries has been secured, as the relocation of geodetic positions can always be accomplished by a competent surveyor, even though the original landmarks and monuments have been washed away, as has been the fate of hundreds of such points established by the Coast and Geodetic Survey on the shores of the Chesapeake Bay during the last 65 years.



REPORT OF THE WORK OF THE COAST AND GEODETIC SURVEY IN
DORCHESTER COUNTY.

INSTRUCTIONS.

The following letters, together with the laws¹ of the United States relating to the subject, constitute the "instructions" received by the chief of the Coast and Geodetic Survey party engaged on work in connection with the Maryland Shell Fish Commission. They are short and definite, but furnish ample authority and leeway for all legitimate development of the cooperation of the Government and the State in the survey of oyster bars. The "free hand" permitted by these orders, together with the aid and many valuable suggestions received from the officers of the survey at Washington, have proved very beneficial to the work and are greatly appreciated.

DEPARTMENT OF COMMERCE AND LABOR,
OFFICE OF THE SECRETARY,
Washington, June 2, 1906.

SIR: In reply to your letter of May 28, requesting me to designate officers of the Coast and Geodetic Survey and of the Bureau of Fisheries to cooperate with the State of Maryland in making survey of and locating the natural oyster beds, I have the honor to inform you that Mr. C. C. Yates will be designated to cooperate on the part of the Coast and Geodetic Survey as soon as Congress makes the provisions of the act effective by providing an appropriation for the purpose.

Respectfully,

His Excellency Hon. EDWIN WARFIELD,
Governor of Maryland, Annapolis, Md.

LAWRENCE O. MURRAY, *Assistant Secretary.*

DEPARTMENT OF COMMERCE AND LABOR,
COAST AND GEODETIC SURVEY,
Washington, July 3, 1906.

SIR: Upon the receipt of these instructions you will surrender the command, accounts, etc., of the steamer *Endeavor* to the Hydrographic Inspector. * * *

As soon as this transfer is completed you will enter upon the duties of Coast Survey representative on the Shell Fish Commission of Maryland.

You will consult the Commissioners, prepare a program of work, and submit estimates in the usual form.

You are authorized to come to Washington for consultation from time to time as may be necessary.

* * * * *

Very respectfully,

Capt. C. C. YATES,
U. S. C. and G. S. Steamer Endeavor, Baltimore, Md.

O. H. TITTMANN, *Superintendent.*

ORGANIZATION AND EQUIPMENT.

The personnel and occupation of the party of the Coast and Geodetic Survey have remained practically unchanged since the beginning of the "oyster survey." Besides

¹ For these laws see Appendix A.

the chief of party, it consists of the necessary triangulators, computers, draftsmen, and temporary employees required to carry on both the surveying operations in the field and the preparation for publication of oyster charts and technical records in the office at Washington.

The equipment for the work of the party has been ample and satisfactory. The large living and office quarters furnished the Government on the Maryland Shell Fish Commission house boat *Oyster* have been very convenient for the work, besides facilitating efficient cooperation with the surveying and oyster investigation parties of the State. In addition to the accommodations on the *Oyster*, the Coast and Geodetic Survey party has had the constant use of the large launch *Inspector* and several other boats furnished by its own service, and the occasional use of the Bureau of Fisheries launch *Canvasback*¹ and the steamer *Governor McLane*² of the State Fishery Force.

The greater part of the equipment of instruments for the operations of both the Government and State has been furnished by the Coast and Geodetic Survey and consists of all necessary theodolites, levels, sextants, drafting instruments, hydrometers, etc., required for all field and office work.

CHRONOLOGICAL STATEMENT OF WORK.

The field work of the Coast and Geodetic Survey in Dorchester County dates from March 14, 1910, when a subparty was organized and sent out to complete certain unfinished details of triangulation in Talbot County and to take up the overlapping triangulation between Dorchester and Talbot Counties.³ This party first went to St. Michaels, then to Cambridge, and finally to Oxford, where the main party on the house boat was joined at the end of April.

On April 30, 1910, the house boat *Oyster* was towed from Baltimore by the State steamer *McLane* to an anchorage in Tar Creek near Bellevue. While at this harbor the house boat was cleaned, painted, and generally overhauled for the season's work, and at the same time triangulation was carried on in Choptank River and its tributaries.

On May 30, 1910, the house boat shifted her anchorage to Tred Avon River off Oxford, from which point a small amount of field work was done in Dorchester County along with the work in Talbot County.

On June 30, 1910, the *Oyster* was towed to an anchorage off Cambridge, where she remained until the completion of the overlapping field work in Choptank River of both Dorchester and Talbot Counties.

On July 20, 1910, the house boat *Oyster* was towed from Cambridge to an anchorage off Solomons Island in the mouth of the Patuxent River. A greater part of the field work along the Chesapeake Bay shore of Dorchester County was carried on from this harbor. During weather too rough to work in the open Chesapeake Bay, considerable work was also done from this point in checking up descriptions of triangulation stations required for the preparation of the publications covering Calvert, St. Marys, and Charles Counties.

¹ By courtesy of Dr. H. F. Moore, United States Bureau of Fisheries.

² By courtesy of Capt. James A. Turner, commanding.

³ The field work of Dorchester County was so intermixed with that of Talbot County that the chronological statement of the work in one of these counties necessarily includes a considerable part of the work of the other county.

On August 11, 1910, the *Oyster* was moved across the Chesapeake Bay to an anchorage in Honga River off Hoopers Island Wharf. A greater part of the oyster-survey work along the lower Chesapeake Bay shore of Dorchester County, as well as that of Honga River and Fishing Bay, was carried on from this point as headquarters.

On September 30, 1910, the field work in the southern half of Dorchester County being completed, the house boat *Oyster* was towed by the steamer *McLane* to the Little Choptank River and anchored off the town of Madison, where she remained for over two months while oyster-survey operations were being carried on in the Little Choptank River and its many tributaries.

On December 4, 1910, the house boat *Oyster* was moved to the northern side of Little Choptank River to an anchorage in the mouth of Hudson Creek, where she remained in spite of bad weather and ice until the practical completion of the oyster-survey work in Dorchester County.

On December 15, 1910, the field work of Dorchester County was completed, and as this was the last county to be surveyed, this date also marks the completion of all the field work of the Maryland Oyster Survey, with the exception of the two days, the 20th and 21st of June, 1912, when a small party, under the charge of Mr. Frank W. Seth, surveyman in the Coast and Geodetic Survey, was put in the field to complete necessary details of triangulation in Talbot and Dorchester Counties.

The office work connected with the oyster survey of Dorchester County, including the computations of geographic information and the drafting necessary for the preparation for publication of the oyster charts and the technical records of that county, was carried on intermittingly with the office work of other counties from the beginning of the field work in Dorchester County on March 14, 1910, to the time of filing of the certified oyster charts and technical records in the archives of the Maryland Shell Fish Commission and with the clerk of the circuit court of Dorchester County on August 17, 1912.

STATISTICS.¹

Landmarks and triangulation signals erected.....	156
Monuments planted to mark triangulation stations.....	156
Triangulation stations occupied for observations of horizontal angles.....	161
Old triangulation stations recovered.....	65
New triangulation stations established.....	125
Total old and new triangulation stations marked and described.....	190
Linear miles of shore line covered by triangulation (approximate).....	270
Square miles covered by triangulation (approximate).....	330
Hydrographic projections prepared and completed as records of oyster boundaries.....	21
Triangles computed.....	380
Geographic positions computed.....	170
Corners of oyster bar and crab bottom boundaries established by computation.....	671
Back azimuths and distances computed from corners of boundaries to triangulation stations.....	2,013
Descriptions of triangulation stations prepared for publication.....	190
Descriptions of oyster bar and crab bottom boundaries prepared for publication.....	135
"Charts of Natural Oyster Bars" prepared for publication.....	8
Progress map prepared for publication.....	1

¹ These statistics only include field and office work directly performed by the party of the Coast and Geodetic Survey in connection with the oyster survey of this county, and do not include the many thousands of soundings and examinations of the character of the bottom made by the engineers of the Commission, which are of considerable value to the Coast and Geodetic Survey as hydrographic records for future use in connection with the preparation of new editions of charts of the waters of Maryland. See Appendix D of this publication for "Statistics of results of combined operations of the Government and the State."

GENERAL REMARKS.

Before ending this report the representative of the Coast and Geodetic Survey wishes to renew his statement of appreciation of the courteous assistance received from various Government and State officials and others interested in the oyster industry of Maryland, especially to the following:

To his colleague from the Department of Commerce and Labor, Dr. H. F. Moore, of the Bureau of Fisheries, whose well-known scientific knowledge of all matters relating to oysters has been of great value to the work.

To Mr. Walter J. Mitchell, chairman of the Maryland Shell Fish Commission, who, by his administrative ability in carrying out the complicated requirements of the oyster laws and by his unflinching tact, has made the cooperation of the various services engaged on the work both agreeable and effective.

To Dr. Caswell Grave, secretary of the Commission, who, as editor of the Commission's annual report and commissioner in charge of the biological and economic oyster investigations, has been brought into constant contact with the Government work and aided its operations in every way.

To Mr. Benjamin K. Green, treasurer of the Commission, who has looked after the equipment and commissary of the house boat in such a way as to add greatly to the comfort and convenience of the party of the Coast and Geodetic Survey.

To Mr. Swepson Earle, hydrographic engineer to the Commission, whose knowledge of the work from former service in the Coast and Geodetic Survey has greatly facilitated his practical use of the technical data furnished by the Government.

And to the many others connected with the Commission or who as residents in the locality where the work was being carried on have greatly assisted by furnishing important information or willing services.

CHARTS AND MAPS.

CHARTS OF NATURAL OYSTER BARS.¹

The charts of the natural oyster bars of Dorchester County published by the Coast and Geodetic Survey from results of the surveys of the Government in cooperation with the Maryland Shell Fish Commission consist of eight sheets covering all the oyster-producing waters of that county. They are published on the large scale of 1 part in 20,000 (approximately $3\frac{1}{16}$ inches to a statute mile) and are constructed on polyconic projections; and all information shown on them is based on the United States standard datum of the Coast and Geodetic Survey.

These charts show all oyster bars and other boundaries established by the Commission, and are certified for the purpose of filing in the office of the clerk of the circuit court of Dorchester County and in the office of the Maryland Shell Fish Commission, as required by the oyster laws of Maryland.

In addition to the oyster bar and other boundaries, the charts show the location and name of all landmarks (United States Coast and Geodetic Survey triangulation stations) used in making the survey, together with the hydrography and topography² necessary to make the technical definitions and delineations of boundaries readily understandable both by the people engaged in the oyster industry and the general public who may become interested through leasing of barren bottoms for oyster culture.

The names of the oyster bars are those used locally, as nearly as could be ascertained by the hydrographic engineer of the Commission. When there was no local name in common use, a name was selected from one of the prominent features of the vicinity. By the use of recognized names or those that would naturally suggest certain sections of water, it is believed that much confusion will be avoided in the location on the charts of the oyster bars, especially by those not familiar with the use of maps.

The corners of the oyster bars are numbered from 1 to the total number of corners in each area under consideration. Where boundaries adjoin, making one point a corner of two or more oyster bars, these points have two or more numbers, each number corresponding to the bar in which the figure is located. The numbers of the corners correspond with the technical and legal descriptions of this publication under the heading "Boundaries of natural oyster bars."

The landmarks and oyster bars have been grouped in the "Contents" of this publication in accordance with the charts upon which they are shown. To find a particular oyster bar or landmark which is only known by name, consult the "Contents" and the desired chart and general location will be indicated. To find the name of a bar or landmark which is only known by location, consult the progress map at the end of this publication for the number of the chart on which it is to be found, and then examine the known locality on the chart for the name of the bar or landmark in question.

¹ These charts can be obtained by application to the Superintendent of the Coast and Geodetic Survey, at Washington, D. C.

² Much of the detail of the inshore topography was obtained from the excellent map of Dorchester County, prepared and published by the Maryland Geological Survey under the direction of Dr. William Bullock Clark from surveys of the Maryland Geological Survey in cooperation with the United States Geological Survey.

The contours on the charts showing the depth of water at mean low tide have been taken from the hydrographic sheets of former work of the Coast and Geodetic Survey. Four curves were selected as being the most convenient for taking off from the original hydrographic sheets and the ones of greatest value to those interested in shell fish industries. The 1-fathom contour (6 feet) and the 5-fathom curve (30 feet) correspond in a general way to the inner and outer limits of all the oyster bars surveyed. The 3-fathom contour (18 feet) furnishes the curve of about the average depth of water on the oyster bars, and the 10-fathom contour (60 feet) serves in a general way to indicate the outer limits of probable oyster culture.

The boundaries of the waters within the "territorial limits of the county" and the boundaries of the "waters contiguous to the county" opened up for the leasing with Dorchester County are plainly indicated on the charts. A full technical description of these boundaries is given in this publication under the heading "Boundaries of county waters."

The areas in acres of the oyster bars were determined under the direction of the hydrographic engineer of the Commission by two independent planimeter measurements of the areas as delineated on the smooth projections of the Coast and Geodetic Survey. These areas are given in small figures in parentheses on the face of the chart within the boundaries of the different shell fish bottoms.

The symbols used on the charts for the different kinds of boundaries, triangulation stations, contours of depth of water, etc., require no other explanation than that given in the legend and other notes on the face of the charts.

LEASING CHARTS.

The leasing charts of Dorchester County, like those for Anne Arundel, Somerset, Wicomico, Worcester, Calvert, Charles, St. Marys, Baltimore, Kent, Queen Annes and Talbot counties, have been prepared under the direction of the hydrographic engineer of the Commission. They are constructed on polyconic projections on the scales of 1 part in 5,000 or 1 part in 10,000 as the needs of oyster culture may require, and the information shown on them is based on the United States standard datum of the Coast and Geodetic Survey.

These charts show all the oyster bars, crab bottoms, and clam beds and other boundaries established by the Commission, and also all boundaries of oyster lots leased for the purpose of oyster culture, thus making them comprehensive and valuable records of the results of the operations of the oyster-culture laws.

The lots leased under the provision of the "old 5-acre law" are frequently of irregular shape, but the lots leased under the provision of the new oyster laws must be of rectangular shape by the terms of that act. For this latter purpose the leasing charts have been divided by parallels of latitude and meridians of longitude into small rectangles of 1 acre or 5 acres, as may be best suited to the area under consideration, and prospective leaseholders by the rules of the Commission are compelled to select whole rectangles as far as possible.

For reasons of the present changeable nature of the number of lots leased and the large number of charts required, the leasing charts are not likely to be published for some years, but they can be seen at any time on file at the offices of the Commission, in the Marine Bank Building at Baltimore.

PROJECTIONS.

The polyconic projections¹ covering Dorchester County waters are 21 in number and on the scale of 1 part in 10,000. They were constructed by draftsmen of the Coast and Geodetic Survey, but the sextant positions which determine the location of the legal boundaries of the oyster bars as delineated by the Shell Fish Commission were plotted by the draftsman of the Commission.

A copy of each of these projections, with all the plotted positions of triangulation stations, shore line, sextant positions, and boundaries of oyster bars, was made under the direction of the hydrographic engineer of the Commission by pricking through with a sharp needle the intersections of the projection lines and all other points as plotted on the original sheets.

These projections (in duplicate) are the original records of all oyster bar and other boundaries established by the Commission, one set being filed in the archives of the Coast and Geodetic Survey, at Washington, and the other set in the archives of the Shell Fish Commission.

PROGRESS MAPS.

The progress map to be found at the end of this publication is on a scale of 1 part in 100,000, and shows in outline the work accomplished by the United States Coast and Geodetic Survey in Dorchester County and contiguous waters. It gives the scheme of all the charts and smooth projections constructed in connection with the survey, the location and names of all triangulation stations used as a basis for the surveying work, and the "boundaries of county waters" established by the Commission for the purpose of carrying out the laws of Maryland relating to oyster culture.

Besides indicating the amount of work done by the Coast and Geodetic Survey in connection with the work of the Shell Fish Commission, this progress map will be of special value for index purposes to engineers and others searching for the particular chart or projection covering the locality of the oyster bars or landmarks that may be under consideration.

The progress maps² accompanying the first and second annual reports of the Maryland Shell Fish Commission were prepared under the direction of the hydrographic engineer of the Commission. They are on the scale of 1 part in 400,000, and show the outline of the tide-water counties of Maryland, with shaded areas to indicate the waters already covered by the operations of the oyster survey.

¹ For the scheme of these projections see the progress map at the end of this publication.

² These maps and reports can be obtained by application to Maryland Shell Fish Commission, Marine Bank Building, Baltimore, Md.

BOUNDARIES OF THE COUNTY WATERS.¹

WATERS WITHIN TERRITORIAL LIMITS OF COUNTY.

The laws of Maryland relating to oyster culture provide that "no person shall be permitted, by lease, assignment, or in any other manner, to acquire a greater amount of land than ten acres situated within the territorial limits of any of the counties, or one hundred acres in any other place."

The boundary line² between the waters "within the territorial limits" of Dorchester County and the waters in "any other place," as established by the Shell Fish Commission for the purpose of carrying out the oyster laws, and delineated on the "oyster" charts and the smooth projections of the Coast and Geodetic Survey, is technically described and defined as follows:³

Commencing at the head of the oyster-producing waters of Choptank River on the channel boundary line between Dorchester County and Talbot County; thence following the channel boundary line between Talbot County and Dorchester County down the upper Choptank River to a point situated about half way between the town of Choptank and Cabin Creek; thence continuing down the channel boundary line of the upper Choptank River as laid down on "Chart No. 35, Natural Oyster Bars, Maryland" around Chancellors Point and pass the city of Cambridge to the entrance of upper Choptank River between Castle Haven Point and Island Creek; thence along the boundary line between Talbot County and Dorchester County in the lower Choptank River as laid down on "Charts Nos. 36 and 37, Natural Oyster Bars, Maryland," to a point in the Chesapeake Bay entrance of the lower Choptank River defined by the intersection of this boundary line with a straight line defined at its northwestern end by a point situated on Blackwalnut Point in latitude $38^{\circ} 40' 06.6''$ and longitude $76^{\circ} 20' 24.7''$ and defined at its southeastern end by a point situated on Cook Point in latitude $38^{\circ} 37' 55.7''$ and longitude $76^{\circ} 17' 28.7''$; thence in a straight line across the southeastern half of the Chesapeake Bay entrance of the lower Choptank River to a point situated on Cook Point defined by latitude $38^{\circ} 37' 55.7''$ and longitude $76^{\circ} 17' 28.7''$; thence in a southeasterly direction along the mean low-water line or across the mouth of all inlets less than 100 yards in width, as the case may be, of the eastern shore of Chesapeake Bay to a point situated on the northern side of Tripps Bay defined by latitude $38^{\circ} 36' 10.4''$ and longitude $76^{\circ} 16' 21.8''$; thence in a straight line across the eastern end of Tripps Bay to a point situated on the southern side of the eastern end of Tripps Bay defined by latitude $38^{\circ} 35' 52.7''$ and longitude $76^{\circ} 16' 05.1''$; thence in a southwesterly direction along the mean low-water line or across the mouth of all inlets less than 100 yards in width, as the case may be, of the eastern shore of Chesapeake Bay to a point situated on the northeastern side of the entrance of Brannock Bay defined by latitude $38^{\circ} 35' 33.9''$ and longitude $76^{\circ} 16' 23.8''$; thence in a straight line across the entrance of Brannock Bay to a point situated on Mills Point on the southwestern side of the entrance of Brannock Bay defined by latitude $38^{\circ} 35' 07.2''$ and longitude $76^{\circ} 17' 13.2''$; thence in a southwesterly direction along the mean low-water line or across the mouth of all inlets less than 100 yards in width, as the case may be, of the eastern shore of Chesapeake Bay to a point situated on Hills Point on the northern side of the entrance of Little Choptank River defined by latitude $38^{\circ} 33' 48.6''$ and longitude $76^{\circ} 18' 41.8''$; thence in a straight line across the entrance of Little Choptank River to a point situated on James Island on the southern side of Little Choptank River defined by latitude $38^{\circ} 31' 44.9''$ and longitude $76^{\circ} 20' 01.9''$; thence following the northern and western side of James Island along the mean low-water line or across the mouth of all inlets less than

¹ For a complete historical and legal description of the boundaries of the counties of Maryland, the valuable publication entitled "The Counties of Maryland—Their Origin, Boundaries, and Election Districts," prepared by Dr. Edward B. Mathews and published by the Maryland Geological Survey under the direction of Dr. William Bullock Clark, superintendent, should be consulted, as the boundaries described in this publication have been established and technically defined for the purpose of carrying out the oyster laws of the State, and may or may not be correct for other purposes.

² See "Charts of Natural Oyster Bars," published by the Coast and Geodetic Survey, and the progress map at the end of this publication.

³ Latitudes and longitudes based on the United States standard datum of the United States Coast and Geodetic Survey.

100 yards in width, as the case may be, of the eastern shore of Chesapeake Bay to a point situated on the southern end of James Island defined by latitude $38^{\circ} 30' 07.6''$ and longitude $76^{\circ} 20' 19.3''$; thence in a straight line across the entrance of Oyster Creek to a point situated on the southern side of the entrance of Oyster Creek defined by latitude $38^{\circ} 29' 51.9''$ and longitude $76^{\circ} 20' 25.4''$; thence in a southeasterly direction along the mean low-water line across the mouth of all inlets less than 100 yards in width, as the case may be, along the eastern shore of Chesapeake Bay across the entrance of Punch Island Creek to a point situated on the northern side of the entrance between two marsh islands into the extreme northern end of Tar Bay defined by latitude $38^{\circ} 22' 48.6''$ and longitude $76^{\circ} 16' 46.7''$; thence in a straight line across the entrance of the northern end of Tar Bay to a point situated on the northern end of a marsh island defined by latitude $38^{\circ} 22' 33.6''$ and longitude $76^{\circ} 16' 45.0''$; thence in a southerly direction following the western side of a marsh island along the mean low water line or across the mouth of all inlets less than 100 yards in width, as the case may be, of the eastern shore of Chesapeake Bay to a point situated on the southern end of a marsh island on the northern side of the main northern entrance of Tar Bay defined by latitude $38^{\circ} 21' 49.2''$ and longitude $76^{\circ} 16' 31.0''$; thence in a straight line across the main northern entrance of Tar Bay to a point situated on the northern end of Barren Island defined by latitude $38^{\circ} 20' 53.4''$ and longitude $76^{\circ} 16' 01.5''$; thence following the western and southern side of Barren Island along the mean low-water line or across the mouth of all inlets less than 100 yards in width, as the case may be, to a point situated on the southern end of Barren Island defined by latitude $38^{\circ} 18' 39.8''$ and longitude $76^{\circ} 14' 37.5''$; thence in a straight line across the southern entrance of Tar Bay to a point situated on Pons Point on the western side of Upper Hooper Island defined by latitude $38^{\circ} 18' 24.0''$ and longitude $76^{\circ} 13' 27.5''$; thence in a southeasterly direction following the western side of Upper Hooper Island, Middle Hooper Island, and Lower Hooper Island along the mean low-water line or across the causeways and bridges connecting these islands and the mouths of all inlets less than 100 yards in width, as the case may be, of the eastern shore of Chesapeake Bay to a point situated on the southern side of Lower Hooper Island on the northwestern side of the entrance of Hooper Strait defined by latitude $38^{\circ} 13' 57.7''$ and longitude $76^{\circ} 07' 56.5''$; thence in a straight line across the Chesapeake Bay entrance of Hooper Strait to a point situated on the northwestern side Bloodworth Island on the southern side of the entrance of Hooper Strait defined by latitude $38^{\circ} 11' 40.6''$ and longitude $76^{\circ} 05' 25.2''$; thence in a southerly direction following the western side of Bloodworth Island along the mean low-water line or across the mouth of all inlets less than 100 yards in width, as the case may be, to a point situated on the southwestern end of a part of Bloodworth Island known as Billys Island defined by latitude $38^{\circ} 09' 23.8''$ and longitude $76^{\circ} 05' 09.1''$; thence in a straight line across the channel between Billys Island and Adam Island to a point situated on the northern end of Adam Island defined by latitude $38^{\circ} 09' 14.7''$ and longitude $76^{\circ} 05' 14.0''$; thence following the northern and western side of Adam Island along the mean low-water line or across the mouth of all inlets less than 100 yards in width, as the case may be, of the eastern shore of Chesapeake Bay to a point situated on the southern end of Adam Island defined by latitude $38^{\circ} 08' 16.4''$ and longitude $76^{\circ} 05' 09.0''$; thence in a straight line across the channel between Adam Island and Holland Island to a point on the northern end of Holland Island defined by latitude $38^{\circ} 08' 06.6''$ and longitude $76^{\circ} 05' 27.8''$; thence in a southerly direction following the western side of Holland Island along the mean low-water line or across the mouth of all inlets less than 100 yards in width, as the case may be, to a point on the southern end of Holland Island defined by latitude $38^{\circ} 06' 36.4''$; and longitude $76^{\circ} 05' 31.6''$; thence in a straight line to a point situated on the boundary line between Dorchester County and Somerset County on the southern side of the Chesapeake Bay entrance of Holland Straits about $1\frac{1}{2}$ miles north-northeast of Holland Island Bar Light defined by latitude $38^{\circ} 04' 40.8''$ and longitude $76^{\circ} 04' 14.8''$; thence in a straight line along the Holland Straits boundary line between Dorchester County and Somerset County to a point on the western side of Pry Island on the eastern side of Holland Straits defined by latitude $38^{\circ} 05' 44.1''$ and longitude $76^{\circ} 03' 44.6''$; thence in a straight line along the Holland Straits boundary line between Dorchester County and Somerset County across the mouth of Pry Cove to a point on the western side of a small marsh island on the eastern side of Holland Straits defined by latitude $38^{\circ} 06' 39.9''$ and longitude $76^{\circ} 03' 17.8''$; thence in a straight line diagonally across Holland Straits along the boundary line between Dorchester County and Somerset County to a point on the southeastern side of Bloodworth Island on the northwestern side of Holland Straits defined by latitude $38^{\circ} 08' 50.6''$ and longitude $76^{\circ} 01' 53.4''$; thence in a straight line across the western half of Upper Tangier Sound along the boundary line between Dorchester County and Somerset County to a point situated in Tangier Sound about $1\frac{3}{8}$ miles west of upper land end of Deal Island Wharf and $2\frac{3}{8}$

miles south by east of Sharkfin Shoal Light defined by latitude $38^{\circ} 10' 08.1''$ and longitude $76^{\circ} 58' 40.6''$; thence in a straight line along the Tangier Sound boundary line between Dorchester County and Somerset County to a point in Tangier Sound entrance of Nanticoke and Wicomico Rivers situated about $\frac{7}{8}$ mile east-southeast of Sharkfin Shoal Light defined by latitude $38^{\circ} 11' 50.3''$ and longitude $75^{\circ} 58' 20.8''$ thence along the boundary line between Dorchester County and Somerset County, up the channel of Nanticoke River, pass Roaring Point and Ragged Point to a point on the channel boundary line between Dorchester County and Somerset County situated about 2 miles north of the town of Bivalve, all as laid down on "Chart No. 41, Natural Oyster Bars, Maryland," thence continuing up the Nanticoke River along the channel boundary line between Dorchester County and Somerset County to the head of the oyster-producing waters.

WATERS CONTIGUOUS TO COUNTY.

The oyster laws of Maryland provide that a true and accurate delineation of all natural oyster bars shall be made on copies of charts of the United States Coast and Geodetic Survey, "which said copies shall be filed in the office of the said Commissioners in the city of Baltimore," and "in the office of the clerks of the circuit courts for the respective counties wherein the grounds so designated may lie."

For the purpose of carrying out the latter part of this section of the law and for the purpose of establishing the limits of the oyster-culture area to be opened up for leasing with each county surveyed, it is necessary for the Shell Fish Commission to establish a boundary line between the waters contiguous to but not within the territorial limits of each county and the waters contiguous to but not within the territorial limits of adjacent counties.

This boundary line has been delineated on the "Charts of Natural Oyster Bars," published by the Coast and Geodetic Survey, and is technically described and defined as follows:¹

Commencing at a point in the Chesapeake Bay entrance of the lower Choptank River defined by the intersection of the boundary line between Dorchester County and Talbot County as laid down on "Charts Nos. 36 and 37, Natural Oyster Bars, Maryland," with a straight line defined at its northwestern end by a point situated on Blackwalnut Point in latitude $38^{\circ} 40' 06.6''$ and longitude $76^{\circ} 20' 24.7''$ and defined at its southeastern end by a point situated on Cook Point in latitude $38^{\circ} 37' 55.7''$ and longitude $76^{\circ} 17' 28.7''$; thence along the boundary line between Dorchester County and Talbot County passing into Chesapeake Bay south of Sharps Island as laid down on "Charts Nos. 36 and 37, Natural Oyster Bars, Maryland," to a point in Chesapeake Bay about $5\frac{1}{2}$ miles southwest of Sharps Island Light and $5\frac{3}{4}$ miles northwest of James Island defined by latitude $38^{\circ} 34' 29.6''$ and longitude $76^{\circ} 26' 17.0''$; thence in a straight line in a southerly direction with Chesapeake Bay to a point situated in Chesapeake Bay about $4\frac{1}{2}$ miles west of the southern end of James Island defined by latitude $38^{\circ} 30' 00.0''$ and longitude $76^{\circ} 25' 30.0''$; thence in a straight line in a southeasterly direction with Chesapeake Bay to a point situated in Chesapeake Bay about $2\frac{5}{8}$ miles east of Cove Point Light defined by latitude $38^{\circ} 23' 10.3''$ and longitude $76^{\circ} 20' 00.0''$; thence in a straight line in a southerly direction with Chesapeake Bay to a point situated in Chesapeake Bay about $3\frac{1}{8}$ miles northeast of Cedar Point Light defined by latitude $38^{\circ} 19' 37.7''$ and longitude $76^{\circ} 19' 19.0''$; thence in a straight line in a southerly direction with Chesapeake Bay to a point situated in Chesapeake Bay about $2\frac{3}{4}$ miles east of Cedar Point Light defined by latitude $38^{\circ} 17' 58.0''$ and longitude $76^{\circ} 18' 59.7''$; thence in a straight line in a southeasterly direction with Chesapeake Bay to a point situated in Chesapeake Bay about $5\frac{5}{8}$ miles west of Holland Island Bar Light in latitude $38^{\circ} 04' 34.8''$ and longitude $76^{\circ} 12' 01.0''$; thence in a straight line in an easterly direction across the eastern half of Chesapeake Bay to a point situated on Holland Island Bar Light defined by latitude $38^{\circ} 04' 07.3''$ and longitude $76^{\circ} 05' 45.9''$; thence in a straight line in a northeasterly direction toward the entrance of Holland Straits to a point situated about $1\frac{1}{2}$ miles north-northeast of Holland Island Bar Light on the boundary line between Dorchester County and Somerset County on the southern side of the Chesapeake Bay entrance of Holland Straits defined by latitude $38^{\circ} 04' 40.8''$ and longitude $76^{\circ} 04' 14.8''$.

¹ Latitudes and longitudes based on the United States standard datum of the United States Coast and Geodetic Survey.

LANDMARKS (U. S. COAST AND GEODETIC SURVEY TRIANGULATION STATIONS).

EXPLANATION.

The oyster laws of Maryland authorizing the survey to be made by the Shell Fish Commission provide for "an accurate report of said survey, setting forth such a description of landmarks as may be necessary to enable the said board, or their successors, to find and ascertain the boundary lines of said natural oyster beds, bars, and rocks, as shown by delineation on the maps and charts." The law of the United States authorizing the cooperation of the Department of Commerce and Labor in the survey of natural oyster bars of Maryland provides for the erection of "such structures as may be necessary to mark the points of triangulation, so that the same may be used for such future work of the Coast and Geodetic Survey as the said bureau may be hereafter required to perform in prosecuting the Government coast survey of the navigable waters of the United States located within the State of Maryland."

Under the provisions of the sections of the laws stated above, the markings and descriptions of landmarks must be sufficient for the present and future needs of both the Government and the State. With this end in view, considerable work has been expended in erecting permanent monuments at the triangulation stations and in the proper description of their location.

An effort has been made to arrange the descriptions of location and character of landmarks in a uniform and logical manner. The descriptions start with the assumption that the individual seeking a landmark has only an indefinite idea of its location. They gradually proceed from description of the general locality of a landmark to the descriptions of its immediate surroundings. This is followed by specific details of the character of the center and reference marks and a "round" of reference angles and distances which in themselves frequently contain enough information to furnish an independent and reliable location of the triangulation station.

METHOD OF DESCRIBING TRIANGULATION STATIONS.

The separate descriptions of triangulation stations should not be used without reading the following explanation of the method of describing the triangulation stations, as it contains certain details that are common to all the landmarks described in this publication and which are omitted in the separate descriptions as being needless repetitions:

Name.—The title at the top of each separate description is the name by which the landmark or triangulation station is known and designated in all work and published oyster records or oyster charts of both the Government and State. The selection of the name is usually left to the triangulator establishing the station, and it may or may not have geographic or other significance in reference to the locality.

General locality.—Under this heading is given the general locality of the landmark in reference to well-known and prominent natural or artificial features, such as the nearest body of water, town, river, steamer wharf, well-defined point of land, church, or any other feature that is likely to remain both permanent and prominent.

This heading also covers a reference to the published chart or map which shows the location of the station most clearly. Nearly all the triangulation stations described in this publication are plainly indicated by name and a triangulation symbol on the published charts of oyster bars of Maryland. In this case they are referred to by serial number only, the words "charts of oyster bars of Maryland" being omitted to avoid needless repetition. These published oyster charts are on the large scale of 1 part in 20,000 (approximately $3\frac{1}{6}$ inches to a statute mile) and show the locations of the triangulation stations so clearly that in many cases the written descriptions will not be required to find them.

Immediate locality.—Under this heading is given the description of the "observed station" in reference to its immediate surroundings. This is supposed to include a statement of the station's estimated elevation above high water or some other well-defined level of the locality, such as a road or house; the character of the ground on which it is located, such as marsh land, sand beach, cultivated field, or meadow; estimated bearings in points of the compass and estimated distances in yards *from* (not *to*) easily recognized features, such as extreme end of point, edge of bluff, bank of creek, line of telephone poles, shore line, barn, house, fence, ditch, trees, or any other definite detail, such as being on range with the tangent of an island and a church; and so forth.

When a standard monument has been established near the station as a "reference station," this heading also covers a statement of the true bearing of the monument in degrees and minutes and its measured distance in meters, as it is the first object that is likely to catch the eye when the immediate vicinity of the desired station is reached and might be mistaken for the center mark of the "observed station" unless special attention is called to it.

The distinction between the "observed station" and "reference station" should be carefully noted by anyone making use of the description of stations for any future surveying operations.

The "observed station" is located at the particular triangulation point covered by the description of stations and is the one whose geographic position is first computed, as it is the point which was "occupied" and "observed on" for horizontal angles. However, in spite of the primary importance of the location of the "observed station," it will be noted from the description of stations that frequently it is not marked as well as the "reference station," and in some instances has only a pine stub to indicate its position. This is the case for the reason that the necessity of intervisibility of landmarks usually made it compulsory to locate "observed stations" on edges of banks and ends of points of land, which in the tidewater section of Maryland generally means they will be washed away in a short period of years. The past experience of the Coast and Geodetic Survey in this region has shown the great need of "reference stations," if the frequent reestablishment of a new framework of triangulation is to be avoided.

The chief reason and need for the establishment of the "reference station," or secondary station, as it might be well named, is explained in the preceding paragraph, but in several instances other reasons, such as the location of the "observed station" on an unstable sand dune, in a cultivated field, in front of a residence, or other places objectionable to the landowner, have led to establishment of "reference stations." The location of the "reference station" in relation to the "observed station" is fixed

for plotting on charts or for computation of its geographic position by checked measurements of its distances and azimuth from the "observed station."¹

Marks.—Under this heading is given a description of the character of the permanent monuments or other marks of the location of the "observed station," and of the "reference station" where one has been established.

All the marks designated in the descriptions as "the center point of triangle on standard cement monument" are exactly alike. These monuments are made of cement, sand, and gravel, and are 2 feet long and 8 inches square at top and bottom. Their tops are all marked with the same brass mold and show a center hole surrounded by a triangle, with the letters "M. S. F. C." arranged around the vertex and the letters "U. S. C. S." underneath the base of the triangle. The center hole is always in the center of the top of the monument by construction, and if this is found to have been broken off without disturbing the bottom the center of its square section can be used as the location of the station.

All the "standard cement monuments," whether used for marking the "observed station" or "reference station," have been planted upright in exactly the same manner, with their tops projecting 3 or 4 inches above the surface of the ground, unless otherwise stated.

Therefore, as the above facts in reference to the "standard cement monuments" are a constant element in all cases, the repetition of these facts in the description of stations is made needless by this one statement.

References.—Under this heading are given the "rounds" of directions and distances to all objects that might be useful in locating the stations when the surface marks can not be found. It is also contemplated that for general purposes of topography, hydrography, or location of boundaries of oyster bars these references will be sufficient in many cases to relocate the position of an "observed station" or "reference station" when both of them have been destroyed.

The first reference object given in the descriptions is always a triangulation station visible from the station being described, this, if possible, being a lighthouse, church spire, or other permanent and prominent point. Its direction is taken as being $0^{\circ} 00' 00''$, and the directions of all other objects are measured from it as an initial point, the angles being taken in a clockwise direction (left to right).

The true bearing² of the initial object is always given in parentheses alongside its name. This furnishes means for the calculation of the bearings of any of the other reference objects for the purposes of locating a station by horizontal angles or for the relocation of corner buoys of oyster-bar boundaries by the method of compass directions described in this publication under the heading of "Boundaries of oyster bars."

The distances in the last column under "References" are given in three different units, which vary according to their accuracy. The "miles" are statute miles and may be considered only as rough estimates. The "yards" are more accurate, but must be looked on as results generally obtained by pacing or careful estimating. The "meters,"

¹ Geographic coordinates (latitude, longitude, distance, and azimuth) relating to any of the "observed stations" or of the "reference stations" described in this publication can be obtained by application to the Superintendent of the Coast and Geodetic Survey, at Washington, D. C.

² The mean magnetic variation for Dorchester County was $6^{\circ} 00'$ west of north in 1911 and increasing at the rate of $5'$ yearly.

however, are accurate to the degree indicated by their decimals and in every case have been measured with a steel tape. In the same manner the accuracy of the directions are indicated by the refinement of angular measure with which they are recorded.

DESCRIPTIONS OF TRIANGULATION STATIONS.

WEATHER BUREAU STAFF.

General locality.—Eastern side of Tred Avon River in the town of Oxford. (See Chart No. 35.)

Immediate locality.—Observed station is in park south of high and primary schools, 55 yards east of shore of Tred Avon River, 55 yards west of Morris Street, and in center of circle of trees.

Marks.—Observed station is center of galvanized iron staff on square galvanized angle-iron tower.

References.—None necessary.

FIRST.

General locality.—Eastern shore of Tred Avon River in town of Oxford about $\frac{1}{8}$ mile north of railroad wharves. (See Chart No. 35.)

Immediate locality.—Observed station is about 8 feet above high water, 2 yards east-southeast of edge of bank, 4 yards east by north of point of bank, 4 yards northeast of edge of bank at small gully, 2 yards south of corner fence post, and 35 yards west of house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	//	
"Bach" (S 17° 38' W)	o	oo	oo	..... $\frac{5}{8}$ mile.
Right peak of small house.....	51	59	..	..... $1\frac{5}{8}$ miles.
Right peak of modern house.....	67	10	..	..... $1\frac{5}{8}$ miles.
Left peak of small house	128	37	..	..... $1\frac{1}{8}$ miles.
Nail in blaze in fence post	207	52	oo	..... 4.98 meters.
Nail in blaze in apple tree (20 inches diam- eter).....	237	43	30	..... 11.94 meters.
Nail in blaze in apple tree (12 inches diam- eter).....	266	24	50	..... 14.56 meters.
Windmill.....	346	43	..	..... $\frac{1}{4}$ mile.

BACH.

General locality.—Eastern shore of entrance to Tred Avon River on Bachelor Point about $1\frac{3}{8}$ miles north-northeast of Choptank River Light. (See Chart No. 35.)

Immediate locality.—Observed station is in cultivated field about 6 feet above high water, 30 yards east of edge of bank, 70 yards north-northeast of edge of bank on range with Choptank River Light, and 100 yards south by west of edge of bank of trees.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	//	
"Choptank River Light" (S 16° 59' W).....	o	oo	oo	..... $1\frac{3}{8}$ miles.
Tangent of Benoni Point.....	55	29	..	..... $1\frac{1}{4}$ miles.
Left peak of roof of house	147	25	..	..... $1\frac{5}{8}$ miles.
Left corner of burnt house.....	166	05	..	..... $1\frac{1}{8}$ miles.
Right corner of house.....	211	35	..	..... $\frac{1}{4}$ mile.
Left corner of left chimney on very large house.....	240	46	..	..... $\frac{5}{8}$ mile.
"Large Water Tank".....	338	00	20	..... $2\frac{3}{4}$ miles.

BOONE.

General locality.—Northeastern shore of Choptank River about $\frac{3}{8}$ mile northwest of entrance to Boone Creek, $\frac{1}{2}$ mile southeast of Bachelor Point, and $1\frac{1}{8}$ miles northeast of Choptank River Light. (See Chart No. 35.)

Immediate locality.—Observed station is about 5 feet above high water, 13 yards northeast of edge of tree-fringed bank, 60 yards south-southwest of right corner of house, and 50 yards south-southeast of large apple tree.

Marks.—Observed station is center point of triangle on standard cement monument with top 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"Choptank River Light" (S 33° 54' W).....	o	oo	oo	..... 1 $\frac{1}{4}$ miles.
Nail in blaze in locust tree (5 inches diameter).....	21	01	40	..... 10.26 meters.
Nail in blaze in locust tree (10 inches diameter).....	65	31	10	..... 20.59 meters.
Near peak of house.....	107	59	..	..... $\frac{1}{4}$ mile.
Right corner of house.....	159	12	..	..... 57 yards.
Near peak of house.....	195	28	..	..... $\frac{3}{4}$ mile.
Nail in blaze in locust tree (4 inches diameter).....	323	14	oo	..... 13.02 meters.

ENTER.

General locality.—Northern shore of Island Creek on point at east side of entrance to a small cove, about $\frac{1}{2}$ mile northeast of Choptank River, and $1\frac{3}{8}$ miles east-northeast of Choptank River Light. (See Chart No. 35.)

Immediate locality.—Observed station is in cultivated land about 6 feet above high water, 16 yards north of edge of bank of creek, 18 yards south-southeast of edge of bank of cove, 30 yards east-northeast of outlet of cove, and 250 yards west by south of frame house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 2 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"Choptank River Light" (S 72° 00' W)....	o	oo	oo	..... 1 $\frac{3}{8}$ miles.
Nail in blaze in locust tree (6 inches diameter)	67	05	40	..... 39.96 meters.
Nail in blaze in cedar tree (10 inches diameter).....	109	17	20	..... 16.91 meters.
Left corner of left chimney of house.....	117	35	..	..... 2 miles.
Left corner of house.....	173	35	..	..... $\frac{1}{8}$ mile.
Near corner of house.....	204	11	..	..... 1 $\frac{1}{2}$ miles.
"Large Water Tank".....	301	37	oo	..... 2 $\frac{1}{2}$ miles.
Nail in blaze in locust tree (4 inches diameter).....	357	13	40	..... 23.93 meters.

LANDEYE.

General locality.—Northeastern shore of Choptank River on point at south side of entrance to Island Creek, about $1\frac{1}{2}$ miles east of Choptank River Light. (See Chart No. 35.)

Immediate locality.—Observed station is in cultivated land about 5 feet above high water, 15 yards east-southeast of edge of bank, 50 yards southwest of fringe of trees and bushes, 55 yards south-southwest of point of field and end of fringe of trees and bushes.

Marks.—Observed station is center point of triangle on standard cement monument projecting 2 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2-inches below base of monument.

References.—

	°	'	"	
"Choptank River Light" (S 83° 39' W).....	0	00	00	1½ miles.
Chimney of house near Bachelors Point.....	48	33	..	1¼ miles.
Left corner of barn.....	122	21	..	¾ mile.
Left corner of barn.....	230	18	..	¾ mile.
"Large Water Tank".....	297	25	50	2¾ miles.

CHOPTANK RIVER LIGHT.

General locality.—In Choptank River about 1¼ miles southeast of Benoni Point, 1 mile south of entrance to Tred Avon River, and 8½ miles east of Blackwalnut Point. (See Charts Nos. 35 and 37.)

Immediate locality.—Observed station is on hexagonal screw-pile structure known as Choptank River Light House.

Marks.—Observed station is center of lantern on Choptank River Light House.

References.—

	°	'	"	
Chlora (S. 57° 04' E).....	0	00	00	2¾ miles.

BENONI 2.

General locality.—Northern shore of Choptank River on Benoni Point at western side of entrance to Tred Avon River, about 1¾ miles northwest of Choptank River Light. (See Progress map.)

Immediate locality.—Observed station is about 5 feet above high water, 9 yards south-southwest of foot of knoll and edge of marsh, 4 yards northeast of edge of bank, 25 yards east-southeast of point of bank, 30 yards north by west of point of marsh, and 100 yards southwest of a cove. Cement monument marking reference station is 7.45 meters N. 42° 02' E of observed station.

Marks.—Observed station is nail in center of 2 by 4 inch stub projecting 4 inches above a 4-inch tile pipe with top of pipe flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	"	
"Choptank River Light" (S 40° 01' E).....	0	00	00	1¼ miles.
"Large Water Tank".....	13	10	20	3½ miles.
Left corner of house.....	65	40	..	4½ miles.
Nail in blaze in waterbush.....	181	09	10	7.68 meters.
Nail in blaze in water bush.....	231	34	40	4.54 meters.
Near peak of small house.....	245	50	..	1¾ miles.
Left corner of burnt house.....	261	14	..	2 miles.
REFERENCE STATION.....	262	02	40	7.45 meters.
Peak of near gable of large house.....	277	30	..	1¾ miles.
Nail in blaze in waterbush.....	288	09	40	10.40 meters.
Left corner of house.....	306	56	..	1¾ miles.

CHLORA.

General locality.—Northeastern shore of Choptank River on Chlora Point about 1½ miles south-southeast of entrance to Island Creek, 1½ miles northwest of entrance to LaTrappe Creek, and 2¾ miles southeast of Choptank River Light. (See Chart No. 35.)

Immediate locality.—Observed station is about 8 feet above high water, 6 yards east-northeast of edge of bank, 9 yards south of wire fence, and 18 yards north of edge of bank at walnut tree. Cement monument marking reference station is 6.91 meters N. 78° 43' E of observed station.

Marks.—Observed station is hole in center of cement filled tile pipe 4 inches diameter, with top about 2 inches below surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above the surface of the ground.

References.—

	°	'	"	
"Choptank River Light" (N 57° 03' W).....	0	00	00	2¾ miles.
Nail in blaze in wild cherry tree (3 inches diameter).....	74	39	10	3.11 meters.
Nail in blaze in cedar tree (4 inches diameter).....	129	31	00	9.01 meters.

References—Continued.

	o	'	"	
REFERENCE STATION.....	135	46	10	..... 6.91 meters.
Nail in blaze in walnut tree (14 inches diameter).....	220	12	10	..... 16.70 meters.
Near peak of house.....	254	53	..	..... 3 miles.
Spindle on cupola.....	267	24	..	..... 2 $\frac{3}{8}$ miles.
"Large Water Tank".....	294	46	30	..... 1 $\frac{1}{2}$ miles.

TRAPPE.

General locality.—Northern shore of Choptank River at west side of entrance to La Trappe Creek about 1 $\frac{1}{2}$ miles southeast of Chlora Point. (See Chart No. 35.)

Immediate locality.—Observed station is on grassy gravel point about 3 feet above high water, 4 yards north of shore, 6 yards east-northeast of shore, and 17 yards south by east of large cedar tree. Cement monument marking reference station is 12.62 meters N 47° 40' E of observed station.

Marks.—Observed station is center of 2-inch tile pipe projecting 2 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument projecting 2 inches above surface of ground.

References.—

	o	'	"	
"Lan" (N 25° 07' E).....	0	00	00	..... $\frac{1}{2}$ mile.
Cedar tree.....	11	05	..	..... 35 yards.
Red Beacon.....	96	50	00	..... $\frac{1}{4}$ mile.
Right chimney of house.....	130	16	..	..... 3 miles.
"Black Beacon".....	145	54	40	..... $\frac{1}{4}$ mile.
Northerly peak of Travers Wharf house.....	196	15	..	..... 2 $\frac{3}{8}$ miles.
Center of smaller water tank.....	241	02	..	..... 2 $\frac{5}{8}$ miles.
"Large Water Tank".....	241	44	30	..... 2 $\frac{5}{8}$ miles.
Nail in blaze in cedar tree (20 inches diameter).....	294	50	50	..... 7.23 meters.
REFERENCE STATION.....	350	06	40	..... 12.62 meters.
Nail in blaze in cedar tree (22 inches diameter).....	353	23	40	..... 15.99 meters.

GRUBIN.

General locality.—Northern shore of Choptank River on east side of entrance to La Trappe Creek. (See Chart No. 35.)

Immediate locality.—Observed station is on grassy marsh back of gravel beach, about 1 foot above high water, 13 yards east of shore, 13 yards south of shore, 20 yards southeast of extreme end of point, and 100 yards northwest of pond.

Marks.—Observed station is center point of triangle on standard cement monument projecting 6 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Howard" (S 1° 21' W).....	0	00	00	..... 2 $\frac{3}{8}$ miles.
South peak of Travers Wharf house.....	45	02	..	..... 3 miles.
"Black Beacon".....	51	56	10	..... $\frac{1}{4}$ mile.
Center of smaller water tower.....	86	56	..	..... 3 miles.
"Large Water Tank".....	87	49	30	..... 2 $\frac{3}{8}$ miles.
Red Beacon.....	90	47	10	..... $\frac{1}{4}$ mile.
South peak of shed.....	153	07	..	..... $\frac{5}{8}$ mile.
Near peak of barn.....	181	58	..	..... $\frac{5}{8}$ mile.
Nail in blaze in stump (7 inches diameter)...	194	47	40	..... 12 17 meters.
Chimney of house.....	199	51	..	..... $\frac{3}{8}$ mile.
Nail in blaze in cedar tree (5 inches diameter).....	225	34	30	..... 12.04 meters.

BLACK BEACON.

General locality.—Northeastern shore of Choptank River off entrance to La Trappe Creek about 1½ miles northeast of Horn Point. (See Chart No. 35.)

Immediate locality.—Observed station is on a cylindrical foundation known as La Trappe Creek Outer Light.

Marks.—Observed station is center point of lantern on La Trappe Creek Outer Light.

References.—None necessary.

HOWELLS.

General locality.—Northern shore of Choptank River on Howells Point about 1½ miles east of Horn Point, 2 miles north of entrance to Jenkins Creek, and 2 miles northwest of Hambrooks Bar Beacon. (See Chart No. 35.)

Immediate locality.—Observed station is on a long grassy gravel point about 3 feet above high water, 50 yards south-southeast of old fish shanty and trees, 25 yards south of highest level part of land, 11 yards west of shore, 3 yards east of shore, and ¼ mile north of extreme end of Point. Cement monument marking reference station is 22.82 meters N 17° 53' of observed station.

Marks.—Observed station is nail in center of cedar stub in center of 4-inch tile pipe with top of pipe 4 inches below surface of ground. Reference station is center point of triangle on standard cement monument projecting 5 inches above surface of ground.

References.—

	°	'	"	
"Red" (N 78° 26' E).....	0	00	00	1½ miles.
South peak of Kirby Wharf house.....	12	35	..	2 miles.
"Hambrooks Bar Beacon".....	44	16	50	2 miles.
Flagstaff on boathouse.....	57	19	..	1½ miles.
"Dicks Water Tank".....	62	22	10	1¾ miles.
"Cambridge Standpipe".....	69	41	10	3¼ miles.
Spindle on barn cupola.....	137	22	..	1¾ miles.
"Large Water Tank".....	209	51	40	3¾ miles.
"Black Beacon".....	251	22	20	1½ miles.
Nail in blaze in dead locust tree (15 inches diameter).....	285	21	50	9.83 meters.
Nail in blaze in locust tree (3 inches diameter).....	294	01	40	13.37 meters.
Nail in blaze in pin oak tree (11 inches diameter).....	297	59	10	27.28 meters.
REFERENCE STATION.....	299	26	40	22.82 meters.

RED.

General locality.—Northern shore of Choptank River at eastern side of Dickinsons Bay about 1½ miles east-northeast of Howells Point and ¾ mile northwest of Kirby Wharf. (See Chart No. 35.)

Immediate locality.—Observed station is on cultivated land on first high bluff upstream from Howells Point, about 12 feet above high water, 8 yards northeast of edge of bank, 10 yards north of edge of bank, 10 yards east of edge of bank. Cement monument marking reference station is 23.65 meters N 89° 58' E of observed station and almost on line with east chimney of house.

Marks.—Observed station is nail in stub in center of 2-inch tile pipe with top of pipe 6 inches below surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument projecting 5 inches above surface of ground

References.—

	°	'	"	
"Hambrooks Bar Beacon" (S 3° 39' E).....	0	00	00	1¾ miles.
"Cambridge Standpipe".....	0	30	10	3 miles.
"Dicks Water Tank".....	19	34	50	1¾ miles.
Center of silo tower.....	51	38	..	3 miles.
"Large Water Tank".....	102	32	50	4¾ miles.
Near peak of barn with two cupolas.....	148	28	..	1 mile.
REFERENCE STATION.....	229	16	20	23.63 meters.
East chimney of house.....	229	38	..	¼ mile.

References—Continued.

	o	/	"	
Near peak of large barn.....	282	07	..	3/4 mile.
Right peak of Kirby Wharf house.....	308	26	..	5/8 mile.
Near peak of hospital.....	348	39	..	3 1/4 miles.
"East Cambridge Tall Stack".....	351	07	40	3 miles.

DOUBLE.

General locality.—Northern shore of Choptank River nearly opposite Cambridge, about 1 mile northwest of entrance to Bolingbroke Creek and 1 1/2 miles east of Hambrooks Bar Beacon. (See Chart No. 35.)

Immediate locality.—Observed station is on point of marsh separated from field by a row of locust trees about 12 yards northeast of shore, 20 yards north of shore, 14 yards east of shore, and 30 yards south of a large wild cherry tree.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"East Cambridge Tall Stack" (S 32° 33' W) ..	0	00	00	1 3/4 miles.
"Dicks Water Tank".....	51	44	20	2 miles.
"Hambrooks Bar Beacon".....	60	01	00	1 1/2 miles.
"Large Water Tank".....	76	25	40	6 5/8 miles.
Chimney of house.....	107	34	..	2 1/8 miles.
Nail in blaze in wild cherry tree (24 inches diameter).....	142	08	30	26.69 meters.
Nail in blaze in locust tree (5 inches diameter).....	177	10	40	24.92 meters.
Chimney outside of near end of house.....	177	29	..	1/2 mile.
Nail in blaze in wild cherry tree (4 inches diameter).....	207	20	40	34.66 meters.
Spindle on barn cupola.....	248	23	..	1/2 mile.
Chimney of house.....	320	47	..	2 1/4 miles.
Spindle on cupola.....	347	55	..	2 miles.
Near peak of hospital.....	354	52	..	1 3/4 miles.

BOLING.

General locality.—Northern shore of Choptank River on an island in entrance to Bolingbroke Creek, about 3/4 mile northwest of Chancellors Point and 2 miles east-northeast of Cambridge. (See Chart No. 35.)

Immediate locality.—Observed station is in rushes on a sandy marsh about 3 feet above high water, 6 yards northeast of shore, 7 yards north of shore, 8 yards east of shore, and 160 yards northwest by north of entrance to Bolingbroke Creek.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"East Cambridge Tall Stack" (S 60° 19' W) ..	0	00	00	1 7/8 miles.
Chimney outside of left end of mansard roof house.....	33	11	..	2 7/8 miles.
Flagpole on boat house.....	37	05	..	2 3/4 miles.
"Hambrooks Bar Beacon".....	44	30	00	2 3/8 miles.
Nail in blaze in cedar tree (8 inches diameter).....	134	40	30	26.53 meters.
Nail in blaze in old cedar stump (13 inches diameter).....	191	39	00	5.29 meters.
Near peak of barn cupola.....	249	14	..	1 3/4 miles.

References—Continued.

	°	'	"	
Near peak of barn.....	270	14	..	1½ miles.
Chimney of house.....	294	34	..	1½ miles.
Nail in blaze in cedar tree (11 inches diameter).....	300	25	40	4.56 meters.
Chimney of house.....	313	10	..	1½ miles.

REAR.

General locality.—Northern shore of Choptank River about ⅛ mile northwest of Chancellors Point, and ½ mile southeast of entrance to Bolingbroke Creek. (See Chart No. 35.)

Immediate locality.—Observed station is in cultivated field on bluff about 12 feet above high water, 65 yards north of edge of bank, 110 yards northeast of edge of bank and trees, 160 yards east of edge of bank, and 95 yards northwest of bottom of gully.

Marks.—Observed station is center point of triangle on standard cement monument projecting 6 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Barber" (N 35° 22' E).....	0	00	00	1 mile.
Near corner of square cupola.....	27	51	..	¼ mile.
Chimney of house.....	78	16	..	1½ miles.
Near peak of barn cupola.....	105	00	..	1¼ miles.
Near peak of large barn.....	136	08	..	1¾ miles.
Left peak of large barn.....	177	19	..	1¾ miles.
Barn cupola.....	214	22	..	2 miles.
"Cambridge Standpipe".....	221	13	50	2¾ miles.
"Hambrooks Bar Beacon".....	255	40	50	3 miles.
"Large Water Tank".....	257	19	00	8¼ miles.
Chimney of house.....	280	15	..	1¼ miles.
Chimney outside near end of house.....	288	83	..	1¾ miles.

CHANCELLOR.

General locality.—Northern shore of Choptank River on Chancellors Point about ¾ mile north of entrance of Hurst Creek, and ¾ mile southeast of entrance to Bolingbroke Creek. (See Chart No. 35.)

Immediate locality.—Observed station is on sand and grass point about 1 foot above high water, 35 yards west of shore, 35 yards northeast of shore, 60 yards north by west of extreme end of point, 13 yards south of line of cedar stumps, 27 yards southeast of large lone pine tree, and almost on range of Cambridge Standpipe and left peak of hospital. Cement monument marking reference station is 4.70 meters N 31° 31' W of observed station and almost on line to large lone pine tree.

Marks.—Observed station is nail in cedar stub in center of 4-inch tile pipe with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 6 inches above surface of ground.

References.—

	°	'	"	
"Cambridge Standpipe" (S 78° 00' W).....	0	00	00	2⅞ miles.
REFERENCE STATION.....	70	29	10	4.70 meters.
Nail in blaze in lone pine tree (16 inches diameter).....	71	00	00	24.74 meters.
Southeast corner of square cupola.....	115	45	..	350 yards.
Nail in blaze in cedar stump (16 inches diameter).....	122	32	50	12.40 meters.
Chimney of house.....	216	38	..	1¼ miles.
Near peak of house.....	245	53	..	1⅞ miles.
Chimney on left end of house.....	282	44	..	1¼ miles.
Chimney of house.....	328	52	..	1⅞ miles.
Nail in blaze in small pine tree.....	350	04	40	23.26 meters.
Left peak of hospital.....	359	06	..	2¼ miles.

BARBER.

General locality.—Northwestern shore of upper Choptank River about 1 mile north-northeast of Chancellors Point and about $\frac{1}{8}$ mile west-southwest of Goose Point. (See Chart No. 35.)

Immediate locality.—Observed station is on marsh about 2 feet above high water, 12 yards north-northwest of county road and shore, 45 yards west-southwest of a cabin on the county road, 25 yards west of two cedar trees just across road, and 65 yards south of a wire fence.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe with top 2 inches below base of monument.

<i>References.</i> —	o	/	"	
"Duck" (N 75° 49' E).....	o	oo	oo	..... $\frac{7}{8}$ mile.
Nail in blaze in cedar tree (10 inches diameter).....	5	04	50	..... 19.17 meters.
Smokepipe on wharf house.....	35	48	..	..... 1 $\frac{1}{2}$ miles.
Near peak of house.....	57	06	..	..... 1 $\frac{1}{2}$ miles.
Northwest peak of house.....	92	22	..	..... 1 $\frac{3}{4}$ miles.
Chimney on left end of house.....	116	41	..	..... 2 $\frac{1}{4}$ miles.
Near peak of house with square cupola.....	133	33	..	..... $\frac{7}{8}$ mile.
Large lone tree.....	208	40	..	..... 350 yards.
Nail in blaze in cedar tree (5 inches diameter).....	309	58	40	..... 36.42 meters.
Nail in blaze in persimmon tree (5 inches diameter).....	323	12	30	..... 36.01 meters.
Near corner of barn.....	347	15	..	..... 21.96 meters.
Nail in blaze in cedar tree (10 inches diameter).....	359	16	50	..... 20.12 meters.

DUCK. (CHOPTANK RIVER.)

General locality.—Northern shore of Choptank River on Goose Point about $\frac{3}{4}$ mile north of Oyster Shell Point and 1 $\frac{3}{4}$ miles northeast of Chancellors Point. (See Chart No. 35.)

Immediate locality.—Observed station is on edge of sand beach on lower part of point on level with high water, 15 to 20 yards southeast of a group of cedar and persimmon trees. Cement monument marking reference station is 12.61 meters N 28° 19' W of observed station.

Marks.—Observed station is center of 2-inch tile pipe projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument projecting 5 inches above surface of ground.

<i>References.</i> —	o	/	"	
"Jam" (N 35° 54' E).....	o	oo	oo	..... 1 $\frac{3}{8}$ miles.
Left peak of large barn.....	46	01	..	..... 1 $\frac{3}{4}$ miles.
Center of roof of house.....	82	31	..	..... 1 $\frac{3}{8}$ miles.
Smokepipe on wharf house.....	115	52	..	..... $\frac{7}{8}$ mile.
Left peak of barn cupola.....	160	21	..	..... 2 miles.
Near corner of square chimney of house.....	174	03	..	..... 2 $\frac{3}{4}$ miles.
Chimney of house.....	192	50	..	..... 4 miles.
Near corner of square cupola on house.....	197	16	..	..... 1 $\frac{5}{8}$ miles.
Nail in blaze in persimmon tree (2 inches diameter).....	238	59	40	..... 21.22 meters.
REFERENCE STATION.....	295	47	30	..... 12.61 meters.
Nail in blaze in persimmon tree (3 inches diameter).....	297	48	50	..... 15.20 meters.
Nail in blaze in cedar tree (3 inches diameter).....	332	27	20	..... 14.28 meters.

JAM.

General locality.—Western shore of Choptank River on Jamaica Point opposite entrance to Warwick River. (See Chart No. 35.)

Immediate locality.—Observed station is on marsh point about 3 feet above high water, 25 yards west-northwest of end of wharf, 7 yards north of county road, 11 yards northeast of county road, 13 yards south of shore, 8 yards west-southwest of shore, and 30 yards north by east of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

<i>References.</i> —	o	'	"	
"Spindle" (N 14° 53' W).....	0	00	00	..... ¾ mile.
Chimney outside near end of house.....	16	33	..	..... 2 miles.
Chimney of large house.....	19	46	..	..... 2 miles.
"Wick".....	76	04	00	..... ¾ mile.
Chimney of house.....	82	48	..	..... 1½ miles.
Left chimney of large brick house.....	90	07	..	..... 1½ miles.
Left corner of wharf house.....	95	57	20	..... 49.81 meters.
Right corner of wharf house.....	108	14	00	..... 46.85 meters.
Nail in first plank on level part of wharf.....	110	03	50	..... 24.94 meters.
Near peak of large barn.....	144	56	..	..... 1½ miles.
Chimney of house.....	171	30	..	..... 2 miles.
Near peak of house.....	202	51	..	..... 2¼ miles.
Near peak of house near wharf.....	211	21	..	..... 2 miles.
Right peak of barn cupola.....	218	30	..	..... 2½ miles.
Near corner of fence.....	269	38	..	..... ¼ mile.

SPINDLE.

General locality.—Western shore of upper Choptank River about ¾ mile north of Jamaica Point Wharf. (See Chart No. 35.)

NOTE.—This triangulation landmark was destroyed before this publication was prepared, and therefore it is not described, although its name and location are shown on Chart No. 35.

BANK.

General locality.—Western shore of upper Choptank River about 1 mile north-northwest of Jamaica Point, and ¼ miles southwest of entrance to Cabin Creek. (See Chart No. 35.)

Immediate locality.—Observed station is in a cultivated field on a tree fringed bluff about 20 feet above high water, 10 yards northwest of edge of bluff, 10 yards west of edge of bluff, and 12 yards north of edge of bluff.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

<i>References.</i> —	o	'	"	
"Raccoon" (N 19° 26' E).....	0	00	00	..... ⅝ mile.
Left chimney of modern house.....	5	55	..	..... 1¼ miles.
Nail in blaze in branch of double oak tree (12 and 18 inches diameter).....	34	56	40	..... 7.03 meters.
Chimney of house in woods.....	54	30	..	..... 1½ miles.
Chimney of shanty in woods.....	86	07	..	..... 1½ miles.
Chimney of house.....	103	23	..	..... 1¾ miles.
Nail in blaze in oak tree (8 inches diameter).....	124	13	10	..... 8.55 meters.
Nail in blaze in cedar tree (7 inches diameter).....	161	00	10	..... 21.11 meters.
Front peak of house.....	168	29	..	..... ½ mile.

RACCOON.

General locality.—Western shore of upper Choptank River about $\frac{3}{8}$ mile south of entrance to a small creek, $1\frac{1}{2}$ miles north of Jamaica Point, and 1 mile west of entrance to Cabin Creek. (See Chart No. 35.)

Immediate locality.—Observed station is between 2 clumps of trees on sandy marsh about 2 feet above high water, 8 yards northwest of shore, 12 yards west of shore, 16 yards north of shore, and 200 yards southeast of woods beyond marsh.

Marks.—Observed station is center point of triangle on standard cement monument projecting 6 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	//	
"Blind" (N 52° 15' E).....	0	00	00	..... $\frac{3}{4}$ mile.
Chimney outside near end of house.....	34	22	..	..... $1\frac{3}{4}$ miles.
Near peak of modern house.....	41	07	..	..... $1\frac{1}{8}$ miles.
Chimney of house.....	77	59	..	..... $1\frac{3}{4}$ miles.
Near peak of house.....	105	09	..	..... 2 miles.
Chimney of house.....	113	14	..	..... $3\frac{1}{8}$ miles.
Near peak of Jamaica Point Wharf house...	120	42	..	..... $1\frac{1}{2}$ miles.
Left corner of house.....	144	31	..	..... 1 mile.
Nail in blaze in oak tree (10 inches diameter).	155	21	50	..... 12.66 meters.
Nail in blaze in large pine tree (12 inches diameter).....	204	45	40	..... 37.12 meters.
Nail in blaze in oak tree (10 inches diameter).	329	46	20	..... 26.50 meters.
Chimney outside near end of house.....	350	04	..	..... $\frac{5}{8}$ mile.

BLIND.

General locality.—Northwestern shore of Choptank River about $\frac{1}{2}$ mile west-northwest of entrance to Cabin Creek, and 2 miles north of Jamaica Point. (See Chart No. 35.)

Immediate locality.—Observed station is on marsh point between river and line of locust tree about 1 foot above high water, 11 yards north of shore, 15 yards west of shore, 16 yards northeast of shore at duck blind, and 25 yards east by north of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 6 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	//	
"Up" (N 61° 44' E).....	0	00	00	..... $\frac{3}{4}$ mile.
Chimney outside of near end of old house....	47	17	..	..... 1 mile.
Peak of side gable of modern house.....	57	24	..	..... $1\frac{1}{4}$ miles.
Right peak of Jamaica Point Wharf house...	131	24	..	..... 2 miles.
Chimney on house.....	162	44	..	..... $1\frac{1}{4}$ miles.
Nail in blaze in locust tree (4 inches diameter).....	201	23	50	..... 10.28 meters.
Nail in blaze in locust tree (4 inches diameter).....	226	50	20	..... 7.53 meters.
Nail in blaze in locust tree (6 inches diameter).....	270	06	10	..... 5.72 meters.
Nail in blaze in locust tree (10 inches diameter).....	322	04	50	..... 14.25 meters.

UP.

General locality.—Northwestern shore of upper Choptank River about $\frac{3}{4}$ mile north of entrance to Cabin Creek and $2\frac{1}{2}$ miles north-northeast of Jamaica Point. (See Chart No. 35.)

Immediate locality.—Observed station is on a marsh point about 1 foot above high water, 55 yards northwest of extreme end of point, 25 yards west of shore, and 20 yards north of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 8 inches above surface of marsh. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Myrtle" (S 60° 25' E).....	0	00	00	..... $\frac{3}{8}$ mile.
Peak of side gable of modern house.....	34	14	..	..... 1 mile.
Chimney of old house.....	36	10	..	..... $\frac{5}{8}$ mile.
Tangent of point.....	77	45	..	..... 1 mile.
House.....	111	45	..	..... $1\frac{1}{8}$ miles.
Tangent of point.....	122	02	..	..... $\frac{5}{8}$ mile.
House.....	273	00	..	..... $1\frac{1}{2}$ miles.
Tangent of point.....	305	15	..	..... 175 yards.

MYRTLE.

General locality.—Eastern shore of upper Choptank River about $\frac{1}{2}$ mile north of entrance to Cabin Creek. (See Chart No. 35.)

Immediate locality.—Observed station is on a marsh point about 1 foot above high water, 17 yards east of shore, 20 yards south of extreme end of point, 15 yards southwest of small gut, and 250 yards west of woods.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Hut" (S 7° 47' W).....	0	00	00	..... $\frac{3}{8}$ mile.
Left peak of old barn.....	6	41	..	..... $\frac{7}{8}$ mile.
Tangent of point.....	32	14	..	..... $\frac{7}{8}$ mile.
Chimney of house.....	53	01	..	..... 2 miles.
Chimney outside east end of house.....	78	42	..	..... $1\frac{1}{4}$ miles.
Near peak of shanty.....	157	18	..	..... $\frac{3}{4}$ mile.
Stack of cannery at Choptank.....	180	51	..	..... $2\frac{3}{4}$ miles.
Left peak of house.....	194	19	..	..... $2\frac{1}{4}$ miles.
Tangent of point.....	203	56	..	..... $\frac{1}{4}$ mile.
Right peak of roof showing over woods.....	314	37	..	..... $\frac{3}{4}$ mile.
Large lone pine tree.....	333	11	..	..... 300 yards.

HUT.

General locality.—Eastern shore of upper Choptank River on north side of entrance to Cabin Creek. (See Chart No. 35.)

Immediate locality.—Observed station is on marsh point about 1 foot above high water, 15 yards east of shore, 50 yards northwest of shore, 20 yards northeast of extreme end of point, 90 yards southwest of a hut, and 80 yards south-southwest of trees.

Marks.—Observed station is center point of triangle on standard cement monument projecting 6 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"House" (S 46° 38' W).....	0	00	00	..... $\frac{3}{4}$ mile.
Chimney of house.....	25	27	..	..... $1\frac{3}{4}$ miles.
Chimney outside of house.....	60	33	..	..... $1\frac{1}{4}$ miles.
Cupola on barn.....	132	48	..	..... $2\frac{1}{2}$ miles.
Right corner of hut.....	173	53	20	..... 90 yards.

References—Continued.

	o	'	"	
Chimney outside near end of old house	242	13	..	1/2 mile.
Peak of near gable of modern house	281	42	..	1/2 mile.
Right peak of old barn	337	43	..	3/8 mile.

HOUSE.

General locality.—Eastern shore of Choptank River about 1/4 mile south of entrance to Cabin Creek, 1 mile north of entrance to Warwick River, and on south side of a small cove. (See Chart No. 35.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 14 yards south of shore, 26 yards southeast of shore, 35 yards southwest by west of shore and mouth of small creek in marsh and 175 yards north of woods.

Marks.—Observed station is center point of triangle on standard cement monument projecting 3 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Saw" (S 6° 22' W)	o	oo	oo	3/8 mile.
Two pine trees	5	49	..	
Left peak of shanty	126	49	..	1 1/8 miles.
Chimney outside near end of house	131	06	..	1 1/8 miles.
Near peak of house	137	29	..	1 1/8 miles.
Tangent of point	172	07	..	1/4 mile.
Stack of cannery at Choptank	189	09	..	4 miles.
Near peak of house	193	59	..	4 1/2 miles.
Near peak of shack	219	48	..	1/8 mile.
Cut in woods	348	16	..	1/2 mile.

SAW.

General locality.—Eastern shore of Choptank River about 1/2 mile northeast of entrance to Warwick River, and 1 mile northeast by east of Jamaica Point. (See Chart No. 35.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 22 yards east of shore, 26 yards southeast of shore, 37 yards northeast of shore, 200 yards west-northwest of dense woods.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Wick" (S 19° 01' W)	o	oo	oo	1/2 mile.
Right peak of Jamaica Point Wharf house	24	57	..	1 mile.
Left corner of very wide chimney on brick house	32	14	..	1 1/4 miles.
Right corner of railing on roof of house	70	36	..	1 1/8 miles.
Chimney of house	86	44	..	1 1/4 miles.
Near peak of house	135	04	..	1 1/4 miles.
Chimney outside left end of house	152	42	..	2 miles.
Cupola or steeple	181	04	oo	5 miles.
Near corner of brick house	311	51	..	1/2 mile.

WICK.

General locality.—Eastern shore of upper Choptank River on northern side of entrance to Warwick River about 3/4 mile northeast of Jamaica Point. (See Chart No. 35.)

Immediate locality.—Observed station is on sandy ridge between beach and marsh about 2 feet above high water, 8 yards northeast of shore, 10 yards north of shore, 9 yards east of shore, 100 yards southeast by east of extreme end of point, and 35 yards northwest of two pine trees. Cement monument marking reference station is 8.26 meters N 25° 00' E of observed station.

Marks.—Observed station is nail in cedar stub with top flush with the surface of the ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

<i>References.</i> —	o	/	''	
"War" (S 2° 08' E).....	0	00	00	5/8 mile.
Near peak of house in trees.....	2	21	..	5/8 mile.
Smoke pipe on wharf house.....	27	13	..	2 3/8 miles.
Tangent of Goose Point.....	45	55	..	1 7/8 miles.
Right peak of Jamaica Point Wharf house...	62	29	..	5/8 mile.
Right corner of very wide chimney on brick house.....	68	42	..	7/8 mile.
Left corner of cupola on roof.....	115	10	..	1 1/8 miles.
Near peak of house.....	167	00	..	2 3/8 miles.
REFERENCE STATION.....	207	07	20	8.26 meters.
Nail in blaze in pine tree (12 inches diameter).....	296	59	10	30.06 meters.
Right pine tree.....	325	53	20	400 yards.

WAR.

General locality.—Eastern shore of upper Choptank River on southern side of entrance to Warwick River about 3/4 mile east-southeast of Jamaica Point. (See Chart No. 35.)

Immediate locality.—Observed station is on northern side of point of marsh about 1 foot above high water, 45 yards south of shore, 35 yards southeast of shore, 45 yards east of shore, and 35 to 45 yards southwest to west of woods. Cement monument marking reference station is 4.95 meters S 12° 18' E of observed station.

Marks.—Observed station is nail in center of cedar stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

<i>References.</i> —	o	/	''	
"Gander" (S 11° 26' W).....	0	00	00	3/4 mile.
Chimney of house.....	17	12	..	2 miles.
Smoke pipe on wharf house.....	23	00	..	1 3/4 miles.
Left chimney of small house.....	26	05	..	2 miles.
Square cupola on large house.....	45	53	..	3 1/4 miles.
Left peak of house.....	66	11	..	1 1/8 miles.
Right corner of very wide chimney on brick house.....	96	11	..	1 mile.
Left peak of Jamaica Point Wharf house.....	105	01	..	5/8 mile.
Chimney of house.....	132	50	..	1 3/4 miles.
Near peak of house.....	157	00	..	2 3/8 miles.
Nail in blaze in pin oak tree (10 inches diameter).....	186	09	50	42.26 meters.
Nail in blaze in pine tree (11 inches diameter).....	212	30	40	41.75 meters.
Nail in blaze in pine tree (12 inches diameter).....	245	18	30	31.45 meters.
Nail in blaze in pine tree (12 inches diameter).....	267	08	30	30.11 meters.
REFERENCE STATION.....	336	16	20	4.95 meters.
Chimney of house.....	353	07	..	1 mile.

GANDER.

General locality.—Southeastern shore of Choptank River $\frac{3}{8}$ mile southwest of entrance to Goose Creek, about $1\frac{1}{8}$ miles east-northeast of Oystershell Point, and about $1\frac{1}{8}$ miles south-southeast of Jamaica Point. (See Chart No. 35.)

Immediate locality.—Observed station is in an uncultivated field on bank about 6 feet above high water, 19 yards east of edge of bank, 33 yards northeast of edge of bank, 33 yards southeast of edge of bank, and 155 yards west of two large cedar trees at a paling fence.

Marks.—Observed station is center point of triangle on standard cement monument projecting 6 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"Chief" (S 9° 44' W).....	0	00	00	..... $\frac{5}{8}$ mile.
Chimney of house.....	28	22	..	..... $1\frac{1}{4}$ miles.
Smoke pipe on wharf house.....	40	14	..	..... $1\frac{1}{8}$ miles.
Chimney of house.....	50	00	..	..... $4\frac{1}{2}$ miles.
"Cambridge Stand Pipe".....	62	46	50	..... $5\frac{3}{4}$ miles.
Chimney outside of house.....	113	39	..	..... $1\frac{1}{4}$ miles.
Right chimney of house.....	135	48	..	..... $1\frac{1}{4}$ miles.
Near peak of Jamaica Point Wharf house....	147	14	..	..... $1\frac{1}{8}$ miles.
Chimney of house.....	148	54	..	..... $2\frac{3}{8}$ miles.
Chimney of house.....	164	24	..	..... $3\frac{1}{4}$ miles.
Tangent of point.....	172	50	..	..... $\frac{3}{4}$ mile.
Right end of roof of long barn.....	235	04	..	..... $\frac{5}{8}$ mile.
Black walnut tree.....	282	36	..	..... 200 yards.
Chimney of house.....	344	59	..	..... $\frac{1}{4}$ mile.

CHIEF.

General locality.—Southeast shore of Choptank River on a narrow neck of land between Choptank River and Indian Creek, about 1 mile east of Oystershell Point. (See Chart No. 35.)

Immediate locality.—Observed station is on a grass strip between Choptank River and Indian Creek about 2 feet above high water, 15 yards south of river shore, 11 yards north of creek shore, 20 yards southeast of river shore, and 25 yards southwest of river shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"Shell" (S 85° 11' W).....	0	00	00	..... 1 mile.
Smoke pipe on wharf house.....	0	42	..	..... $\frac{3}{4}$ mile.
Nail in blaze in locust tree (3 inches diameter).....	13	37	10	..... 11.76 meters.
Right corner of railing on house.....	78	32	..	..... 2 miles.
Near peak of house.....	91	47	..	..... $3\frac{5}{8}$ miles.
Right corner of square chimney.....	114	47	..	..... $\frac{1}{2}$ mile.
Near corner of barn.....	144	05	..	..... $\frac{1}{4}$ mile.
Nail in blaze in cedar tree (6 inches diameter).....	167	07	10	..... 22.07 meters.
Stack of cannery.....	208	56	20	..... $\frac{3}{8}$ mile.
Peak of house between two chimneys.....	253	32	..	..... $\frac{1}{4}$ mile.
Nail in blaze in cedar tree (8 inches diameter).....	348	04	50	..... 13.81 meters.
Near peak of cottage.....	358	38	..	..... 1 mile.

SHELL.

General locality.—Southeastern shore of Choptank River on Oyster Shell Point about $\frac{3}{4}$ mile south of Goose Point and $1\frac{1}{2}$ miles east-northeast of Chancellors Point. (See Chart No. 35.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 100 yards north of rail fence, 55 yards southwest of shore, 75 yards south of shore, 400 yards west of a wharf, 250 yards west by north of a small house near the shore, 50 yards west by north of corner of fence. Cement monument marking reference station is 2.27 meters N $83^{\circ} 07'$ W of observed station.

Marks.—Observed station is nail in cedar stub flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 5 inches above the surface of the ground.

References.—

	o	'	"	
"Whitehall" (S $41^{\circ} 55'$ W).....	0	00	00	..... $\frac{5}{8}$ mile.
Lone tree.....	29	12	..	..... 225 yards.
"Cambridge Standpipe".....	35	39	00	..... $4\frac{1}{2}$ miles.
Right corner of square cupola.....	39	24	..	..... $1\frac{1}{2}$ miles.
REFERENCE STATION.....	54	57	50	..... 2.27 meters.
Chimney of left end of house.....	83	10	..	..... $1\frac{1}{8}$ miles.
Near peak of large house.....	150	53	..	..... $1\frac{7}{8}$ miles.
Near peak of Jamaica Point Wharf house....	158	17	..	..... $1\frac{7}{8}$ miles.
Right peak of building.....	177	29	..	..... $2\frac{5}{8}$ miles.
Chimney on house.....	205	20	..	..... $1\frac{1}{4}$ miles.
Smoke pipe on wharf house.....	221	13	..	..... $\frac{1}{4}$ mile.
Near peak of shed.....	265	40	..	..... 150 yards.
Near peak of house.....	280	06	..	..... 300 yards.

WHITEHALL.

General locality.—Southeastern shore of Choptank River about $\frac{5}{8}$ mile southwest of Oystershell Point, and $1\frac{1}{8}$ miles east of Chancellor Point. (See Chart No. 35.)

Immediate locality.—Observed station is on a marsh point among water bushes about 12 yards south-southeast of shore, 13 yards south-southwest of shore, and 15 yards east-southeast of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Ferry" (S $55^{\circ} 08'$ W).....	0	00	00	..... $1\frac{1}{4}$ miles.
Chimney of house.....	10	50	..	..... $2\frac{3}{4}$ miles.
"Cambridge Stand Pipe".....	27	22	40	..... 4 miles.
Right of square cupola.....	46	16	..	..... $1\frac{1}{8}$ miles.
Left chimney on long house.....	99	58	..	..... $1\frac{1}{4}$ miles.
Chimney outside near end of house.....	137	20	..	..... $1\frac{7}{8}$ miles.
Near peak of large building.....	144	31	..	..... $2\frac{3}{8}$ miles.
Front peak of Jamaica Point Wharf house...	150	00	..	..... $2\frac{1}{2}$ miles.

FERRY.

General locality.—Southern shore of Choptank near east side of entrance to Hurst Creek about $2\frac{1}{2}$ miles east of Cambridge. (See Chart. No. 35.)

Immediate locality.—Observed station is on a sand beach about on level with high water, 92 yards east-northeast of Hurst Creek, 1 yard southeast of shore, and 6 to 10 yards northwest to north of several low cedar trees. Cement monument marking reference station is 16.74 meters S $50^{\circ} 12'$ E of observed station.

Marks.—Observed station is nail in pine stub in center of 2-inch tile pipe with top of pipe 6 inches below surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument.

References.—

	°	'	"	
"E. Cambridge Tall Stack" (N. 81° 21' W)	0	00	00	2½ miles.
"Hambrooks Bar Beacon"	24	05	10	3½ miles.
Near peak of large house with cupola	79	37		1 mile.
Near peak of barn cupola	99	22		2 miles.
Near peak of Jamaica Point Wharf house	116	23		3¾ miles.
Nail in blaze in cedar tree (11 inches diameter)	193	07	00	6.82 meters.
REFERENCE STATION	211	09	00	16.74 meters.
Nail in blaze in cedar tree (8 inches diameter)	242	42	50	8.32 meters.
Nail in blaze in cedar tree (16 inches diameter)	279	49	00	9.76 meters.
Chimney of house	338	10		1¾ miles.

SHOAL.

General locality.—Southern shore of Choptank River near entrance to a small creek about 1 mile east-southeast of Cambridge 1½ miles west-southwest of Chancellors Point. (See Chart No. 35.)

Immediate locality.—Observed station is in woods on a point of land about 10 feet above high water, 50 yards east of edge of bank, 6 yards southwest of wire fence at edge of high land, 7 yards south of wire fence, 11 yards west of wire fence, 13 yards west-southwest of large double oak tree, and 90 yards east of a marsh point at a creek. Cement monument marking reference station is 6.08 meters S 23° 44' W of observed station.

Marks.—Observed station is center of tile pipe with top 6 inches below surface of ground. Reference station is center point of triangle on standard cement monument projecting 5 inches above surface of ground.

References.—

	°	'	"	
"Cambridge" (N 46° 31' W)	0	00	00	1¾ miles.
Large chimney of house	25	55		3¾ miles.
Spindle of barn cupola	61	31		1¾ miles.
Left chimney of house	84	09		2 miles.
Near peak of barn with cupola	106	11		1¾ miles.
Nail in blaze in large double oak tree	120	03	20	11.31 meters.
Nail in blaze in black walnut tree (8 inches diameter)	205	53	40	10.96 meters.
Nail in blaze in cedar tree (6 inches diameter)	224	26	30	8.05 meters.
REFERENCE STATION	250	15	40	6.08 meters.
Nail in blaze in black walnut tree (17 inches diameter)	304	19	20	3.19 meters.
Flagstaff on boathouse	358	43		2½ miles.

EAST CAMBRIDGE TALL STACK.

General locality.—Southern shore of Choptank River in the town of Cambridge on the east side of Cambridge Creek. (See Chart No. 35.)

Immediate locality.—Observed station is tall square brick smokestack at plant of Cambridge Manufacturing Company.

Marks.—Observed station is center of stack.

References.—None necessary.

EAST CAMBRIDGE SPIRE.

General locality.—Southern shore of Choptank River in town of Cambridge on the east side of Cambridge Creek and the south side of Maryland Avenue. (See Chart No. 35.)

Note.—This triangulation landmark was torn down before this publication was prepared and therefore it is not described, although its name and location are shown on Chart No. 35.

CAMBRIDGE STANDPIPE.

General locality.—Southwestern side of Choptank River in the town of Cambridge. (See Chart No. 35.)

Immediate locality.—Observed station is on standpipe on the north side of High Street near Pine Street.

Marks.—Observed station is center of cylindrical water standpipe with ornamental railing on top.

References.—None necessary.

CAMBRIDGE.

General locality.—Southern shore of Choptank River on a point about $\frac{3}{4}$ mile southeast of Hambrooks Bar Beacon and $\frac{1}{2}$ mile northwest of Cambridge steamer wharf. (See Chart No. 35.)

Immediate locality.—Observed station is on a marsh point about 1 foot above high water, 30 yards west of shore, 35 yards south of shore at cut, 40 yards southwest of shore, and 3 yards southwest of barb-wire fence running northwest and southeast.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Command" (N 50° 20' W)	0	00	00	..... $\frac{7}{8}$ mile.
"Hambrooks Bar Beacon"	36	12	00	..... $\frac{3}{4}$ mile.
Southwest peak of Kirby Wharf house	58	27	..	..... $1\frac{3}{4}$ miles.
Chimney outside of south end of house	107	00	..	..... $1\frac{7}{8}$ miles.
Near one of four chimneys on large square house	133	26	..	..... $2\frac{1}{4}$ miles.
Right chimney of large house on Chancellors Point	146	27	..	..... $2\frac{3}{4}$ miles.
Weather vane on hotel	235	36	..	..... $\frac{1}{2}$ mile.
Chimney of house	328	03	..	..... $\frac{3}{4}$ mile.
Flagpole	354	09	..	..... $\frac{3}{4}$ mile.
Flagpole on boathouse	359	24	..	..... $\frac{3}{4}$ mile.

HAMBROOKS BAR BEACON.

General locality.—Southern side of Choptank River about $\frac{1}{4}$ mile offshore from point of land known as Hambrooks Bar, about 2 miles southeast of Howells Point and $1\frac{1}{2}$ miles northwest of Cambridge. (See Chart No. 35.)

Immediate locality.—Observed station is on a cylindrical foundation known as Hambrooks Bar Beacon.

Marks.—Observed station is center point of lantern on Hambrooks Bar Beacon.

References.—None necessary.

DICKS WATER TANK.

General locality.—Southern shore of Choptank River near Hambrooks Bar about $\frac{5}{8}$ mile southwest of Hambrooks Bar Beacon and $\frac{1}{2}$ mile west of extreme end of Hambrooks Bar. (See Chart No. 35.)

Immediate locality.—Observed station is on water tank.

Marks.—Observed station is spindle on top of water tank.

References.—None necessary.

COMMAND.

General locality.—Southern shore of Choptank River about ½ mile west-southwest of Hambrooks Bar Beacon and about 1½ miles northwest of Cambridge Wharf. (See Chart No. 35.)

Immediate locality.—Observed station is on a marsh point inside of a fence line, about 2 feet above high water, 18 yards southeast of shore, 16 yards south of shore, 25 yards southwest of shore, and 150 yards northwest of a boathouse.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Choptank River Light" (N 49° 40' W).....	0	00	00	6¾ miles.
Nail in blaze in fence post.....	5	33	30	10.85 meters.
Near peak of large building.....	16	45	..	2¼ miles.
Nail in blaze in fence post.....	65	08	20	11.01 meters.
Left chimney of house with three dormer windows.....	68	28	..	1⅞ miles.
Near peak of Kirby Wharf house.....	86	40	..	1½ miles.
"Hambrooks Bar Beacon".....	121	17	50	½ mile.
Near peak of large house.....	153	10	..	3 miles.
Flagstaff on boathouse.....	183	20	..	150 yards.
"Dicks Water Tank".....	266	29	30	⅓ mile.
Nail in blaze in fence post.....	328	25	40	17.23 meters.
Left chimney of old house.....	331	53	..	2¾ miles.
"Large Water Tank".....	347	03	10	5 miles.

HOWARD.

General locality.—Southern shore of Choptank River, 2 miles southeast of Horn Point and about ¼ mile northwest of entrance to Jenkins Creek. (See Chart No. 35.)

Immediate locality.—Observed station is on cultivated land on bluff about 12 feet above high water, 25 yards southwest of edge of bluff, 30 yards south of edge of bluff, 35 yards west of edge of bluff, 45 yards west-northwest of corner of fence dividing field from marsh, and 65 yards northeast of the south one of two small poplar trees in field.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Choptank River Light" (N 36° 14' W).....	0	00	00	6 miles.
Near peak of barn.....	30	20	..	3½ miles.
"Black Beacon".....	32	16	50	2⅝ miles.
Red Beacon.....	34	11	30	2⅞ miles.
Near peak of low house in trees.....	79	52	..	3¼ miles.
Near peak of Kirby Wharf house.....	90	53	..	3 miles.
"Dicks Water Tank".....	109	57	40	1½ miles.
Left chimney of house.....	115	00	..	1 mile.
Nail in blaze in locust tree (8 inches diameter).....	125	51	50	37.49 meters.
Nail in blaze in locust tree.....	144	34	50	45.66 meters.
Nail in blaze in locust tree.....	188	22	40	63.83 meters.
Near peak of barn.....	245	03	..	¼ mile.
Right peak of house.....	317	02	..	¼ mile.
Right peak of old house.....	351	02	..	1½ miles.

TOOT.

General locality.—Southern shore of Choptank River on Horn Point about $1\frac{5}{8}$ miles west of Howells Point, and at eastern side of entrance to Lecomptes Bay. (See Chart No. 35.)

Immediate locality.—Observed station is in woods about 7 feet above high water, 15 yards south of shore, 13 yards southwest of shore, and 20 yards west of shore, and near but not on highest point of ground. Cement monument marking reference station is 12.38 meters S $33^{\circ} 34'$ W of observed station.

Marks.—Observed station is nail in center of stub in 2-inch tile pipe projecting 2 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of the ground.

References.—

	o	'	''	
"Choptank River Light" (N $34^{\circ} 15'$ W)	0	00	00	4 $\frac{1}{8}$ miles.
East peak of large barn	57	02	..	2 $\frac{1}{4}$ miles.
Large chimney of house	68	24	..	2 $\frac{1}{2}$ miles.
Red Beacon	71	28	00	2 miles.
"Black Beacon"	73	17	30	1 $\frac{5}{8}$ miles.
Near peak of house	88	38	..	2 miles.
Nail in blaze in elm tree	147	42	40	5.48 meters.
Nail in blaze in oak tree (24 inches diameter)	200	47	10	4.70 meters.
Nail in blaze in oak tree (20 inches diameter)	246	58	10	16.89 meters.
REFERENCE STATION	247	49	00	12.38 meters.
Chimney of house	293	21	..	1 $\frac{1}{2}$ miles.
Chimney outside of house	331	19	..	1 $\frac{5}{8}$ miles.
"Large Water Tank"	344	41	10	2 $\frac{1}{8}$ miles.
Near corner of boathouse	351	52	..	2 $\frac{1}{8}$ miles.

LECOMPTE.

General locality.—Southern shore of Choptank River on southwestern side of Lecomptes Bay about $1\frac{1}{2}$ miles west-southwest of Horn Point, $\frac{5}{8}$ mile northwest of Travers Wharf, and $\frac{1}{4}$ mile southwest of mouth of Lecomptes Creek. (See Chart No. 35.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 18 yards west of point of shore, 14 yards south-southeast of shore, 5 yards east-southeast of turn in shore at beach, 7 yards northeast of a pool, 10 yards northwest of cut in shore, and 115 yards southeast of near one of two large cedar trees.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	''	
"Grubin" (N $56^{\circ} 00'$ E)	0	00	00	3 $\frac{1}{8}$ miles.
"Black Beacon"	0	12	10	2 $\frac{7}{8}$ miles.
Barn cupola	9	10	..	..
North peak of wharf house	69	02	..	$\frac{1}{2}$ mile.
North peak of house	106	43	..	$\frac{3}{8}$ mile.
Left one of two large cedar trees	248	12	..	117 yards.
Spindle on barn cupola	280	48	..	$\frac{1}{2}$ mile.
Chimney outside of house	303	44	..	$\frac{5}{8}$ mile.
Red Beacon	358	07	20	3 $\frac{1}{8}$ miles.

LARGE WATER TANK.

General locality.—Southwestern shore of Choptank River at Castle Haven, about $2\frac{1}{8}$ miles south of Choptank River Light. (See Chart No. 35.)

Immediate locality.—Observed station is on water tank on high steel tower near barns at Castle Haven.

Marks.—Observed station is center point of windmill on water tank.

References.—None necessary.

CASTLE.

General locality.—Southern shore of Choptank River on Castlehaven Point on north side of Castlehaven Creek about 2 miles south-southwest of Choptank River Light. (See Chart No. 35.)

Immediate locality.—Observed station is on a narrow neck of land, about 25 yards south-southwest of shore of Choptank River, 20 yards north of shore of cove, 22 yards west of bathhouse, and 100 yards east-northeast of three poplar trees.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Choptank River Light" (N 25° 41' W).....	0	00	00	2 miles.
Right corner of house near Bachelor Point..	19	27		3 miles.
Left corner of bathhouse.....	95	31	20	21.42 meters.
Near corner of bathhouse.....	109	32	20	19.83 meters.
Near peak of house.....	122	56		3 miles.
Right peak of boathouse at Castlehaven				
Wharf.....	215	04		1/8 mile.
Right corner of chimney of brick house....	254	18		1/8 mile.

JERE.

General locality.—Eastern side of Chesapeake Bay on Sharps Island, about 1 1/2 miles south-southeast of Sharps Island Light. (See Chart No. 36.)

Immediate locality.—Observed station is on hard ground about 7 feet above high water, 95 yards south-southeast of old hotel building, 95 yards west-southwest of shore, 150 yards southwest of a point and in such a position that Sharps Island Light shows to the right of the old hotel building.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Sharps Island Light" (N 24° 06' W).....	0	00	00	1 1/2 miles.
Church cupola.....	46	35	50	5 1/4 miles.
Chimney on left end of roof of large house....	47	44		5 miles.
Chimney of large house.....	104	25		4 1/4 miles.
Large chimney of large house.....	115	46		4 3/4 miles.
Chimney on right end of large house.....	142	21		5 5/8 miles.
Near corner of house.....	346	59		95 yards.

SHARPS ISLAND LIGHT.

General locality.—Eastern side of Chesapeake Bay off entrance to Choptank River, about 1 mile north-northwest of Sharps Island and 2 5/8 miles southwest of Blackwalnut Point. (See Chart No. 36.)

Immediate locality.—Observed station is on structure with a cylindrical foundation known as Sharps Island Light.

Marks.—Observed station is center point of lantern on Sharps Island Light.

References.—

	°	'	"	
"Black" (N 43° 36' E).....	0	00	00	2 3/4 miles.

BLACK.

General locality.—Eastern shore of Chesapeake Bay on Blackwalnut Point at north side of entrance to Choptank River, about 2 3/4 miles northeast of Sharps Island Light. (See Charts No. 36.)

Immediate locality.—Observed station is in cultivated land about 8 feet above high water, 35 yards east-northeast of edge of bank, 45 yards west of edge of bank, 65 yards northwest of edge of bank, and 130 yards south of a lone apple tree.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Sharps Island Light" (S 43° 37' W)	0	00	00	2¾ miles.
Near peak of old house	123	10	..	½ mile.
Lone apple tree	133	16	..	131 yards.
Chimney of house among trees	145	38	..	1¾ miles.
Right chimney of house near water	163	31	..	1 mile.
Right chimney of large house	211	27	..	7 miles.
"Choptank River Light"	232	11	30	8½ miles.
Near peak of barn	253	22	..	6 miles.
Left chimney of house	270	12	..	3¾ miles.
Chimney outside left end of house	283	35	..	7 miles.
Near peak of old hotel building on Sharps Island	337	47	..	3½ miles.

BAR.

General locality.—Western shore of entrance to Harris Creek on Upper Bar Neck Point, about 1¾ miles north-northeast of Blackwalnut Point and 1½ miles south-southeast of Tilghman Island Wharf. (See Progress map.)

Immediate locality.—Observed station is in cultivated field about 6 feet above high water, 3 yards west of edge of bank and 60 yards north of line of trees at edge of marsh. Cement monument marking reference station is 45.81 meters S 83° 00' W of observed station nearly on line to large lone persimmon tree 15 inches diameter.

Marks.—Observed station is center of 4-inch tile pipe with top about 6 inches below surface of ground. Reference station is center point of triangle on standard cement monument projecting 6 inches above surface of ground.

References.—

	°	'	"	
"Large Water Tank" (S 61° 46' E)	0	00	00	9¼ miles.
Nail in blaze in oak stump	63	18	00	51.17 meters.
Nail in blaze in wild cherry tree	78	58	40	46.66 meters.
Nail in blaze in cedar tree	88	35	30	47.69 meters.
Nail in blaze in lone persimmon tree	144	33	10	49.48 meters.
REFERENCE STATION	144	46	00	45.81 meters.
Right chimney of first house to right of woods	205	39	..	¾ mile.
Schoolhouse cupola	213	11	40	1¾ miles.
Stack of cannery	216	19	..	1½ miles.
Stack of cannery	227	10	..	1¾ miles.
Right chimney of house showing over woods	239	07	..	2½ miles.
Neavitt schoolhouse cupola	269	25	..	3¾ miles.
Chimney of house	276	58	..	2½ miles.

CHANGE (1910).

General locality.—Eastern shore of Harris Creek on Change Point, about 1½ miles east of Knapps Narrows. (See Progress map.)

Immediate locality.—Observed station is in cultivated field about 8 feet above high water, 45 yards north-northeast of extreme end of point, 55 yards northwest of edge of bank, 35 yards east of edge of bank, 70 yards southeast by south of corner of wire fence, and 70 yards south-southwest of wire fence.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Nelson 3" (S 53° 21' E).....	0	00	00	1 $\frac{7}{8}$ miles.
"Windmill".....	5	53	50	9 $\frac{1}{4}$ miles.
Near peak of house.....	25	43	..	7 miles.
Chimney of house.....	89	04	..	2 $\frac{1}{2}$ miles.
Near peak of house.....	117	29	..	2 $\frac{1}{2}$ miles.
Near peak of storehouse on Tilghman Island				
Wharf.....	123	16	..	1 $\frac{3}{4}$ miles.
Near peak of house.....	131	01	..	2 $\frac{3}{8}$ miles.
Near chimney of brick house.....	210	58	..	2 $\frac{1}{8}$ miles.
Right chimney of house.....	278	54	..	$\frac{1}{4}$ mile.
Near peak of house.....	307	44	..	$\frac{1}{8}$ mile.

CHEF.

General locality.—Eastern shore of Chesapeake Bay on Cook Point, at southern side of entrance to Choptank River, about 4 miles east of Sharps Island. (See Charts Nos. 36 and 37.)

Immediate locality.—Observed station is in cultivated field about 8 feet above high water, 30 yards inside of fringe of trees parallel with shore, 45 yards southwest of eastern end of fringe of trees, 70 yards east of western end of fringe of trees, and 190 yards northwest by north of gate in fence running east and west.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Sharps Island Light" (N 84° 01' W).....	0	00	00	4 $\frac{1}{2}$ miles.
Nail in blaze in wild cherry tree (4 inches diameter).....	18	41	10	31.43 meters.
Nail in blaze in locust tree (5 inches diameter).....	46	09	20	28.53 meters.
Large chimney of house.....	51	57	..	4 $\frac{3}{4}$ miles.
Nail in blaze in locust tree (5 inches diameter).....	79	02	50	29.04 meters.
Left peak of house.....	81	21	..	5 miles.
Near peak of barn.....	98	22	..	7 $\frac{1}{2}$ miles.
Nail in blaze in locust tree (6 inches diameter).....	99	50	30	43.16 meters.
Near chimney on largest building in group..	127	24	..	6 miles.
Left end of house.....	150	48	30	7 $\frac{5}{8}$ miles.
"Choptank River Light".....	158	02	10	5 $\frac{7}{8}$ miles.
Lone persimmon tree.....	165	47	..	231 yards.
"Large water tank".....	177	43	10	6 $\frac{3}{8}$ miles.
Right chimney outside house.....	194	02	..	2 $\frac{1}{4}$ miles.
Chimney on right one of two houses.....	222	37	..	$\frac{1}{4}$ mile.
Right peak of barn.....	251	19	..	$\frac{1}{4}$ mile.
Right peak of hotel on Sharps Island.....	341	27	..	4 miles.

COOK POINT WINDMILL.

General locality.—Eastern shore of Chesapeake Bay on Cook Point, between Tripps Bay and Cook Point Cove, about 1 $\frac{1}{4}$ miles southeast of end of point. (See Charts Nos. 36 and 37.)

Immediate locality.—Observed station is on windmill over smaller and west one of two water tanks west of a barn on Cook Point farm.

Marks.—Observed station is center of windmill over smaller tank.

References.—None necessary.

BRANNOCK.

General locality.—Eastern shore of Chesapeake Bay between Choptank River and Little Choptank River, on the southern shore of Brannock Bay, about 7 miles southeast of Sharps Island Light. (See Charts Nos. 36 and 37.)

Immediate locality.—Observed station is on high land about 8 feet above high water, 11 yards south of shore, 7 yards south of edge of bluff, 8 yards north of rail fence on far side of county road, 50 yards east of bend where road leaves shore and runs toward farmhouse and 150 yards northeast of a farmhouse.

Marks.—Observed station is center point of triangle on standard cement monument projecting about inches above surface of ground. Subsurface mark is 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	//	
Sharps Island Light (N 54° 34' W).....	0	00	00	7 miles.
Near peak of house on Cook Point.....	38	18	..	3½ miles.
"Cook Point windmill".....	45	33	30	2½ miles.
Right chimney of house in trees.....	83	15	..	2 miles.
Between two chimneys on large part of house.	104	31	..	1 mile.
Outside chimney on near end of house.....	108	06	..	1 mile.
Center one of three chimneys of house.....	142	03	..	1 mile.
Tangent of right end of barn roof.....	150	49	..	1 mile.
Center one of three chimneys on house.....	163	16	..	¾ mile.
Right peak of house.....	203	34	..	2 miles.
Left chimney of 1½-story house across creek..	210	47	..	2 miles.
Near peak of barn.....	285	11	..	¾ mile.
Tangent of Mills Point.....	343	43	..	¾ mile.
Tangent of left end of Sharps Island Hotel..	352	12	..	5½ miles.

ROBINS.

General locality.—Eastern shore of Chesapeake Bay on Hills Point, at northeast side of entrance to Little Choptank River, about 6 miles southeast of Sharps Island Light. (See Charts Nos. 36 and 37.)

Immediate locality.—Observed station is in cultivated field about 8 feet above high water, 40 yards northeast by north of edge of bluff, 45 yards east by north of point of bluff, 65 yards south by east of edge of bluff in range with Sharps Island Light, and 140 yards north by west of wire fence at bluff.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	//	
"Sharps Island Light" (N 34° 11' W).....	0	00	00	6 miles.
Nail in blaze in cedar tree (8 inches diameter).....	5	43	20	37.11 meters.
Left chimney of house.....	76	25	..	⅜ mile.
Near peak of barn.....	87	14	..	⅜ mile.
Tallest chimney of house.....	91	22	..	¾ mile.
Near peak of barn.....	222	52	..	5¼ miles.
Tangent of end of woods on Taylor Island...	229	14	..	5¼ miles.
Chimney of house on James Point.....	247	10	..	3⅜ miles.
Tangent of James Point.....	248	00	..	3 miles.
Nail in blaze in cedar tree (8 inches diameter).....	336	32	30	28.22 meters.
Nail in blaze in cedar tree (8 inches diameter).....	353	18	50	30.90 meters.
Tangent of right side of hotel on Sharps Island.....	356	39	..	4½ miles.

RAGGED POINT 3.

General locality.—Northern shore of Little Choptank River on Ragged Island, about 3 miles east of the northeast end of James Island. (See Charts Nos. 36 and 37.)

Immediate locality.—Observed station is on small marsh point about 1 foot above high water, 3 yards east of shore, 5 yards northwest of shore, 9 yards north of extreme end of point, and 100 yards east of a small marsh island. Cement monument marking reference station is 27.27 meters N 31° 42' E of observed station. Tile pipe set in cement marking old reference station is 21.75 meters N 30° 42' E of observed station.

Marks.—Observed station is nail in cedar stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Old reference station is tile pipe set in cement projecting 2 inches above surface of ground.

References.—

	°	'	"	
"Hudson" (N 76° 00' E).....	0	00	00	1 5/8 miles.
Near peak of barn.....	66	19		2 miles.
Near peak of barn.....	70	55		2 miles.
Near chimney of house.....	72	00		2 miles.
Right chimney of house.....	75	31		2 1/4 miles.
Near peak of barn.....	109	39		2 1/2 miles.
Near peak of barn.....	116	30		2 1/8 miles.
Left chimney of house on Hooper Point.....	117	34		2 7/8 miles.
Near peak of barn.....	129	50		2 1/2 miles.
Near peak of barn on Hills Point.....	247	47		2 7/8 miles.
OLD REFERENCE STATION (TILE PIPE).....	314	41	40	21.75 meters.
NEW REFERENCE STATION (CEMENT MON- UMENT).....	315	47	40	27.27 meters.

TORREY.

General locality.—Eastern shore of Slaughter Creek, about 1 mile southeast of Hooper Point, and 1/2 mile southwest of entrance to Parsons Creek. (See Charts Nos. 36, 37, and 38.)

Immediate locality.—Observed station is on hard marsh about 1 foot above high water, 90 yards east northeast of shore, 250 yards south of shore, 50 yards west of young pine thicket, and near several small pine trees.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Maryland" (S 22° 07' W).....	0	00	00	3/4 mile.
Peak of barn.....	0	25		1 mile.
Cupola on barn.....	9	37		1 3/8 miles.
Right chimney of house.....	22	48		1 5/8 miles.
Left chimney of house.....	47	32		3/4 mile.
Right end of barn.....	79	07		5/8 mile.
Left chimney of house.....	82	24		5/8 mile.
Center of old windmill.....	97	14		1 mile.
Left chimney of house on Hooper Point.....	109	58		1 mile.
Near peak of barn.....	174	14		4 miles.
Nail in blaze in pine tree (5 inches diam- eter).....	265	24	40	9.60 meters.
Nail in blaze in pine tree (6 inches diam- eter).....	287	08	10	11.86 meters.
Nail in blaze in pine tree (4 inches diam- eter).....	292	06	00	17.90 meters.

MARYLAND.

General locality.—Eastern side of Slaughter Creek, about $1\frac{1}{4}$ miles northeast of Slaughter Creek Bridge, and $\frac{1}{4}$ mile southeast of shore. (See Charts Nos. 36, 37, and 38.)

Immediate locality.—Observed station is in a cultivated field about 35 yards northeast of fence between fields, 105 yards west-northwest of road from Madison to Taylor Island, 115 yards northwest of junction of fences at road, and 130 yards west-northwest of house on opposite side of road.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	''	
"Noble" (S 29° 28' W)	0	00	00	3/4 mile.
Near peak of canning house	2	03	..	1 1/8 miles.
Spindle on cupola on barn	12	10	..	3/4 mile.
Left side of barn	37	09	..	1/4 mile.
Right chimney of house	51	14	..	1/4 mile.
Near chimney of large house	99	33	..	5/8 mile.
Near peak of large barn	126	38	..	7/8 mile.
Left chimney of house	163	02	..	1/2 mile.
Chimney on near end of house	212	46	..	3/4 mile.
Center of front door of house on opposite side of road	269	34	..	130 yards.
Near peak of barn	353	18	..	1 mile.

WHITEWASH.

General locality.—Western shore of Slaughter Creek, about $1\frac{1}{4}$ miles north of Slaughter Creek Bridge, and $1\frac{1}{2}$ miles southwest of entrance to Parsons Creek. (See Charts Nos. 36, 37, and 38.)

Immediate locality.—Observed station is on marsh about on level with high water, about 25 yards west-northwest of shore, 50 yards north-northwest of shore, 60 yards southwest of shore, 50 yards east-southeast of wire fence, and 300 yards south of farm house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	''	
"Moore" (N 23° 17' E)	0	00	00	5/8 mile.
Near chimney of house	28	33	..	1 7/8 miles.
Left chimney of house	42	53	..	5/8 mile.
Near peak of barn	51	57	..	3/4 mile.
Near gable of house	92	49	..	5/8 mile.
Left chimney of house	115	15	..	3/8 mile.
Cupola on barn	155	17	..	3/4 mile.
Center of canning house ventilators	161	17	..	1 1/4 miles.
Center of draw of Slaughter Creek Bridge	169	48	..	1 1/4 miles.
Near peak of large building	177	46	..	1 3/8 miles.
Near peak of barn	330	08	..	250 yards.
Right chimney of house	335	23	..	5/8 mile.
Near peak of barn	351	15	..	5/8 mile.

MOORE.

General locality.—Western shore of Slaughter Creek, about $\frac{5}{8}$ mile south of Hooper Point and $\frac{1}{8}$ mile west-southwest of entrance to Parsons Creek. (See Charts Nos. 36, 37, and 38.)

Immediate locality.—Observed station is on sand and shell land near edge of marsh about 1 foot above high water, 11 yards west of shore, 25 yards north of shore, 130 yards south of shore, 140 yards east of near corner of large barn, and 200 yards west-southwest of end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Veith" (N 9° 21' W)	o	oo	oo	$\frac{5}{8}$ mile.
Right chimney of house	68	23	..	$1\frac{1}{2}$ miles.
Near peak of barn	74	39	..	$1\frac{1}{2}$ miles.
Near peak of barn	149	02	..	$\frac{3}{4}$ mile.
Left chimney of house	168	10	..	$\frac{7}{8}$ mile.
Left chimney of house	189	25	..	$\frac{3}{4}$ mile.
Center of draw of Slaughter Creek bridge	205	46	..	$1\frac{1}{8}$ miles.
Near corner of large barn	275	24	..	140 yards.
Left edge of house	296	55	..	$\frac{1}{2}$ mile.
Near peak of barn	333	27	..	$\frac{5}{8}$ mile.
Right chimney of house on Hooper Point	343	01	..	$\frac{5}{8}$ mile.

VEITH.

General locality.—Southern shore of Little Choptank River on Hooper Point at western side of entrance to Slaughter Creek about 2 miles south of Ragged Point. (See Charts Nos. 36, 37, and 38.)

Immediate locality.—Observed station is on a marsh about 1 foot above high water, 25 yards west of shore, 30 yards south of shore, 50 yards northwest of shore, 6 yards east of edge of larger pond in marsh, 25 yards north of edge of smaller pond in marsh, and 125 yards east of an orchard.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Ragged Point 3" (N 7° 23' E)	o	oo	oo	2 miles.
Left chimney of house	23	31	..	$3\frac{1}{8}$ miles.
Tangent of Susquehanna Point	48	15	..	$2\frac{1}{4}$ miles.
Right chimney of house	75	11	..	$1\frac{1}{2}$ miles.
Near peak of barn	172	27	..	$\frac{1}{2}$ mile.
Left chimney of house	173	28	..	$\frac{1}{2}$ mile.
Near chimney of house	208	22	..	$\frac{1}{2}$ mile.
Center of old windmill	221	47	..	$\frac{1}{2}$ mile.
Near chimney of house on Hooper Point	272	12	..	$\frac{1}{8}$ mile.
Near peak of barn	353	05	..	$3\frac{1}{8}$ miles.

CAN.

General locality.—Southern shore of Little Choptank River on a point about 2 miles east of the southeastern end of James Island, and 1 mile west of entrance to Slaughter Creek. (See Charts No. 36, 37, and 38.)

Immediate locality.—Observed station is on a marsh point about 1 foot above high water, 9 yards southwest of shore, 17 yards southeast of end of point, 20 yards east of shore, and 180 yards north-northwest of a house among trees. Cement monument marking reference station is 9.25 meters S 6° 58' E of observed station.

Marks.—Observed station is center of 4 inch tile pipe set in cement and projecting 2 inches above surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	"	
"Skid" (N 89° 23' W).....	0	00	00	2 miles.
Chimney on near end of old house.....	7	40		2 miles.
Chimney on end of small addition to house..	38	23		2¼ miles.
Near peak of barn on Hills Point.....	83	31		4½ miles.
Near peak of house.....	106	27		4¾ miles.
Left chimney of house.....	132	18		3¾ miles.
Middle chimney of house.....	164	57		3¾ miles.
Left chimney of house.....	210	48		180 yards.
REFERENCE STATION.....	262	25	00	9.25 meters.
Near peak of large barn.....	328	01		1¼ miles.
Left chimney of large house on north end of Taylor Island.....	345	56		1¾ miles.
Tangent to north end of Taylor Island.....	356	20		1¾ miles.

SKID.

General locality.—Eastern shore of Chesapeake Bay, on extreme southern end of James Island, about 8½ miles north-northeast of Cove Point Light and 4 miles southwest of Ragged Point. (See Charts Nos. 36, 37, and 38.)

Immediate locality.—Observed station is on land about 5 feet above high water, 33 yards west of shore, 22 yards northeast of shore, and 60 yards northwest of extreme end of point. Four-inch tile pipe marking old reference station is 148.83 meters N 9° 35' W of observed station and cement monument marking new reference station is 58.70 meters N 9° 59' W of observed station.

Marks.—Observed station is center of 4-inch tile pipe with top 6 inches below surface of ground. Subsurface mark is center of 4-inch tile pipe buried with top 2 inches below base of surface pipe. Old reference station is nail in center of 4-inch tile pipe filled with and set in cement projecting 3 inches above surface of ground. New reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	"	
"Can" (S 89° 25' E).....	0	00	00	2 miles.
Near peak of barn with metal roof.....	24	25		¾ mile.
Left chimney of house.....	28	22		¾ mile.
Left chimney of house.....	39	31		1 mile.
Near peak of house.....	67	27		1½ miles.
Right chimney of house.....	85	19		¾ mile.
Tangent of north end of Taylor Island.....	107	44		¼ mile.
Tangent of end of woods.....	224	23		¾ mile.
Left chimney of large house.....	259	49		¼ mile.
OLD REFERENCE STATION (TILE PIPE).....	259	49	10	148.83 meters.
NEW REFERENCE STATION (MONUMENT).....	259	25	40	58.70 meters.
"Rede" (Right chimney of house).....	274	23	40	¾ mile.
Right tangent of woods on Casons Point....	333	28		5½ miles.
Chimney on near end of house on Hooper Point.....	355	32		2¾ miles.

REDE.

General locality.—Southwestern shore of Little Choptank River on James Island about 3 miles west-northwest of Hooper Point. (See Charts Nos. 36 and 37.)

Immediate locality.—Observed station is on two-story house on the east side of James Island and on the south side of Oyster Creek at its mouth.

Marks.—Eastern chimney of two-story house.

References.—None necessary.

JAMES.

General locality.—Eastern side of Chesapeake Bay on northeast end of James Island at south side of entrance to Little Choptank River. (See Charts Nos. 36 and 37.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 8 yards west of shore, 11 yards northwest of shore, 85 yards south of shore, and 75 yards east of pine woods. Cement monument marking reference station is 19.48 meters S 84° 17' W of observed station.

Marks.—Observed station is center of 2-inch tile pipe projecting 2 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument.

<i>References.</i> —	°	'	"	
"Robins" (N 23° 14' E).....	0	00	00	2¾ miles.
Near peak of house.....	12	37		3½ miles.
Chimney on near end of house.....	48	42		3¾ miles.
Near peak of barn.....	89	01		4¼ miles.
Near chimney of house on Hooper Point....	100	36		3 miles.
Left peak of long barn.....	107	05		3½ miles.
Near peak of barn.....	146	09		2½ miles.
REFERENCE STATION.....	241	03	00	19.48 meters.
"Sharps Island Light".....	320	02	40	7¾ miles.
Right edge of old hotel on Sharps Island....	321	43		6¼ miles.
Left tangent of woods on Cook Point.....	357	29		7 miles.

NELSON 3.

General locality.—Northern shore of Choptank River on Nelson Island, between the entrance to Harris and Broad Creeks. (See Progress map.)

Immediate locality.—Observed station is on southwest point of island on marsh about 2 feet above high water, 28 yards north-northeast of extreme end of point, 45 yards northwest of edge of marsh, and 14 yards east of marsh. Cement monument marking reference station is 32.27 meters N 32° 05' E of observed station.

Marks.—Observed station is center of nail in 3-inch square stub in tile pipe flush with ground. Reference station is center point of triangle on standard cement monument projecting 5 inches above surface of ground.

<i>References.</i> —	°	'	"	
"Choptank River Light" (S 56° 09' E).....	0	00	00	5½ miles.
"Large Water Tank".....	10	09	50	7½ miles.
Right chimney of house.....	31	48		7 miles.
Near chimney outside of house.....	45	44		5¾ miles.
Near peak of barn on Cook Point.....	67	40		5¼ miles.
Left peak of hotel on Sharps Island.....	98	03		7⅝ miles.
"Sharps Island Light".....	109	04	20	7⅝ miles.
Chimney of house.....	137	36		4 miles.
Stack of cannery at Tilghman Island.....	153	43		3½ miles.
Windmill at Tilghman Island.....	155	12		3½ miles.
Chimney of house on Change Point.....	185	37		1¾ miles.
Left peak of house.....	197	50		1½ miles.
Chimney of house.....	254	10		2⅝ miles.
"St. Michaels Church Spire".....	259	55	10	6¼ miles.
REFERENCE STATION.....	268	13	20	32.27 meters.
Left peak of building.....	293	43		2⅝ miles.
Near peak of house with three chimneys.....	335	18		3 miles.

ANNETTE.

General locality.—Western shore of Broad Creek about $\frac{3}{4}$ mile north of Nelson Point, and on south side of entrance to Balls Creek. (See Progress map.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, and 4 yards west of shore. Cement monument marking reference station is 9.39 meters N $75^{\circ} 59'$ W of observed station.

Marks.—Observed station is center of 2-inch tile pipe projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument projecting 3 inches above surface of ground.

References.—	°	'	''	
"Myrtle" (N $15^{\circ} 29'$ E).....	0	00	00	..... $\frac{5}{8}$ mile.
South chimney of house	18	39	..	..... $3\frac{5}{8}$ miles.
South chimney of house	29	53	..	..... $3\frac{3}{4}$ miles.
South gable of barn	35	01	..	..... $3\frac{1}{2}$ miles.
Chimney of house	36	35	..	..... $3\frac{1}{2}$ miles.
South gable of barn	72	54	..	..... 2 miles.
West chimney of house	102	19	..	..... $3\frac{3}{8}$ miles.
"Choptank River Light"	116	34	40	..... $6\frac{1}{4}$ miles.
Water tank at Castle Haven	123	54	..	..... $8\frac{1}{4}$ miles.
North gable of barn on Todd Point	148	31	..	..... $6\frac{1}{2}$ miles.
Nail in blaze in cedar tree (10 inches diameter).....	187	26	00	..... 11.37 meters.
Nail in blaze in cedar tree (10 inches diameter).....	235	06	30	..... 16.81 meters.
REFERENCE STATION	268	29	40	..... 9.39 meters.

PEARY.

General locality.—Eastern shore of Broad Creek about 1 mile north of entrance to Broad Creek, $1\frac{3}{8}$ miles north of Royston Island and $1\frac{3}{4}$ miles east-northeast of Nelson Point. (See Progress map.)

Immediate locality.—Observed station is on wooded shore about 6 feet above high water, 3 yards east of vertical bank which is washed by high water 100 yards south of north end of pine woods. Cement monument marking reference station is 20.93 meters N $43^{\circ} 30'$ E of observed station.

Marks.—Observed station is center of 2-inch tile pipe projecting 3 inches above surface of ground. Reference station is center point of triangle on standard cement monument.

References.—	°	'	''	
"Roys" (S $17^{\circ} 35'$ E).....	0	00	00	..... $1\frac{1}{2}$ miles.
Left tangent of Cook Point	44	53	..	..... $6\frac{1}{4}$ miles.
Right tangent of Nelson Point	96	09	..	..... $1\frac{3}{4}$ miles.
East chimney of house	117	03	..	..... 2 miles.
East gable of Parlett house	131	52	..	..... $2\frac{3}{4}$ miles.
South gable of barn	168	59	..	..... $1\frac{7}{8}$ miles.
Nail in blaze in pine tree (15 inches diameter).....	233	25	40	..... 17.49 meters.
REFERENCE STATION	241	04	50	..... 20.93 meters.
Nail in blaze in pine tree (15 inches diameter).....	307	35	10	..... 15.45 meters.

IRISH.

General locality.—Northeastern shore of Choptank River on west side of entrance to Irish Creek about $\frac{3}{8}$ mile northeast of Royston Island. (See Progress map.)

Immediate locality.—Observed station is in cultivated land, about 5 feet above high water, 13 yards east-northeast of edge of bank, 5 yards north of foot of bank, 4 yards north of a cedar tree, 10 yards west of a small cedar tree at west end of line of locust trees, and 23 yards east-southeast of rounded point of bank.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

<i>References.</i> —	o	/	"	
"Pont" (N 13° 04' E)	0	00	00	1/2 mile.
Near peak of building	25	49	..	1 1/4 miles.
Nail in blaze in locust tree (2 inches diameter)	68	52	50	16.33 meters.
Left peak of house	98	15	..	5/8 mile.
Left peak of barn	123	13	..	1 mile.
Nail in blaze in cedar tree (7 inches diameter)	152	52	10	4.29 meters.
Near peak of house	185	06	..	5 miles.
Nail in blaze in cedar tree (2 inches diameter)	206	33	40	6.24 meters.
"Sharps Island Light"	230	10	20	9 miles.
Near peak of house	291	12	..	3 3/4 miles.
Near peak of barn	348	54	..	300 yards.

ROYS.

General locality.—Northeastern side of Choptank River on southern end of Royston Island, about 1/2 mile southwest of entrance to Irish Creek. (See Progress map.)

Immediate locality.—Observed station is about 5 feet above high water, 15 yards north of shore, 25 yards east of shore, and 25 yards northeast of extreme end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 6 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

<i>References.</i> —	o	/	"	
"Choptank River Light" (S 44° 37' E)	0	00	00	3 5/8 miles.
"Large Water Tank"	9	09	00	5 5/8 miles.
Peak of large barn	49	44	..	4 1/2 miles.
Right peak of barn	71	08	..	5 3/4 miles.
Windmill	71	18	..	5 3/4 miles.
"Sharps Island Light"	109	16	30	8 3/4 miles.
Church Spire	134	43	..	6 miles.
Church Spire	134	47	..	6 miles.
Large spire	134	57	..	6 miles.
Windmill	146	07	..	5 3/4 miles.
Chimney of house	170	03	..	3 miles.
Near peak of large barn	200	28	..	3 1/2 miles.
Nail in blaze in oak tree (3 inches diameter)	215	43	10	10.64 meters.
Nail in blaze in oak tree (3 inches diameter)	281	24	20	6.22 meters.
Nail in blaze in cedar tree (5 inches diameter)	358	28	40	15.92 meters.

CREEK.

General locality.—Northeastern shore of Choptank River on east side of entrance to Irish Creek, about 5/8 mile east-northeast of Royston Island. (See Progress map.)

Immediate locality.—Observed station on marsh point about 1 foot above high water, 11 yards southeast of shore, 11 yards east of shore, 17 yards north-northeast of shore, and 14 yards south of cut in shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—	°	'	"	
"Dot" (S 17° 34' W).....	0	00	00	..... 4 $\frac{5}{8}$ miles.
Right corner of house.....	118	45	..	..... $\frac{5}{8}$ mile.
Right corner of house.....	146	12	..	..... 1 $\frac{1}{4}$ miles.
Left peak of house.....	184	09	..	..... 1 $\frac{1}{8}$ miles.
Left corner of large chimney.....	230	02	..	..... $\frac{5}{8}$ mile.
Near peak of large building.....	354	09	..	..... 5 $\frac{3}{4}$ miles.

CORNER (CHOPTANK RIVER).

General locality.—Southern shore of Choptank River on east side of entrance to Chapel Creek, about 2 miles southeast of Todd Point, and 3 miles south-southwest of Choptank River Light. (See Chart No. 37.)

Immediate locality.—Observed station is on grassy land about 3 feet above high water, 30 yards east of shore, 30 yards south of shore, 35 yards southeast of extreme end of point, and west of small clump of small pine trees.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—	°	'	"	
"Dot" (N 58° 43' W).....	0	00	00	..... 2 $\frac{1}{8}$ miles.
Nail in blaze in holly tree (14 inches diameter).....	35	13	40	..... 13.81 meters.
"Choptank River Light".....	75	55	20	..... 3 miles.
Nail in blaze in pine tree (4 inches diameter).....	105	03	00	..... 3.57 meters.
Right corner of new house.....	108	42	..	..... $\frac{1}{2}$ mile.
Nail in blaze in pine tree (5 inches diameter).....	187	20	10	..... 8.21 meters.
Near peak of 2 $\frac{1}{2}$ -story house.....	308	25	..	..... $\frac{7}{8}$ mile.
Chimney outside right end of house.....	340	33	..	..... 2 miles.
Chimney outside near end of house.....	356	46	..	..... 2 $\frac{1}{4}$ miles.

DOT.

General locality.—Southern shore of Choptank River on Todd Point, about 3 miles east of Cook Point, and 3 $\frac{1}{2}$ miles southwest of Choptank River Light. (See Chart No. 37.)

Immediate locality.—Observed station is about 4 feet above high water, 55 yards west-southwest of shore, 30 yards south-southwest of edge of bank, 40 yards south by east of point where bank meets marsh, 70 yards south by west of extreme end of point, and 200 yards northeast by north of a house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 5 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—	°	'	"	
"Choptank River Light" (S 56° 26' E).....	0	00	00	..... 3 $\frac{1}{4}$ miles.
"Large Water Tank".....	37	36	00	..... 3 $\frac{1}{2}$ miles.
Near peak of house.....	42	45	..	..... 2 $\frac{3}{4}$ miles.
Near peak of building.....	72	49	..	..... 2 $\frac{1}{4}$ miles.
Chimney outside right end of house.....	102	18	..	..... 1 $\frac{3}{8}$ miles.
Chimney outside near end of house.....	175	25	..	..... 200 yards.
Left chimney of house on Cook Point.....	212	24	..	..... 2 $\frac{3}{4}$ miles.
"Sharps Island Light".....	218	32	40	..... 7 $\frac{1}{2}$ miles.
Church Spire.....	250	04	40	..... 7 $\frac{1}{4}$ miles.
Left peak of house.....	277	10	..	..... 7 $\frac{1}{4}$ miles.
Near peak of barn.....	290	09	..	..... 7 $\frac{1}{2}$ miles.
Cupola on house.....	333	02	..	..... 3 $\frac{5}{8}$ miles.

HUDSON.

General locality.—Northern shore of Little Choptank River on Casons Point, about 1 mile north of Susquehanna Point, and 1½ miles east-northeast of Ragged Point. (See Chart No. 37.)

Immediate locality.—Observed station is on sand beach about on level with high water, 2 yards south of a rail fence extending along shore, and 130 yards west-northwest of end of woods at shore. Cement monument marking reference station is 29.65 meters N 8° 30' W of observed station. Four-inch tile pipe marking old reference station is 3.99 meters N 7° 14' W of observed station.

Marks.—Observed station is center of 4-inch tile pipe set in cement projecting 3 inches above surface of cement and 6 inches above surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Old reference station is center of 4-inch tile pipe projecting 3 inches above surface of ground.

References.—

	°	'	"	
"Jenifer" (N 1° 41' W).....	0	00	00	¾ mile.
Left chimney of 1½-story house.....	13	24	..	1¼ miles.
Near peak of barn.....	30	45	..	1⅞ miles.
"Madison Southern M. E. Church Spire"....	145	10	30	2¾ miles.
Near peak of barn.....	213	30	..	3½ miles.
Left chimney of house on Hooper Point.....	223	01	..	3⅞ miles.
Near peak of house.....	251	57	..	5 miles.
Right chimney of house.....	327	50	..	¼ mile.
Near peak of barn.....	350	21	..	½ mile.
Near peak of house.....	352	51	..	¾ mile.
NEW REFERENCE STATION (CEMENT MONU- MENT).....	353	11	50	29.65 meters.
OLD REFERENCE STATION (TILE PIPE).....	354	26	30	3.99 meters.

JENIFER.

General locality.—Western shore of Hudson Creek about ¾ mile northwest of entrance to Back Creek and ¾ mile north of Casons Point. (See Chart No. 37.)

Immediate locality.—Observed station is on edge of cultivated field about 2 feet above high water, 8 yards northeast of shore, 9 yards southwest of shore, 55 yards north by west of extreme end of marsh point, and 65 yards southeast of corner of wire fence about in line with a barn.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Henry" (N 1° 06' W).....	0	00	00	⅞ mile.
Tangent of left end of Ross Wharf.....	8	55	..	1 mile.
Near peak of barn.....	20	24	..	1 mile.
Chimney on left end of house.....	32	30	..	½ mile.
Near peak of barn.....	64	33	..	⅝ mile.
Chimney on near end of house.....	85	48	..	1 mile.
Chimney on near end of house.....	119	59	..	2 miles.
"Madison Southern M. E. Church spire"....	151	57	30	3 miles.
Tangent of Casons Point.....	159	58	..	¾ mile.
Chimney on near end of house.....	189	26	..	½ mile.
Near peak of house.....	225	32	..	¼ mile.
Lightning rod on house.....	276	57	..	225 yards.
Near peak of barn.....	304	00	..	⅞ mile.

HENRY.

General locality.—Western shore of Hudson Creek at south side of entrance to a cove about 1 mile north of Casons Point. (See Chart No. 37.)

Immediate locality.—Observed station is about 2 feet above high water, 5 yards south of shore, 5 yards northwest of shore, 10 yards west of extreme end of point, and 34 yards north of wire fence at shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Mitchell" (N 3° 08' E).....	0	00	00	1/4 mile.
Tangent to left end of Ross Wharf.....	5	28		7/8 mile.
Chimney in center of small house.....	17	23		7/8 mile.
Chimney on left end of house.....	41	04		3/8 mile.
Near peak of barn.....	56	29		7/8 mile.
Chimney on near end of house.....	96	44		5/8 mile.
"Madison Southern M. E. Church spire".....	148	58	00	3 miles.
Chimney on right end of house.....	209	20		7/8 mile.
Chimney on left end of house.....	340	27		1/4 mile.

MITCHELL.

General locality.—Western shore of Hudson Creek about 5/8 mile north-northwest of entrance to Back Creek and 1 1/4 miles north of Casons Point. (See Chart No. 37.)

Immediate locality.—Observed station is in a small grove of oak trees about 2 feet above high water, 11 yards southwest of shore, 12 yards north of shore, and 29 yards west of extreme end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Back" (N 70° 51' E).....	0	00	00	1/4 mile.
Chimney on near end of house.....	23	09		1/4 mile.
Chimney on small house.....	35	09		5/8 mile.
Chimney on right end of house.....	41	36		3/8 mile.
Chimney on right end of house.....	53	32		3/8 mile.
Near peak of house.....	122	09		3/8 mile.
Near peak of barn.....	133	23		3/8 mile.
Nail in blaze in oak tree (18 inches diameter).....	178	27	00	8.72 meters.
Nail in blaze in oak tree (16 inches diameter).....	194	51	20	14.95 meters.
Chimney on left end of house.....	276	17		3/4 mile.
Nail in blaze in oak tree (12 inches diameter).....	281	12	30	10.93 meters.
Near peak of barn.....	321	03		5/8 mile.

BACK.

General locality.—Eastern shore of Hudson Creek about 5/8 mile north of entrance to Back Creek and 1 3/8 miles north of Casons Point. (See Chart No. 37.)

Immediate locality.—Observed station is on solid ground at edge of woods about 2 feet above high water, 14 yards east of shore, 16 yards northeast of shore, 45 yards south-southeast of shore, and 175 yards north-northwest of a house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Bayly" (S 1° 40' E)	0	00	00	..... 3/8 mile.
Near chimney of house	29	44	..	..... 3/4 mile.
Near peak of house	33	20	..	..... 5/8 mile.
Near peak of barn	42	53	..	..... 1/2 mile.
Chimney on near end of house	72	05	..	..... 3/8 mile.
Left chimney of house	151	44	..	..... 3/4 mile.
Nail in blaze in pine tree (12 inches diameter)	175	02	50	..... 8.05 meters.
Nail in blaze in pine tree (12 inches diameter)	226	14	50	..... 11.19 meters.
Nail in blaze in pine tree (12 inches diameter)	305	13	20	..... 16.04 meters.
Right chimney of house	340	53	..	..... 175 yards.

BAYLY.

General locality.—Eastern shore of Hudson Creek about 3/8 mile north of entrance to Back Creek and 1 mile north of Casons Point. (See Chart No. 37.)

Immediate locality.—Observed station is on marsh about on level with high water, 11 yards east of shore, 20 yards south of shore, 22 yards northeast of shore, 8 yards west of a bank 3 feet high, and 15 yards southwest of a large dead cherry tree.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Jenifer" (S 55° 44' W)	0	00	00	..... 1/4 mile.
Near peak of house	9	20	..	..... 3/8 mile.
Left peak of barn	23	59	..	..... 3/8 mile.
Right chimney of house	73	18	..	..... 3/8 mile.
Left chimney of house	103	15	..	..... 1 1/8 miles.
Left chimney of house	117	03	..	.....
Left chimney of house	129	28	..	..... 1/4 mile.
Nail in blaze in cherry tree (4 inches diameter)	172	17	00	..... 8.19 meters.
Near peak of small house	193	18	..	..... 3/8 mile.

CARRIE.

General locality.—Eastern shore of Hudson Creek on north side of entrance to Back Creek about 3/4 mile north of Casons Point. (See Chart No. 37.)

Immediate locality.—Observed station is near edge of a cultivated field about 4 feet above high water, 15 yards east of shore, 3 yards east of edge of bank, and 160 yards north of point at north side of entrance to Back Creek.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Louise" (S 28° 56' E)	0	00	00	..... 1/4 mile.
"Madison Southern M. E. Church Spire"	3	09	30	..... 3 miles.
Left chimney of house	74	19	..	..... 3/8 mile.
Chimney in center of house	101	56	..	..... 3/8 mile.
Lightning rod on right end of house	126	31	..	..... 3/8 mile.
Left dormer window of house	174	31	..	..... 1/2 mile.
Left chimney of house	191	27	..	..... 1 1/4 miles.
Nail in blaze in cedar tree (10 inches diameter)	196	50	50	..... 9.35 meters.
Near peak of barn	229	58	..	..... 1/2 mile.
Near end of house	285	09	..	..... 1 1/4 miles.
Near peak of barn	306	17	..	..... 2 miles.

LOUISE.

General locality.—Eastern shore of Hudson Creek on point at south side of entrance to Back Creek about $\frac{1}{2}$ mile north of Casons Point. (See Chart No. 37.)

Immediate locality.—Observed station is on sand and marsh point about 1 foot above high water, 18 yards north-northeast of shore, 22 yards southeast of shore, 30 yards northwest of shore, and 30 yards east-northeast of extreme end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Mac" (S 64° 57' E).....	o	oo	oo	..... 1 $\frac{1}{8}$ miles.
Chimney of house.....	o	39	..	..... 1 $\frac{1}{2}$ miles.
"Madison Southern M. E. Church Spire"....	39	32	oo	..... 2 $\frac{1}{2}$ miles.
Tangent of Casons Point.....	74	o6	..	..... $\frac{1}{2}$ mile.
Center chimney of house.....	129	17	..	..... $\frac{1}{2}$ mile.
Left end of house.....	155	13	..	..... $\frac{1}{2}$ mile.
Chimney in center of house.....	172	15	..	..... $\frac{1}{2}$ mile.
Near peak of barn.....	192	22	..	..... $\frac{5}{8}$ mile.
Near peak of barn.....	280	20	..	..... $\frac{1}{2}$ mile.
Right chimney of house.....	302	o8	..	..... $\frac{5}{8}$ mile.
Right chimney of house.....	338	31	..	..... 2 miles.

GREENWELL.

General locality.—Northwestern shore of Little Choptank River on point of land at north side of entrance to a cove between Butter Pot Point and Cedar Point about $\frac{3}{4}$ mile northwest of McKeils Point. (See Chart No. 37.)

Immediate locality.—Observed station is on a marsh point about 1 foot above high water, 5 yards north of shore, 13 yards southwest of shore, and 25 yards northwest of extreme end of point. Cement monument marking reference station is 27.78 meters N 35° 11' W of observed station.

Marks.—Observed station is nail in pine stub projecting 12 inches above surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	'	"	
"Ross" (N 62° 17' E).....	o	oo	oo	..... $\frac{3}{4}$ mile.
Near peak of barn.....	32	39	..	..... 1 $\frac{3}{8}$ miles.
"Madison Southern M. E. Church Spire"....	102	24	30	..... 2 $\frac{1}{2}$ miles.
Left peak of large house.....	126	28	..	..... 2 miles.
Near peak of barn.....	155	20	..	..... 4 $\frac{3}{8}$ miles.
Center chimney of house.....	189	o3	..	..... 1 mile.
Near peak of barn.....	253	14	..	..... $\frac{5}{8}$ mile.
REFERENCE STATION.....	262	32	50	..... 27.78 meters.
Near peak of barn.....	309	25	..	..... $\frac{1}{4}$ mile.
Left chimney of house.....	314	49	..	..... $\frac{1}{4}$ mile.
Center chimney of house.....	344	58	..	..... $\frac{3}{4}$ mile.

ROSS.

General locality.—Northwestern shore of Little Choptank River on Cedar Point about $\frac{3}{4}$ mile north of entrance to Fishing Creek. (See Chart No. 37.)

Immediate locality.—Observed station is on marsh point about 1 foot above high water, 25 yards southwest of shore, 30 yards west of shore, 60 yards north by west of extreme end of point, and 150 yards east by south of four pine trees.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"Lee" (N 51° 25' E).....	o	oo	oo	5/8 mile.
Chimney on near peak of house.....	21	43	..	2 3/4 miles.
Near peak of barn.....	23	09	..	2 3/4 miles.
Chimney on near end of house.....	43	27	..	7/8 mile.
Near peak of barn.....	71	32	..	1 1/8 miles.
Chimney on left end of house.....	100	13	..	2 miles.
A cupola.....	101	09	..	2 miles.
Left one of four pine trees standing together..	233	19	..	150 yards.
Right chimney of 1 1/2-story house.....	272	46	..	1/8 mile.
Left chimney of house.....	292	11	..	1 1/4 miles.
Center of roof of bungalow on Cherry Island..	341	28	..	1 mile.

PHIL.

General locality.—Northwestern shore of entrance to Beckwith and Phillips Creeks on point at west side of entrance to Phillips Creek about 1/4 mile northeast of Cherry Island. (See Chart No. 37.)

Immediate locality.—Observed station is on sand and marsh about 1 foot above high water, 12 yards southwest of shore, 33 yards north of shore, 25 yards west-northwest of extreme end of point, and 40 yards from trees along edge of cultivated field.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"Cherry Island Water Tank" (S 72° 48' E)..	o	oo	oo	3/8 mile.
Tangent of Town Point.....	64	42	..	1 1/8 miles.
Tangent of McKeils Point.....	82	21	..	1 3/4 miles.
Near peak of barn.....	102	15	..	3/4 mile.
Chimney on near end of house.....	222	19	..	1 1/4 miles.
Chimney on left end of house.....	245	oo	..	1/2 mile.
Near peak of house.....	319	59	..	3/4 mile.

DUPONT.

General locality.—Western shore of Beckwith Creek about 1/8 mile northwest of the northeast end of Cherry Island. (See Chart No. 37.)

Immediate locality.—Observed station is in a grove of small pine trees about 1 foot above high water, 17 yards west of shore, 25 yards northwest of shore, and 35 yards north of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"Cherry Island Water Tank" (S 12° 29' W)...	o	oo	oo	3/8 mile.
Center of roof of bungalow on Cherry Island...	6	09	..	3/8 mile.
Chimney on near end of house.....	25	05	..	1 1/8 miles.
Nail in blaze in holly tree (4 inches diameter).....	34	05	30	6.55 meters.
Near end of 1 1/2-story house.....	46	39	..	7/8 mile.
Nail in blaze in cedar tree (6 inches diameter).....	106	30	50	12.84 meters.
Near peak of barn.....	205	33	..	1 mile.
Near peak of house.....	242	50	..	1/4 mile.
Between two chimneys on house.....	295	09	..	1/2 mile.
Nail in blaze in pine tree (6 inches diameter).....	297	22	40	6.60 meters.

BECKWITH.

General locality.—Eastern shore of Beckwith Creek about $\frac{1}{4}$ mile northeast of the northeast end of Cherry Island. (See Chart No. 37.)

Immediate locality.—Observed station is near edge of a cultivated field about 2 feet above high water, 30 yards northeast of shore, 35 yards east of shore, 35 yards southeast of shore, and about $\frac{1}{8}$ mile south by east of small $1\frac{1}{2}$ -story house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch-tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	''		
"Cherry Island Water Tank" (S 53° 40' W)...	0	00	00	..... $\frac{1}{2}$ mile.
Chimney of small house on Cherry Island.....	4	38	..	..... $\frac{1}{2}$ mile.
Near peak of barn.....	21	51	..	..... $1\frac{1}{4}$ miles.
Nail in blaze in locust tree (4 inches diameter).	93	09	50	..... 20.32 meters.
Near peak of barn.....	97	47	..	..... $\frac{1}{2}$ mile.
Nail in blaze in locust tree (3 inches diameter).	102	49	30	..	19.46 meters.
Near peak of barn.....	165	55	..	..... $\frac{1}{2}$ mile.
Left chimney of house.....	300	34	..	..... $\frac{1}{4}$ mile.

CHERRY ISLAND WATER TANK.

General locality.—Northeastern side of Little Choptank River on Cherry Island. (See Chart No. 37.)

Immediate locality.—Observed station is on water tower on south end of Cherry Island.

Marks.—Observed station is flagstaff on water tank on Cherry Island.

References.—None necessary.

LEE.

General locality.—North shore of upper Little Choptank River on point between Little Choptank River and Beckwiths Creek. (See Chart No. 37.)

Immediate locality.—Observed station is on a marsh point about 1 foot above high water, 5 yards northeast of shore, 25 yards south of shore, 60 yards east-southeast of extreme end of point, and 175 yards west-northwest of pine woods at shore. Cement monument marking reference station is 11.51 meters N 4° 54' E of observed station.

Marks.—Observed station is nail in 3-inch pine stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	/	''	
"Cherry Island Water Tank" (N 4° 08' E)....	0	00	00	..... $\frac{3}{8}$ mile.
REFERENCE STATION.....	0	46	00	..... 11.51 meters.
Right chimney of house.....	23	46	..	..... $\frac{7}{8}$ mile.
Near peak of barn.....	76	32	..	..... $2\frac{1}{4}$ miles.
Near peak of barn.....	95	31	..	..... $1\frac{1}{8}$ miles.
Tangent of McKeils Point.....	201	44	..	..... $1\frac{1}{4}$ miles.
Near peak of barn.....	251	02	..	..... $\frac{3}{8}$ mile.
Left chimney of house.....	323	30	..	..... $1\frac{3}{4}$ miles.
Center of roof of bungalow on Cherry Island...	354	28	..	..... $\frac{3}{8}$ mile.

SOLOMON.

General locality.—Northern shore of upper Little Choptank River on point west at side of entrance to Solomons Cove about $1\frac{3}{8}$ miles northeast of Town Point. (See Chart No. 37.)

Immediate locality.—Observed station is on marsh point about on level with high water, 1 yard east of shore, 3 yards west of shore, and 5 yards north of extreme end of point. Cement monument marking reference station is 14.34 meters N 2° 39' W of observed station.

Marks.—Observed station is nail in cedar stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	"	
"Lee" (S 72° 38' W).....	0	00	00	7/8 mile.
"Cherry Island Water Tank".....	22	45	50	7/8 mile.
Near chimney of house.....	33	38	..	3/8 mile.
REFERENCE STATION.....	104	42	20	14.34 meters.
Chimney of house.....	124	37	..	1/4 mile.
Right peak of barn.....	201	41	..	1 1/2 miles.
Near peak of barn.....	254	10	..	1/2 mile.
Near peak of barn.....	303	39	..	1/2 mile.
Chimney on near end of house.....	357	56	..	1 1/2 miles.

SETH.

General locality.—Northern shore of upper Little Choptank River opposite entrance to Smiths Cove, and about 1/2 mile east of Solomons Cove. (See Chart No. 37.)

Immediate locality.—Observed station is on marsh point about on level with high water, 3 yards northwest of shore, 5 yards northeast of shore, and 100 yards west-southwest of extreme end of point. Cement monument marking reference station is 24.90 meters N 26° 06' W of observed station.

Marks.—Observed station is nail in cedar stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	"	
"Adam" (S 21° 04' W).....	0	00	00	1/4 mile.
Near peak of barn.....	12	11	..	1/2 mile.
Middle chimney of house.....	14	52	..	1/2 mile.
Chimney on center of house.....	32	07	..	3/4 mile.
Chimney on near end of house.....	54	58	..	2 1/2 miles.
REFERENCE STATION.....	132	50	30	24.90 meters.
Chimney on left end of house.....	181	37	..	3/4 mile.
Chimney on right end of house.....	194	13	..	1 1/4 miles.
Near peak of large house.....	208	17	..	3/4 mile.
Chimney on near end of small house.....	236	50	..	1/2 mile.
Right chimney of house.....	263	57	..	5/8 mile.
Right peak of barn.....	321	40	..	1 mile.

ADAM.

General locality.—Southeastern shore of upper Little Choptank River about 1/8 mile west of entrance to Smith Cove. (See Chart No. 37.)

Immediate locality.—Observed station is on marsh point about on level with high water, 3 yards south of shore, 3 yards southwest of shore, and 6 yards east of shore. Cement monument marking reference station is 27.50 meters S 33° 31' E of observed station.

Marks.—Observed station is nail in cedar stub projecting 5 inches above surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	"	
"Seth" (N 21° 03' E).....	0	00	00	1/4 mile.
Chimney on 1 1/2-story house.....	1	10	..	1 1/8 miles.
Chimney on right end of house.....	11	50	..	1 1/2 miles.
Near peak of large house.....	19	50	..	1 mile.
Chimney on near end of small house.....	42	36	..	1 mile.
Near peak of barn.....	47	07	..	1 mile.
Near peak of barn.....	49	58	..	1 mile.
REFERENCE STATION.....	125	25	30	27.50 meters.
Near peak of barn.....	204	36	..	1/4 mile.
Near chimney of house.....	211	16	..	1/4 mile.
Near peak of barn.....	244	05	..	2 miles.

LAYTON.

General locality.—Southeast shore of Little Choptank River about $\frac{1}{2}$ mile south of Solomons Cove and $1\frac{1}{4}$ miles east-northeast of Town Point. (See Chart No. 37.)

Immediate locality.—Observed station is about 1 foot above high water, 2 yards east of edge of bank 1 foot high, 23 yards west of shore, 24 yards south-southwest of shore, 30 yards northwest of shore, 18 yards north of a graveyard, and 150 yards northeast of a house. Cement monument marking reference station is 17.13 meters S $45^{\circ} 02'$ E of observed station.

Marks.—Observed station is nail in locust stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	'	"	
"Lee" (N $79^{\circ} 26'$ W).....	0	00	00	..... 1 mile.
Right chimney of house.....	3	36	..	..... $1\frac{5}{8}$ miles.
"Cherry Island Water Tank".....	19	34	10	..... 1 mile.
Chimney on center of house.....	82	18	..	..... $\frac{7}{8}$ mile.
Nail in blaze in cedar tree (8 inches diameter).....	108	55	40	..... 3.85 meters.
Chimney on near end of small house.....	144	51	..	..... $1\frac{1}{4}$ miles.
Nail in blaze in cedar tree (6 inches diameter).....	167	51	40	..... 6.40 meters.
Near chimney of house.....	172	50	..	..... $\frac{3}{4}$ mile.
REFERENCE STATION.....	214	23	30	..... 17.13 meters.
Near chimney of house.....	306	53	..	..... 150 yards.
Near peak of barn.....	346	20	..	..... $1\frac{1}{2}$ miles.

DAVID.

General locality.—Southern shore of upper Little Choptank River on point about $\frac{5}{8}$ mile northeast of Town Point and $\frac{3}{8}$ mile southeast of Lee Point. (See Chart No. 37.)

Immediate locality.—Observed station is on a marsh point about on level with high water, 3 yards west of shore, 3 yards east of shore, 3 yards south of extreme end of point, and 100 yards north of pine woods. Cement monument marking reference station is 15.24 meters S $2^{\circ} 58'$ E of observed station.

Marks.—Observed station is a nail in 3-inch pine stub flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	'	"	
"Town" (S $47^{\circ} 24'$ W).....	0	00	00	..... $\frac{5}{8}$ mile.
Tangent of Butter Pot Point.....	12	18	..	..... $1\frac{3}{4}$ miles.
Near peak of barn.....	32	37	..	..... $1\frac{1}{2}$ miles.
Center chimney of house.....	34	46	..	..... $1\frac{3}{8}$ miles.
Near peak of barn.....	49	57	..	..... 1 mile.
Chimney on near end of house.....	93	55	..	..... 2 miles.
Left end of barn roof.....	147	58	..	..... $\frac{5}{8}$ mile.
Near peak of barn.....	203	42	..	..... 2 miles.
REFERENCE STATION.....	309	37	30	..... 15.24 meters.

TOWN.

General locality.—Southeastern shore of Little Choptank River on northeast side of entrance to Fishing Creek on Town Point. (See Chart No. 37.)

Immediate locality.—Observed station is on a small marsh point on the north side of Town Point about 1 foot above high water, 9 yards east of shore, 14 yards southwest of shore, 14 yards south-southeast of extreme end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe with top 2 inches below base of monument.

References.—

	°	'	"	
"Lee" (N 8° 42' E).....	0	00	00	5/8 mile.
Peak of barn showing through trees.....	111	53		5/8 mile.
Tangent of Casons Point.....	236	40		1 3/4 miles.
Near peak of barn.....	268	16		2 miles.
Near peak of large barn.....	270	18		1 mile.
Center chimney of house.....	274	20		1 mile.
Left chimney of house.....	300	39		5/8 mile.
Right chimney of house.....	318	44		1 1/8 miles.
Center chimney of house.....	342	06		1 5/8 miles.
Center of near side of roof of bungalow on Cherry Island.....	356	30		1 mile.

SWEP.

General locality.—Northeastern shore of Fishing Creek about 3/4 mile east-northeast of McKeils Point and 1/4 mile east-southeast of Town Point. (See Chart No. 37.)

Immediate locality.—Observed station is on firm land about 1 foot above high water, 9 yards northeast of shore, 10 yards northwest of shore, 7 yards north of extreme end of point, and 30 yards southwest by south of near corner of a dairy.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Hugh" (S 8° 20' E).....	0	00	00	1/2 mile.
Near chimney of house.....	2	23		1 1/8 miles.
Chimney on right end of house.....	41	48		7/8 mile.
Tangent of McKeils Point.....	75	01		3/4 mile.
Center chimney of house.....	116	11		1 1/4 miles.
Tangent of Town Point.....	116	20		1/4 mile.
Near corner of dairy.....	214	18		30 yards.
Nail in apple tree (10 inches diameter).....	221	54	10	13.14 meters.
Near peak of house.....	301	55		1/4 mile.

HUGH.

General locality.—Eastern shore of Fishing Creek about 3/4 mile southeast of Town Point and 3/4 mile northwest of Windmill Point. (See Chart No. 37.)

Immediate locality.—Observed station is on high marsh about 2 feet above high water, 12 yards northeast of shore, 13 yards southeast of shore, and 17 yards east of extreme end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Etta" (S 64° 09' E).....	0	00	00	1/2 mile.
Near peak of barn.....	136	28		5/8 mile.
Near chimney of house.....	138	34		1/2 mile.
Tangent of McKeils Point.....	168	46		1/2 mile.
Near peak of barn.....	175	17		2 1/2 miles.
Near peak of barn.....	185	52		1 5/8 miles.
Left chimney of house.....	188	25		1 3/8 miles.
Middle chimney of house.....	205	46		1 1/2 miles.
Left chimney of house.....	236	05		1/2 mile.
Nail in blaze in twin dead cedar tree.....	252	02	30	13.64 meters.

ETTA.

General locality.—Northeastern shore of Fishing Creek at east side of entrance to a small creek about $\frac{1}{4}$ mile north of Windmill Point. (See Chart No. 37.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 8 yards east of shore, 9 yards northeast of shore, 11 yards southeast of shore, and 100 yards west of a barn.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	//	
"Mary" (S 11° 38' E)	0	00	00	$\frac{1}{4}$ mile.
Cupola on Brooks barn	28	39	..	$\frac{3}{4}$ mile.
Center of cupola on Brooks workshop	31	45	..	$\frac{3}{4}$ mile.
Right chimney of house	47	13	..	$\frac{5}{8}$ mile.
Left peak of house	96	59	..	1 mile.
Chimney on near end of house	134	04	..	$\frac{1}{8}$ mile.
Near peak of house	144	11	..	$\frac{1}{8}$ mile.
Near peak of large part of house	217	34	..	$\frac{1}{8}$ mile.
Peak of barn	258	47	..	100 yards.

MARY.

General locality.—Northeastern shore of Fishing Creek on Windmill Point, about $1\frac{1}{2}$ miles southeast of Little Choptank River entrance to Fishing Creek. (See Chart No. 37.)

Immediate locality.—Observed station is on a marsh point about 1 foot above high water, 11 yards northwest of shore, 17 yards southeast of shore, and 18 yards east of shore. Cedar stub marking old station "Windmill Point" is 12.60 meters S 82 22' W of observed station.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

		/	//	
"Neil" (S 86° 09' E)	0	00	00	$\frac{5}{8}$ mile.
Near peak of house	23	41	..	$\frac{5}{8}$ mile.
Right chimney of house	30	19	..	$1\frac{1}{8}$ miles.
Right chimney of house	47	26	..	$\frac{5}{8}$ mile.
Right chimney of house	100	37	..	$\frac{1}{2}$ mile.
Left chimney of Brooks house	125	56	..	$\frac{5}{8}$ mile.
Cupola on Brooks workshop	132	58	..	$\frac{5}{8}$ mile.
Right chimney of house	156	43	..	$\frac{1}{2}$ mile.
"Windmill Point" (cedar stub)	168	31	20	12.60 meters.
Near peak of barn	212	09	..	$2\frac{1}{4}$ miles.

NEIL.

General locality.—Northern shore of Fishing Creek about $\frac{5}{8}$ mile east of Windmill Point. (See Chart No. 37.)

Immediate locality.—Observed station is on third marsh point east of Windmill Point about 1 foot above high water, 3 yards north of shore, 5 yards northeast of shore, 5 yards northwest of shore, 70 yards south-southeast of gate to yard of farm house, and 115 yards south of farmhouse. Cement monument marking reference station is 26.10 meters N 5° 41' E of observed station.

Marks.—Observed station is nail in cedar stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	/	//	
"Tom" (S 68° 55' W)	0	00	00	$\frac{3}{4}$ mile.
Cupola on Brooks barn	3	45	..	1 mile.
Center of Brooks workshop cupola	4	35	..	1 mile.
Chimney of house	41	02	..	$\frac{1}{4}$ mile.

References—Continued.

	o	'	"	
Near chimney of house	93	07	..	110 yards.
Cupola on barn	106	02	..	140 yards.
REFERENCE STATION	116	45	30	26.10 meters.
Near chimney of house	185	52	..	3/8 mile.
Near peak of house	199	48	..	1 mile.
Lightning rod on right end of house	307	25	..	1/4 mile.
Near peak of house	351	38	..	7/8 mile.

KIRBY.

General locality.—Northern shore of Fishing Creek opposite entrance to Church Creek about 1 mile east of Windmill Point. (See Chart No. 37.)

Immediate locality.—Observed station is on solid land about 1 foot above high water, 5 yards north of shore, 6 yards northeast of shore, 10 yards east of shore, 45 yards southwest of wire fence, and 125 yards south of a small house. Cement monument marking reference station is 19.99 meters N 5° 25' E of observed station.

Marks.—Observed station is nail in stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of the ground.

References.—

	o	'	"	
"Neil" (S 85° 03' W)	0	00	00	3/8 mile.
Left chimney of large house	9	29	..	3/8 mile.
Cupola on barn	17	20	..	3/8 mile.
Near peak of house	69	50	..	125 yards.
Right chimney of house	79	22	..	1/4 mile.
REFERENCE STATION	100	21	40	19.99 meters.
Near peak of house	162	42	..	1/2 mile.
Two chimneys of house nearly in range	186	31	..	3/4 mile.
Right chimney of house	281	32	..	5/8 mile.
Left chimney of house	327	52	..	3/4 mile.
Center lightning rod of house	332	48	..	1/2 mile.
Cupola on Brooks barn	351	25	..	1 3/8 miles.

PAUL (LITTLE CHOPTANK RIVER).

General locality.—Northern shore of Fishing Creek, about 1 1/8 miles northeast of Deep Water Point. (See Progress map.)

Immediate locality.—Observed station is near edge of a garden about 1 foot above high water, 8 yards north of shore, 10 yards west of shore, 13 yards northeast of shore, and 40 yards southeast of a 1 1/2-story house. Cement monument marking reference station is 8.53 meters N 28° 53' W of observed station.

Marks.—Observed station is nail in locust stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	'	"	
"Neil" (S 76° 32' W)	0	00	00	1 1/8 miles.
Cupola on barn	7	37	..	1 1/2 miles.
Near corner of house	47	49	..	40 yards.
REFERENCE STATION	74	35	00	8.53 meters.
Near chimney of house	168	51	..	1/2 mile.
Near peak of barn	190	58	..	1 1/2 miles.
Right chimney of house	243	15	..	1/2 mile.
Near peak of barn	258	13	..	1/2 mile.
Near peak of barn	321	55	..	1 1/8 miles.
Left chimney of house	343	18	..	1 3/8 miles.
Near peak of house	352	35	..	1 3/4 miles.
Cupola on Brooks barn	358	14	..	2 miles.

CHURCH CREEK (NO. 1 WEST).

General locality.—Western shore of Church Creek, about $\frac{3}{8}$ mile south of Fishing Creek. (See Chart No. 37.)

Immediate locality.—Observed station is near edge of cultivated land about 2 feet above high water, 3 yards south of shore, 20 yards northwest of shore, and 30 yards east of extreme end of point. Cement monument marking reference station is 14.60 meters S $4^{\circ} 47'$ W of observed station.

Marks.—Observed station is nail in stub projecting 2 inches above surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

<i>References.</i> —	o	'	"	
"Kirby" (N $1^{\circ} 27'$ W).....	0	00	00	..... $\frac{5}{8}$ mile.
Near peak of left one of two barns.....	26	38	..	..... 1 mile.
Near peak of barn.....	41	32	..	..... 1 mile.
Chimney of $1\frac{1}{2}$ -story house.....	131	24	..	..... $\frac{1}{2}$ mile.
REFERENCE STATION.....	186	13	40	..... 14.60 meters.
Chimney on near end of house.....	228	21	..	..... 200 yards.
Chimney on left end of house.....	300	05	..	..... $\frac{1}{2}$ mile.
Right chimney of large house.....	326	54	..	..... $\frac{3}{4}$ mile.
Chimney on left end of $1\frac{1}{2}$ -story house.....	356	27	..	..... $\frac{5}{8}$ mile.

AUSTIN.

General locality.—Southern shore of Fishing Creek, on a point about $\frac{5}{8}$ mile east-southeast of Windmill Point. (See Chart No. 37.)

Immediate locality.—Observed station is at edge of young orchard about 3 feet above high water, 18 yards south of shore, 35 yards southwest of shore, 2 yards southwest of edge of bank next to marsh, 10 yards east of edge of bank, and 75 yards north-northwest of near corner of a two-story house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

<i>References.</i> —	o	'	"	
"Tom" (S $86^{\circ} 17'$ W).....	0	00	00	..... $\frac{5}{8}$ mile.
Left chimney of house.....	9	38	..	..... 1 mile.
Left chimney of house.....	108	10	..	..... $\frac{1}{4}$ mile.
Chimney on left end of house.....	149	11	..	..... $\frac{1}{2}$ mile.
Near peak of $1\frac{1}{2}$ -story house.....	158	55	..	..... $1\frac{1}{8}$ miles.
Near peak of house.....	172	21	..	..... 1 mile.
Nail in blaze in persimmon tree (10 inches diameter).....	213	14	50	..... 4.86 meters.
Near corner of house.....	237	36	..	..... 75 yards.
Near peak of house.....	347	06	..	..... $\frac{3}{4}$ mile.
Cupola on Brooks barn.....	358	49	..	..... $\frac{7}{8}$ mile.
Center of cupola on Brooks workshop.....	359	18	..	..... $\frac{7}{8}$ mile.

TOM.

General locality.—Southwestern shore of Fishing Creek, on a point of land between two coves, about $\frac{1}{4}$ mile south of Windmill Point, and $1\frac{1}{2}$ miles southeast of Little Choptank River. (See Chart No. 37.)

Immediate locality.—Observed station is on a marsh point about 1 foot above high water, 9 yards southwest of end of point, and 10 yards southeast of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—	°	'	"	
"Brooks" (S 89° 03' W).....	0	00	00	..... ¼ mile.
Left chimney of house.....	20	00	..	..... ¾ mile.
Near peak of barn.....	58	43	..	..... 2¾ miles.
Chimney on middle of house.....	145	02	..	..... ⅝ mile.
Chimney on left end of large house.....	154	12	..	..... ¾ mile.
Chimney on near end of house.....	162	17	..	..... 1⅝ miles.
Center lightning rod on large house.....	181	03	..	..... ⅝ mile.
Near chimney of house.....	205	55	..	..... ½ mile.
Center of cupola on barn.....	288	51	..	..... ⅞ mile.
Left chimney of house.....	300	30	..	..... 125 yards.
Cupola on Brooks barn.....	353	38	..	..... ¼ mile.
Center of cupola on Brooks workshop.....	355	15	..	..... ¼ mile.

BROOKS.

General locality.—Southwestern shore of Fishing Creek, near Brooks shipyard, about ½ mile southwest of Windmill Point. (See Chart No. 37.)

Immediate locality.—Observed station is on marsh about 8 yards south of shore, 11 yards southeast of shore, 15 yards northeast of shore, and 50 yards north by west of northeast end of large workshop.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—	°	'	"	
"Doctor" (N 2° 28' E).....	0	00	00	..... ¾ mile.
Near peak of barn.....	26	34	..	..... ¾ mile.
Cupola on center of large barn.....	66	29	..	..... 1 mile.
Left chimney of large house.....	68	35	..	..... 1 mile.
Near peak of house.....	77	38	..	..... 2 miles.
Lightning rod on near end of house.....	87	10	..	..... 1 mile.
Chimney on near end of house.....	103	31	..	..... 100 yards.
Weather vane on barn cupola.....	127	20	..	..... 75 yards.
Cupola on workshop.....	182	11	..	..... 45 yards.
Chimney on near end of house.....	328	00	..	..... ⅞ mile.

DOCTOR.

General locality.—Western shore of Fishing Creek on a prominent point about 1 mile southeast of Little Choptank River. (See Chart No. 37.)

Immediate locality.—Observed station is on sand and marsh about 1 foot above high water, 30 yards southwest of shore, 30 yards northwest of shore, and 25 yards west of extreme end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—	°	'	"	
"Eleanor" (N 81° 04' W).....	0	00	00	..... ½ mile.
Tangent of McKeils Point.....	32	51	..	..... ⅞ mile.
Middle dormer window of house.....	34	24	..	..... 2 miles.
Near peak of barn.....	50	52	..	..... 2 miles.
Left chimney of house.....	111	40	..	..... ¾ mile.
Right chimney of house.....	131	21	..	..... ½ mile.
Near peak of barn.....	193	51	..	..... 1 mile.
Left chimney of house.....	209	16	..	..... 1 mile.
Right chimney of house.....	252	13	..	..... ¾ mile.
Weather vane on barn cupola.....	257	22	10	..... ¾ mile.
Cupola on Brooks workshop.....	263	41	..	..... ¾ mile.

ELEANOR.

General locality.—Southwestern shore of Fishing Creek about $\frac{5}{8}$ mile south-southeast of McKeils Point, and 1 mile south of Town Point. (See Chart No. 37.)

Immediate locality.—Observed station is on sandy land at edge of woods about 10 yards southwest by south of shore, 15 yards west-northwest of shore, 28 yards west-southwest of extreme end of small marsh point, and 70 yards west-northwest of shore end of fence extending into water at a marsh point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of the ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Laney" (N 14° 32' W).....	0	00	00	..... $\frac{1}{2}$ mile.
"Cherry Island Water Tank".....	19	14	20	..... $2\frac{1}{8}$ miles.
Middle dormer window of house.....	34	35	..	..... 1 mile.
Near peak of barn.....	37	51	..	..... 1 mile.
Left chimney of house.....	48	56	..	..... 1 mile.
Right chimney of house.....	85	35	..	..... $\frac{7}{8}$ mile.
Right end of barn roof.....	94	16	..	..... 1 mile.
Nail in blaze in cedar tree (10 inches diameter).....	201	41	00	..... 17.95 meters.
Nail in blaze in cedar tree (10 inches diameter).....	288	22	20	..... 6.70 meters.
Nail in blaze in cedar tree (6 inches diameter).....	315	02	00	..... 8.40 meters.
Near peak of house.....	355	30	..	..... $\frac{1}{4}$ mile.

LANEY.

General locality.—Southeastern shore of Little Choptank River on southwestern side of entrance to Fishing Creek on the northeast end of McKeils Point. (See Chart No. 37.)

Immediate locality.—Observed station is on a marsh point 35 yards southeast of shore, 50 yards north-west of shore, and 35 yards south-southwest of extreme end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Mac" (S 77° 08' W).....	0	00	00	..... $\frac{1}{4}$ mile.
Chimney of house.....	34	50	..	..... 2 miles.
Near peak of barn.....	54	23	..	..... 1 mile.
Left chimney of house.....	83	48	..	..... $1\frac{1}{8}$ miles.
Center of roof of bungalow on Cherry Island... 112	23	..	..... $1\frac{5}{8}$ miles.	
"Cherry Island Water Tank".....	113	38	30	..... $1\frac{5}{8}$ miles.
Near peak of barn.....	152	37	..	..... $\frac{5}{8}$ mile.
Right chimney of house.....	231	03	..	..... $1\frac{3}{4}$ miles.
Cupola on barn.....	247	50	..	..... $1\frac{1}{8}$ miles.
Near chimney of house.....	273	13	..	..... $\frac{1}{4}$ mile.

MAC.

General locality.—Southeastern shore of Little Choptank River on northeast side of Tobacco Stick Bay on McKeils Point. (See Chart No. 37.)

Immediate locality.—Observed station is on west side of McKeils Point about 3 feet above high water, 16 yards east of edge of bank, 20 yards southeast of edge of bank, 25 yards northeast of edge of bank, and 150 yards south-southwest of extreme end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Madison Southern M. E. Church Spire" (S 4° 37' E).....	0	00	00	1 7/8 miles.
Spire of M. P. Church at Madison.....	1	28	10	1 7/8 miles.
Tangent of Casons Point.....	89	42	..	1 1/8 miles.
Center chimney of house.....	103	58	..	2 3/4 miles.
Near peak of house.....	113	03	..	1 1/2 miles.
Chimney on center of house.....	117	11	..	1 5/8 miles.
Near peak of large barn.....	140	40	..	1 1/8 miles.
Near peak of barn.....	147	24	..	1 3/8 miles.
Near peak of barn.....	151	55	..	1 mile.
Left chimney of house.....	155	45	..	1 mile.
Center of near side of roof of bungalow on Cherry Island.....	203	35	..	1 3/4 miles.
Right chimney of house.....	242	57	..	7/8 mile.
Near corner of house.....	302	24	..	5/8 mile.

MADISON SOUTHERN M. E. CHURCH SPIRE.

General locality.—Southern shore of Little Choptank River in the town of Madison at the head of Tobacco Stick Bay. (See Chart No. 37.)

Immediate locality.—Observed station is on structure known as Southern M. E. Church, which is the tallest of three spires in the town of Madison.

Marks.—Observed station is spire on Southern M. E. Church.

References.—None necessary.

TOBACCO STICK.

General locality.—Southern shore of Little Choptank River on the northern end of point between Woolford Creek and Tobacco Stick Bay. (See Chart No. 37.)

Immediate locality.—Observed station is about in the center of a shell pile near end of point about 1 foot above high water, 13 yards southeast of shore, 14 yards south of shore, and 30 yards southwest of shore. Cement monument marking reference station is 21.35 meters S 29° 34' E of observed station and about in range with Madison Southern M. E. Church Spire. Four-inch tile pipe marking old reference station is 2.84 meters N 76° 30' E of observed station.

Marks.—Observed station is nail in 6-inch cedar stub with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Old reference station is 4-inch tile pipe set in cement.

References.—

	°	'	"	
"Madison Southern M. E. Church Spire" (S. 29° 53' E).....	0	00	00	1 3/4 miles.
NEW REFERENCE STATION (CEMENT MONU- MENT).....	0	18	10	21.35 meters.
Right end of roof of cannery.....	8	49	..	1 mile.
Tangent of James Point.....	122	14	..	5 1/2 miles.
Chimney on left end of house.....	165	56	..	1 3/8 miles.
Chimney on left end of house.....	189	40	..	3 miles.
Near peak of barn.....	211	16	..	1 5/8 miles.
"Cherry Island Water Tank".....	234	58	50	2 3/4 miles.
Tangent of McKeils Point.....	240	46	..	1 mile.
OLD REFERENCE STATION (TILE PIPE).....	286	22	50	2.84 meters.
Near peak of old barn.....	344	51	..	2 miles.

WOOL.

General locality.—Southeastern shore of Little Choptank River on Susquehanna Point $\frac{1}{4}$ mile west of entrance to Woolford Creek. (See Chart No. 37.)

Immediate locality.—Observed station is on sand and marsh land about 1 foot above high water, 10 yards south of shore, 17 yards southwest of shore, and 22 yards east of shore. Cement monument marking reference station is 24.03 meters S $18^{\circ} 12'$ E of observed station. Four-inch tile pipe marking old reference station is 27.12 meters S $58^{\circ} 31'$ W of observed station.

Marks.—Observed station is nail in center of 4-inch tile pipe set in cement with top flush with surface of ground. Reference station is center of point of triangle on standard cement monument projecting 4 inches above surface of ground. Old reference station is nail in center of 4-inch tile pipe set in cement projecting about 3 inches above surface of ground.

References.—

	o	'	"	
"Veith" (S $55^{\circ} 49'$ W).....	0	00	00	..... $2\frac{3}{8}$ miles.
OLD REFERENCE STATION (TILE PIPE).....	2	41	30	..... 27.12 meters.
Near peak of large house on Hooper Point...	3	25	..	..... $2\frac{1}{2}$ miles.
Near peak of house.....	26	27	..	..... $4\frac{7}{8}$ miles.
Tangent of northeast end of James Island....	39	27	..	..... $4\frac{3}{4}$ miles.
Right chimney of house.....	70	08	..	..... 2 miles.
Left chimney of $1\frac{1}{2}$ -story house.....	106	10	..	..... $1\frac{1}{4}$ miles.
Near peak of barn.....	136	18	..	..... $2\frac{1}{8}$ miles.
Left chimney of house.....	147	47	..	..... 2 miles.
"Cherry Island Water Tank".....	159	33	00	..... $3\frac{1}{4}$ miles.
Right chimney of house.....	285	27	..	..... $\frac{1}{2}$ mile.
NEW REFERENCE STATION (CEMENT MONU- MENT).....	285	58	40	..... 24.03 meters.

POV.

General locality.—Southern shore of Little Choptank River on extreme end of point about $\frac{1}{4}$ mile north of entrance to Parsons Creek about 2 miles south-southeast of Ragged Island, and $1\frac{1}{4}$ miles east of Hooper Point. (See Charts Nos. 37 and 38.)

Immediate locality.—Observed station is on a marsh point about 1 foot above high water, 4 yards south of shore, 4 yards southeast of shore, and 8 yards southwest of shore. Tile pipe marking old reference station is 64.66 meters S $65^{\circ} 17'$ E of observed station. Cement monument marking new reference station is 31.15 meters S $23^{\circ} 40'$ E of observed station.

Marks.—Observed station is center of 4-inch tile pipe projecting 12 inches above surface of ground. Old reference station is nail in center of 4-inch tile pipe set in cement. New reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	'	"	
"Hudson" (N $19^{\circ} 04'$ E).....	0	00	00	..... $2\frac{3}{8}$ miles.
Chimney on near peak of house.....	60	38	..	..... $\frac{3}{8}$ mile.
Chimney on right end of same house.....	61	49	..	..... $\frac{3}{8}$ mile.
Right chimney of house.....	95	10	..	..... $\frac{1}{4}$ mile.
OLD REFERENCE STATION (TILE PIPE).....	95	39	20	..... 64.66 meters.
Near peak of barn.....	100	50	..	..... $\frac{1}{4}$ mile.
NEW REFERENCE STATION (MONUMENT)....	137	15	40	..... 31.15 meters.
Near peak of large house.....	246	47	..	..... $1\frac{1}{2}$ miles.
Near peak of house.....	258	48	..	..... 4 miles.
Chimney of house.....	263	44	..	..... 4 miles.
Chimney on left end of house.....	328	17	..	..... $2\frac{3}{4}$ miles.
Left side of $1\frac{1}{2}$ -story house.....	352	08	..	..... $2\frac{3}{8}$ miles.

NOBLEE.

General locality.—Eastern side of Slaughter Creek about ½ mile northeast of Slaughter Creek Bridge, and ⅞ mile inshore. (See Chart No. 38.)

Immediate locality.—Observed station is in edge of cultivated field on south side of road leading from Madison to Taylor Island, about 250 yards east of shore, 3 yards south of wire fence between field and road, 85 yards west-southwest of farm boundary stone in fence corner near road, and 135 yards east-northeast of barn on same side of road as station.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Finish" (S 14° 52' W).....	0	00	00	..... ⅝ mile.
Near peak of barn.....	7	23	..	..... ⅞ mile.
Right chimney of house.....	13	22	..	..... ⅞ mile.
Center of canning house ventilators.....	19	39	..	..... ⅞ mile.
Center of draw of Slaughter Creek Bridge....	33	58	..	..... ½ mile.
Near peak of Taylor Island wharf house....	36	18	..	..... ½ mile.
Near peak of store at Taylor Island.....	42	16	..	..... ⅞ mile.
Near peak of barn.....	44	41	..	..... 135 yards.
Nail in blaze in cedar tree (4 inches diam- eter).....	65	07	30	..... 15.98 meters.
Near chimney of house.....	99	02	..	..... 250 yards.
Spindle on barn cupola.....	116	56	..	..... 250 yards.
Near chimney of house.....	175	04	..	..... ⅝ mile.
Near peak of house.....	201	47	..	..... 1 mile.
Middle chimney of house.....	315	01	..	..... ¼ mile.

FINISH.

General locality.—Eastern shore of Slaughter Creek about ⅜ mile southeast of Slaughter Creek Bridge. (See Chart No. 38.)

Immediate locality.—Observed station is in corner of cultivated field, about 50 yards east of shore, 12 yards east of wire fence between field and marsh, 14 yards north of wire fence between field and woods, and 17 yards northeast of fence corner.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Taylor" (S 87° 18' W).....	0	00	00	..... ⅜ mile.
Taller stack of canning house at Taylor Island.	21	10	..	..... ½ mile.
Near peak of large dwelling at Taylor Island.	29	09	..	..... ½ mile.
Left chimney of house nearest Slaughter Creek Bridge.....	36	42	..	..... ½ mile.
Near peak of Taylor Island wharf house....	49	57	..	..... ⅜ mile.
Center of draw of Slaughter Creek Bridge....	51	00	..	..... ⅜ mile.
Near peak of old canning house.....	82	10	..	..... ⅜ mile.
Near peak of barn.....	105	31	..	..... ⅝ mile.
Nail in blaze in pine tree (8 inches diameter).	225	56	10	..... 20.18 meters.
Nail in blaze in pine tree (12 inches diameter)	246	19	10	..... 16.15 meters.
Nail in blaze in pine tree (8 inches diameter).	294	38	50	..... 19.55 meters.

TAYLOR.

General locality.—Western shore of Slaughter Creek about $\frac{1}{4}$ mile south of Slaughter Creek Bridge. (See Chart No. 38.)

Immediate locality.—Observed station is on hard land at edge of marsh about 1 foot above high water, 22 yards northwest of shore, 28 yards southwest of shore, and 29 yards west of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

<i>References.</i> —	o	'	"	
"Harrington" (N 2° 37' E).....	0	00	00	..... $\frac{3}{4}$ mile.
Left side of Taylor Island wharf house.....	8	46	..	..... $\frac{1}{4}$ mile.
Spindle on cupola on barn.....	23	35	..	..... $\frac{3}{4}$ mile.
Near peak of barn.....	30	50	..	..... $\frac{3}{4}$ mile.
Near peak of old canning house.....	37	40	..	..... $\frac{3}{8}$ mile.
Left chimney of large house.....	38	34	..	..... $\frac{1}{2}$ mile.
Near peak of barn.....	50	14	..	..... $\frac{5}{8}$ mile.
Nail in blaze in pine tree (5 inches diameter).....	180	39	30	..... 10.27 meters.
Nail in blaze in pine tree (5 inches diameter).....	252	27	30	..... 5.83 meters.
Near peak of house.....	275	43	..	..... $\frac{3}{8}$ mile.
Taller stack of canning house at Taylor Island.....	311	10	..	..... $\frac{3}{8}$ mile.
Left chimney of house nearest Slaughter Creek Bridge.....	344	59	..	..... $\frac{1}{4}$ mile.
Nail in blaze in pine tree (4 inches diameter).....	302	46	40	..... 4.35 meters.

HARRINGTON.

General locality.—Western shore of Slaughter Creek about $\frac{3}{8}$ mile north of Slaughter Creek Bridge. (See Chart No. 38.)

Immediate locality.—Observed station is on a marsh point at south side of entrance to a creek about on level with high water, 20 yards southwest of shore, 26 yards northwest of shore, 27 yards west of extreme end of point, and 300 yards southeast of a house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

<i>References.</i> —	o	'	"	
"Whitewash" (N 22° 53' E).....	0	00	00	..... $\frac{7}{8}$ mile.
Chimney on near end of house.....	24	52	..	..... $\frac{3}{4}$ mile.
Spindle on cupola on barn.....	60	29	..	..... $\frac{3}{8}$ mile.
Near peak of barn.....	81	00	..	..... $\frac{1}{2}$ mile.
Near peak of barn.....	115	46	..	..... $\frac{3}{8}$ mile.
Near peak of old canning house.....	124	48	..	..... $\frac{1}{2}$ mile.
Center of draw of Slaughter Creek Bridge....	149	55	..	..... $\frac{3}{8}$ mile.
Near gable of house nearest west end of Slaughter Creek Bridge.....	169	26	..	..... $\frac{1}{2}$ mile.
Taller stack of canning house at Taylor Island.....	181	26	..	..... $\frac{1}{2}$ mile.
Left chimney of house.....	282	29	20	..... 300 yards.

TRAVERS 2.

General locality.—Eastern shore of Chesapeake Bay on western side of Taylor Island about 4 miles south of James Point. (See Chart No. 38.)

Immediate locality.—Observed station is about 4 feet above high water in a field which was once under cultivation but is now covered with water bushes, about 40 yards east of shore and 15 feet north of a wire fence which starts at the shore and runs east. A stone used as an old reference mark stands 9.41 meters N 26° 53' E of observed station, and the cement monument marking new reference station is 9.52 meters N 77° 20' W of observed station.

Marks.—Observed station is a granite post projecting above the ground with crosslines running approximately north to south and east to west. New reference station is center point of triangle on standard cement monument. Old reference station is a cross on a granite post projecting above the ground with one of the crosslines running in the direction of Cove Point Light.

References.—

	o	'	"	
"Cove Point Light" (S 26° 15' W).....	0	00	00	6½ miles.
Governors Run Wharf.....	77	12		9½ miles.
Tangent of woods at water's edge.....	123	40		½ mile.
Near peak of 2-story house.....	173	23		¼ mile.
OLD REFERENCE STONE (GRANITE POST).....	180	38	20	9.41 meters.
Chimney of 1½-story house.....	195	47		¼ mile.
NEW REFERENCE STATION (CEMENT MONU- MENT).....	256	24	50	9.52 meters.
Near corner of small cabin.....	271	32		¼ mile.
Near chimney of house among trees.....	300	54		½ mile.
Near peak of small house.....	304	54		¾ mile.

DUNNOCK.

General locality.—Eastern shore of Chesapeake Bay about 5¼ miles east of Cove Point Light, and 2⅞ miles north-northwest of north end of Barren Island. (See Chart No. 38.)

Immediate locality.—Observed station is on a marsh about 1 foot above high water, 70 yards from shore in line with Cedar Point Light, 108 yards from shore in line with Cove Point Light, and 250 yards from a clump of woods at shore known locally as "Cattle Island Woods." Cement monument marking reference station is 35.18 meters N 88° 14' E of observed station and nearly in line with Cove Point Light.

Marks.—Observed station is center of 2-inch tile pipe projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument projecting 6 inches above surface of ground.

References.—

	o	'	"	
"Cedar Point Light" (S 36° 47' W).....	0	00	00	7⅝ miles.
Roof of house.....	43	41		6 miles.
Flagstaff at Cove Point Light.....	51	21		5¼ miles.
"Cove Point Light".....	51	33	40	5¼ miles.
"Point of Rocks".....	67	13	10	7¼ miles.
Near peak of barn.....	168	39		½ mile.
Chimney of house.....	172	34		½ mile.
REFERENCE STATION.....	231	26	40	35.18 meters.
Peak of barn.....	241	08		1¼ miles.
Chimney of house.....	256	20		1½ miles.

COVE POINT LIGHT.

General locality.—Western shore of Chesapeake Bay on Cove Point about 5 miles north of entrance to Patuxent River. (See Chart No. 38.)

Immediate locality.—Observed station is on tower known as "Cove Point Light," which is near a detached dwelling and a detached fog-signal house.

Marks.—Observed station is center point of lantern on Cove Point Light.

References.—

	°	'	"	
"Cedar Point Light" (S 7° 16' E).....	0	00	00	..... 6 miles.

POINT OF ROCKS.

General locality.—Western shore of Chesapeake Bay on Point of Rocks, about $2\frac{3}{4}$ miles northwest of Cove Point Light. (See Chart No. 38.)

Immediate locality.—Observed station is in dense woods on a bluff about 90 feet high, 5 yards west of edge at extreme point, 8 yards south of edge of bluff, and 5 yards northwest of edge of bluff. Cement monument marking reference station is 9.42 meters S 66° 44' W of observed station.

Marks.—Observed station is nail in center of round stake 4 inches in diameter with top flush with surface of ground driven into a 6-inch tile pipe with top 6 inches below surface of ground. Subsurface mark was reported in 1898 as a 6-inch tile pipe buried with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	"	
"Cove Point Light" (S 43° 26' E).....	0	00	00	..... $2\frac{3}{4}$ miles.
Center nail in blaze of tree (13 inches diameter).....	19	19	40	..... 5.64 meters.
Center nail in blaze of tree (13 inches diameter).....	90	05	30	..... 5.62 meters.
REFERENCE STATION.....	110	09	30	..... 9.42 meters.
Nail in blaze in tree (9 inches diameter).....	126	35	40	..... 4.16 meters.
Right tangent Governors Run Wharf.....	186	20	20	..... $7\frac{1}{2}$ miles.
Tangent of main woods.....	249	57	..	..... $8\frac{1}{2}$ miles.
Left peak of large house.....	297	45	20	..... 6 miles.
North peak of large house.....	312	17	30	..... $6\frac{3}{4}$ miles.

CEDAR POINT LIGHT.

General locality.—Western shore of Chesapeake Bay on Cedar Point at south side of entrance to Patuxent River, about $3\frac{1}{4}$ miles east-southeast of Drum Point Light and 6 miles south by east of Cove Point Light. (See Chart No. 39.)

Immediate locality.—Observed station is on a square tower on a square brick dwelling known as Cedar Point Lighthouse.

Marks.—Observed station is center point of lantern on Cedar Point Lighthouse.

References.—

	°	'	"	
"Cove Point Light" (N 7° 16' W).....	0	00	00	..... 6 miles.

HOOPER ISLAND LIGHT.

General locality.—Eastern side of Chesapeake Bay offshore about $3\frac{1}{2}$ miles west of Hoopers Island, and 4 miles south of Barren Island. (See Chart No. 39.)

Immediate locality.—Observed station is on Hoopers Island Lighthouse.

Marks.—Observed station is center point of lantern on conical tower on cylindrical foundation, known as Hooper Island Lighthouse.

References.—

	°	'	"	
"Cedar Point Light" (N 65° 04' W).....	0	00	00	..... 7 miles.

SOUTH.

General locality.—Eastern side of Chesapeake Bay on western shore of Barren Island, about $4\frac{3}{4}$ miles north of Hooper Island Light and 6 miles east of Cedar Point Light. (See Chart No. 39.)

Immediate locality.—Observed station is on sandy marsh about 1 foot above high water and 4 yards east of rapidly washing shore. Cement monument marking reference station is 101.21 meters N $72^{\circ} 40'$ E of observed station.

Marks.—Observed station is nail in cedar stub about 8 inches in diameter and 4 feet long with top projecting about 20 inches above surface of ground. Reference station is center point of triangle on standard cement monument projecting 6 inches above surface of ground. "South Secondary" is marked the same as the observed station except top was badly burned, only projecting 3 inches above surface of ground.

References.—

	o	'	"	
"Hooper Island Light" (S $8^{\circ} 10'$ E)	0	00	00	. . . . . $4\frac{3}{4}$ miles.
"Cedar Point Light"	80	50	20	. . . . . 6 miles.
Tangent to Hog Point	90	00	..	. . . . . $7\frac{1}{2}$ miles.
"Cove Point Light"	131	08	10	. . . . . $7\frac{3}{4}$ miles.
Tangent of shore north of station	170	00	..	. . . . . 1 mile.
REFERENCE STATION (CEMENT MONUMENT)	260	50	50	. . . . . 101.21 meters.
"SOUTH SECONDARY" (CEDAR STUB)	260	50	50	. . . . . 100.25 meters.
Left chimney of house	301	39	..	. . . . . $2\frac{1}{8}$ miles.
Dead pine tree	346	57	..	. . . . . 90 yards.

NORTH.

General locality.—Eastern side of Chesapeake Bay on western shore of Barren Island about $\frac{3}{8}$ mile south of north end of island and 7 miles east-southeast of Cove Point Light. (See Chart No. 39.)

Immediate locality.—Observed station is on hard land surrounded by water bushes and scrub pines about 2 feet above high water, and 50 yards east-southeast of point where three large pine trees stand near shore. Cement monument marking reference station is 48.71 meters N $72^{\circ} 39'$ E of observed station.

Marks.—Observed station is center one of four nails in cedar stub 8 inches in diameter and 4 feet in length with top projecting about 8 inches above surface of ground. Reference station is center point of triangle on standard cement monument projecting 3 inches above surface of ground. Station called "North Secondary" is marked the same as the observed station except the top of cedar post is about 18 inches above surface of ground.

References.—

	o	'	"	
"Cove Point Light" (N $64^{\circ} 08'$ W)	0	00	00	. . . . . 7 miles.
Near peak of house	54	47	..	. . . . . $2\frac{1}{8}$ miles.
Nail in blaze in pine tree (6 inches diameter)	74	57	50	. . . . . 8.18 meters.
Nail in blaze in pine tree (8 inches diameter)	116	17	20	. . . . . 14.15 meters.
Nail in blaze in pine tree (5 inches diameter)	132	36	10	. . . . . 9.99 meters.
REFERENCE STATION (CEMENT MONUMENT)	136	47	00	. . . . . 48.71 meters.
NORTH SECONDARY (CEDAR STUB)	136	47	00	. . . . . 49.95 meters.
Nail in blaze in pine tree (5 inches diameter)	186	10	20	. . . . . 5.98 meters.
"Cedar Point Light"	306	08	30	. . . . . $6\frac{1}{4}$ miles.

MINT.

General locality.—Eastern shore of Tar Bay on Charity Point at north side of entrance to Fishing Creek, about $\frac{5}{8}$ mile west of Fishing Creek bridge, and $1\frac{5}{8}$ miles east of north end of Barren Island. (See Chart No. 39.)

Immediate locality.—Observed station is on shell bank about 4 feet above high water, 2 yards east of shore, 11 yards southwest of small wild cherry tree, 13 yards west-southwest of another small wild cherry tree, and just west of a dense growth of small trees and brush. Cement monument marking reference station is 21.85 meters N $52^{\circ} 05'$ E of observed station.

Marks.—Observed station is center of 4-inch tile pipe with top 7 inches below surface of ground. Subsurface mark is center of 4-inch tile pipe buried with top 2 inches below base of surface pipe. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	/	//	
"Hosier Memorial Church Spire" (S 21° 24' E)	0	00	00	1 1/8 miles.
"Mt. Zion M. E. Church Spire"	6	41	50	2 1/4 miles.
Chimney on middle of house	7	52	..	1 1/2 miles.
"Hooper Island Light"	27	22	10	6 1/4 miles.
Near peak of house	58	05	..	1 1/2 miles.
Chimney on outside of near end of 2-story house	64	06	..	1 1/2 miles.
Chimney of shanty	72	50	..	1 1/2 miles.
Tangent of north end of Barren Island	112	00	..	1 1/2 miles.
Red Beacon	122	25	20	1 1/2 miles.
Black Beacon	123	37	40	1 1/2 miles.
"Cove Point Light"	130	29	40	8 1/4 miles.
Left tangent of Cattle Island woods	160	00	..	4 miles.
Nail in blaze in wild cherry tree (3 inches diameter)	233	20	00	10.34 meters.
REFERENCE STATION	253	28	50	21.85 meters.
Nail in blaze in wild cherry tree (5 inches diameter)	266	50	10	11.86 meters.
Left chimney of large 2-story house	356	07	..	7/8 mile.

KEENES.

General locality.—Eastern shore of Honga River on Keenes Point, about 1 1/4 miles north-northeast of Fishing Creek Bridge and 3/4 mile east of Cedar Point. (See Charts Nos. 39 and 40.)

Immediate locality.—Observed station is on marsh with dense growth of water bushes alongshore, about 1 foot above high water, 20 yards north of shore, 30 yards east of shore, and 35 yards south of cultivated land.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	//	
"Kerwin" (S 79° 28' E)	0	00	00	1 1/2 miles.
Near peak of barn	159	38	..	1 mile.
Chimney on right end of house	161	04	..	1 mile.
Near peak of barn	196	20	..	2 miles.
Left tangent of trees along edge of cultivated land	211	00	..	65 yards.
Center one of group of three large pine trees	282	14	..	1/2 mile.
Right tangent of trees along edge of cultivated land	344	00	..	60 yards.

GUNNERS.

General locality.—Western shore of Honga River on Gunners Island on point at northern side of entrance to Gunners Cove, about 5/8 mile north of Long Point and 1 1/8 miles southeast of Fishing Creek Bridge. (See Charts Nos. 39 and 40.)

Immediate locality.—Observed station is on a marsh with water bushes alongshore, about 1 foot above high water, 23 yards southwest of shore, 28 yards south of shore, 70 yards northwest of extreme end of point, and 170 yards northeast of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting about 3 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Kerwin" (N 38° 20' E).....	o	oo	oo	..... 2 miles.
Near peak of barn.....	52	33	..	..... 2½ miles.
Chimney on left end of house.....	78	15	..	..... 2 miles.
Right tangent to Wroten Island.....	112	37	..	..... 1½ miles.
Center of draw of bridge.....	134	43	..	..... 2⅞ miles.
"Mount Zion M. E. Church Spire".....	170	44	30	..... 1¾ miles.
Left edge of house.....	239	35	..	..... 1⅞ miles.
Near peak of house.....	247	12	..	..... 1⅞ miles.
Center of draw of Fishing Creek Bridge.....	274	40	..	..... 1⅞ miles.
Right edge of old windmill.....	275	13	..	..... 1¼ miles.
Near peak of small house.....	279	50	..	..... 1¼ miles.

HOSIER MEMORIAL CHURCH SPIRE.

General locality.—Eastern shore of Tar Bay on Upper Hooper Island, about 5⅜ miles north by east of Hooper Island Light and 1 mile south of Fishing Creek. (See Charts Nos. 39 and 40.)

Immediate locality.—Observed station is on a church known as Hosier Memorial Church.

Marks.—Observed station is center of spire.

References.—None necessary.

MOUNT ZION M. E. CHURCH SPIRE.

General locality.—Eastern shore of Tar Bay on Upper Hooper Island, about 1¼ miles northwest of Ferry Point and 2 miles south of entrance to Fishing Creek. (See Charts Nos. 39 and 40.)

Immediate locality.—Observed station is on a church known as Mount Zion M. E. Church.

Marks.—Observed station is center of spire on Mount Zion M. E. Church.

References.—None necessary.

BRIDGE.

General locality.—Eastern shore of Chesapeake Bay and western shore of Honga River on Ferry Point at southern end of Upper Hooper Island, about 3¾ miles northeast by north of Hooper Island Light. (See Charts Nos. 39 and 40.)

Immediate locality.—Observed station is on a marsh point, about 1 foot above high water, 50 yards west of river shore, 55 yards south of river shore, 85 yards east of shore of bay, 75 yards northeast by north of second telephone pole north of bridge, and 80 yards north-northeast of bridge tender's cabin.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Mount Zion M. E. Church Spire" (N 44°				
47' W).....	o	oo	oo	..... 1⅝ miles.
Near peak of oyster house.....	13	28	..	..... 1½ miles.
"Hosier Memorial Church Spire".....	14	59	oo	..... 2⅝ miles.
Left tangent of Wroten Island.....	58	12	..	..... 2 miles.
Near peak of barn.....	68	33	..	..... 1½ miles.
Center of roof of old windmill.....	122	20	..	..... 3¾ miles.
Outside chimney of right end of house.....	164	03	..	..... 1 mile.
Chimney in center of large house.....	171	15	..	..... 1¼ miles.
Chimney in center of house.....	185	25	..	..... 2 miles.
"Hooper Island Light".....	262	51	50	..... 3¾ miles.

APPLEGARTH.

General locality.—Eastern shore of Chesapeake Bay on south end of Hooper Island, about 3½ miles east of Hooper Strait Light. (See Chart No. 40.)

Immediate locality.—Observed station is on marsh, about 1 foot above high water and 150 yards north of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 3 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Hooper Strait Light" (S 83° 45' E).....	0	00	00	3½ miles.
"Point no Point Light".....	132	34	10	10½ miles.
"Hooper Island Light".....	189	11	30	6 miles.
Left one of row of large pine trees.....	192	20	..	⅞ mile.
"Hoopersville Methodist Church Cupola"....	214	53	30	2⅞ miles.
Chimney of house.....	230	05	..	¾ mile.
Chimney in middle of house.....	246	47	..	¾ mile.
"Hopkins Memorial Church Cupola".....	257	45	00	¾ mile.
Chimney in center of house.....	259	52	..	¾ mile.
Chimney of abandoned house.....	271	25	..	½ mile.
Near peak of house showing over roof.....	278	06	..	½ mile.
Right tangent of clump of pine trees.....	295	33	..	300 yards.

HOPKINS MEMORIAL CHURCH CUPOLA.

General locality.—Eastern shore of Chesapeake Bay in small village of Applegarth on Lower Hooper Island, about 2⅜ miles southeast by east of Hooper Island Wharf, and 3¼ miles east-southeast of Hooper Strait Light. (See Chart No. 40.)

Immediate locality.—Observed station is on church known as Hopkins Memorial Church.

Marks.—Observed station is center of bell cupola.

References.—None necessary.

HOOPERSVILLE METHODIST CHURCH CUPOLA.

General locality.—Eastern shore of Chesapeake Bay in town of Hoopersville on Middle Hooper Island, about ¼ mile southwest of Hooper Island Wharf. (See Chart No. 40.)

Immediate locality.—Observed station is on church known as Hoopersville Methodist Church.

Marks.—Observed station is center of bell cupola.

References.—None necessary.

BENTLEY.

General locality.—Southwestern shore of Honga River on the north side of Bentley Point about 2 miles south of Wroten Island, and 1½ miles east of drawbridge at Ferry Point. (See Chart No. 40.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 30 yards southwest of shore, 45 yards east of shore, and 50 yards southeast by south of a small marsh point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Hoopersville M. E. Church Cupola" (S 3°	0	00	00	2¼ miles.
29' W).....	0	00	00	2¼ miles.
Near peak of house.....	9	38	..	⅞ mile.
Center of draw of Hooper Island bridge.....	97	12	..	1½ miles.
Peak of draw-tender's cabin.....	99	26	..	1⅝ miles.
"Mount Zion M. E. Church Spire".....	116	08	50	3⅞ miles.
Near peak of oyster house.....	120	37	..	4¾ miles.
Near peak of large house.....	125	37	..	3¾ miles.
Left tangent to Wroten Island.....	142	00	..	1⅞ miles.
Right edge of barn.....	151	40	..	1¾ miles.
Left chimney of house.....	171	32	..	2⅞ miles.
Center of old windmill.....	236	48	..	2½ miles.
"Hopkins Memorial Church Cupola".....	326	59	40	4 miles.
Stack of oyster house at Hooper Island Wharf.	347	51	..	2½ miles.

KERWIN.

General locality.—Northeastern shore of Honga River about $2\frac{1}{4}$ miles east-northeast of Fishing Creek Bridge, and $1\frac{1}{2}$ miles east of Keenes Point. (See Chart No. 40.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 60 yards east of shore, 60 yards northwest of shore, and 55 yards north-northeast of end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Mount Zion M. E. Church Spire" (S 34° 04' W).....	0	00	00	..... 3 $\frac{5}{8}$ miles.
"Hosier Memorial Church Spire".....	14	29	00	..... 3 miles.
Chimney on outside of end of house.....	29	01	..	..... 3 miles.
Right chimney of house.....	31	37	..	..... 2 $\frac{1}{4}$ miles.
Center of draw of Fishing Creek Bridge.....	35	32	..	..... 2 $\frac{1}{4}$ miles.
Stack of Fishing-Creek Crab House.....	36	26	..	..... 2 $\frac{1}{4}$ miles.
Center of old windmill on Fishing Creek.....	37	02	..	..... 2 $\frac{1}{4}$ miles.
Tangent of woods.....	70	14	..	..... 250 yards.
Stove pipe on left edge of house.....	163	11	..	..... 1 mile.
Near chimney of house.....	230	31	..	..... $\frac{1}{8}$ mile.
Center of draw of Hooper Island Bridge.....	337	43	..	..... 4 $\frac{3}{8}$ miles.

WROTEN.

General locality.—Northeastern shore of Honga River on southern shore of Wroten Island about $2\frac{1}{2}$ miles north-northwest of Bentley Point. (See Chart No. 40.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 40 yards west of shore, 55 yards northwest of shore, and 100 yards north of extreme end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 3 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Charles" (S 65° 22' E).....	0	00	00	..... 1 $\frac{3}{4}$ miles.
Chimney on right end of house.....	78	32	..	..... 2 $\frac{3}{8}$ miles.
Center of draw of Hooper Island Bridge.....	98	49	..	..... 2 miles.
"Mount Zion M. E. Church Spire".....	144	29	50	..... 2 $\frac{1}{4}$ miles.
Right edge of house in trees.....	161	54	..	..... $\frac{5}{8}$ mile.
Near peak of barn.....	174	13	..	..... $\frac{3}{8}$ mile.
Near peak of house.....	270	56	..	..... $\frac{3}{4}$ mile.
Chimney on left end of house.....	321	04	..	..... 1 $\frac{1}{2}$ miles.

CHARLES.

General locality.—Northeastern shore of Honga River about $1\frac{3}{4}$ miles north of Bentley Point, and $2\frac{1}{2}$ miles east-northeast of drawbridge at Ferry Point. (See Chart No. 40.)

Immediate locality.—Observed station is on firm land about 1 foot above high water, 20 yards east-southeast of shore, 30 yards northwest of shore, 50 yards north-northeast of shore, and 40 yards southwest by south of large tree near bend in a rail fence.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—	o	'	"	
"Lakes" (S 70° 54' E).....	0	00	00	..... 1 mile.
Left edge of barn roof.....	33	11	..	..... 2¼ miles.
"Hopkins Memorial Church Cupola".....	56	20	10	..... 5⅛ miles.
Center of draw of Hooper Island Bridge.....	133	10	..	..... 2½ miles.
Left edge of drawtender's cabin.....	134	47	..	..... 2½ miles.
Chimney on right end of house.....	154	55	..	..... 3 miles.
"Mount Zion M. E. Church Spire".....	162	11	20	..... 3⅜ miles.
Left peak of oyster house.....	162	18	..	..... 3¼ miles.
Tangent of south end of Wroten Island.....	162	52	..	..... 1⅝ miles.
Chimney on left end of house.....	166	07	..	..... 1½ miles.
Chimney on end of house.....	170	05	..	..... 1¾ miles.
Nail in blaze in tree (6 inches diameter).....	322	22	10	..... 19.93 meters.
Nail in blaze in tree (6 inches diameter).....	248	59	50	..... 12.63 meters.

LAKES.

General locality.—Northeastern shore of Honga River on a point at northern side of entrance to Lakes Cove about 1½ miles north-northeast of Bentley Point. (See Chart No. 40.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 26 yards north of shore, 65 yards northeast of shore, and 70 yards east of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 3 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—	o	'	"	
"Asquith" (S 6° 08' W).....	0	00	00	..... 1¾ miles.
"Mount Zion M. E. Church Spire".....	89	20	50	..... 4⅝ miles.
Chimney on outside of house.....	182	40	..	..... ¾ mile.
Between two dormer windows of house.....	242	00	..	..... 1¾ miles.
Left chimney of house.....	273	34	..	..... ⅞ mile.

ASQUITH.

General locality.—Eastern shore of Honga River on Asquith Island, about 2½ miles northeast of Hoopersville, and ⅞ mile north of Windmill Point. (See Chart No. 40.)

Immediate locality.—Observed station is on strip of sandy marsh between a pond and river about 2 feet above high water, 3 yards west of shore of pond, 11 yards east of shore of river, and 50 yards south of end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe with top about 2 inches below base of monument.

References.—	o	'	"	
"Hoopersville Methodist Church cupola" (S 44° 57' W).....	0	00	00	..... 2¼ miles.
Near peak of house.....	4	12	..	..... 2 miles.
Near peak of barn.....	9	06	..	..... 2¼ miles.
Near peak of small barn.....	38	24	..	..... 1¾ miles.
Nail in blaze in pine tree (15 inches diam- eter).....	87	59	40	..... 6.04 meters.
Left side of old windmill.....	154	51	..	..... 2 miles.
Near peak of house.....	157	50	..	..... 2⅝ miles.
Nail in blaze in pine tree (12 inches diam- eter).....	320	06	10	..... 17.08 meters.
Nail in blaze in pine tree (15 inches diam- eter).....	336	50	00	..... 7.48 meters.
Tangent to outside end of Hooper Island wharf.....	352	20	..	..... 1¾ miles.

WINDMILL 2.

General locality.—Eastern shore of Honga River on Windmill Point, about $1\frac{7}{8}$ miles east-northeast of Hoopersville. (See Chart No. 40.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 25 yards north-northeast of end of point, 35 yards east of shore, and 30 yards northwest of shore. Cement monument marking reference station is 19.78 meters $N 36^{\circ} 41' E$ of observed station.

Marks.—Observed station is nail in stub in 4-inch tile pipe with top of pipe 4 inches below surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	'	"	
"Hoopersville Methodist Church Cupola" ($S 64^{\circ} 22' W$)	0	00	00	..... $1\frac{7}{8}$ miles.
Two house chimneys about in line	1	24	..	..... $1\frac{5}{8}$ miles.
Center of store doorway in Hoopersville	3	54	..	..... $1\frac{5}{8}$ miles.
Near peak of house	53	59	..	..... 2 miles.
"Mount Zion M. E. Church spire"	61	25	40	..... $5\frac{1}{4}$ miles.
"Hosier Memorial Church Spire"	68	09	30	..... 6 miles.
Tangent to Bentley Point	91	46	..	..... $1\frac{1}{2}$ miles.
Near gable of house	149	52	..	..... $1\frac{1}{2}$ miles.
REFERENCE STATION	152	19	10	..... 19.75 meters.
Near peak of cabin	183	42	..	..... $1\frac{1}{2}$ miles.
"Toddville M. E. Church Spire"	184	01	20	..... $4\frac{3}{4}$ miles.
Center gable of house	185	00	..	..... $3\frac{3}{8}$ miles.
St. Thomas Church Spire"	211	06	20	..... $4\frac{1}{8}$ miles.
Left tangent Hooper Island Wharf	356	25	..	..... $1\frac{1}{4}$ miles.

PAUL (HONGA RIVER).

General locality.—Eastern shore of Honga River on Paul Point at northwestern side of entrance to Fox Creek, about $1\frac{1}{2}$ miles east-northeast of Windmill Point, and $\frac{3}{4}$ mile southwest of Wingate Point. (See Chart No. 40.)

Immediate locality.—Observed station is on marsh point about 1 foot above high water, 7 yards west of shore, 13 yards northwest of shore, 25 yards north-northeast of extreme end of point, 50 yards north-northwest of a small marsh island, and 55 yards east-northeast of a cabin.

Marks.—Observed station is center of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"St. Thomas Church Spire" ($S 71^{\circ} 18' E$)	0	00	00	..... 3 miles
Left side of small cabin on Crab Point	32	05	..	..... $1\frac{3}{4}$ miles.
"Hopkins Memorial Church Cupola"	91	26	30	..... $2\frac{5}{8}$ miles.
Between two stacks on oyster house on Hooper Island Wharf	136	08	..	..... 3 miles.
"Hoopersville Methodist Church Cupola"	137	23	20	..... $3\frac{1}{4}$ miles.
Near corner of cabin	150	05	..	..... 53 yards.
Near peak of house	195	41	..	..... 1 mile.
Peak of barn	241	26	..	..... 2 miles.
Center one of three chimneys on large house	273	57	..	..... $1\frac{1}{2}$ miles.
Chimney of Wingate Wharf waiting room	304	38	..	..... $\frac{5}{8}$ mile.
"Toddville M. E. Church Spire"	319	46	00	..... $3\frac{1}{4}$ miles.
Flagstaff on hall at Bishop Head	359	29	..	..... $2\frac{7}{8}$ miles.

TODDVILLE M. E. CHURCH SPIRE.

General locality.—On neck of land between Fishing Bay and Honga River in town of Toddville, about $2\frac{1}{2}$ miles east of Wingate wharf. (See Chart No. 40.)

Immediate locality.—Observed station is on church known as Toddville M. E. Church.

Marks.—Observed station is center of spire.

References.—None necessary.

Survey of Oyster Bars, Dorchester County, Md.

DUCK (HONGA RIVER).

General locality.—Eastern shore of Fox Creek on Piney Point, at north side of entrance to Duck Point Cove, about $\frac{3}{4}$ mile southeast of Wingate Point. (See Chart No. 40.)

Immediate locality.—Observed station is on a marsh point 1 foot above high water, 50 yards south of shore, 50 yards north of shore, and 65 yards east-northeast of end of point.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"St. Thomas Church Spire" (S 63° 20' E).....	0	00	00	..... 1 $\frac{3}{4}$ miles.
Near peak of small cabin.....	75	13	..	..... 1 mile.
Left tangent of Hooper Island.....	88	10	..	..... 3 miles.
"Hopkins Memorial Church Cupola".....	104	51	00	..... 3 $\frac{1}{8}$ miles.
"Hoopersville Methodist Church Cupola".....	137	20	50	..... 4 $\frac{3}{8}$ miles.
Left chimney of house.....	158	40	..	..... 2 miles.
Left edge of cabin on Paul Point.....	159	29	..	..... 1 $\frac{1}{8}$ miles.
Tangent of outside end of Wingate Wharf.....	185	52	..	..... $\frac{7}{8}$ mile.
Chimney on waiting room Wingate Wharf.....	186	26	..	..... $\frac{7}{8}$ mile.
Front peak of store building.....	214	04	..	..... $\frac{3}{4}$ mile.
Peak of oyster house.....	222	46	..	..... $\frac{3}{4}$ mile.
Near gable of house.....	245	39	..	..... 1 mile.
Outside chimney of house.....	318	18	..	..... 1 $\frac{1}{8}$ miles.

ST. THOMAS CHURCH SPIRE.

General locality.—Eastern shore of Honga River in town of Bishop Head, about $2\frac{1}{2}$ miles southeast by east of Wingate Wharf, and $2\frac{3}{4}$ miles north of Hooper Strait Light. (See Chart No. 40.)

Immediate locality.—Observed station is on church known as St. Thomas Church.

Marks.—Observed station is center of spire.

References.—None necessary.

NORMAN.

General locality.—Eastern shore of Honga River, about $2\frac{1}{2}$ miles north-northwest of Hooper Strait Light, and $\frac{1}{2}$ mile south of Crab Point. (See Chart No. 40.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 60 yards east of shore, 70 yards northeast of shore, and 80 yards southeast of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	'	"	
"Hooper Strait Light" (S 35° 11' E).....	0	00	00	..... 2 $\frac{1}{2}$ miles.
Right tangent of woods.....	12	00	..	..... 400 yards.
Left edge of small house.....	28	29	..	..... 5 $\frac{1}{4}$ miles.
Tangent of lower end of Hooper Island.....	76	12	..	..... 2 miles.
"Hopkins Memorial Church Cupola".....	99	57	20	..... 2 $\frac{1}{4}$ miles.
"Hoopersville M. E. Church Cupola".....	127	47	30	..... 4 $\frac{1}{8}$ miles.
Between two stacks on oyster house at Hoop- ers Island Wharf.....	130	27	..	..... 3 $\frac{7}{8}$ miles.
Left tangent of woods.....	184	14	..	..... 400 yards.
Front peak of store building.....	205	33	..	..... 2 $\frac{1}{8}$ miles.
Near peak of house.....	216	57	..	..... 3 miles.
Left one of two chimneys close together.....	248	22	..	..... 2 miles.
Near peak of canning house.....	250	36	..	..... 2 miles.
Flagstaff on hall at Bishop Head.....	284	30	..	..... 1 $\frac{3}{4}$ miles.
"St. Thomas Church Spire".....	285	07	50	..... 1 $\frac{3}{4}$ miles.

HOOPER STRAIT LIGHT.

General locality.—Northern side of Hooper Strait at eastern side of entrance to Honga River about 2½ miles west-northwest of southern end of Bishop Head, and 3 miles east-southeast of Lower Hooper Island. (See Chart No. 40.)

Immediate locality.—Observed station is on hexagonal, screw-pile structure known as Hooper Strait Light.

Marks.—Observed station is center of lantern on Hooper Strait Light.

References.—

“Head” (S 82° 30' E)..... 0 00 00 2½ miles.

CRAB.

General locality.—Western shore of upper Tangier Sound on eastern side of Bloodsworth Island, about 1 mile southeast of entrance to Piney Island Cove, 1 mile northeast of entrance to Great Cove, and 2¾ miles southwest of Sharkfin Shoal Light. (See Chart No. 41.)

Immediate locality.—Observed station is about 1 foot above high water, 15 yards southwest of shore, 35 yards west of shore, and 150 yards south-southwest of a crab house.

Marks.—Observed station is center point of triangle on standard cement monument.

References.—

“Sharkfin Shoal Light” (N 45° 25' E)..... 0 00 00 2½ miles.
 Left end of large house near Stump Point... 6 11 7½ miles.
 End of roof of house on bluff..... 31 36 6¼ miles.
 End of Deal Island Wharf..... 53 03 3¾ miles.
 Large house..... 72 35 4¼ miles.
 Aspen tree near “Joshua”..... 88 06 5½ miles.
 Tall pine tree..... 165 00 40 1½ miles.

HEAD.

General locality.—Upper end of Tangier Sound, on eastern side of southern part of peninsula known as Bishop Head, situated between Hooper Strait and Fishing Bay. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh behind water bushes which skirt shore, about 15 yards southwest of shore, and ½ mile north of extreme south end of Bishop Head. Cement monument marking reference station is 13.41 meters N 20° 37' E of observed station.

Marks.—Observed station is a nail in a pine stub flush with ground. Reference station is center point of triangle on standard cement monument.

References.—

“Sharkfin Shoal Light” (S 60° 41' E)..... 0 00 00 2¾ miles.
 Crab-house flagstaff..... 50 30 3¼ miles.
 Large pine tree..... 97 42 2 miles.
 REFERENCE STATION..... 139 55 40 13.41 meters.
 Near gable of 2½-story house..... 140 24 ¼ mile.
 Chimney of house..... 156 44 ⅜ mile.
 Chimney of house..... 208 28 1½ miles.
 Chimney of end of house..... 238 53 3 miles.
 Right side of Nanticoke Point woods..... 326 56 7½ miles.

CROCH.

General locality.—Western shore of Fishing Bay about 4½ miles northwest of Sharkfin Shoal Light, and ¼ mile north-northeast of entrance to Tedious Creek. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 45 yards southwest of shore, 50 yards west of shore, 60 yards northwest of shore, and 150 yards north of a small marsh island covered with water bushes.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Sharkfin Shoal Light" (S 39° 09' E)	0	00	00	4½ miles.
Right chimney of house	36	59		2⅞ miles.
Right peak of house	59	35		1½ miles.
Chimney in middle of large building	79	02		1⅝ miles.
Chimney in middle of house	92	51		1½ miles.
Near peak of house	120	11		⅝ mile.
Near peak of house	142	41		⅝ mile.
Chimney outside of right end of house	197	39		1⅜ miles.
Between two chimneys of house nearly in line	204	40		1¼ miles.
Near peak of house	219	18		1 mile.
Chimney outside of right end of house	241	56		4 miles.

ROAST.

General locality.—Western shore of Fishing Bay on Roasting Ear Point, about 5¾ miles north-northwest of Sharkfin Shoal Light, 4½ miles north of Bishop Head, and ¾ mile northeast of entrance to Goose Creek. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 40 yards northwest of shore, 40 yards west of shore, and 70 yards south by west of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Sharkfin Shoal Light" (S 21° 41' E)	0	00	00	5¾ miles.
Left chimney of house on Bishop Head	30	05		4⅞ miles.
Near peak of house	45	23		3 miles.
Chimney on left end of house	69	15		2 miles.
Smokepipe on near house	73	36		1⅜ miles.
Tallest one of five pine trees	95	24		1 mile.
Stack of canning house on Farm Creek	151	29		2½ miles.
Stack of canning house on Elliott Island	219	33		2 miles.
Chimney outside of near end of house	229	35		1⅞ miles.
Chimney in middle of house	233	01		2 miles.
Between two gables of large house	236	00		2 miles.
Windmill	240	04		2 miles.

FARM.

General locality.—Western shore of Fishing Bay on point at south side of entrance to Cedar Creek, about 1⅝ miles west of Fishing Point, and ¾ mile northeast of entrance to Farm Creek. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 20 yards south of shore, 60 yards northwest of shore, 45 yards west-southwest of extreme end of point, 10 yards east-northeast of a small pond in marsh, and 300 yards south by east of a small oyster watch house on opposite side of Cedar Creek.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Toddville M. E. Church Spire" (S 45° 58' W)	0	00	00	1¾ miles.
Chimney in middle of house	4	03		2 miles.
Stack of canning house on Farm Creek	9	31		1½ miles.
Near corner of small shanty	51	13		½ mile.
Smoke pipe on small shanty	84	12		¾ mile.
Left chimney of house	204	34		4⅞ miles.
Stack of canning house at Elliott Island	239	29		1¾ miles.
Near peak of house	322	22		2¼ miles.

THORO.

General locality.—Western shore of Fishing Bay about $\frac{3}{4}$ mile northeast of entrance to Thoroughfare Creek, and $1\frac{1}{2}$ miles north of Fishing Point on the western end of Elliott Island. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 40 yards northwest of shore, 50 yards north-northeast of shore, 55 yards northeast by north of shore, and 130 yards east-northeast of entrance to a small creek.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"Toddville M. E. Church Spire" (S 48° 30' W).....	o	oo	oo	..... 3½ miles.
Chimney in center of house.....	2	o8	..	..... 3 miles.
Lone poplar tree.....	262	14	..	..... 2 miles.
Chimney on right end of house.....	271	o2	..	..... 2 miles.
Lightning rod on near peak of large house.....	274	35	..	..... 1¾ miles.
Spire of church on Elliott Island.....	28o	52	5o	..... 1¾ miles.
Center one of three chimneys on house.....	281	54	..	..... 1¾ miles.
Stack of canning house on Elliott Island.....	3o6	oo	5o	..... 1½ miles.

HIGH.

General locality.—Southeastern shore of Upper Fishing Bay on Elliott Island, about $\frac{3}{8}$ mile east-northeast of extreme end of Fishing Point. (See Chart No. 41.)

Immediate locality.—Observed station is on high sandy land in a grove of pine trees, about 30 yards east-southeast of edge of bank, and 35 yards west-northwest of near corner of west one of five sheds in a row.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	o	/	"	
"Farm" (N 84° 52' W).....	o	oo	oo	..... 17½ miles.
Nail in blaze in pine tree (18 inches diam- eter).....	174	17	1o	..... 17.83 meters.
Nail in blaze in pine tree (12 inches diam- eter).....	219	59	1o	..... 5.58 meters.
Near corner of shed with metal roof (west one of five in a row).....	235	38	..	..... 33 yards.
Left chimney of house.....	257	34	..	..... 100 yards.
Right chimney of house.....	274	56	..	..... ¾ mile.
Nail in blaze in pine tree (15 inches diam- eter).....	312	4o	2o	..... 10.28 meters.

ELLIOTT.

General locality.—Eastern shore of Fishing Bay on Fishing Point at the extreme western end of Elliott Island about $5\frac{1}{2}$ miles north-northwest of Clay Island, and opposite entrance to Farm Creek. (See Chart No. 41.)

Immediate locality.—Observed station is on sandy marsh about 1 foot above high water, 16 yards south of shore, 20 yards north of shore, 30 yards east-northeast of extreme end of sandy point, 185 yards west-southwest of a sand ridge near trees and brush, and 290 yards northwest of a canning house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Toddville M. E. Church Spire" (S 73° 11' W)	0	00	00	..... 2 $\frac{7}{8}$ miles.
Chimney on right end of house	5	55	..	..... 2 miles.
Tangent of high bluff	167	31	..	..... 1 $\frac{1}{4}$ mile.
Left edge of old building	250	24	..	.....
Stack of canning house at Elliott Island	256	29	42	..... 290 yards.
Small house in trees	326	19	..	..... 2 $\frac{5}{8}$ miles.

EAR.

General locality.—Eastern shore of Fishing Bay, about 6 $\frac{1}{8}$ miles north of Sharkfin Shoal Light, 1 $\frac{3}{4}$ miles east-northeast of Roasting Ear Point, and 1 $\frac{3}{4}$ miles southeast of Fishing Point, on Elliott Island. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 20 yards northeast of shore, 30 yards north by west of shore, and 40 yards east by south of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Sharkfin Shoal Light" (S 5° 49' E)	0	00	00	..... 6 $\frac{1}{8}$ miles.
Chimney on left end of house	31	23	..	..... 5 $\frac{1}{8}$ miles.
Chimney in middle of large building	46	21	..	..... 5 miles.
Near peak of barn	70	22	..	..... 2 $\frac{1}{2}$ miles.
"Toddville M. E. Church Spire"	102	12	30	..... 3 $\frac{3}{4}$ miles.
Stack of canning house at Elliott Island	145	59	..	..... 1 $\frac{1}{2}$ miles.
Chimney on right end of house	151	22	..	..... 1 $\frac{1}{4}$ miles.
Near peak of house	164	03	..	..... 1 $\frac{1}{4}$ miles.
Left peak of barn	197	45	..	..... 1 $\frac{1}{4}$ miles.
"Nanticoke Church"	291	53	50	..... 5 $\frac{1}{8}$ miles.

FISH.

General locality.—Eastern shore of Fishing Bay, about 4 $\frac{3}{8}$ miles north of Sharkfin Shoal Light, 3 $\frac{1}{4}$ miles south-southeast of Elliott Island, and 2 $\frac{1}{4}$ miles north-northeast of point of Clay Island. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh about 1 foot above high water, 50 yards northeast of shore, 60 yards east of shore, and 85 yards north-northeast of shore.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	"	
"Sharkfin Shoal Light" (S 1° 56' W)	0	00	00	..... 4 $\frac{3}{8}$ miles.
Center gable of house at Bishop Head	41	59	..	..... 4 $\frac{1}{4}$ miles.
Near peak of house	63	18	..	..... 4 $\frac{1}{4}$ miles.
Chimney in middle of house	65	24	..	..... 3 $\frac{1}{2}$ miles.
Left chimney of house	90	01	..	..... 3 miles.
Near peak of house	99	21	..	..... 3 miles.
Stack of canning house on Farm Creek	120	05	..	..... 5 miles.
Stack of canning house on Elliott Island	146	17	..	..... 3 $\frac{1}{2}$ miles.
"Nanticoke Church"	263	46	40	..... 4 $\frac{1}{4}$ miles.

FROG.

General locality.—Western side of entrance to Nanticoke River, on Frog Point, at southeastern end of Clay Island. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh point about 20 yards west of shore, 25 yards east of shore, 25 yards from extreme end of point, and in front of water bushes. Cement monument marking reference station is 13.10 meters N 3° 11' E of observed station.

Marks.—Observed station is nail in stub flush with ground. Reference station is center point of triangle on standard cement monument.

References.—

	o	/	''	
"Sharkfin Shoal Light" (S 41° 25' W).....	0	00	00	3 1/8 miles.
Left tangent of Clay Island.....	35	17	..	1 1/4 miles.
REFERENCE STATION.....	141	45	50	13.10 meters.
Right tangent of Sandy Point.....	177	41	..	3/4 mile.
Chimney of house.....	179	12	..	2 1/2 miles.
Chimney near end of large house.....	183	02	..	2 1/2 miles.
Stack of canning house.....	184	36	..	2 1/2 miles.
Land end of Nanticoke Wharf.....	184	36	..	2 1/2 miles.
End of Nanticoke Wharf house.....	186	00	..	2 1/4 miles.
Chimney on ell end of main part of large house.....	211	27	..	2 1/4 miles.
Right tangent of Nanticoke Point woods.....	238	44	..	2 3/4 miles.
Large square chimney of house (Dames Quarter).....	264	17	..	4 miles.
Rock Creek poplar tree.....	284	17	..	3 1/2 miles.
Flagstaff on Deal Island Wharf.....	322	09	..	4 3/4 miles.

COW.

General locality.—Western shore of Nanticoke River, on Mink Point, about 3/8 mile east of entrance to Cow Creek and 1 3/8 miles west of Roaring Point. (See Chart No. 41.)

Immediate locality.—Observed station is on very soft marsh at edge of water bushes about 5 yards west of shore, 15 yards northeast of shore, and 15 yards northwest of extreme end of point. Cement monument marking reference station is 8.68 meters N 44° 28' W of observed station.

Marks.—Observed station is a nail in a pine stub flush with ground. Reference station is center point of triangle on standard cement monument.

References.—

	o	/	''	
"Frog" (S 6° 13' W).....	0	00	00	2 miles.
A shanty.....	37	16	..	3/4 mile.
REFERENCE STATION.....	129	19	20	8.68 meters.
A shanty.....	189	53	..	1 mile.
A shanty.....	209	52	..	1/2 mile.
Tangent of land.....	217	43	..	1/2 mile.
Large house.....	236	48	..	2 1/2 miles.
Windmill.....	243	52	..	2 3/4 miles.
Chimney of large house.....	254	24	..	2 1/4 miles.
Canning house stack.....	257	28	..	1 3/4 miles.
Canning house stack.....	275	26	..	1 1/2 miles.
Near corner of Nanticoke Wharf.....	284	49	..	1 1/2 miles.
Large house.....	297	32	..	2 1/2 miles.
Large house.....	299	24	..	2 1/2 miles.
Right tangent of Nanticoke woods.....	310	15	..	3 miles.
Left tangent of Sandy Point.....	341	48	..	1 1/2 miles.

OKAY.

General locality.—Western shore of Nanticoke River, on Marsh Point, about 1/8 mile south of Swan Creek Cove and 2 miles west of Bivalve Wharf. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh about 2 feet above high water, 10 yards back from shore, and 35 yards south of shanty known as Insley's watch house.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	/	//	
Bivalve Church (N 84° 32' E).....	0	00	00	2½ miles.
Chimney of house.....	20	38	..	2½ miles.
Windmill tower.....	46	41	..	2½ miles.
Tangent of land.....	92	23	..	1¼ miles.
Tangent of land.....	105	45	..	150 yards.
Left side of watch house.....	249	17	..	35 yards.
Right side of watch house.....	258	17	..	35 yards.
Space between chimneys of large house.....	340	43	..	¾ miles.
Tangent of Bivalve Wharf.....	355	31	..	2¼ miles.
Stack of canning house.....	359	12	..	2¼ miles.

AR.

General locality.—Western shore of Nanticoke River about 1½ miles northwest of Bivalve Wharf, and ¾ mile north-northeast of entrance to Longrell Creek. (See Chart No. 41.)

Immediate locality.—Observed station is on marsh between two small creeks about 40 yards back from shore, 35 yards west-southwest of mouth of one creek, and 45 yards northwest of the mouth of the other creek.

Marks.—Observed station is center point of triangle on standard cement monument, projecting 4 inches above surface of ground.

References.—

	o	/	//	
"Nanticoke Church" (S 13° 34' E).....	0	00	00	3¾ miles.
Right edge Sandy Point woods.....	23	58	..	4 miles.
Smoke pipe of cabin.....	42	57	..	1½ miles.
Chimney of house.....	46	26	..	½ mile.
Left tangent of first woods.....	81	20	..	2¾ miles.
Left tangent of long thick woods.....	98	53	..	1 mile.
Left edge short thick woods.....	134	11	..	1 mile.
Chimney of cabin.....	247	47	..	½ mile.
Houses with several gables.....	262	18	..	3 miles.
Right edge Wetipquin woods.....	274	37	..	2¼ miles.
Chimney of house behind trees.....	302	43	..	2 miles.
Windmill.....	319	03	..	2 miles.
Stack of canning house.....	320	15	..	2 miles.
Chimney of house on Ragged Point.....	350	33	..	2¼ miles.
Windmill.....	352	57	..	¾ miles.

GOVER.

General locality.—Northwestern shore of Nanticoke River about 1¾ miles west-northwest of entrance to Wetipquin Creek and ⅛ mile north of a cove named Perch Haul. (See Progress map.)

Immediate locality.—Observed station is on a point of marsh covered with grass and water bushes, about 15 yards northwest of extreme end of point, 200 yards east-northeast of a shanty among bushes and small trees, ¼ mile east of a clump of about 50 pine trees, and ¼ mile southeast of another clump of trees.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	/	//	
Bivalve Church (S 21° 30' E).....	0	00	00	2¾ miles.
Tangent of land.....	35	24	..	1 mile.
Left side of opening in woods.....	72	06	..	2 miles.
Two pine trees together.....	83	07	..	¾ mile.
Center of shanty.....	98	26	..	200 yards.
Clump of pine trees.....	123	56	..	¼ mile.
Clump of pine trees.....	176	20	..	¼ mile.

References—Continued.

	o	/	//	
Inside edge of cove	201	45	..	100 yards.
Clump of small pine trees	255	31	..	¼ mile.
Tangent to point of land	260	35	..	1½ miles.
Left tangent of Sandy Hill Wharf	276	02	..	3 miles.
Large house	286	27	..	¾ miles.
Left edge of pine woods near Wetipquin Creek	328	13	..	2 miles.

STREETT.

General locality.—Northwestern shore of Nanticoke River on point on southwest side of entrance to Jacks Creek. (See Progress map.)

Immediate locality.—Observed station is on a marsh and grass point about 7 yards west from its extreme end and 4 yards from each side of point to north and south. Cement monument marking reference station is 11.89 meters N 60° 22' W of observed station.

Marks.—Observed station is nail in pine stub flush with ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	/	//	
"Earle" (S 45° 01' E)	0	00	00	1 mile.
A shanty	0	41	..	1 mile.
Large house	27	08	..	2½ miles.
Canning-house stack at Tyaskin	33	42	..	1¾ miles..
Large building	36	42	..	1¾ miles.
Point of marsh	47	33	..	100 yards.
First of four trees	135	01	..	½ mile.
REFERENCE STATION	164	39	00	11.89 meters.
Point of marsh	255	02	..	30 yards.
House on the other side of Jacks Creek	258	13	..	½ mile.
Left tangent of Sandy Hill Wharf	309	38	..	1¼ miles.
A house	318	08	..	1½ miles.

EARLE.

General locality.—Southeastern shore of Nanticoke River about 1 mile below Sandy Hill Wharf. (See Progress map.)

Immediate locality.—Observed station is on sandy and grass land between the river and a pine grove about 5 feet above high water, 80 yards back from shore, 15 yards southeast of a white oak tree, about 2½ feet in diameter, 15 yards southwest of another and larger white oak tree, and 20 yards east of a shanty.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	/	//	
"Juliet" (S 41° 05' W)	0	00	00	1¼ miles..
Nail in blaze in white oak tree (2½ feet diam- eter)	88	44	30	13.98 meters.
Nail in blaze in pine tree	160	39	00	19.05 meters.
Nail in blaze in oak tree (2½ feet diameter)	196	35	40	13.95 meters.
Nail in blaze in pine tree	326	01	00	15.76 meters.
Right tangent of woods on other side of We- tipquin Creek	358	52	..	1½ miles.

JULIET.

General locality.—Eastern shore of Nanticoke River on point on southwest side of entrance to Wetipquin Creek. (See Progress map.)

Immediate locality.—Observed station is on sand and marsh point about 100 yards southwest of entrance to Wetipquin Creek, 10 yards back from high water, 5 yards outside of several small pine trees, and 100 yards north of dense pine woods.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	o	/	"	
"Earle" (N 41° 04' E).....	0	00	00	1¼ miles.
Nail in blaze in pine tree.....	29	41	30	4.92 meters.
Near point of roof of oyster house.....	40	05	..	300 yards.
Left edge of woods.....	64	21	..	200 yards.
Nail in blaze in pine tree.....	71	17	00	6.31 meters.
Nail in blaze in pine tree.....	98	20	00	6.88 meters.
Right edge of woods.....	163	52	..	200 yards.
Right tangent of Bivalve Wharf.....	170	02	..	1½ miles.
Two-story house.....	210	06	..	2½ miles.
Two-story house.....	228	37	..	¾ mile.
Opening in woods.....	230	16	..	3 miles.
House at Jacks Creek.....	324	00	..	1¾ miles.
Tangent of land.....	345	58	..	150 yards.
Tangent of land.....	354	49	..	150 yards.

POLE.

General locality.—Eastern shore of Nanticoke River on wharf off town of Bivalve, located about 1¼ miles northeast of Ragged Point. (See Chart No. 41.)

Immediate locality.—Observed station is on western peak of a house on wharf at Bivalve about 300 yards from shore.

Marks.—Observed station is flagpole on peak of house.

References.—None necessary.

BIVALVE CHURCH.

General locality.—Eastern shore of Nanticoke River about ¾ mile back from shore in town of Bivalve on main road leading to the steamer landing. (See Chart No. 41.)

Immediate locality.—Observed station is on Bivalve Methodist Church.

Marks.—Observed station is center of steeple on Bivalve Methodist Church.

References.—None necessary.

RAG.

General locality.—Eastern shore of Nanticoke River on northern side of Ragged Point, about 2 miles north-northeast of Roaring Point. (See Chart No. 41.)

Immediate locality.—Observed station is on a sandy point about 25 yards back from shore, 100 yards northeast of extreme end of point, 50 yards west of a grove of pine trees, 20 yards southwest of a group of pine trees, 75 yards southwest of another group of pine trees, and 20 yards west of two 15-inch pine trees 2½ feet apart.

Marks.—Observed station is center point of triangle on standard cement monument.

References.—

	o	/	"	
"Nanticoke Church" (S 1° 46' E).....	0	00	00	1½ miles.
Left end of Sandy Point.....	29	17	..	3½ miles.
Chimney of house.....	51	48	..	2½ miles.
Large tree at left end of woods.....	130	20	..	3¾ miles.
Left one of two trees (opposite shore).....	169	56	..	3¾ miles.
Flagpole on Bivalve Wharf.....	201	11	..	1¼ miles.
Smoke pipe on Bivalve wharf house.....	207	14	..	1¼ miles.
Nail in stump of limb on pine tree.....	218	35	..	32.78 meters.
Nail in baze in double pine tree.....	258	01	..	19.66 meters.
Nail in blaze in large pine tree.....	293	26	..	43.19 meters.
Chimney of house.....	303	29	..	135 yards.
Windmill near large house.....	344	13	..	¾ mile.
Steeple on barn.....	356	40	..	1 mile.
Large chimney of large flat-roof house.....	357	10	..	1 mile.

NANTICOKE CHURCH.

General locality.—Eastern shore of Nanticoke River in town of Nanticoke, about $\frac{1}{8}$ mile back from river and $\frac{3}{4}$ mile northeast of Roaring Point. (See Chart No. 41.)

Immediate locality.—Observed station is on church known as “Nanticoke Methodist Episcopal Church.”

Marks.—Observed station is center of spire on Nanticoke Methodist Episcopal Church.

References.—None necessary.

ROAR.

General locality.—Eastern shore of Nanticoke River on Roaring Point, about $\frac{1}{4}$ mile north from outer end of Roaring Point Wharf. (See Chart No. 41.)

Immediate locality.—Observed station is on a sandy knoll about 5 feet above high water, 20 yards south of shore, 40 yards north of shore, 30 yards east of extreme end of point, and 150 yards from pine woods which stand inshore from station.

Marks.—Observed station is center point of triangle on standard cement monument.

References.—

	o	'	"	
“Frog” (S 39° 02' W).....	0	00	00	..... 2½ miles.
Two shanties.....	19	17	..	..... 2 miles.
One shanty.....	30	20	..	..... 1¾ miles.
A shanty.....	71	32	..	..... 1¼ miles.
A shanty.....	98	53	..	..... 1¾ miles.
Barn steeple.....	117	41	..	..... 4½ miles.
A shanty.....	121	25	..	..... 2¾ miles.
A house.....	144	42	..	..... 7½ miles.
Twin trees on Ragged Point.....	159	30	..	..... 2 miles.
Chimney of house.....	175	23	..	..... 1½ miles.
Windmill.....	184	04	..	..... 1 mile.
Gambrel-roof house.....	184	32	..	..... 1 mile.
Canning-house stack.....	195	11	..	..... ½ mile.
Land end of wharf.....	271	58	..	..... ¼ mile.
Large house.....	293	38	..	..... 1½ miles.
Right tangent of Nanticoke Point woods.....	297	22	..	..... 2½ miles.
Right tangent of Nanticoke Wharf.....	304	52	..	..... ¾ mile.
Left tangent of Sandy Point.....	359	51	..	..... 1¾ miles.

NANTI.

General locality.—Eastern side of Nanticoke River about $\frac{1}{2}$ mile northwest of Nanticoke Point, and $1\frac{3}{4}$ miles northwest of Great Shoals Light. (See Chart No. 41.)

Immediate locality.—Observed station is on grass land about 2 feet above high water, 20 yards back from shore, and about midway between house near poplar trees about $\frac{1}{4}$ mile north of station and the edge of woods on Nanticoke Point.

Marks.—Observed station is center point of triangle on standard cement monument.

References.—

	o	'	"	
“Sharkfin Shoal Light” (S 65° 14' W).....	0	00	00	..... 5 miles.
Tangent of Sandy Point.....	51	33	..	..... 2¼ miles.
Left end of Nanticoke Wharf.....	89	45	..	..... 2 miles.
Near chimney of house.....	96	51	..	..... ¾ mile.
Chimney of house.....	101	08	..	..... ¼ mile.
Near chimney of house nearest woods.....	116	56	..	..... ¼ mile.
Tree high above woods.....	119	53	..	..... 2½ miles.
Right end of heavy woods.....	134	03	..	..... 1½ miles.
Right end of scant woods.....	147	11	..	..... ¾ mile.
Wild cherry tree.....	178	24	..	..... 50 yards.
Left end of woods.....	227	46	..	..... ¼ mile.
Right end of woods.....	269	45	..	..... ¼ mile.
Poplar tree Dames Quarter.....	307	28	..	..... 2¾ miles.
Tangent of Haines Point.....	330	55	..	..... 4½ miles.

WHITE.

General locality.—Eastern side of entrance to Nanticoke River on Stump Point, about $2\frac{3}{4}$ miles southeast of Roaring Point and $1\frac{3}{8}$ miles northwest of Great Shoal Light. (See Chart No. 41.)

Immediate locality.—Observed station is on sand and grass point about 2 feet above high water, 3 yards east of shore, 20 yards northwest of shore, 15 yards north of extreme end of point, 40 yards west of a cove, 100 yards northwest of a point of land, and 100 yards southwest of a dense pine woods. Cement monument marking reference station is 16.63 meters N 3° 13' E of observed station.

Marks.—Observed station is a nail in a pine stub about 6 inches below surface of ground. Reference station is center point of triangle on standard cement monument.

References.—

	o	/	//	
"Great Shoals Light" (S 44° 16' E).....	0	00	00	$1\frac{3}{4}$ miles.
Poplar tree at Dames Quarter.....	65	08	..	$2\frac{1}{2}$ miles.
Tangent of Hall Point.....	86	06	..	$3\frac{3}{4}$ miles.
Tangent of Sandy Point.....	164	17	..	3 miles.
Left end of pine woods.....	172	27	..	100 yards.
Right end of pine woods.....	213	21	..	150 yards.
REFERENCE STATION.....	227	29	00	16.63 meters.
Largest one in clump of about 12 pine trees..	247	23	..	$\frac{3}{8}$ mile.
Chimney of cabin on Ellis Point.....	279	05	..	2 miles.
A house.....	311	54	..	$\frac{1}{2}$ mile.
Point of land.....	335	02	..	100 yards.

GREAT SHOALS LIGHT.

General locality.—Entrance to Monie Bay and Wicomico River about halfway between Long Point and Mollies Point. (See Progress map.)

Marks.—Observed station is center of black lantern on square screw pile structure known as "Great Shoals Light."

Reference.—

	o	/	//	
"Sharkfin Shoal Light" (S 81° 50' W).....	0	00	00	$5\frac{7}{8}$ miles.

ROOM.

General locality.—Eastern shore of upper Tangier Sound on Halls Point about $1\frac{1}{8}$ miles northeast of Haines Point, and $2\frac{5}{8}$ miles east-southeast of Sharkfin Shoal Light. (See Chart No. 41.)

Immediate locality.—Observed station is on a locust and mulberry fringed bluff about 15 feet high, 5 yards back from edge of bluff, 15 yards west-northwest of a barn, 15 yards from a wagon road parallel with shore, and 25 yards east of clump of mulberry trees. Cement monument marking reference station is 21.45 meters S 18° 30' W of observed station and almost in line with large mulberry tree.

Marks.—Observed station is nail in center of stub with top flush with ground. Reference station is center point of triangle on standard cement monument.

References.—

	o	/	//	
"Sharkfin Shoal Light" (N 70° 00' W).....	0	00	00	$2\frac{1}{2}$ miles.
Gable on near side of house on Bishop Head.	3	01	..	$5\frac{1}{2}$ miles.
Near end of roof of large $2\frac{1}{2}$ -story house.....	12	53	..	$7\frac{1}{4}$ miles.
Left tangent of Clay Island.....	39	18	..	$3\frac{1}{2}$ miles.
Left side of Sandy Point woods.....	70	08	..	4 miles.
Roaring Point Wharf.....	85	22	..	5 miles.
Near chimney on end of large house.....	94	36	..	$4\frac{1}{4}$ miles.
Right side of Nanticoke woods.....	110	28	..	$3\frac{3}{4}$ miles.
"Mount Vernon Church".....	127	18	..	7 miles.
Near corner of barn.....	137	06	..	15.06 meters.
Right-hand corner of barn.....	152	08	..	18.11 meters.
REFERENCE STATION.....	268	30	00	21.45 meters.
Large cedar tree.....	276	30	..	100 yards.
Two-inch iron pipe.....	279	38	30	9.21 meters.

SHARKFIN SHOAL LIGHT.

General locality.—Northern end of Tangier Sound about equally distant from entrances of Hooper Strait, Fishing Bay, and Nanticoke River. (See Chart No. 41.)

Immediate locality.—Observed station is on hexagonal, screw-pile structure known as Sharkfin Shoal Lighthouse.

Marks.—Observed station is center point of lantern on Sharkfin Shoal Light.

Reference.—o / "

"Great Shoals Light" (N 81° 45' E) o oo oo 5 $\frac{7}{8}$ miles.

*
HAINES.

General locality.—Eastern shore of upper Tangier Sound on Haines Point about $\frac{5}{8}$ mile north of Deal Island Wharf, and 2 $\frac{1}{2}$ miles southeast of Sharkfin Shoal Light. (See Chart No. 41.)

Immediate locality.—Observed station is on sand and grass point about 5 feet above high water, 20 yards back from shore, 3 yards west of a barb-wire fence, 20 yards south of a clump of locust and water bushes, and about on range with left edge of clump of trees and bushes and Sharkfin Shoal Light. Cement monument marking reference station is 9.64 meters N 77° 43' E of observed station.

Marks.—Observed station is nail in pine stub in center of a drain tile with top broken off below surface. Reference station is center point of triangle on standard cement monument.

References.—o / "

"Sharkfin Shoal Light" (N 45° 58' W)	o oo oo	. . . . . 2 $\frac{1}{2}$ miles.
Left of bushes	39 57	. . . . . 20 yards.
Left of Sandy Point woods	53 38	. . . . . 4 $\frac{3}{4}$ miles.
Chimney of 2 $\frac{1}{2}$ -story house	75 04	. . . . . $\frac{1}{2}$ mile.
Chimney of house	85 49	. . . . . 350 yards.
Chimney on end of cottage	99 00	. . . . . $\frac{3}{4}$ mile.
REFERENCE STATION	123 40 40	. . . . . 9.64 meters.
Pine tree	148 37 30	. . . . . 2.14 meters.
Large square chimney of house	152 49	. . . . . 400 yards.
Right one of five large pine trees	184 40	. . . . . 300 yards.
Halfway between chimneys of store on Deal Island	213 08	. . . . . $\frac{3}{4}$ mile.
"Deal Island Church"	217 00	. . . . . 1 $\frac{1}{2}$ miles.
Black gum tree	223 49	. . . . . 6.70 meters.
Right end of Deal Island wharf	234 10	. . . . . $\frac{1}{2}$ mile.
"Hooper Strait Light"	343 34	. . . . . 7 $\frac{1}{2}$ miles.

DEAL ISLAND CHURCH.

General locality.—Western side of upper Tangier Sound on Deal Island on main road about $\frac{1}{4}$ mile inshore, and $\frac{3}{4}$ mile south of bridge across Laws Thoroughfare. (See Chart No. 41.)

Immediate locality.—Observed station is on Deal Island Methodist Church.

Marks.—Observed station is center of steeple on Deal Island Methodist Church.

References.—None necessary.

SOLOMONS LUMP LIGHT.

General locality.—Kedge Straits about $\frac{1}{2}$ mile north of Smith Island and about 1 $\frac{1}{2}$ miles south of South Marsh. (See Progress map.)

Immediate locality.—Observed station is on square tower on northerly side of a caisson and octagonal structure known as "Solomons Lump Light."

Marks.—Observed station is center of black lantern on square tower.

References.—o / "

"James Island Light" (S 42° 12' E) o oo oo 7 $\frac{7}{8}$ miles.

HOLLAND ISLAND BAR LIGHT.

General locality.—Easterly side of Chesapeake Bay off entrance to Kedge Straits, about $2\frac{3}{4}$ miles south of Holland Island, and $3\frac{3}{4}$ miles northwest of Smith Island. (See Chart No. 42.)

Immediate locality.—Observed station is on hexagonal, screw-pile structure known as Holland Island Bar Light.

Marks.—Observed station is center point of lantern on Holland Island Bar Light.

References.—

“Solomons Lump Light” (S $72^{\circ} 06' E$) 0 00 00 $4\frac{3}{4}$ miles.

HOLLAND ISLAND CHURCH SPIRE.

General locality.—Eastern side of Chesapeake Bay on Holland Island about $3\frac{1}{2}$ miles north of Holland Island Bar Light. (See Chart No. 42.)

Immediate locality.—Observed station is on church known as Holland Island Church.

Marks.—Observed station is center of spire on Holland Island Church.

References.—None necessary.

OKAHANIKAN.

General locality.—Eastern shore of Chesapeake Bay on western side of Bloodsworth Island about $\frac{3}{8}$ mile south of point at south side of entrance to Okahanikan Cove, and $2\frac{3}{4}$ miles south-southeast of Hooper Strait Light. (See Chart No. 42.)

Immediate locality.—Observed station is on sandy marsh about 2 feet above high water, 40 yards southeast of shore, 40 yards east of shore, and 35 yards west of water bushes between sand and soft marsh.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground. Subsurface mark is center of 2-inch tile pipe buried with top 2 inches below base of monument.

References.—

	°	'	''	
“Hooper Strait Light” (N $17^{\circ} 15' E$)	0	00	00	. . . . . $2\frac{3}{4}$ miles.
Peak of barn	4	50	..	. . . . . 4 miles.
Left chimney of large house	34	48	..	. . . . . $3\frac{3}{4}$ miles.
Deal Island church spire	89	30	40	. . . . . 8 miles.
Chimney on small house	160	00	..	. . . . . . . . . .
Chimney of house on Billys Island	166	50	..	. . . . . $1\frac{1}{4}$ miles.
Tangent to north end of Billys Island	173	03	..	. . . . . 1 mile.
“Hooper Island Light”	280	55	40	. . . . . 10 miles.
“Hopkins Memorial Church Cupola”	306	24	20	. . . . . $4\frac{1}{2}$ miles.
Chimney in center of house	308	48	..	. . . . . $4\frac{1}{2}$ miles.
Chimney on right end of house	351	16	..	. . . . . 5 miles.

SENATOR.

General locality.—Western shore of Tangier Sound on southern side of Holland Straits and on extreme northeastern point of South Marsh. (See Progress map.)

Immediate locality.—Observed station is on marshland about 35 yards from north side of point, 30 yards from east side of point, 10 yards north of a small pool of water, and 5 yards northeast of another small pool of water. No permanent reference points near station.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	''	
“Sharkfin Shoal Light” (N $16^{\circ} 21' E$)	0	00	00	. . . . . $4\frac{3}{4}$ miles.
Chimney on house	31	30	..	. . . . . $4\frac{3}{4}$ miles.
Left-hand chimney of crab house on Deal Island	50	19	..	. . . . . $3\frac{1}{2}$ miles.
Right end of large oyster house on Deal Island	81	59	..	. . . . . $3\frac{1}{2}$ miles.
Lone pine tree	201	35	..	. . . . . $1\frac{7}{8}$ miles.

MILES.

General locality.—Western shore of Tangier Sound on eastern side of the lower half of South Marsh just south of the middle one of three creeks on this shore of the island. (See Progress map.)

Immediate locality.—Observed station is on a marsh point about 75 yards south of entrance to a small creek, 50 yards south of the north side of the point, and 60 yards west of its extreme end.

Marks.—Observed station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	"	
"Sharkfin Shoal Light" (N 8° 33' E).....	0	00	00	..... 7¾ miles.
"Deal Island Church".....	29	26	..	..... 5¼ miles.
End of roof of house among trees, Deal Island.	33	48	..	..... 4¼ miles.
Tangent of near point of land.....	155	35	..	..... ¼ mile.
"Solomons Lump Light".....	178	56	55	..... 3¼ miles.
First large tree (third from left).....	231	57	..	..... 7⁄8 mile.
Lone pine tree.....	330	27	..	..... 4¼ miles.

FOG 2.

General locality.—Eastern shore of Chesapeake Bay and southern shore of Kedge Straits on northwest point of Smith Island known as Fog Point. (See Progress map.)

Immediate locality.—Observed station is among myrtle bushes on the north side of a sand and grass point about 1 foot above high water. 65 yards southwest from extreme end of point, 6 yards south-southeast from shore, and 50 yards east-northeast from the remains of old "Fog Point Lighthouse." Cement monument marking reference station is 15.26 meters S 0° 40' W from observed station and about in line with a lone cherry tree one-fourth mile distant.

Marks.—Observed station is nail in center of tile pipe with top flush with surface of ground. Reference station is center point of triangle on standard cement monument projecting 4 inches above surface of ground.

References.—

	°	'	"	
"Solomons Lump Light" (N 59° 22' E).....	0	00	00	..... 1¾ miles.
Tangent of point of land.....	13	08	..	..... ¾ mile.
Large tree near two smaller ones.....	22	41	..	..... 1½ miles.
Lone pine tree.....	89	28	..	..... 1 mile.
REFERENCE STATION.....	121	18	30	..... 15.26 meters.
Large lone cherry tree.....	121	26	..	..... ¼ mile.
First one of two trees.....	133	43	..	..... ½ mile.
Old lighthouse foundation.....	193	47	..	..... 50 yards.
First tree on Holland Island.....	272	37	..	..... 5¾ miles.

POINT NO POINT LIGHT.

General locality.—Western side of Chesapeake Bay offshore about 1⅞ miles southeast of Point No Point and 6¾ miles north-northeast of Point Lookout. (See Progress map.)

Immediate locality.—Observed station is on brick dwelling on a cylindrical foundation known as Point No Point Lighthouse.

Marks.—Observed station is center point of lantern on Point No Point Lighthouse.

References.—

	°	'	"	
"Cedar Point Light" (N 19° 35' W).....	0	00	00	..... 12 miles.

POINT LOOKOUT LIGHT.

General locality.—Western side of Chesapeake Bay on Point Lookout at northern side of entrance to Potomac River. (See Progress map.)

Immediate locality.—Observed station is on Point Lookout Lighthouse, which is a dwelling on shore near a fog-bell tower.

Marks.—Observed station is center point of a lantern on a dwelling known as Point Lookout Lighthouse.

References.—

	°	'	"	
"Smith Point Light" (S 34° 37' E).....	0	00	00	..... 13 miles.

BOUNDARIES OF OYSTER BARS.

EXPLANATION.

The law of the United States authorizing the cooperation of the Department of Commerce and Labor in the survey of natural oyster bars of Maryland provides for the designation and employment by the Department of Commerce and Labor of such officers, experts, and other technically qualified persons "as may be necessary to cooperate with the Maryland State Board of Shell Fish Commissioners in making a survey of and locating the natural oyster beds, bars, and rocks in the waters within the State of Maryland." The oyster laws of Maryland provide that the Maryland Shell Fish Commissioners, with the aid of such persons as may be designated by the Government, shall proceed "to have laid out, surveyed, and designated on the said charts the natural beds and bars, and shall cause to be marked and defined as accurately as practicable the limits and boundaries of the natural beds, bars, and rocks as established by said survey, and they shall take true and accurate notes of said survey in writing, and make an accurate report of said survey, setting forth such a description of landmarks as may be necessary to enable the said board, or their successors, to find and ascertain the boundary lines of the said natural oyster beds, bars, and rocks, as shown by a delineation on the maps and charts." The oyster laws of Maryland also provide in another section that there shall "be made a true and accurate survey of the natural oyster beds, bars, and rocks * * * with reference to fixed and permanent objects on the shore, giving courses and distances, to be fully described and set out in a written report of said survey."

Under the provisions of the laws quoted above the State of Maryland, in cooperation with the Department of Commerce and Labor, must define the boundaries of the natural oyster bars "as accurately as practicable" and also "with reference to fixed and permanent objects on the shore, giving courses and distances." The requirement of "as accurately as practicable" is easily fulfilled by definition of the location of the corners of the oyster bars by latitude and longitude. In fact, this method is probably the most satisfactory and accurate one that could be used for all purposes of legal definition or for relocation of the oyster-bar boundaries by competent engineers. Therefore the additional requirement of "giving courses and distances" is superfluous and is only fulfilled in the published definitions on account of the specific provisions of the law making it compulsory. This part of the description of boundaries has involved an immense amount of extra computations in order to prevent technical discrepancies between the latitude and longitude of a corner of an oyster bar and its distance and bearing from objects on shore of known latitude and longitude without adding anything to the accuracy and very little to the convenience of practical use of the descriptions of the oyster-bar boundaries.

As provided by law the boundaries of the oyster bars are all straight lines, but in the work already completed they have inclosed areas of all shapes from triangles to

complicated 14-sided figures, and of all sizes from 4 acres to 7,548 acres. The sides have varied in length from 93 to 7,529 yards, and in some cases the corners of the boundaries have been practically at the triangulation stations from which they are located, while in other instances they were over 13,600 yards from the landmarks most available for the purpose of fixing their position.

The varied characteristics of the legal boundaries of the oyster bars indicated by the above statement, together with the complicated requirements of the law under which the survey has been made and the magnitude of the work with the consequent need of fixed and uniform methods, have made the problem of describing the boundaries one of considerable difficulty and great importance.

The boundaries of the oyster bars of Maryland, as established by the Shell Fish Commission and delineated on the Coast and Geodetic Survey charts and projections and on the leasing charts of the commission, are technically defined and described by a method somewhat different from that used in other oyster surveys. But it is believed that the forms finally adopted will fulfill all needs of the survey for both the present and the future.

METHOD OF DESCRIBING BOUNDARIES.

The descriptions have been arranged in tabular form, thus avoiding many hundred repetitions of the same words by making one explanation of the tables sufficient for all oyster bars in each county.

Title.—At the top of each tabular form is given the legal name of the oyster bar to be described, and the one by which it is known and designated in the published oyster records and on the oyster charts. The adopted name of the oyster bar is the one used locally, as nearly as could be ascertained by the hydrographic engineer of the commission; and when there was no local name in common use a name was selected from one of the prominent features of the vicinity that would naturally suggest the section of the waters where the oyster bar was located.

Underneath the name, in parentheses, is given the general locality of the oyster bar and the serial number of the "Maryland Oyster Chart" on which its legal boundaries are shown.¹

First column.—This column, under the heading of "Corner of bar," gives the number corresponding to the corner of the boundary as shown on the charts and to the number on the buoy marking the actual corner of the bar. The numbers of the corners have been assigned by naming the southernmost point No. 1, thence proceeding in a clockwise direction around the bar. Where a corner of one oyster bar is identical with the corner of the boundaries of one or more other oyster bars, only the number of the corner of the oyster bar being described in the table is given in this column.

Second and third columns.—These two columns, under the headings of "Latitude" and "Longitude," give the geographic positions of the corners. These positions have been adopted by the 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 relocated from distant triangulation stations

¹ These charts can be obtained by application to the Superintendent of the Coast and Geodetic Survey at Washington, D. C.

of the survey, even though all the landmarks and buoys originally used for their location have been destroyed by natural or other causes.

Fourth and fifth columns.—These two columns, under the general heading of "True bearing"¹ and the specific headings "Forward" and "Back," give bearings measured from a true north-and-south line. The three "Forward" bearings are from the corner of the boundary designated in the first column to the triangulation stations named on the corresponding lines in the last column, and the three "Back" bearings are from these same stations in the last column to the corresponding corner of boundary in the first column. The difference in minutes of arc between the forward and back bearings shown in some cases is actual and not accidental, and is due to the fact that the computations took into account the spheroidal shape of the earth.

Sixth column.—This column, under the heading of "Distance," gives the three computed distances in yards from the corner of the bar noted in the first column to the three triangulation stations named on the corresponding lines in the last column, and vice versa.

Seventh column.—This column, under the heading of "U. S. C. & G. S. triangulation station,"² gives the names of the landmarks from which were computed the corresponding "Latitude," "Longitude," "True bearing," and "Distance" of the "Corner of bar" designated in the first column. A full description of the location and markings of these triangulation stations is given in another part of this publication under the heading of "Descriptions of triangulation stations."

SURVEYING METHODS FOR RELOCATION OF BOUNDARIES.

There are a number of methods that can be used in the relocation of the actual boundaries of the natural oyster bars as technically described in this publication and delineated on the published charts of the Coast and Geodetic Survey and the leasing charts of the Shell Fish Commission.

The following brief descriptions of five of these more or less different methods assume a certain amount of experience and knowledge on the part of the engineer in the particular kind of surveying under consideration, and are only intended as reminders of ways and means that can be used.

There are two problems that are likely to present themselves to those interested in the boundaries of natural oyster bars: One, to determine whether the buoys marking the corners have been dragged or otherwise moved from their correct positions, and the other, to relocate or reestablish a buoy at the point from which it was removed. The different ways of solving these two problems partly depend upon the instruments possessed by the engineer and his assistants and partly on his training and experience.

(1) *Triangulation.*—This method is the one that will give the greatest accuracy, but on account of its requiring special data and instruments, and being an operation rarely used by engineers not engaged in geodetic surveying, it is recommended only for cases in dispute that can not be settled satisfactorily by some other method. An explanation of this class of work would be too long for a report of this sort, and those

¹ The mean magnetic variation for Dorchester County was 6° 00' west of north in 1911 and increasing at the rate of 5' yearly.

² Geographic positions of these triangulation stations can be obtained by application to the Superintendent of the Coast and Geodetic Survey, Washington, D. C.

not familiar with this method are referred to the publications on the subject by the Coast and Geodetic Survey.

(2) *Hydrographic*.—This method is the most simple and satisfactory one that can be adopted if the surveyor can obtain the use of the necessary instruments and assistants. It is the one best suited for the work of the engineers of the Commission in relocating corners of boundaries, as it gives results of the accuracy ordinarily required and is rapid in execution. Besides, it has the advantage of being available whenever three triangulation stations of suitable relative positions are visible from the offshore points needing relocation.

Most navigators and others familiar with the use of a 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 stated.

In the case where there is only one engineer having a single sextant, the three-point method can be used if the two angles determining the position of a buoy are first derived from the "Forward" bearings given in the tabular forms describing the boundaries of the oyster bars. For example, take "Drum Point" oyster bar, which is the first one described in this publication, and assume that "Corner No. 3" is to be examined as to its position. The angle between the two landmarks "Up" and "Blind" as determined from right to left from the forward bearings from this corner is $26^{\circ} 36'$ and the angle between "Blind" and "Myrtle" is $60^{\circ} 12'$. Having these two angles, the engineer proceeds to the buoy of doubtful location and measures the actual sextant angles between the landmarks for which the calculations were made. If the measured and calculated angles do not agree the buoy is not in its correct position and the boundary corner must be relocated. 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 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, as the use of the protractor is essential in case of the washing away or destruction of one or more of the landmarks originally used in describing the boundaries. Under these circumstances, any three landmarks of suitable relative position that are visible from the point to be located can be utilized. For example, the engineer can proceed to the buoy of doubtful position and measure the two adjacent sextant angles between the three landmarks selected. These two angles are set off on the three-arm protractor and the actual position of the 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 landmarks selected. The center of the hub of the protractor will indicate on the chart the actual position of the 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 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 protractor angles between the three selected landmarks. One of the angles thus obtained is set on the sextant and the boat moved about until the two landmarks 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 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 resetting either.

If there are two observers, two sextants, and a protractor, it can be seen that the best conditions for both rapid and accurate hydrographic location of a point is attained. In fact, this is the method by which the buoys at the corners of the boundaries were originally placed by the hydrographic engineer to the commission.

(3) *Magnetic bearings from offshore.*—This method of fixing a position on water is a simple and well-known one in navigation. It is available to anyone having a boat compass and will be of special use to the State Fishery Force in investigating cases where buoys are supposed to have been moved for illegal purposes.

In the case where a buoy is supposed to have been moved from its true position the observer can take compass bearings to the three landmarks given in the last column of the tables opposite the boundary corner in question. These bearings are then corrected for the local declination,¹ and if the results agree with the published bearings the buoy is correctly located.

In the case where the buoy is not in its correct position, or has disappeared altogether, the desired point can be determined by maneuvering the vessel until the corrected bearings agree with the ones in the tabular descriptions, when the buoy can be anchored in its proper location.

In the case where the landmarks, for which the bearings are published, have been destroyed or washed away, any landmarks whose positions are indicated on the charts can be used. This can be done by getting their bearings directly from the chart by parallel rulers or a protractor and then applying these new bearings in the same manner as the ones published in the tables.

(4) *Magnetic bearings from shore.*—This method will be of special value to engineers having an ordinary surveyor's compass. The compass can be set over the point marking a "triangulation station" on shore, the name of which is given in the last column opposite the "corner" in question. The instrument is then set at the corresponding "back" bearing (corrected for local magnetic declination) given in the fifth column of the tables opposite the "corner" in question. The direction thus determined will give one range on which the desired point must be located. The compass can then be moved to a second triangulation station and another range located in a similar manner. The intersection of these two range lines will give the desired point; but in general it should be checked by an additional range line determined from a third station.

(5) *Horizontal angles measured at landmarks.*—This process is a modification of the triangulation method, and will be useful to engineers who have a transit and desire considerable accuracy.

¹The mean magnetic variation for Dorchester County was 6° 00' west of north in 1911 and increasing at the rate of 5' yearly.

The instrument is placed over a "triangulation station," the name of which appears in the last column of the tabular description opposite the "corner" in question. The telescope is then pointed to the landmark indicated in the "Descriptions of landmarks" as having a direction of 0° 00' 00" from the triangulation station being occupied by the transit. The tabular description of the boundaries is next examined and the "back" bearing of the questionable boundary "corner" from the landmark being occupied is taken out. The angle calculated from this "back" bearing and the bearing given in parentheses alongside the zero landmark in the "Descriptions of landmarks" is then set off on the transit and a range line established on which the desired point must be located. A similar process is then carried on at a second station, and so on until the position of the buoy is satisfactorily fixed.

BOUNDARIES OF NATURAL OYSTER BARS.

DRUM POINT.

(Upper Choptank River—Chart No. 35.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 38 35.96	75 57 34.20	N 77 36 W	S 77 36 E	663	Up. Blind. Myrtle.
			S 75 48 W	N 75 47 E	1,776	
			S 15 36 W	N 15 36 E	201	
2	38 38 37.27	75 57 37.42	N 80 05 W	S 80 06 E	571	Up. Blind Myrtle.
			S 73 40 W	N 73 39 E	1,706	
			S 7 24 E	N 7 24 W	241	
3	38 38 52.76	75 57 27.92	S 62 27 W	N 62 26 E	918	Up. Myrtle. Hut.
			S 16 09 W	N 16 09 E	792	
			S 11 58 W	N 11 58 E	1,576	
4	38 38 50.12	75 57 22.04	S 70 55 W	N 70 54 E	1,025	Up. Myrtle. Hut.
			S 29 14 W	N 29 14 E	770	
			S 18 22 W	N 18 22 E	1,531	

CABIN CREEK ENTRANCE.

(Upper Choptank River—Chart No. 35.)

1	38 38 02.66	75 58 13.40	N 17.08 E	S 17 08 W	1,323	Up. Blind. Raccoon.
			N 44 54 W	S 44 55 E	970	
			S 84 07 W	N 84 07 E	1,824	
2	38 38 07.42	75 58 17.50	N 24 17 E	S 24 17 W	1,215	Up. Blind. Raccoon.
			N 47 35 W	S 47 36 E	781	
			S 78 30 W	N 78 29 E	1,741	
3	38 38 14.37	75 58 05.06	N 11 00 E	S 11 00 W	886	Up. Blind. Raccoon.
			N 72 06 W	S 72 07 E	951	
			S 74 03 W	N 74 02 E	2,116	
4	38 38 10.08	75 58 01.20	N 3 47 E	S 3 47 W	1,017	Up. Blind. Raccoon.
			N 66 33 W	S 66 34 E	1,098	
			S 78 27 W	N 78 26 E	2,181	

Survey of Oyster Bars, Dorchester County, Md.

CABIN CREEK.

(Upper Choptank River—Chart No. 35.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / ' "	° / ' "		
1	38 37 33.23	75 58 28.98	N 9 14 W	S 9 14 E	1,702	Blind. Raccoon. Bank.
			N 60 07 W	S 60 07 E	1,617	
			S 84 56 W	N 84 56 E	1,748	
2	38 37 46.60	75 58 57.78	N 21 41 E	S 21 42 W	1,322	Blind. Raccoon. Bank.
			N 61 00 W	S 61 00 E	732	
			S 58 18 W	N 58 18 E	1,150	
Thence along county boundary as delineated on chart No. 35 to corner No. 3.						
3	38 38 07.18	75 58 37.02	N 42 21 E	S 42 22 W	1,506	Up. Blind. Raccoon.
			N 6 26 W	S 6 26 E	538	
			S 74 06 W	N 74 05 E	1,237	
4	38 37 55.62	75 58 17.54	N 18 23 E	S 18 23 W	1,584	Up. Blind. Raccoon.
			N 31 54 W	S 31 54 E	1,080	
			N 88 17 W	S 88 18 E	1,706	

TANNERS PATCH.

(Upper Choptank River—Chart No. 35.)

1	38 36 52.72	75 58 44.82	S 24 01 E	N 24 01 W	1,070	War. Wick. Raccoon.
			N 65 28 E	S 65 28 W	431	
			N 24 21 W	S 24 22 E	2,384	
2	38 37 01.20	75 58 57.24	S 31 11 E	N 31 11 W	1,475	War. Wick. Raccoon.
			S 81 34 E	N 81 34 W	728	
			N 19 09 W	S 19 09 E	1,997	
3	38 37 08.12	75 58 50.58	N 59 21 W	S 59 22 E	1,356	Bank. Spindle. Jam.
			S 71 19 W	N 71 18 E	788	
			S 30 37 W	N 30 37 E	1,102	
4	38 36 59.38	75 58 38.21	S 53 39 W	N 53 38 E	1,103	Jam. Spindle. Bank.
			N 87 45 W	S 87 46 E	1,075	
			N 56 35 W	S 56 35 E	1,793	

DIXON.

(Upper Choptank River—Chart No. 35.)

1	38 35 46.40	75 59 12.80	S 27 19 E	N 27 19 W	1,502	Chief. Gander. War.
			S 82 40 E	N 82 39 W	906	
			N 43 01 E	S 43 02 W	1,724	
Thence along county boundary as delineated on chart No. 35 to corner No. 2.						
2	38 36 26.90	75 58 57.27	S 18 11 E	N 18 11 W	1,559	Gander. War. Wick.
			S 82 07 E	N 82 07 W	772	
			N 34 31 E	S 34 31 W	1,274	
3	38 36 21.78	75 58 45.54	S 7 40 E	N 7 40 W	1,320	Gander. War. Wick.
			N 81 38 E	S 81 38 W	459	
			N 18 36 E	S 18 36 W	1,290	
4	38 35 57.08	75 58 53.42	S 5 56 E	N 5 56 W	1,703	Chief. Gander. War.
			S 38 58 E	N 38 58 W	611	
			S 36 23 E	N 36 23 W	1,118	

Survey of Oyster Bars, Dorchester County, Md.

113

OYSTER SHELL POINT.

(Upper Choptank River—Chart No. 35.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' "	° / ' "	° / ' "	° / ' "	Yards.	
1	38 35 05.58	76 00 08.13	N 61 54 E N 4 16 E N 60 16 W	S 61 55 W S 4 17 W S 60 17 E	2,677 1,257 1,720	Gander. Duck. Barber.
2	38 35 14.68	76 00 30.08	N 72 03 E N 35 29 E N 59 07 W	S 72 04 W S 35 29 W S 59 07 E	3,094 1,162 1,063	Gander. Duck. Barber.
Thence along county boundary as delineated on chart No. 35 to corner No. 3.						
3	38 35 29.35	75 59 58.01	N 77 38 E N 21 05 W N 88 21 W	S 77 39 W S 21 05 E S 88 21 E	2,144 484 1,762	Gander. Duck. Barber.
4	38 35 13.00	75 59 45.02	N 60 00 E N 27 18 W N 74 02 W	S 60 01 W S 27 19 E S 74 03 E	2,021 1,129 2,189	Gander. Duck. Barber.

STATES BANK.

(Middle Choptank River—Chart No. 35.)

1	38 34 03.60	76 02 35.51	N 43 03 E N 9 06 E S 89 16 W	S 43 03 W S 9 06 W N 89 15 E	1,947 2,010 1,075	Rear. Boling. Shoal.
2	38 34 11.20	76 02 32.80	N 47 08 E N 8 06 E S 76 45 W	S 47 09 W S 8 07 W N 76 45 E	1,715 1,754 1,179	Rear. Boling. Shoal.
3	38 34 24.13	76 02 28.08	N 57 10 E N 5 22 E S 60 58 W	S 57 10 W S 5 22 W N 60 58 E	1,347 1,298 1,456	Rear. Boling. Shoal.
Thence along county boundary as delineated on Chart No. 35 to corner No. 4.						
4	38 34 18.74	76 01 58.46	S 49 58 E N 20 53 E N 24 13 W	N 49 58 W S 20 53 W S 24 13 E	926 977 1,616	Ferry. Rear. Boling.
5	38 34 10.08	76 02 02.44	S 69 33 E N 20 38 E N 17 31 W	N 69 33 W S 20 38 W S 17 31 E	869 1,287 1,851	Ferry. Rear. Boling.

SHOAL CREEK.

(Middle Choptank River—Chart No. 35.)

1	38 34 03.60	76 02 35.51	N 43 02 E N 9 06 E S 89 16 W	S 43 03 W S 9 06 W N 89 15 E	1,947 2,010 1,075	Rear. Boling. Shoal.
2	38 34 26.23	76 03 37.80	S 36 26 E N 16 10 E N 51 04 W	N 36 26 W S 16 11 W S 51 05 E	966 2,543 2,137	Shoal. Double. Cambridge.
3	38 34 38.42	76 03 29.50	N 84 51 E N 13 31 E N 63 40 W	S 84 52 W S 13 32 W S 63 41 E	2,769 2,090 2,100	Rear. Double. Cambridge.
4	38 34 11.20	76 02 32.80	N 47 08 E N 8 06 E S 76 45 W	S 47 09 W S 8 07 W N 76 45 E	1,715 1,754 1,179	Rear. Boling. Shoal.

Survey of Oyster Bars, Dorchester County, Md.

GREEN MARSH.

(Middle Choptank River—Chart No. 35.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / //	° / //	° /	° /	Yards.	
1	38 34 36.98	76 04 07.08	N 42 10 W S 19 40 W S 49 48 E	S 42 10 E N 19 40 E N 49 48 W	1,322 591 1,766	Cambridge. East Cambridge tall stack. Shoal.
2	38 35 06.05	76 04 40.62	N 65 06 E N 7 12 W N 50 20 W	S 65 07 W S 7 13 E S 50 21 E	2,614 3,682 1,479	Double. Red. Command.
3	38 35 27.32	76 04 27.48	N 81 21 W S 25 52 W S 33 39 E	S 81 22 E N 25 52 E N 33 38 W	1,503 797 3,409	Command. Cambridge. Shoal.
4	38 34 49.95	76 03 47.52	N 68 53 W S 35 48 W S 27 47 E	S 68 53 E N 35 48 E N 27 47 W	1,507 1,225 1,783	Cambridge. East Cambridge tall stack. Shoal.

HAMBROOKS.

(Middle Choptank River—Chart No. 35.)

1	38 35 36.96	76 04 11.95	S 87 00 W S 36 03 W N 87 58 E	N 86 59 E N 36 03 E S 87 58 W	1,900 1,289 1,613	Command. Cambridge. Double.
2	38 35 51.84	76 05 01.66	S 81 22 E N 2 34 E N 59 52 W	N 81 21 W S 2 34 W S 59 53 E	2,961 2,112 3,077	Double. Red. Howells.
3	38 36 10.60	76 05 12.54	N 71 30 E N 14 32 E N 68 58 W	S 71 31 W S 14 32 W S 68 59 E	3,391 1,526 2,544	Double. Red. Howells.
Thence along county boundary as delineated on chart No. 35						to corner No. 1.

TURTLE BACK.

(Middle Choptank River—Chart No. 35.)

1	38 35 43.90	76 05 21.78	N 14 47 E N 49 35 W S 64 58 W	S 14 47 W S 49 36 E N 64 57 E	2,457 2,796 3,052	Red. Howells. Howard.
2	38 35 58.78	76 05 55.86	N 39 11 E N 43 06 W S 46 06 W	S 39 12 W S 43 06 E N 46 05 E	2,419 1,797 2,586	Red. Howells. Howard.
Thence along county boundary as delineated on Chart No. 35						to corner No. 3.
3	38 36 09.56	76 05 26.90	N 26 46 E N 64 34 W S 50 39 W	S 26 46 W S 64 35 E N 50 38 E	1,693 2,208 3,401	Red. Howells. Howard.

Survey of Oyster Bars, Dorchester County, Md.

SANDY HILL LUMPS.

(Middle Choptank River—Chart No. 35.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 35 30.92	76 06 04.28	N 84 27 E	S 84 28 W	Yards. 1,082 2,465 4,143	Command. Howells. Toot.
			N 24 03 W	S 24 04 E		
			N 66 29 W	S 66 31 E		
2	38 35 36.38	76 06 08.12	S 86 08 E	N 86 08 W	1,181 2,256 3,979	Command. Howells. Toot.
			N 23 36 W	S 23 36 E		
			N 68 21 W	S 68 22 E		
3	38 35 42.82	76 05 56.38	S 71 07 E	N 71 06 W	916 2,212 4,199	Command. Howells. Toot.
			N 33 16 W	S 33 17 E		
			N 72 40 W	S 72 41 E		
4	38 35 35.45	76 05 51.45	S 86 15 E	N 86 15 W	738 2,492 4,402	Command. Howells. Toot.
			N 32 38 W	S 32 39 E		
			N 70 05 W	S 70 07 E		

SANDY HILL.

(Middle Choptank River—Chart No. 35.)

1	38 35 18.80	76 06 32.90	N 74 22 E	S 74 23 W	1,904 2,672 3,674	Command. Howells. Toot.
			N 5 19 W	S 5 19 E		
			N 55 53 W	S 55 54 E		
2	38 35 23.28	76 07 29.58	N 83 49 E	S 83 50 W	3,353 2,804 6,209	Command. Howells. Chlora.
			N 26 32 E	S 26 32 W		
			N 21 12 W	S 21 13 E		
Thence from corner No. 2 along the mean low water line of the shore to corner No. 3, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
3	38 35 29.62	76 07 39.76	N 87 39 E	S 87 41 W	3,607 2,754 5,916	Command. Howells. Chlora.
			N 33 33 E	S 33 33 W		
			N 19 31 W	S 19 32 E		
4	38 36 15.38	76 07 16.76	N 85 21 W	S 85 22 E	1,888 2,369 3,305	Toot. Howard. Command.
			S 6 45 E	N 6 44 W		
			S 65 01 E	N 66 00 W		
5	38 35 49.78	76 06 23.68	N 72 49 W	S 72 50 E	3,439 1,868 1,676	Toot. Howard. Command.
			S 37 06 W	N 37 06 E		
			S 71 31 E	N 71 30 W		

Survey of Oyster Bars, Dorchester County, Md.

COMMANDER.

(Middle Choptank River—Chart No. 35.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' "	° / ' "	° / ' "	° / ' "	Yards.	
1	38 35 05.62	76 07 06.25	N 11 34 E N 4 25 W N 40 45 W	S 11 34 W S 4 25 E S 40 45 E	3,169 5,262 3,308	Howells. Trappe. Toot.
Thence from corner No. 1 along the mean low water line of the shore to corner No. 2, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
2	38 35 10.24	76 07 15.66	S 57 55 E N 74 53 E N 1 00 W	N 57 55 W S 74 54 W S 1 00 E	294 3,072 4,607	Howard. Command. Black Beacon.
3	38 35 13.00	76 07 13.01	S 35 41 E N 76 15 E N 1 54 W	N 35 41 W S 76 16 W S 1 54 E	307 2,981 4,514	Howard. Command. Black Beacon.
4	38 35 09.10	76 07 04.21	N 72 29 E N 11 00 E N 42 49 W	S 72 30 W S 11 01 W S 42 50 E	2,792 3,043 3,256	Command. Howells. Toot.

HORN POINT.

(Middle Choptank River—Chart No. 35.)

1	38 36 01.54	76 08 51.30	N 1 04 W N 36 28 W N 89 02 W	S 1 04 E S 36 29 E S 89 03 E	4,501 3,859 1,819	Chlora. Large water tank. Le Compte.
2	38 36 05.80	76 08 59.82	N 1 51 E N 34 57 W S 85 57 W	S 1 51 W S 34 58 E N 85 57 E	4,358 3,611 1,598	Chlora. Large water tank. Le Compte.
3	38 36 31.46	76 08 34.36	S 66 39 W S 23 54 E N 85 58 E	N 66 39 E N 23 54 W S 85 59 W	2,469 425 2,976	Le Compte. Toot. Howells.
4	38 36 46.21	76 08 32.40	S 57 32 W S 7 44 E S 84 21 E	N 57 29 E N 7 44 W N 84 20 W	2,748 895 2,929	Le Compte. Toot. Howells.
5	38 36 22.66	76 08 05.67	S 31 11 E N 77 05 E N 18 50 W	N 31 11 W S 77 06 W S 18 50 E	3,037 2,266 4,001	Howard. Howells. Chlora.
6	38 36 14.90	76 08 21.45	S 40 25 E N 73 42 E N 12 11 W	N 40 25 W S 73 43 W S 12 11 E	3,070 2,735 4,143	Howard. Howells. Chlora.
Thence from corner No. 6 along the mean low water line of the shore to corner No. 1, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						

LE COMPTE.

(Middle Choptank River—Chart No. 35.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' "	° / ' "	° / ' "	° / ' "	Yards.	
1	38 36 31.46	76 08 34.36	S 66 39 W S 23 54 E N 85 58 E	N 66 39 E N 23 54 W S 85 59 W	2,469 425 2,976	Le Compte. Toot. Howells.
2	38 37 03.90	76 09 04.60	S 35 18 W S 33 16 E S 76 47 E	N 35 17 E N 33 15 W N 76 45 W	2,538 1,769 3,869	Le Compte. Toot. Howells.
3	38 37 24.00	76 08 54.36	S 32 17 W S 17 59 E S 65 55 E	N 32 17 E N 17 59 W N 65 52 W	3,252 2,271 3,829	Le Compte. Toot. Howells.
4	38 37 52.86	76 09 25.36	N 47 35 E N 2 15 E S 64 59 W	S 47 36 W S 2 15 W N 64 58 E	1,106 3,304 1,538	Chlora. Landeye. Large Water Tank.
5	Thence along county boundary as delineated on Chart No. 35		S 45 23 W S 3 16 W S 63 42 E	N 45 22 E N 3 16 E N 63 41 W	3,580 1,929 2,994	to corner No. 5. Le Compte. Toot. Howells.
6	38 36 46.21	76 08 32.40	S 57 32 W S 7 44 E S 84 21 E	N 57 29 E N 7 44 W N 84 20 W	2,748 895 2,929	Le Comte. Toot. Howells.

CASTLE HAVEN CREEK.

(Middle Choptank River—Chart No. 35.)

1	38 36 53.06	76 09 52.72	S 6 28 W S 63 33 E N 26 06 W	N 6 28 E N 63 32 W S 26 05 E	1,717 2,509 1,521	Le Compte. Toot. Large Water Tank.
Thence from corner No. 1 along the mean low water line of the shore to corner No. 2, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
2	38 37 21.68	76 10 13.20	N 87 52 E N 49 12 E N 17 38 W	S 87 54 W S 49 13 W S 17 38 E	4,619 2,750 4,210	Black Beacon. Chlora. Large Water Tank.
3	38 37 39.00	76 10 00.38	S 68 37 W S 42 33 E S 84 30 E	N 68 37 E N 42 32 W N 84 28 W	502 3,620 4,297	Large Water Tank. Toot. Black Beacon.
4	38 37 17.41	76 09 30.56	N 66 31 W S 17 09 W S 40 34 E	S 66 32 E N 17 08 E N 40 33 W	1,369 2,644 2,551	Large Water Tank. Le Compte. Toot.

Survey of Oyster Bars, Dorchester County, Md.

CASTLE HAVEN.

(Outer Choptank River—Charts Nos. 35 and 37.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station	
			Forward	Back			
			° / ' "	° / ' "			
	38 36 51.26	76 12 04.64	N 60 26 W	S 60 27 E	3,767	Dot.	
			S 20 37 W	N 20 37 E			114
			N 63 10 E	S 63 11 W			3,161	Corner. Large Water Tank.
2	38 36 58.50	76 12 39.54	S 68 22 E	N 68 22 W	950	Corner. Choptank River Light. Dot.	
			N 27 15 E	S 27 16 W	5,426		
			N 55 32 W	S 55 33 E	2,855		
3	38 37 32.00	76 12 49.04	S 37 29 E	N 37 28 W	1,865	Corner. Choptank River Light. Dot.	
			N 36 32 E	S 36 33 W	4,597		
			N 76 59 W	S 77 00 E	2,158		
4	38 37 28.60	76 12 09.40	N 79 13 W	S 79 14 E	3,208	Dot. Corner. Large Water Tank,	
			S 3 36 E	N 3 36 W	1,368		
			N 86 45 E	S 86 46 W	2,952		
5	38 38 28.84	76 10 46.48	S 31 49 W	N 31 48 E	3,998	Corner. Castle. Chlora.	
			S 35 07 E	N 35 07 W	1,928		
			S 81 02 E	N 81 00 W	2,999		
6	38 37 38.70	76 09 49.62	N 50 00 E	S 50 01 W	1,903	Chlora. Choptank River Light. Castle.	
			N 30 04 W	S 30 05 E	4,008		
			N 73 59 W	S 73 59 E	410		

Thence from corner No. 6 along the mean low water line of the shore to corner No. 1, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.

COOK POINT.

(Outer Choptank River—Charts Nos. 36 and 37.)

1	38 38 15.20	76 16 26.68	S 68 09 W	N 68 09 E	1,768	Chef. Dot. Roys.
			S 75 07 E	N 75 06 W	3,782	
			N 31 13 E	S 31 15 W	7,853	
2	38 38 37.80	76 17 47.96	S 19 43 E	N 19 42 W	1,508	Chef. Dot. Bar.
			S 73 22 E	N 73 20 W	6,059	
			N 23 34 W	S 23 35 E	6,020	
3	38 38 48.40	76 17 48.16	S 16 08 E	N 16 07 W	1,850	Chef. Dot. Bar.
			S 70 12 E	N 70 10 W	6,174	
			N 24 57 W	S 24 58 E	5,692	
4	38 38 52.80	76 17 30.32	S 1 15 E	N 1 15 W	1,926	Chef. Dot. Nelson 3.
			S 67 14 E	N 67 12 W	5,788	
			N 16 58 E	S 16 59 W	6,768	
5	38 39 47.20	76 17 08.36	N 16 44 E	S 16 45 W	4,845	Nelson 3. Black. Chef.
			N 82 51 W	S 82 53 E	5,233	
			S 8 09 W	N 8 09 E	3,798	
6	38 39 51.12	76 16 42.84	N 9 05 E	S 9 05 W	4,564	Nelson 3. Black. Chef.
			N 84 56 W	S 84 59 E	5,890	
			S 17 19 W	N 17 19 E	4,077	
7	38 39 29.28	76 16 17.40	S 30 52 W	N 30 51 E	3,678	Chef. Dot. Roys.
			S 44 30 E	N 44 29 W	4,863	
			N 42 12 E	S 42 13 W	5,694	

RED BUOY.

(Outer Choptank River—Charts Nos. 36 and 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 38 11.38	76 18 33.10	N 87 13 W	S 87 16 E	Yards. 6,366 5,679 1,783	Sharps Island Light. Jere. Chef.
			S 67 19 W	N 67 17 E		
			S 72 44 E	N 72 44 W		
2	38 38 19.61	76 18 47.52	N 89 42 W	S 89 44 E	5,975 5,449 2,235	Sharps Island Light. Jere. Chef.
			S 63 05 W	N 63 03 E		
			S 68 50 E	N 68 49 W		
3	38 38 49.02	76 18 11.33	S 59 17 W	N 59 15 E	6,765 8,467 2,123	Jere. Brannock. Chef.
			S 20 05 E	N 20 03 W		
			S 32 04 E	N 32 04 W		
4	38 38 33.14	76 18 06.04	S 63 51 W	N 63 50 E	6,635 7,916 1,603	Jere. Brannock. Chef.
			S 20 27 E	N 20 26 W		
			S 38 00 E	N 38 00 W		

SPEDDEN.

(Entrance Choptank River—Charts Nos. 36 and 37.)

1	38 37 10.14	76 18 16.06	S 82 55 E	N 82 54 W	2,363 1,982 5,693	Cook Point Windmill. Chef. Jere.
			N 39 11 E	S 39 12 W		
			S 88 45 W	N 88 43 E		
2	38 37 31.92	76 18 50.81	S 79 48 W	N 79 46 E	4,848 6,653 2,314	Jere. Brannock. Chef.
			S 36 26 E	N 36 25 W		
			N 69 45 E	S 69 46 W		
3	38 37 45.32	76 19 01.38	S 73 44 W	N 73 43 E	4,680 7,183 2,476	Jere. Brannock. Chef.
			S 36 05 E	N 36 04 W		
			N 81 53 E	S 81 54 W		
4	38 37 49.56	76 18 55.20	S 72 40 W	N 72 38 E	4,876 7,207 2,297	Jere. Brannock. Chef.
			S 34 22 E	N 34 21 W		
			N 84 51 E	S 84 52 W		
5	38 37 32.40	76 18 24.66	S 80 54 W	N 80 52 E	5,533 6,281 1,675	Jere. Brannock. Chef.
			S 31 16 E	N 31 14 W		
			N 62 02 E	S 62 03 W		
6	38 37 13.42	76 18 10.90	S 79 41 E	N 79 40 W	2,245 1,810 5,832	Cook Point Windmill. Chef. Jere.
			N 38 03 E	S 38 03 W		
			S 87 41 W	N 87 39 E		

Survey of Oyster Bars, Dorchester County, Md.

DUPONT.

(Chesapeake Bay—Off Tripps Bay—Charts Nos. 36 and 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' / ''	° / ' / ''	° / ' / ''	° / ' / ''	Yards.	
1	38 36 45.00	76 17 27.32	S 24 48 E N 62 11 E N 0 54 W	N 24 47 W S 62 12 W S 0 54 E	4,152 1,193 2,384	Brannock. Cook Point Windmill. Chef.
2	38 36 54.84	76 17 46.20	S 28 39 E N 81 46 E N 12 42 E	N 28 38 W S 81 47 W S 12 42 W	4,674 1,572 2,103	Brannock. Cook Point Windmill. Chef.
3	38 37 01.20	76 17 40.40	S 25 49 E N 89 34 E N 9 32 E	N 25 48 W S 89 35 W S 9 32 W	4,794 1,402 1,863	Brannock. Cook Point Windmill. Chef.
4	38 36 50.60	76 17 22.10	S 22 03 E N 68 09 E N 4 34 W	N 22 02 W S 68 09 W S 4 34 E	4,271 989 2,201	Brannock. Cook Point Windmill. Chef.

DIAMOND.

(Chesapeake Bay—Vicinity Sharps Island—Charts Nos. 36 and 37.)

1	38 36 10.60	76 20 02.68	S 65 58 E N 48 58 E N 56 43 W	N 65 55 W S 40 00 W S 56 44 E	6,410 5,398 3,434	Brannock. Chef. Jere.
2	38 36 39.40	76 20 43.16	S 62 38 E N 63 26 E N 40 31 W	N 62 36 W S 63 28 W S 40 32 E	7,797 5,750 4,489	Brannock. Chef. Sharps Island Light.
3	38 36 58.72	76 20 27.22	S 56 56 E N 67 52 E N 50 24 W	N 56 53 W S 67 54 W S 50 26 E	7,761 5,096 4,332	Brannock. Chef. Sharps Island Light.
4	38 36 58.28	76 18 45.32	N 88 00 E N 46 18 E N 65 19 W	S 88 02 W S 46 19 W S 65 21 E	3,121 2,802 6,641	Cook Point Windmill. Chef. Sharps Island Light.
5	38 36 10.72	76 19 10.96	S 59 45 E N 37 23 E N 66 05 W	N 59 45 W S 37 23 W S 66 06 E	5,191 4,454 4,637	Brannock. Chef. Jere.

BRANNOCK.

(Chesapeake Bay Off Tripps Bay—Charts Nos. 36 and 37.)

1	38 36 09.83	76 17 22.46	S 31 58 E N 28 00 E N 74 58 W	N 31 58 W S 28 01 W S 75 01 E	3,046 1,974 7,361	Brannock. Cook Point Windmill. Jere.
2	38 36 20.52	76 17 36.43	S 33 57 E N 43 10 E N 3 38 E	N 33 56 W S 43 10 W S 3 38 W	3,550 1,895 3,215	Brannock. Cook Point Windmill. Chef.
3	38 36 33.12	76 17 29.46	S 28 05 E N 49 16 E N 0 24 E	N 28 05 W S 49 17 W S 0 24 W	3,819 1,468 2,783	Brannock. Cook Point Windmill. Chef.
4	38 36 17.62	76 17 08.98	S 23 49 E N 21 04 E N 77 34 W	N 23 48 W S 21 04 W S 77 37 E	3,111 1,586 7,644	Brannock. Cook Point Windmill. Jere.

Survey of Oyster Bars, Dorchester County, Md.

MILL POINT.

(Chesapeake Bay—Off Tripps Bay—Charts Nos. 36 and 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / ' "	° / ' "		
1	38 35 40.00	76 17 36.81	S 51 37 E	N 51 37 W	Yards. 2,542 3,043 7,333	Brannock. Cook Point Windmill. Jere.
			N 25 25 E	S 25 26 W		
			N 66 35 W	S 66 38 E		
2	38 35 48.78	76 17 54.30	S 52 39 E	N 52 38 W	3,088 3,024 6,793	Brannock. Cook Point Windmill. Jere.
			N 35 49 E	S 35 49 W		
			S 67 17 W	N 67 15 E		
3	38 35 54.00	76 17 43.40	S 46 35 E	N 46 34 W	2,983 2,715 6,995	Brannock. Cook Point Windmill. Jere.
			N 33 03 E	S 33 03 W		
			N 69 34 W	S 69 36 E		
4	38 35 51.00	76 17 37.50	S 45 54 E	N 45 53 W	2,801 2,722 7,176	Brannock. Cook Point Windmill. Jere.
			N 29 08 E	S 29 08 W		
			N 69 15 W	S 69 17 E		

HILLS POINT.

(Chesapeake Bay—Off Entrance Little Choptank River—Charts Nos. 36 and 37.)

1	38 34 30.62	76 19 27.02	S 45 17 E	N 45 17 W	1,458 6,611 6,494	Robins. Cook Point Windmill. Jere.
			N 39 42 E	S 39 43 W		
			N 35 58 W	S 35 59 E		
2	38 34 51.17	76 20 00.00	S 48 00 E	N 47 59 W	2,569 7,397 5,428	Robins. Chef. Jere.
			N 32 45 E	S 32 46 W		
			N 32 48 W	S 32 50 E		
3	38 34 58.06	76 20 10.62	S 48 18 E	N 48 17 W	2,933 6,798 5,082	Robins. Cook Point Windmill. Jere.
			N 52 16 E	S 52 18 W		
			N 31 33 W	S 31 35 E		
4	38 35 24.58	76 19 14.73	S 14 01 E	N 14 01 W	2,932 5,086 5,379	Robins. Cook Point Windmill. Jere.
			N 50 02 E	S 50 03 W		
			N 50 18 W	S 50 20 E		
5	38 34 34.56	76 19 06.60	S 23 09 E	N 23 08 W	1,260 6,173 6,722	Robins. Cook Point Windmill. Jere.
			N 36 37 E	S 36 39 W		
			N 40 22 W	S 40 24 E		

HILLS POINT NORTH.

(Chesapeake Bay—Off Entrance Little Choptank River—Charts Nos. 36 and 37.)

1	38 34 24.41	76 21 25.20	S 22 18 E	N 22 18 W	5,815 4,244 5,508	James. Robins. Jere.
			S 78 54 E	N 78 52 W		
			N 07 10 W	S 07 10 E		
2	38 34 46.64	76 21 30.20	S 20 54 E	N 20 53 W	6,559 4,573 4,748	James. Robins. Jere.
			S 69 58 E	N 69 56 W		
			N 06 42 W	S 06 43 E		
3	38 35 01.72	76 20 25.88	S 51 21 E	N 51 20 W	3,321 7,507 4,775	Robins. Chef. Jere.
			N 38 37 E	S 38 39 W		
			N 28 12 W	S 28 13 E		
4	38 34 52.64	76 20 20.36	S 54 09 E	N 54 08 W	3,019 7,662 5,114	Robins. Chef. Jere.
			N 36 20 E	S 36 22 W		
			N 28 01 W	S 28 02 E		

Survey of Oyster Bars, Dorchester County, Md.

HILLS POINT SOUTH.

(Chesapeake Bay—Off Entrance Little Choptank River—Charts Nos. 36 and 37.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 32 34.80	76 20 25.80	S 20 38 E	N 20 37 W	1,798	James. Robins. Jere.
			N 41 59 E	S 42 00 W	3,875	
			N 13 51 W	S 13 52 E	9,433	
2	38 33 49.88	76 21 52.36	S 34 43 E	N 34 41 W	5,128	James. Robins. Jere.
			N 85 56 E	S 85 58 W	4,896	
			N 0 16 E	S 0 16 W	6,628	
3	38 34 51.17	76 20 00.00	S 48 00 E	N 47 59 W	2,569	Robins. Chef. Jere.
			N 32 45 E	S 32 46 W	7,397	
			N 32 48 W	S 32 50 E	5,428	
4	38 34 00.00	76 20 16.80	S 4 57 E	N 4 57 W	4,573	James. Robins. Jere.
			N 89 50 E	S 89 51 W	2,353	
			N 21 39 W	S 21 40 E	6,766	
5	38 33 42.30	76 20 49.25	S 17 35 E	N 17 34 W	4,152	James. Robins. Jere.
			N 79 22 E	S 79 23 W	3,269	
			N 13 23 W	S 13 23 E	7,078	
6	38 33 03.70	76 20 13.40	S 6 33 E	N 6 33 W	2,675	James. Robins. Jere.
			N 49 55 E	S 49 56 W	2,958	
			N 17 32 W	S 17 33 E	8,586	

JAMES POINT.

(Chesapeake Bay—Vicinity James Point—Chart No. 36.)

1	38 31 41.59	76 22 01.56	S 40 31 E	N 40 30 W	4,170	Skid. James. Robins.
			N 88 00 E	S 88 01 W	3,171	
			N 47 39 E	S 47 41 W	6,937	
2	38 31 42.18	76 22 32.00	S 47 47 E	N 47 46 W	4,747	Skid. James. Robins.
			N 88 42 E	S 88 43 W	3,977	
			N 51 54 E	S 51 56 W	7,539	
3	38 32 42.94	76 23 10.08	S 40 49 E	N 40 47 W	6,923	Skid. James. Robins.
			S 68 33 E	N 68 31 W	5,355	
			N 69 27 E	S 69 29 W	7,414	
4	38 33 25.78	76 22 59.76	S 54 10 E	N 54 08 W	5,811	James. Robins. Sharps Island Light.
			N 80 09 E	S 80 11 W	6,768	
			N 4 00 E	S 4 01 W	9,966	
5	38 33 23.00	76 21 58.38	S 43 01 E	N 43 00 W	4,523	James. Robins. Jere.
			N 76 03 E	S 76 05 W	5,197	
			N 1 27 E	S 1 27 W	7,538	
6	38 32 34.36	76 21 42.68	S 58 00 E	N 57 59 W	3,148	James. Robins. Jere.
			N 57 59 E	S 58 01 W	5,457	
			N 1 24 W	S 1 24 E	9,179	

Survey of Oyster Bars, Dorchester County, Md.

123

TRIVERS.

(Chesapeake Bay—Vicinity James Island—Charts Nos. 36 and 38.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 28 46.52	76 21 27.48	S 65 42 E	N 65 40 W	2,920	Travers 2. Skid. Jere.
			N 33 28 E	S 33 28 W	3,276	
			N 2 08 W	S 2 08 E	16,871	
2	38 29 39.12	76 22 04.88	S 50 50 E	N 50 48 W	4,711	Travers 2. Skid. Jere.
			N 71 04 E	S 71 05 W	2,957	
			N 1 23 E	S 1 23 W	15,090	
3	38 30 11.68	76 21 53.40	S 39 25 E	N 39 24 W	5,272	Travers 2 Skid. Jere.
			S 86 50 E	N 86 40 W	2,497	
			N 0 15 E	S 0 15 W	13,986	
4	38 29 47.76	76 21 39.72	S 42 25 E	N 42 24 W	4,425	Travers 2. Skid. Jere.
			N 72 35 E	S 72 36 W	2,233	
			N 1 10 W	S 1 10 E	14,799	
5	38 29 33.16	76 21 43.34	S 48 00 E	N 47 59 W	4,146	Travers 2. Skid. Jere.
			N 62 28 E	S 62 29 W	2,511	
			N 0 47 W	S 0 47 E	15,291	
6	38 29 03.00	76 21 17.52	S 53 45 E	N 53 44 W	2,972	Travers 2. Skid. Jere.
			N 35 18 E	S 35 19 W	2,669	
			N 3 07 W	S 3 08 E	16,329	

MARSHALL.

(Oyster Creek—Charts Nos. 36, 37, and 38.)

1	38 29 21.71	76 19 59.20	N 44 12 E	S 44 14 W	7,422	Ragged Point 3. Rede. Skid.
			N 7 40 W	S 7 41 E	3,036	
			N 19 00 W	S 19 01 E	1,636	
2	38 29 28.62	76 20 07.94	N 46 44 E	S 46 46 W	7,423	Ragged Point 3. Rede. Skid.
			N 3 35 W	S 3 35 E	2,781	
			N 12 55 W	S 12 55 E	1,351	
3	38 29 27.76	76 19 56.36	N 44 54 E	S 44 56 W	7,224	Ragged Point 3. Rede. Skid.
			N 9 44 W	S 9 44 E	2,844	
			N 24 16 W	S 24 17 E	1,480	

Survey of Oyster Bars, Dorchester County, Md.

OYSTER CREEK.

(Little Choptank River—Charts Nos. 36, 37, and 38.)

Corner of bar	Latitude	Longitude	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 29 35.52	76 20 04.10	N 47 32 E	S 47 34 W	7,190	Ragged Point 3. Rede. Skid.
			N 6 11 W	S 6 11 E	2,557	
			N 20 26 W	S 20 26 E	1,154	
2	38 29 36.92	76 20 09.58	N 48 35 E	S 48 37 W	7,267	Ragged Point 3. Rede. Skid.
			N 2 59 W	S 2 59 E	2,499	
			N 14 00 W	S 14 00 E	1,065	
3	38 29 41.12	76 20 07.64	N 49 10 E	S 49 12 W	7,137	Ragged Point 3. Rede. Skid.
			N 4 25 W	S 4 25 E	2,361	
			N 19 07 W	S 19 07 E	945	
4	38 29 39.60	76 20 02.20	N 48 05 E	S 48 07 W	7,061	Ragged Point 3. Rede. Skid.
			N 7 43 W	S 7 43 E	2,427	
			N 25 40 W	S 25 40 E	1,048	

GRANGER.

(Little Choptank River—Charts Nos. 36, 37, and 38.)

1	38 30 00.84	76 19 49.14	N 85 52 E	S 85 51 W	2,653	Can. Rede. Skid.
			N 21 42 W	S 21 42 E	1,818	
			N 74 07 W	S 74 07 E	831	
2	38 30 19.44	76 19 57.56	S 81 22 E	N 81 23 W	2,902	Can. Rede. Skid.
			N 22 55 W	S 22 55 E	1,153	
			S 55 16 W	N 55 16 E	702	
3	38 30 22.59	76 19 46.56	N 55 58 E	S 56 00 W	5,840	Ragged Point 3. Rede. Skid.
			N 37 46 W	S 37 47 E	1,208	
			S 59 46 W	N 59 46 E	1,005	
4	38 30 04.26	76 19 38.61	N 88 10 E	S 88 11 W	2,369	Can. Rede. Skid.
			N 31 09 W	S 31 09 E	1,838	
			N 84 03 W	S 84 04 E	1,085	

CATORS.

(Little Choptank River—Charts Nos. 36, 37, and 38.)

1	38 30 11.58	76 19 20.12	S 84 48 E	N 84 47 W	1,885	Can. James. Skid.
			N 19 22 W	S 19 23 E	3,335	
			S 85 06 W	N 85 05 E	1,575	
2	38 30 19.24	76 19 35.42	S 79 21 E	N 79 20 W	2,323	Can. Rede. Skid.
			N 44 06 W	S 44 07 E	1,487	
			S 71 20 W	N 71 20 E	1,228	
3	38 30 40.44	76 19 12.60	N 31 00 W	S 31 00 E	2,535	James. Rede. Skid.
			N 77 50 W	S 77 50 E	1,678	
			S 57 55 W	N 57 55 E	2,087	
4	38 30 36.74	76 19 05.30	N 33 07 W	S 33 07 E	2,744	James. Rede. Skid.
			N 75 24 W	S 75 24 E	1,894	
			S 63 22 W	N 63 22 E	2,194	

HENPECK.

(Little Choptank River—Charts Nos. 36, 37, and 38.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / '	° / '		
1	38 30 17.80	76 18 41.76	N 35 52 W	S 35 52 E	Yards. 3,623 2,699 2,608	James. Rede. Skid.
			N 65 34 W	S 65 35 E		
			S 82 24 W	N 82 23 E		
2	38 30 26.75	76 18 49.68	N 35 59 W	S 35 59 E	3,256 2,391 2,462	James. Rede. Skid.
			N 70 04 W	S 70 05 E		
			S 74 47 W	N 74 46 E		
3	38 30 45.98	76 18 15.24	S 68 30 W	N 68 29 E	3,533 1,340 2,221	Skid. Can. Veith.
			S 6 47 E	N 6 47 W		
			S 62 21 E	N 62 20 W		
4	38 30 38.50	76 18 03.75	S 73 49 W	N 73 47 E	3,740 1,088 1,835	Skid. Can. Veith.
			S 7 43 W	N 7 43 E		
			S 64 55 E	N 64 54 W		

SLAUGHTER CREEK.

(Entrance Slaughter Creek—Charts Nos. 36, 37, and 38.)

1	38 29 57.14	76 16 10.23	N 32 57 E	S 32 57 W	1,009 1,480 704	Pov. Veith. Torrey.
			N 65 23 W	S 65 24 E		
			S 22 52 W	N 22 52 E		
2	38 30 06.63	76 16 36.65	N 67 07 E	S 67 08 W	1,356 711 886	Pov. Veith. Moore.
			N 65 20 W	S 65 20 E		
			S 32 18 W	N 32 18 E		
3	38 30 35.68	76 16 19.76	N 12 43 W	S 12 43 E	2,899 1,289 1,949	Ragged Point 3. Veith. Torrey.
			S 57 59 W	N 57 59 E		
			S 0 37 W	N 0 37 E		
4	38 30 06.76	76 16 03.56	N 15 40 W	S 15 41 E	3,950 1,550 1,546	Ragged Point 3. Veith. Moore.
			N 79 08 W	S 79 09 E		
			S 60 51 W	N 60 51 E		

HOOVER.

(Entrance Slaughter Creek—Charts Nos. 36, 37, and 38.)

1	38 30 06.63	76 16 36.65	N 67 07 E	S 67 08 W	1,356 711 886	Pov. Veith. Moore.
			N 65 20 W	S 65 20 E		
			S 32 18 W	N 32 18 E		
2	38 31 09.96	76 16 54.94	S 4 59 W	N 4 59 E	1,846 2,365 1,697	Veith. Pov. Ragged Point 3.
			S 47 08 E	N 47 08 W		
			N 9 58 E	S 9 59 W		
3	38 30 53.60	76 16 11.60	S 45 29 W	N 45 28 E	1,836 1,208 2,439	Veith. Pov. Wool.
			S 28 59 E	N 28 59 W		
			N 63 35 E	S 63 36 W		
4	38 30 35.68	76 16 19.76	N 12 43 W	S 12 43 E	2,899 1,289 1,949	Ragged Point 3. Veith. Torrey.
			S 57 59 W	N 57 59 E		
			S 0 37 W	N 0 37 E		

Survey of Oyster Bars, Dorchester County, Md.

NINE ACRES.

(Little Choptank River—Charts Nos. 36 and 37.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 30 30.04	76 17 50.80	S 31 40 W	N 31 40 E	932	Can. Veith. Ragged Point 3.
			S 69 31 E	N 69 30 W	1,409	
			N 30 27 E	S 30 27 W	3,501	
2	38 30 38.50	76 18 03.75	S 73 49 W	N 73 47 E	3,740	Skid. Can. Veith.
			S 7 43 W	N 7 43 E	1,088	
			S 64 55 E	N 64 54 W	1,835	
3	38 30 45.98	76 18 15.24	S 68 30 W	N 68 29 E	3,533	Skid. Can. Veith.
			S 6 47 E	N 6 47 W	1,340	
			S 62 21 E	N 62 20 W	2,221	
4	38 31 04.40	76 18 13.18	S 60 10 W	N 60 09 E	3,853	Skid. Can. Veith.
			S 3 03 E	N 3 03 W	1,954	
			S 49 11 E	N 49 10 W	2,527	
5	38 31 25.00	76 17 20.60	S 61 07 W	N 61 06 E	5,408	Skid. Veith. Pov.
			S 12 29 E	N 12 29 W	2,403	
			S 48 46 E	N 48 45 W	3,210	
6	38 30 55.10	76 17 24.07	S 36 10 W	N 36 10 E	2,030	Can. Veith. Pov.
			S 24 33 E	N 24 33 W	1,472	
			S 66 09 E	N 66 08 W	2,739	

LITTLE CHOPTANK.

(Little Choptank River—Charts Nos. 36 and 37.)

1	38 30 49.58	76 18 43.36	N 48 07 W	S 48 08 E	2,794	James. Rede. Skid.
			N 88 56 W	S 88 54 E	2,415	
			S 60 53 W	N 60 52 E	2,910	
2	38 31 00.84	76 18 59.66	N 47 58 W	S 47 59 E	2,219	James. Rede. Skid.
			S 80 25 W	N 80 24 E	2,011	
			S 49 36 W	N 49 36 E	2,771	
3	38 31 28.62	76 18 41.03	S 43 37 W	N 43 36 E	3,775	Skid. Can. Pov.
			S 16 55 E	N 16 55 W	2,894	
			S 63 47 E	N 63 45 W	5,067	
4	38 31 04.40	76 18 13.18	S 60 10 W	N 60 09 E	3,853	Skid. Can. Veith.
			S 3 03 E	N 3 03 W	1,954	
			S 49 11 E	N 49 10 W	2,527	

RAGGED POINT.

(Little Choptank River—Charts Nos. 36 and 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 31 25.95	76 17 50.96	S 56 05 W	N 56 04 E	Yards. 4,737 2,722 2,107	Skid. Veith. Ragged Point 3.
			S 29 06 E	N 29 06 W		
			N 57 30 E	S 57 29 W		
2	38 31 27.27	76 18 23.92	S 48 42 W	N 48 40 E	4,070 3,271 2,865	Skid. Veith. Ragged Point 3.
			S 42 12 E	N 42 11 W		
			N 67 41 E	S 67 42 W		
3	38 32 16.42	76 18 21.70	S 77 36 E	N 77 35 W	2,654 3,568 2,859	Ragged Point 3. Robins. James.
			N 11 13 W	S 11 13 E		
			S 68 10 W	N 68 09 E		
4	38 32 37.45	76 17 20.97	N 39 31 W	S 39 31 E	3,617 4,616 1,613	Robins. James. Ragged Point 3.
			S 67 25 W	N 67 23 E		
			S 37 34 E	N 37 34 W		
5	38 32 33.58	76 17 05.86	N 42 46 W	S 42 47 E	3,979 4,944 1,287	Robins. James. Ragged Point 3.
			S 70 36 W	N 70 34 E		
			S 26 56 E	N 26 56 W		
6	38 32 01.32	76 17 19.42	S 86 21 E	N 86 21 W	945 4,643 4,339	Ragged Point 3. Robins. James.
			N 30 18 W	S 30 19 E		
			S 82 39 W	N 82 38 E		

PEANUT HILL.

(Little Choptank River—Charts Nos. 36 and 37.)

1	38 32 16.42	76 18 21.70	S 77 36 E	N 77 35 W	2,654 3,568 2,859	Ragged Point 3. Robins. James.
			N 11 13 W	S 11 13 E		
			S 68 10 W	N 68 09 E		
2	38 32 43.02	76 19 38.07	S 17 51 W	N 17 50 E	2,059 4,842 2,922	James. Ragged Point 3. Robins.
			S 72 22 E	N 72 20 W		
			N 27 02 E	S 27 03 W		
3	38 32 55.00	76 18 55.58	S 36 37 W	N 36 36 E	2,945 3,959 2,208	James. Ragged Point 3. Robins.
			S 61 48 E	N 61 47 W		
			N 5 17 E	S 5 17 W		
4	38 32 46.79	76 18 49.44	S 42 36 W	N 42 35 E	2,836 3,689 2,476	James. Ragged Point 3. Robins.
			S 64 25 E	N 64 24 W		
			N 00 57 E	S 00 57 W		
5	38 32 47.28	76 18 09.44	N 22 29 W	S 22 30 E	2,662 3,647 2,781	Robins. James. Ragged Point 3.
			S 54 46 W	N 54 45 E		
			S 54 37 E	N 54 36 W		
6	38 32 26.44	76 18 12.20	S 68 49 E	N 68 48 W	2,510 3,300 3,226	Ragged Point 3. Robins. James.
			N 16 39 W	S 16 39 E		
			S 64 15 W	N 64 14 E		

Survey of Oyster Bars, Dorchester County, Md.

RAGGED POINT FLATS.

(Little Choptank River—Charts Nos. 36 and 37.)

Corner of bar	Latitude ° / ' / "	Longitude ° / ' / "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward ° / ' / "	Back ° / ' / "		
1	38 32 33.58	76 17 05.86	N 42 46 W	S 42 47 E	3,979	Robins.
			S 70 36 W	N 70 34 E	4,944	James.
			S 26 56 E	N 26 56 W	1,287	Ragged Point 3.
2	38 32 37.45	76 17 20.97	N 39 31 W	S 39 31 E	3,617	Robins.
			S 67 25 W	N 67 23 E	4,616	James.
			S 37 34 E	N 37 34 W	1,613	Ragged Point 3.
3	38 33 08.88	76 17 33.50	N 48 42 W	S 48 43 E	2,622	Robins.
			S 54 13 W	N 54 12 E	4,845	James.
			S 29 22 E	N 29 21 W	2,683	Ragged Point 3.
4	38 33 35.79	76 17 19.95	N 70 32 W	S 70 32 E	2,469	Robins.
			S 48 55 W	N 48 53 E	5,691	James.
			S 16 25 E	N 16 25 W	3,384	Ragged Point 3.
5	38 32 55.80	76 16 56.50	N 53 38 W	S 53 39 E	3,662	Robins.
			S 64 02 W	N 64 00 E	5,463	James.
			S 10 01 E	N 10 01 W	1,927	Ragged Point 3.

COW ISLAND.

(Little Choptank River—Charts Nos. 36 and 37.)

1	38 33 03.34	76 18 15.64	N 24 00 W	S 24 01 E	2,100	Robins.
			S 46 46 W	N 46 45 E	3,863	James.
			S 48 30 E	N 48 29 W	3,247	Ragged Point 3.
2	38 33 12.32	76 18 18.86	N 25 29 W	S 25 31 E	1,789	Robins.
			S 42 47 W	N 42 46 E	4,018	James.
			S 45 44 E	N 45 43 W	3,516	Ragged Point 3.
3	38 33 21.90	76 17 51.22	N 49 17 W	S 49 17 E	1,981	Robins.
			S 46 37 W	N 46 38 E	4,763	James.
			S 32 43 E	N 32 43 W	3,294	Ragged Point 3.
4	38 33 08.88	76 17 33.50	N 48 42 W	S 48 43 E	2,622	Robins.
			S 54 13 W	N 54 12 E	4,845	James.
			S 29 22 E	N 29 21 W	2,683	Ragged Point 3.

Survey of Oyster Bars, Dorchester County, Md.

BALD EAGLE.

(Little Choptank River—Charts Nos. 36 and 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 33 08.88	76 17 33.50	N 48 42 W	S 48 42 E	Yards. 2,622 4,845 2,683	Robins. James. Ragged Point 3.
			S 54 13 W	N 54 12 E		
			S 29 22 E	N 29 21 W		
2	38 33 21.90	76 17 51.22	N 49 17 W	S 49 17 E	1,981 4,763 3,294	Robins. James. Ragged Point 3.
			S 46 37 W	N 46 38 E		
			S 32 43 E	N 32 43 W		
3	38 33 46.72	76 17 52.96	N 72 38 W	S 72 39 E	1,524 5,343 4,052	Robins. James. Ragged Point 3.
			S 39 44 W	N 39 43 E		
			S 26 52 E	N 26 51 W		
4	38 33 35.79	76 17 19.95	N 70 32 W	S 70 33 E	2,469 5,601 3,384	Robins. James. Ragged Point 3.
			S 48 55 W	N 48 53 E		
			S 16 25 E	N 16 25 W		

CORNERS WHARF.

(Outer Choptank River—Chart No. 37.)

1	38 36 44.62	76 13 08.16	N 85 54 E	S 85 54 W	1,645 4,794 2,626	Corner. Large Water Tank. Dot.
			N 69 52 E	S 69 54 W		
			N 37 28 W	S 37 28 E		
2	38 36 55.18	76 13 39.80	S 84 30 E	N 84 29 W	2,489 5,492 1,888	Corner. Large Water Tank. Dot.
			N 76 23 E	S 76 25 W		
			N 23 45 W	S 23 45 E		
3	38 37 17.05	76 13 31.38	S 66 36 E	N 66 35 W	2,457 5,145 1,395	Corner. Large Water Tank. Dot.
			N 83 48 E	S 83 50 W		
			N 44 47 W	S 44 47 E		
4	38 37 04.99	76 12 59.40	S 68 00 E	N 68 00 W	1,519 4,377 2,301	Corner. Large Water Tank. Dot.
			N 77 17 E	S 77 19 W		
			N 52 38 W	S 52 38 E		

LOGANS HILL.

(Outer Choptank River—Chart No. 37.)

1	38 38 19.84	76 12 56.18	S 69 32 E	N 69 31 W	4,466 3,590 4,102	Large Water Tank. Choptank River Light. Benoni 2.
			N 54 34 E	S 54 35 W		
			N 20 44 E	S 20 44 W		
2	38 39 05.04	76 13 38.98	S 68 56 W	N 68 54 E	6,512 2,764 4,094	Chef. Dot. Choptank River Light.
			S 16 26 W	N 16 25 E		
			N 82 11 E	S 82 13 W		
3	38 38 48.40	76 11 45.22	Thence along county boundary as delineated on Chart No. 37 to corner No. 3.		3,479 1,533 2,905	Castle. Choptank River Light. Benoni 2.
			S 49 58 E	N 49 57 W		
			N 43 09 E	S 43 10 W		
			N 8 24 W	S 8 24 E		

Survey of Oyster Bars, Dorchester County, Md.

TODD POINT.

(Outer Choptank River—Chart No. 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' "	° / ' "	° / ' "	° / ' "	Yards.	
I	38 37 44.92	76 15 34.76	N 83 08 W S 52 43 W N 88 44 E	S 83 09 E N 52 42 E S 88 45 W	3,037 2,417 2,281	Chef. Cook Point Windmill. Dot.
2	38 38 08.08	76 16 12.40	S 78 18 W S 22 26 W S 77 25 E	N 78 17 E N 22 26 E N 77 24 W	2,061 2,429 3,357	Chef. Cook Point Windmill. Dot.
3	38 38 27.26	76 16 09.52	N 63 37 W S 63 03 W S 66 42 E	S 63 40 E N 63 03 E N 66 41 W	7,532 2,350 3,484	Black. Chef. Dot.
4	38 38 25.41	76 15 29.22	S 72 24 W S 58 22 E N 74 49 E	N 72 23 E N 58 21 W S 74 52 W	3,317 2,508 7,224	Chef. Dot. Choptank River Light.
5	38 38 59.43	76 15 27.58	S 56 08 W S 40 20 E N 83 52 E	N 56 07 E N 40 20 W S 83 55 W	3,859 3,230 6,968	Chef. Dot. Choptank River Light.
6	38 39 04.40	76 16 03.56	N 73 08 W S 44 12 W S 49 10 E	S 73 11 E N 44 11 E N 49 09 W	7,216 3,232 4,022	Black. Chef. Dot.
7	38 39 22.52	76 16 00.60	N 78 01 W S 38 31 W S 42 27 E	S 78 04 E N 38 30 E N 42 26 W	7,139 3,743 4,392	Black. Chef. Dot.
8	38 39 15.33	76 15 07.00	S 54 23 W S 27 17 E N 88 08 E	N 54 21 E N 27 17 W S 88 10 W	4,612 3,374 6,388	Chef., Dot. Choptank River Light.
9	38 39 58.32	76 15 41.88	N 41 38 E N 11 48 W N 63 59 W	S 41 39 W S 11 48 E S 64 01 E	4,344 4,356 6,387	Roys. Nelson 3. Bar.
10	38 39 08.00	76 13 46.22	Thence along county boundary as delineated on Chart No. 37 to corner No. 10.			
			N 83 52 E N 51 26 E N 1 59 W	S 83 54 W S 51 27 W S 1 59 E	4,273 3,549 4,940	Choptank River Light. Benoni 2. Roys.
11	38 38 27.40	76 13 47.20	S 79 39 W S 22 13 W S 38 36 E	N 79 36 E N 22 12 E N 38 35 W	5,957 1,493 4,285	Chef. Dot. Corner.

Survey of Oyster Bars, Dorchester County, Md.

ALONG SHORE.

(Little Choptank River—Charts Nos. 37 and 38.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 30 00.96	76 15 45.59	N 8 14 W	S 8 14 E	725	Pov. Ragged Point 3. Moore.
			N 21 06 W	S 21 07 E	4,286	
			S 73 01 W	N 73 00 E	1,909	
2	38 30 12.16	76 15 58.60	N 35 16 E	S 35 16 W	417	Pov. Ragged Point 3. Moore.
			N 18 19 W	S 18 19 E	3,813	
			S 57 45 W	N 57 44 E	1,752	
3	38 30 29.02	76 15 52.95	N 23 50 W	S 23 50 E	3,336	Ragged Point 3. Veith. Moore.
			S 75 43 W	N 75 43 E	1,860	
			S 47 20 W	N 47 19 E	2,219	
4	38 30 35.38	76 15 37.42	N 31 48 W	S 31 49 E	3,339	Ragged Point 3. Veith. Moore.
			S 73 05 W	N 73 04 E	2,315	
			S 49 56 W	N 49 55 E	2,669	
5	38 31 14.82	76 15 16.20	N 12 37 E	S 12 37 W	2,264	Hudson. Ragged Point 3. Pov.
			N 57 00 W	S 57 01 E	2,768	
			S 26 28 W	N 26 28 E	1,979	
6	38 31 13.00	76 15 10.38	N 8 31 E	S 8 31 W	2,295	Hudson. Ragged Point 3. Pov.
			N 57 38 W	S 57 39 E	2,931	
			S 31 13 W	N 31 13 E	2,000	
Thence from corner No. 6 along the mean low water line of the shore to corner No. 7, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
7	38 30 33.14	76 15 35.20	N 31 58 W	S 31 59 E	3,434	Ragged Point 3. Veith. Moore.
			S 75 16 W	N 75 15 E	2,351	
			S 51 59 W	N 51 58 E	2,662	
8	38 30 22.26	76 15 49.51	N 19 04 E	S 19 05 W	4,213	Hudson. Veith. Torrey.
			S 83 04 W	N 83 03 E	1,908	
			S 28 49 W	N 28 48 E	1,707	
9	38 30 13.42	76 15 53.64	N 20 23 W	S 20 24 E	3,818	Ragged Point 3. Veith. Moore.
			N 87 51 W	S 87 51 E	1,786	
			S 58 47 W	N 58 46 E	1,886	
Thence from corner No. 9 along the mean low water line of the shore to corner No. 10, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
10	38 30 05.66	76 15 45.58	N 10 32 W	S 10 32 E	570	Pov. Ragged Point 3. Moore.
			N 21 54 W	S 21 54 E	4,138	
			S 68 36 W	N 68 35 E	1,962	

Survey of Oyster Bars, Dorchester County, Md.

SUSQUEHANNA.
(Little Choptank River—Chart No. 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 31 01.62	76 15 35.10	N 20 33 E	S 20 33 W	Yards.	Hudson. Ragged Point 3. Pov.
			N 43 00 W	S 43 01 E	2,835	
			S 16 03 W	N 16 03 E	2,669	
2	38 31 15.74	76 15 54.62	N 34 46 E	S 34 46 W	2,651	Hudson. Ragged Point 3. Veith
			N 41 26 W	S 41 27 E	1,970	
			S 40 51 W	N 40 50 E	2,689	
3	38 31 48.07	76 15 17.22	S 16 28 W	N 16 28 E	3,017	Pov. Wool. Hudson.
			S 44 42 E	N 44 41 W	1,058	
			N 25 36 E	S 25 36 W	1,206	
4	38 31 36.00	76 15 02.28	S 26 43 W	N 26 43 E	2,784	Pov. Wool. Mac.
			S 45 16 E	N 45 16 W	489	
			N 61 53 E	S 61 54 W	2,935	

LITTLE POLLARD.
(Little Choptank River—Chart No. 37.)

1	38 31 56.50	76 16 08.94	S 09 12 E	N 09 12 W	3,220	Pov. Wool. Hudson.
			S 63 53 E	N 63 52 W	2,353	
			N 66 59 E	S 66 59 W	2,055	
2	38 32 01.68	76 16 17.82	S 12 37 E	N 12 36 W	3,435	Pov. Wool. Hudson.
			S 62 44 E	N 62 43 W	2,642	
			N 73 31 E	S 73 32 W	2,217	
3	38 32 13.23	76 16 15.16	S 10 18 E	N 10 17 W	3,804	Pov. Wool. Hudson.
			S 54 55 E	N 54 54 W	2,784	
			N 83 21 E	S 83 22 W	2,070	
4	38 32 29.67	76 15 49.92	S 22 35 W	N 22 34 E	4,904	Veith. Wool. Tobacco Stick.
			S 36 46 E	N 36 45 W	2,689	
			S 57 21 E	N 57 20 W	3,426	
5	38 32 20.52	76 15 39.58	S 67 26 W	N 67 25 E	1,843	Ragged Point 3. Wool. Hudson.
			S 35 54 E	N 35 53 W	2,278	
			S 89 41 E	N 89 41 W	1,113	

CASON.
(Little Choptank River—Chart No. 37.)

1	38 31 30.20	76 14 38.82	N 51 15 E	S 51 16 W	2,523	Mac. Hudson. Ragged Point 3.
			N 16 21 W	S 16 21 E	1,762	
			N 73 23 W	S 73 24 E	3,456	
2	38 32 01.19	76 15 08.99	S 88 43 W	N 88 42 E	2,513	Ragged Point 3. Wool. Tobacco Stick.
			S 23 45 E	N 23 45 W	1,305	
			S 63 45 E	N 63 45 W	2,007	
3	38 32 13.16	76 14 37.54	S 10 54 W	N 10 54 E	1,627	Wool. Tobacco Stick. Mac.
			S 36 51 E	N 36 50 W	1,613	
			N 86 09 E	S 86 10 W	1,938	
4	38 31 50.58	76 14 17.50	S 45 06 W	N 45 05 E	1,184	Wool. Tobacco Stick. Mac.
			S 39 30 E	N 39 29 W	686	
			N 57 33 E	S 57 34 W	1,662	

TOBACCO STICK.

(Little Choptank River—Chart No. 37.)

Corner of bar.	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 31 30.20	76 14 38.82	N 51 15 E	S 51 16 W	Yards. 2,523 1,762 3,456	Mac. Hudson. Ragged Point 3.
			N 16 21 W	S 16 21 E		
			N 73 23 W	S 73 24 E		
2	38 31 50.58	76 14 17.50	S 45 06 W	N 45 05 E	1,184 686 1,662	Wool. Tobacco Stick. Mac.
			S 39 30 E	N 39 29 W		
			N 57 33 E	S 57 34 W		
3	38 31 57.85	76 13 53.18	N 49 33 E	S 49 33 W	997 1,866 1,835	Mac. Hudson. Wool.
			N 66 01 W	S 66 02 E		
			S 53 54 W	N 53 54 E		
4	38 31 43.25	76 13 07.52	N 66 47 W	S 66 48 E	3,171 1,445 2,479	Hudson. Tobacco Stick. Madison Southern M. E. Church Spire.
			S 78 44 W	N 78 44 E		
			S 3 40 W	N 3 39 E		

BUTTERPOT.

(Little Choptank River—Chart No. 37.)

1	38 32 06.04	76 13 46.40	S 20 15 W	N 20 15 E	1,120 688 1,448	Tobacco Stick. Mac. Greenwell.
			N 57 23 E	S 57 23 W		
			S 15 57 W	N 15 57 E		
2	38 32 06.26	76 14 05.62	S 6 33 E	N 6 33 W	1,065 1,147 1,389	Tobacco Stick. Mac. Greenwell.
			N 71 33 E	S 71 33 W		
			N 4 35 E	S 4 35 W		
3	38 32 23.40	76 14 05.62	S 4 15 E	N 4 15 W	1,640 1,109 1,861	Tobacco Stick. Mac. Ross.
			S 78 50 E	N 78 50 W		
			N 41 26 E	S 41 26 W		
4	38 32 23.22	76 13 33.90	N 69 42 E	S 69 42 W	1,719 1,456 1,091	Swep. Ross. Greenwell.
			N 15 37 E	S 15 37 W		
			N 41 54 W	S 41 54 E		

HUDSON.

(Little Choptank River—Hudson Creek—Chart No. 37.)

1	38 32 16.77	76 14 22.62	S 22 15 W	N 22 14 E	1,857 1,524 1,539	Wool. Tobacco Stick. Mac.
			S 22 03 E	N 22 02 W		
			N 89 40 E	S 89 41 W		
2	38 32 39.68	76 14 56.00	S 3 35 W	N 3 35 E	654 599 639	Hudson. Louise. Jenifer.
			N 81 09 E	S 81 10 W		
			N 07 04 W	S 07 04 E		
3	38 32 43.46	76 14 50.61	S 13 15 W	N 13 15 E	801 452 483	Hudson. Louise. Carrie.
			S 84 20 E	N 84 20 W		
			N 22 01 E	S 22 01 W		
4	38 32 30.09	76 14 32.40	S 76 13 E	N 76 13 W	1,850 417 743	Mac. Louise. Hudson.
			N 4 36 W	S 4 36 E		
			S 63 43 W	N 63 43 E		
5	38 32 23.40	76 14 05.62	S 4 15 E	N 4 15 W	1,640 1,109 1,861	Tobacco Stick. Mac. Ross.
			S 78 50 E	N 78 50 W		
			N 41 26 E	S 41 26 W		

Survey of Oyster Bars, Dorchester County, Md.

ROSS.

(Little Choptank River—Hudson Creek—Chart No. 37.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / ' "	° / ' "		
1	38 32 49.24	76 14 47.65	S 58 08 E	N 58 08 W	436	Louise. Carrie. Jenifer.
			N 22 07 E	S 22 07 W	273	
			N 43 50 W	S 43 50 E	433	
2	38 32 49.40	76 14 53.20	S 65 31 E	N 65 30 W	569	Louise. Carrie. Jenifer.
			N 45 12 E	S 45 13 W	352	
			N 26 28 W	S 26 28 E	343	
3	38 33 27.42	76 14 53.12	S 35 08 W	N 35 08 E	230	Mitchell. Henry. Back.
			S 12 55 W	N 12 54 E	717	
			S 76 55 E	N 76 55 W	252	
4	38 33 27.04	76 14 48.46	S 55 34 W	N 55 34 E	309	Mitchell. Henry. Back.
			S 22 27 W	N 22 27 E	743	
			N 70 04 E	S 70 04 W	129	

McKEILS POINT.

(Little Choptank River—Chart No. 37.)

1	38 32 23.22	76 13 33.90	N 69 42 E	S 69 42 W	1,719	Swep. Ross. Greenwell.
			N 15 37 E	S 15 37 W	1,456	
			N 41 54 W	S 41 54 E	1,091	
2	38 32 23.40	76 14 05.62	S 4 15 E	N 4 15 W	1,640	Tobacco Stick. Mac. Ross.
			S 78 50 E	N 78 50 W	1,109	
			N 41 26 E	S 41 26 W	1,861	
3	38 32 46.11	76 13 59.68	S 43 30 E	N 43 30 W	1,352	Mac. Town. David.
			N 85 27 E	S 85 28 W	1,787	
			N 71 23 E	S 71 24 W	2,709	
4	38 32 49.54	76 13 19.24	N 87 51 E	S 87 51 W	711	Town. Ross. Greenwell.
			N 0 23 E	S 0 23 W	514	
			S 86 10 W	N 86 10 E	1,120	
5	38 32 33.64	76 13 10.42	N 76 06 E	S 76 06 W	1,020	Swep. Ross. Greenwell.
			N 12 22 W	S 12 22 E	1,075	
			N 71 09 W	S 71 09 E	1,427	

TOWN.

(Little Choptank River—Chart No. 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / '	° / '		
1	38 32 33.64	76 13 10.42	N 76 06 E	S 76 06 W	Yards.	Swep. Ross. Greenwell.
			N 12 22 W	S 12 22 E	1,020	
			N 71 09 W	S 71 09 E	1,075 1,427	
2	38 32 49.54	76 13 19.24	N 87 51 E	S 87 51 W	711	Town. Ross. Greenwell.
			N 0 23 E	S 0 23 W	514	
			S 86 10 W	N 86 10 E	1,120	
3	38 33 06.94	76 12 53.07	N 78 31 E	S 78 31 W	820	David. Lee. Ross.
			N 17 26 E	S 17 26 W	668	
			S 83 58 W	N 83 58 E	693	
4	38 32 49.12	76 12 54.85	N 11 17 E	S 11 17 W	1,263	Lee. Ross. Greenwell.
			N 50 35 W	S 50 35 E	832	
			S 88 02 W	N 88 01 E	1,765	
5	38 32 40.16	76 12 55.80	N 82 06 W	S 82 07 E	1,759	Greenwell. Laney. Hugh.
			S 18 29 W	N 18 29 E	691	
			S 40 29 E	N 40 29 W	1,129	

BRUMELL.

(Little Choptank River—Chart No. 37.)

1	38 32 49.12	76 12 54.85	N 11 17 E	S 11 17 W	1,263	Lee. Ross. Greenwell.
			N 50 35 W	S 50 35 E	832	
			S 88 02 W	N 88 01 E	1,765	
2	38 33 06.94	76 12 53.07	N 78 31 E	S 78 31 W	820	David. Lee. Ross.
			N 17 26 E	S 17 26 W	668	
			S 83 58 W	N 83 58 E	693	
3	38 33 22.38	76 12 59.57	S 9 56 E	N 9 56 W	1,098	Town. Lee. Phil.
			N 72 36 E	S 72 36 W	390	
			N 10 07 W	S 10 07 E	936	
4	38 33 30.84	76 12 18.30	S 76 50 W	N 76 49 E	740	Lee. David. Layton.
			S 10 19 W	N 10 19 E	654	
			S 62 56 E	N 62 56 W	1,045	
5	38 33 40.34	76 12 08.92	S 20 47 W	N 20 47 E	1,030	David. Layton. Adam.
			S 40 37 E	N 40 37 W	1,049	
			S 71 50 E	N 71 50 W	1,567	
6	38 33 40.06	76 11 51.16	S 41 14 W	N 41 13 E	1,267	David. Layton. Adam.
			S 15 07 E	N 15 07 W	815	
			S 64 49 E	N 64 49 W	1,125	
7	38 33 24.39	76 12 22.72	N 85 22 W	S 85 22 E	606	Lee. David. Layton.
			S 0 00 W	N 0 00 E	425	
			S 76 09 E	N 76 09 W	1,079	
8	38 33 66.62	76 12 30.04	N 45 04 E	S 45 05 W	1,603	Solomon. Lee. Ross.
			N 32 18 W	S 32 18 E	767	
			S 87 16 W	N 87 15 E	1,301	

Survey of Oyster Bars, Dorchester County, Md.

CHERRY ISLAND.

(Little Choptank River—Chart No. 37.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 33 37.86	76 12 49.59	N 34 55 E	S 34 55 W	268	Cherry Island Water Tank. Phil. Ross.
			N 47 01 W	S 47 01 E	585	
			S 35 01 W	N 35 01 E	1,363	
2	38 33 43.24	76 13 00.47	S 20 50 W	N 20 50 E	1,388	Ross. Lee. Dupont.
			S 34 01 E	N 34 01 W	709	
			N 43 26 E	S 43 26 W	821	
3	38 33 55.38	76 12 59.62	S 20 34 E	N 20 33 W	1,064	Lee. Cherry Island Water Tank. Dupont.
			S 48 24 E	N 48 24 W	560	
			N 70 57 E	S 70 58 W	573	
4	38 33 52.58	76 12 50.28	S 7 58 E	N 7 58 W	911	Lee. Cherry Island Water Tank. Dupont.
			S 31 43 E	N 31 43 W	326	
			N 46 20 E	S 46 20 W	408	
5	38 33 45.11	76 12 53.06	N 34 38 E	S 34 38 W	647	Dupont. Phil. Ross.
			N 65 08 W	S 65 08 E	371	
			S 26 54 W	N 26 53 E	1,524	
6	38 33 42.06	76 12 46.30	N 63 27 W	S 63 27 E	576	Phil. Ross. Lee.
			S 34 39 W	N 34 39 E	1,528	
			S 2 11 E	N 2 11 W	548	

JONES.

(Little Choptank River—Chart No. 37.)

1	38 33 19.34	76 11 33.10	N 45 53 E	S 45 53 W	1,013	Seth. Solomon. Lee.
			N 27 56 W	S 27 56 E	795	
			N 83 28 W	S 83 28 E	1,929	
2	38 33 28.68	76 11 35.12	N 63 27 E	S 63 27 W	873	Seth. Solomon. David.
			N 39 27 W	S 39 27 E	503	
			S 65 42 W	N 65 41 E	1,382	
3	38 33 29.68	76 11 28.34	N 59 20 E	S 59 20 W	699	Seth. Solomon. Layton.
			N 54 36 W	S 54 37 E	611	
			S 41 53 W	N 41 53 E	586	
4	38 33 20.58	76 11 26.24	N 39 26 E	S 39 26 W	860	Seth Solomon. Layton.
			N 39 59 W	S 39 59 E	863	
			S 73 49 W	N 73 49 E	466	

PATTISON.

(Little Choptank River—Chart No. 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 33 41.76	76 10 41.62	S 88 15 W	N 88 14 E	Yards.	Solomon. Seth. Adam.
			S 85 25 W	N 85 25 E	1,737	
			S 56 55 W	N 56 55 E	638 982	
2	38 33 44.34	76 10 50.16	S 84 41 W	N 84 41 E	1,516	Solomon. Seth. Adam.
			S 71 22 W	N 71 21 E	433	
			S 43 46 W	N 43 46 E	863	
3	38 33 51.96	76 10 42.26	S 77 00 W	N 76 59 E	1,764	Solomon. Seth. Adam.
			S 57 28 W	N 57 28 E	734	
			S 42 29 W	N 42 29 E	1,193	

BARN POINT.

(Little Choptank River—Fishing Creek—Chart No. 37.)

1	38 32 06.16	76 12 59.56	S 63 01 E	N 63 01 W	1,222	Doctor. Hugh. Sweep.
			N 70 55 E	S 70 55 W	881	
			N 30 57 E	S 30 58 W	1,367	
2	38 32 29.30	76 12 59.39	S 39 06 E	N 39 05 W	1,719	Doctor. Sweep. Ross.
			N 60 44 E	S 60 44 W	801	
			N 23 35 W	S 23 35 E	1,305	
3	38 32 30.62	76 12 25.70	N 50 50 W	S 50 51 E	1,824	Ross. Laney. Eleanor.
			S 71 48 W	N 71 48 E	1,070	
			S 32 39 W	N 32 39 E	1,456	
4	38 32 07.38	76 12 37.00	N 5 20 E	S 5 20 W	1,135	Sweep. Laney. Eleanor.
			N 57 55 W	S 57 56 E	846	
			S 47 44 W	N 47 44 E	657	

SALTWORK.

(Little Choptank River—Fishing Creek—Chart No. 37.)

1	38 31 54.70	76 12 16.39	S 33 34 E	N 33 34 W	897	Tom. Etta. Hugh.
			N 63 44 E	S 63 45 W	597	
			N 24 45 W	S 24 45 E	743	
2	38 32 00.92	76 12 40.06	N 87 19 E	S 87 19 W	1,165	Etta. Hugh. Laney.
			N 34 13 E	S 34 13 W	562	
			N 43 38 W	S 43 38 E	922	
3	38 32 07.38	76 12 37.00	N 5 20 E	S 5 20 W	1,135	Sweep. Laney. Eleanor.
			N 57 55 W	S 57 56 E	846	
			S 47 44 W	N 47 44 E	657	
4	38 32 02.54	76 12 13.75	S 75 49 W	N 75 48 E	1,136	Eleanor. Doctor. Mary.
			S 16 25 W	N 16 25 E	451	
			S 45 18 E	N 45 18 W	675	

Survey of Oyster Bars, Dorchester County, Md.

FISHING CREEK.

(Little Choptank River—Fishing Creek—Chart No. 37.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 31 35.43	76 12 13.22	S 88 50 E	N 88 49 W	Yards. 1,449 640 502	Austin. Mary. Doctor.
			N 46 38 E	S 46 38 W		
			N 16 02 W	S 16 02 E		
2	38 31 54.70	76 12 16.39	S 33 34 E	N 33 34 W	897 597 743	Tom. Etta. Hugh.
			N 63 44 E	S 63 45 W		
			N 24 45 W	S 24 45 E		
3	38 32 02.54	76 12 13.75	S 75 49 W	N 75 48 E	1,136 451 675	Eleanor. Doctor. Mary.
			S 16 25 W	N 16 25 E		
			S 45 18 E	N 45 18 W		
4	38 31 53.92	76 12 02.43	N 89 30 W	S 89 29 E	1,402 447 732	Eleanor. Doctor. Tom.
			S 71 33 W	N 71 32 E		
			S 9 54 E	N 9 54 W		
5	38 31 36.00	76 11 50.84	S 86 44 E	N 86 43 W	857 440 865	Austin. Mary. Doctor.
			N 16 51 W	S 16 51 E		
			N 57 41 W	S 57 41 E		

GRAPEVINE.

(Little Choptank River—Fishing Creek—Chart No. 37.)

1	38 31 38.00	76 11 16.16	N 67 40 E	S 67 40 W	883 300 1,105	Kirby. Neil. Mary.
			N 23 42 E	S 23 42 W		
			N 71 21 W	S 71 21 E		
2	38 31 44.60	76 11 16.12	S 69 45 W	N 69 44 E	1,173 344 823	Tom. Austin. Kirby.
			S 10 43 W	N 10 43 E		
			N 82 07 E	S 82 07 W		
3	38 31 45.98	76 10 45.86	S 66 00 W	N 66 00 E	947 961 992	Austin. Church Creek (No. 1, West) Paul.
			S 2 23 E	N 2 23 W		
			N 67 01 E	S 67 01 W		
4	38 31 39.04	76 10 45.65	N 55 36 E	S 55 37 W	1,100 301 728	Paul. Kirby. Neil.
			N 1 37 E	S 1 37 W		
			N 70 48 W	S 70 48 E		

BRIDGE.

(Slaughter Creek—Chart No. 38.)

1	38 28 13.02	76 17 27.61	S 37 00 E	N 36 59 W	646 911 717	Finish. Noble. Harrington.
			N 48 45 E	S 48 45 W		
			N 10 46 W	S 10 46 E		
2	38 28 13.55	76 17 32.20	S 7 05 W	N 7 05 E	566 995 688	Taylor. Noble. Harrington.
			N 54 09 E	S 54 09 W		
			N 1 02 W	S 1 02 E		
3	38 28 19.52	76 17 30.80	S 7 58 W	N 7 58 E	770 860 489	Taylor. Noble. Harrington.
			N 63 38 E	S 63 38 W		
			N 5 49 W	S 5 49 E		
4	38 28 19.43	76 17 26.28	S 25 47 E	N 25 46 W	814 756 517	Finish. Noble. Harrington.
			N 59 23 E	S 59 23 W		
			N 19 06 W	S 19 07 E		

PUNCH ISLAND CREEK.

(Chesapeake Bay off Punch Island Creek—Chart No. 38.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 23 56.04	76 19 13.20	S 70 15 E	N 70 14 W	Yards. 3,746 8,641 6,094	Dunnock. Travers 2. Cove Point Light.
			N 5 58 W	S 5 59 E		
			S 75 21 W	N 75 18 E		
2	38 25 38.36	76 20 01.28	N 4 10 E	S 4 11 W	5,157 6,800 6,730	Travers 2. Cove Point Light. Dunnock.
			S 42 47 W	N 42 45 E		
			S 45 31 E	N 45 29 W		
3	38 26 37.92	76 19 31.38	N 7 35 W	S 7 35 E	3,163 8,848 7,828	Travers 2. Cove Point Light. Dunnock.
			S 37 43 W	N 37 41 E		
			S 30 48 E	N 30 46 W		
4	38 24 28.52	76 17 54.30	N 21 45 W	S 21 46 E	8,073 8,413 2,760	Travers 2. Cove Point Light. Dunnock.
			S 71 44 W	N 71 40 E		
			S 31 14 E	N 31 13 W		

STONE PILE.

(Chesapeake Bay off Barren Island—Chart No. 39.)

1	38 20 14.08	76 17 00.20	S 53 49 E	N 53 48 W	2,452 1,741 6,237	South. North. Dunnock.
			N 70 50 E	S 70 49 W		
			N 0 03 W	S 0 03 E		
2	38 20 36.20	76 17 00.60	S 42 17 E	N 42 16 W	2,965 1,664 5,475	South. North. Dunnock.
			S 84 00 E	N 83 59 W		
			N 0 04 E	S 0 04 W		
3	38 20 42.48	76 16 37.06	S 29 34 E	N 29 33 W	2,765 1,100 5,298	South. North. Dunnock.
			S 69 28 E	N 69 28 W		
			N 6 43 W	S 6 43 E		
4	38 20 15.24	76 16 44.80	S 46 34 E	N 46 33 W	2,162 1,345 6,194	South. North. Dunnock.
			N 66 41 E	S 66 41 W		
			N 3 50 W	S 3 50 E		

NEW DISCOVERY.

(Chesapeake Bay off Barren Island—Chart No. 39.)

1	38 17 36.82	76 16 29.76	N 83 28 E	S 83 30 W	6,554 4,029 8,928	Bridge. South. Cedar Point Light.
			N 16 53 E	S 16 54 W		
			N 85 30 W	S 85 33 E		
2	38 17 38.00	76 16 48.24	N 84 14 E	S 84 17 W	7,038 4,161 8,435	Bridge. South. Cedar Point Light.
			N 23 32 E	S 23 32 W		
			N 85 30 W	S 85 33 E		
3	38 18 29.32	76 16 48.16	S 81 41 E	N 81 38 W	7,074 2,668 8,479	Bridge. South. Cedar Point Light.
			N 38 27 E	S 38 27 W		
			S 82 46 W	N 82 43 E		
4	38 18 30.14	76 16 29.98	S 80 50 E	N 80 48 W	6,602 2,370 8,961	Bridge. South. Cedar Point Light.
			N 29 45 E	S 29 45 W		
			S 82 58 W	N 82 55 E		

HORSE POINT CHANNEL.

(Tar Bay—Charts Nos. 39 and 40.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 17 51.82	76 13 39.72	S 23 04 W	N 23 03 E	Yards.	Hooper Island Light. Bridge. [Spire. Mount Zion M. E. Church
			N 83 03 E	S 83 04 W	5,460	
			N 0 13 W	S 0 13 E	2,008	
2	38 18 15.04	76 14 06.06	S 13 53 W	N 13 53 E	5,993	Hooper Island Light. Bridge. [Spire. Mount Zion M. E. Church
			S 78 39 E	N 78 38 W	2,747	
			N 25 07 E	S 25 07 W	1,629	
3	38 18 21.82	76 13 58.40	S 15 12 W	N 15 11 E	6,265	Hooper Island Light. Bridge. [Spire. Mount Zion M. E. Church
			S 72 50 E	N 72 49 W	2,605	
			N 21 23 E	S 21 23 W	1,339	
4	38 17 58.08	76 13 30.06	S 24 33 W	N 24 32 E	5,767	Hooper Island Light. Bridge. [Spire. Mount Zion M. E. Church
			N 88 57 E	S 88 58 W	1,737	
			N 7 22 W	S 7 22 E	2,065	

WARE.

(Chesapeake Bay—Off Middle Hooper Island—Charts Nos. 39 and 40.)

1	38 17 07.00	76 12 30.44	N 26 08 W	S 26 08 E	4,198	Mount Zion M. E. Church Spire. Hooper Island Light. Hoopersville Methodist Church Cupola.
			S 48 29 W	N 48 27 E	5,317	
			S 41 29 E	N 41 28 W	4,076	
2	38 17 09.85	76 12 42.24	N 22 41 W	S 22 41 E	3,982	Mount Zion M. E. Church Spire. Hooper Island Light. Hoopersville Methodist Church Cupola.
			S 45 22 W	N 45 21 E	5,153	
			S 43 44 E	N 43 43 W	4,359	
3	38 17 19.64	76 12 39.00	N 25 52 W	S 25 53 E	3,716	Mount Zion M. E. Church Spire. Hooper Island Light. Hoopersville Methodist Church Cupola.
			S 43 32 W	N 43 31 E	5,448	
			S 40 04 E	N 40 03 W	4,547	
4	38 17 16.00	76 12 27.55	N 29 03 W	S 29 04 E	3,964	Mount Zion M. E. Church Spire. Hooper Island Light. Hoopersville Methodist Church Cupola.
			S 46 40 W	N 46 39 E	5,578	
			S 38 00 E	N 37 59 W	4,260	

WHITE WOOD.

(Tar Bay—Chart No. 39.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 18 42.04	76 14 17.60	S 9 33 W	N 9 32 E	6,822	Hooper Island Light. Mount Zion M. E. Church Spire. Hosier Memorial Church Spire.
			N 60 29 E	S 60 29 W	1,147	
			N 16 13 E	S 16 13 W	2,597	
2	38 18 52.52	76 14 23.00	S 7 57 W	N 7 56 E	7,150	Hooper Island Light. Mount Zion M. E. Church Spire. Hosier Memorial Church Spire.
			N 79 29 E	S 79 30 W	1,161	
			N 22 05 E	S 22 05 W	2,311	
3	38 18 55.92	76 14 14.60	S 9 33 W	N 9 33 E	7,298	Hooper Island Light. Mount Zion M. E. Church Spire. Hosier Memorial Church Spire.
			N 83 58 E	S 83 58 W	924	
			N 17 40 E	S 17 40 W	2,127	
4	38 18 45.56	76 14 08.52	S 11 20 W	N 11 20 E	6,983	Hooper Island Light. Mount Zion M. E. Church Spire. Hosier Memorial Church Spire.
			N 59 28 E	S 59 28 W	879	
			N 11 31 E	S 11 31 W	2,425	

TAR BAY.

(Tar Bay—Chart No. 39.)

1	38 19 51.60	76 14 40.56	S 42 05 E	N 42 05 W	2,399	Mount Zion M. E. Church Spire. Hosier Memorial Church Mint. [Spire.]
			N 83 38 E	S 83 38 W	1,343	
			N 17 34 E	S 17 34 W	2,064	
2	38 20 00.50	76 14 52.44	S 42 45 E	N 42 44 W	2,835	Mount Zion M. E. Church Spire. Hosier Memorial Church Mint. [Spire.]
			S 84 46 E	N 84 46 W	1,657	
			N 29 22 E	S 29 22 W	1,913	
3	38 20 22.52	76 14 25.54	S 5 12 W	N 5 12 E	10,157	Hooper Island Light. Hosier Memorial Church Mint. [Spire.]
			S 46 20 E	N 46 19 W	1,294	
			N 13 36 E	S 13 36 W	951	
4	38 20 13.88	76 14 14.80	S 7 00 W	N 6 59 E	9,898	Hooper Island Light. Hosier Memorial Church Mint. [Spire.]
			S 47 13 E	N 47 13 W	886	
			N 2 54 W	S 2 54 E	1,217	

Survey of Oyster Bars, Dorchester County, Md.

TUBBMANS DRAIN.

(Honga River—Charts Nos. 39 and 40.)

Corner of bar	Latitude	Longitude	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / '	° / '		
1	38 20 41. 16	76 12 40. 52	S 8 04 W	N 8 04 E	823	Gunnars. Kerwin. Keenes.
			N 46 46 E	S 46 47 W	2, 825	
			N 14 18 W	S 14 18 E	2, 511	
2	38 21 04. 94	76 13 32. 18	N 24 44 E	S 24 44 W	1, 797	Keenes. Mint. Gunnars.
			S 67 02 W	N 67 01 E	1, 296	
			S 37 51 E	N 37 51 W	2, 047	
3	38 21 32. 82	76 12 59. 10	S 8 24 E	N 8 24 W	2, 585	Gunnars. Kerwin. Keenes.
			N 85 41 E	S 85 42 W	2, 559	
			N 10 23 W	S 10 23 E	703	
4	38 21 31. 24	76 12 21. 72	S 13 48 W	N 13 48 E	2, 578	Gunnars. Kerwin. Keenes.
			N 81 01 W	S 81 02 E	1, 579	
			N 56 21 W	S 56 22 E	1, 344	
5	38 20 50. 92	76 12 05. 68	N 35 13 E	S 35 13 W	1, 965	Kerwin. Keenes. Gunnars.
			N 36 17 W	S 36 18 E	2, 610	
			S 42 18 W	N 42 17 E	1, 546	

PEANUT.

(Honga River—Charts Nos. 39 and 40.)

1	38 20 50. 92	76 12 05. 68	N 35 13 E	S 35 13 W	1, 965	Kerwin. Keenes. Gunnars.
			N 36 17 W	S 36 18 E	2, 610	
			S 42 18 W	N 42 17 E	1, 546	
2	38 21 31. 24	76 12 21. 72	S 13 48 W	N 13 48 E	2, 578	Gunnars. Kerwin. Keenes.
			N 81 01 W	S 81 02 E	1, 579	
			N 56 21 W	S 56 22 E	1, 344	
3	38 21 06. 78	76 11 08. 84	S 19 20 W	N 19 19 E	1, 135	Kerwin. Gunnars. Wroten.
			S 56 38 W	N 56 37 E	3, 053	
			S 0 11 E	N 0 11 W	3, 543	

GUM.

(Honga River—Charts Nos. 39 and 40.)

1	38 20 08. 82	76 11 36. 90	N 6 58 E	S 6 58 W	3, 048	Kerwin. Gunnars. Wroten.
			N 81 20 W	S 81 21 E	1, 826	
			S 25 29 E	N 25 29 W	1, 757	
2	38 20 11. 70	76 11 54. 90	S 36 15 E	N 36 15 W	2, 088	Wroten. Kerwin. Gunnars.
			N 16 08 E	S 16 08 W	3, 049	
			N 82 21 W	S 82 21 E	1, 339	
3	38 20 13. 24	76 12 04. 30	S 40 32 E	N 40 32 W	2, 283	Wroten. Kerwin. Gunnars.
			N 20 52 E	S 20 53 W	3, 078	
			N 83 18 W	S 83 19 E	1, 085	
4	38 20 50. 92	76 12 05. 68	N 35 13 E	S 35 13 W	1, 965	Kerwin. Keenes. Gunnars.
			N 36 17 W	S 36 18 E	2, 610	
			S 42 18 W	N 42 17 E	1, 546	
5	38 21 06. 78	76 11 08. 84	S 19 20 W	N 19 19 E	1, 135	Kerwin. Gunnars. Wroten.
			S 56 38 W	N 56 37 E	3, 053	
			S 0 11 E	N 0 11 W	3, 543	
6	38 20 22. 66	76 11 03. 78	N 11 16 W	S 11 17 E	2, 609	Kerwin. Gunnars. Wroten.
			S 85 55 W	N 85 54 E	2, 691	
			S 3 27 W	N 3 27 E	2, 057	

WROTEN ISLAND.

(Honga River—Charts Nos. 39 and 40.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / "	° / "	° / "	° / "	Yards.	
1	38 18 12.40	76 12 00.50	N 59 24 W S 54 59 W S 61 38 E	S 59 25 E N 54 59 E N 61 37 W	3,072 785 2,445	Mount Zion M. E. Church Bridge. [Spire. Bentley.
2	38 19 20.32	76 12 45.56	N 0 33 E S 63 22 W S 11 25 E	S 0 33 W N 63 22 E N 11 25 W	1,912 1,619 2,796	Gunners. Mount Zion M. E. Church Bridge. [Spire.
3	38 20 11.70	76 11 54.90	S 36 15 E N 16 08 E N 82 21 W	N 36 15 W S 16 08 W S 82 21 E	2,088 3,049 1,339	Wroten. Kerwin. Gunners.
4	38 19 55.12	76 11 46.86	N 64 25 W S 14 25 W S 42 14 E	S 64 26 E N 14 24 E N 42 14 W	1,708 4,042 1,519	Gunners. Bridge. Wroten.
5	38 19 41.22	76 11 59.10	N 45 13 W S 11 11 W S 64 01 E	S 45 14 E N 11 10 E N 64 01 W	1,713 3,513 1,497	Gunners. Bridge. Wroten.
6	38 18 49.00	76 11 57.96	N 83 04 W S 22 53 W S 41 01 E	S 83 03 E N 22 53 E N 41 01 W	2,732 1,828 3,175	Mount Zion M. E. Church Bridge. [Spire. Bentley.
7	38 18 42.22	76 11 09.82	N 1 35 E S 53 48 W S 20 23 E	S 1 35 W N 53 47 E N 20 22 W	1,334 2,407 2,312	Wroten. Bridge. Bentley.

SMOKE POINT.

(Honga River—Chart No. 40.)

1	38 17 52.32	76 11 14.54	S 62 30 E N 45 24 E N 83 06 W	N 62 30 W S 45 23 W S 83 06 E	1,049 3,003 1,879	Bentley. Charles. Bridge.
2	38 17 54.62	76 11 43.28	S 71 39 E N 55 00 E N 82 19 W	N 71 39 W S 55 01 W S 82 19 E	1,785 3,542 1,111	Bentley. Charles. Bridge.
3	38 18 01.68	76 11 42.60	S 64 29 E N 58 07 E S 85 26 W	N 64 29 W S 58 08 W N 85 25 E	1,857 3,396 1,120	Bentley. Charles. Bridge.
4	38 17 58.70	76 11 14.22	S 52 49 E N 48 21 E N 89 40 W	N 52 49 W S 48 20 W S 89 41 E	1,157 2,850 1,873	Bentley. Charles. Bridge.

Survey of Oyster Bars, Dorchester County, Md.

DARK POINT.
(Honga River—Chart No. 40.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 17 27.98	76 09 27.16	N 24 22 E	S 24 22 W	Yards. 2,546 3,016 1,953	Lakes. Charles. Bentley.
			N 13 43 E	S 13 43 W		
			N 80 05 W	S 80 06 E		
2	38 18 00.32	76 09 57.80	N 56 37 E	S 56 38 W	2,232 1,843 1,341	Lakes. Charles. Bentley.
			N 3 05 E	S 3 05 W		
			S 55 47 W	N 55 47 E		
3	38 17 56.00	76 10 44.14	N 33 49 E	S 33 50 W	2,391 2,075 620	Charles. Bridge. Bentley.
			N 87 49 W	S 87 50 E		
			S 11 23 E	N 11 23 W		
4	38 18 51.52	76 10 56.94	N 86 06 E	S 86 07 W	1,674 1,065 2,929	Charles. Wroten. Bridge.
			N 16 40 W	S 16 40 E		
			S 52 48 W	N 54 47 E		
5	38 18 55.40	76 10 13.14	N 58 49 W	S 58 49 E	1,717 2,703 507	Wroten. Bentley. Charles.
			S 15 02 W	N 15 02 E		
			S 88 03 E	N 88 03 W		
6	38 18 37.97	76 09 31.54	N 46 22 W	S 46 23 E	827 2,713 1,167	Charles. Bentley. Lakes.
			S 41 46 W	N 41 45 W		
			N 88 00 W	S 88 00 E		
7	38 17 52.42	76 09 20.68	N 30 25 E	S 30 25 W	1,733 2,290 2,151	Lakes. Charles. Bentley.
			N 22 50 W	S 22 51 E		
			S 76 54 W	N 76 53 E		

LAKES COVE.
(Honga River—Chart No. 40.)

1	38 16 55.38	76 09 18.12	S 42 12 W	N 42 11 E	3,592 1,356 518	Hoopersville Methodist Church Cupola. Windmill 2. Asquith.
			S 23 30 E	N 23 30 W		
			N 64 12 E	S 64 12 W		
2	38 17 16.45	76 09 48.20	N 30 43 E	S 30 44 W	3,150 3,322 1,545	Lakes. Charles. Bentley.
			N 2 41 W	S 2 41 E		
			N 62 00 W	S 62 01 E		
3	38 17 17.87	76 09 31.63	N 23 43 E	S 23 44 W	2,906 3,325 1,927	Lakes. Charles. Bentley.
			N 10 20 W	S 10 20 E		
			N 69 26 W	S 69 27 E		
4	38 17 27.98	76 09 27.16	N 24 22 E	S 24 22 W	2,546 3,016 1,953	Lakes. Charles. Bentley.
			N 13 43 E	S 13 43 W		
			N 80 05 W	S 80 06 E		
5	38 17 52.42	76 09 20.68	N 30 25 E	S 30 25 W	1,733 2,290 2,151	Lakes. Charles. Bentley.
			N 22 50 W	S 22 51 E		
			S 76 54 W	N 76 53 E		
6	38 18 02.14	76 08 33.80	N 17 29 W	S 17 29 E	1,224 2,777 3,439	Lakes. Charles. Bentley.
			N 50 10 W	S 50 11 E		
			S 76 17 W	N 76 15 E		
7	38 17 37.89	76 08 43.94	N 2 50 W	S 2 50 E	1,987 3,195 3,072	Lakes. Charles. Bentley.
			N 35 40 W	S 35 41 E		
			N 89 58 W	S 89 59 E		

WINDMILL.

(Honga River—Chart No. 40.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 15 44.58	76 09 38.82	S 38 46 E	N 38 45 W	2,981	Hopkins Memorial Church Cupola.
			N 43 38 E	S 43 39 W	1,581	Windmill 2.
			S 81 38 W	N 81 37 E	1,883	Hoopersville Methodist Church Cupola.
2	38 16 39.32	76 10 06.60	S 27 57 W	N 27 57 E	2,399	Hoopersville Methodist Church Cupola.
			S 69 00 E	N 69 00 W	1,960	Windmill 2.
			N 66 24 E	S 66 25 W	1,916	Asquith.
3	38 16 55.38	76 09 18.12	S 42 12 W	N 42 11 E	3,592	Hoopersville Methodist Church Cupola.
			S 23 30 E	N 23 30 W	1,356	Windmill 2.
			N 64 12 E	S 64 12 W	518	Asquith.
4	38 16 00.58	76 08 57.98	N 0 30 E	S 0 30 W	605	Windmill 2.
			S 74 35 W	N 74 33 E	3,059	Hoopersville Methodist Church Cupola.
			S 15 15 E	N 15 15 W	2,969	Hopkins Memorial Church Cupola.

HICKORY.

(Honga River—Chart No. 40.)

1	38 15 44.58	76 09 38.82	S 38 46 E	N 38 45 W	2,981	Hopkins Memorial Church Cupola.
			N 43 38 E	S 43 39 W	1,581	Windmill 2.
			S 81 38 W	N 81 37 E	1,883	Hoopersville Methodist Church Cupola.
2	38 15 52.42	76 10 00.76	N 62 17 E	S 62 17 W	1,891	Windmill 2.
			N 34 16 E	S 34 17 W	2,842	Asquith.
			S 67 12 W	N 67 11 E	1,389	Hoopersville Methodist Church Cupola.
3	38 16 17.94	76 10 15.30	S 32 34 W	N 32 34 E	1,660	Hoopersville Methodist Church Cupola.
			N 89 32 E	S 89 32 W	2,060	Windmill 2.
			N 53 11 E	S 53 11 W	2,482	Asquith.
4	38 16 39.32	76 10 06.60	S 27 57 W	N 27 57 E	2,399	Hoopersville Methodist Church Cupola.
			S 69 00 E	N 69 00 W	1,960	Windmill 2.
			N 66 24 E	S 66 25 W	1,916	Asquith.

Survey of Oyster Bars, Dorchester County, Md.

LOWER THOROUGHFARE.

(Honga River—Chart No. 40.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 15 16.32	76 09 20.92	N 44 37 E	S 44 38 W	4,289	Paul. Windmill 2. Hoopersville Methodist Church Cupola.
			N 16 21 E	S 16 21 W	2,185	
			N 73 49 W	S 73 50 E	2,435	
2	38 15 22.58	76 09 55.40	N 88 43 E	S 88 45 W	5,950	Norman. Windmill 2. Hoopersville Methodist Church Cupola.
			N 39 05 E	S 39 06 W	2,430	
			N 71 47 W	S 71 48 E	1,497	
3	38 15 28.00	76 09 54.92	S 89 31 E	N 89 29 W	5,936	Norman. Windmill 2. Hoopersville Methodist Church Cupola.
			N 41 44 E	S 41 44 W	2,282	
			N 78 45 W	S 78 46 E	1,463	
4	38 15 39.62	76 08 48.36	N 43 26 E	S 43 27 W	3,123	Paul. Windmill 2. Hoopersville Methodist Church Cupola.
			N 10 49 W	S 10 49 E	1,335	
			S 88 06 W	N 88 08 E	3,206	
5	38 15 27.02	76 08 45.10	N 37 26 E	S 37 26 W	3,390	Paul. Windmill 2. Hoopersville Methodist Church Cupola.
			N 10 59 W	S 10 59 E	1,768	
			N 84 29 W	S 84 31 E	3,307	

PAUL.

(Honga River—Chart No. 40.)

1	38 16 03.42	76 08 15.64	S 69 20 E	N 69 19 W	3,522	Norman. Paul. Windmill 2.
			N 41 05 E	S 41 05 W	1,944	
			N 65 34 W	S 65 35 E	1,230	
2	38 16 19.26	76 08 28.20	S 63 55 E	N 63 53 W	4,042	Norman. Paul. Windmill 2.
			N 59 58 E	S 59 59 W	1,861	
			S 88 09 W	N 88 09 E	786	
3	38 16 24.80	76 08 17.22	S 59 32 E	N 59 31 W	3,874	Norman. Paul. Windmill 2.
			N 60 34 E	S 60 34 W	1,515	
			S 78 52 W	N 78 52 E	1,099	
4	38 16 09.16	76 08 04.74	S 64 28 E	N 64 27 W	3,332	Norman. Paul. Windmill 2.
			S 37 50 E	N 37 50 W	1,611	
			N 77 24 W	S 77 24 E	1,445	

CRAB POINT.

(Honga River—Chart No. 40.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / '	° / '		
1	38 15 53.08	76 07 23.38	S 64 52 E	N 64 52 W	2,106	Norman. Paul. Windmill 2.
			N 3 31 W	S 3 31 E	1,818	
			N 71 08 W	S 71 09 E	2,652	
2	38 15 56.60	76 07 48.80	S 68 35 E	N 68 34 W	2,774	Norman. Paul. Windmill 2.
			N 18 24 E	S 18 24 W	1,787	
			N 68 04 W	S 68 05 E	1,977	
3	38 16 04.08	76 07 47.56	S 63 37 E	N 63 36 W	2,847	Norman. Paul. Windmill 2.
			N 20 12 E	S 20 12 W	1,538	
			N 75 24 W	S 75 23 E	1,929	
4	38 16 00.44	76 07 21.48	S 58 23 E	N 58 23 W	2,180	Norman. Paul. Windmill 2.
			N 5 55 W	S 5 55 E	1,575	
			N 76 37 W	S 76 38 E	2,631	

NORMAN.

(Honga River—Chart No. 40.)

1	38 14 13.98	76 06 03.62	S 62 08 E	N 62 07 W	2,723	Hooper Strait Light. Norman. Applegarth.
			N 5 00 W	S 5 00 E	2,457	
			S 80 50 W	N 80 49 E	3,765	
2	38 14 32.20	76 07 06.08	N 38 17 E	S 38 17 W	2,335	Norman. Hopkins Memorial Church Cupola. Applegarth.
			N 86 59 W	S 87 00 E	2,198	
			S 59 27 W	N 59 27 E	2,387	
3	38 15 33.24	76 08 33.96	S 86 35 E	N 86 34 W	3,790	Norman. Paul. Windmill 2.
			N 35 24 E	S 35 25 W	3,046	
			N 22 32 W	S 22 32 E	1,652	
4	38 15 38.98	76 06 45.80	S 65 15 E	N 65 14 W	1,000	Norman. Paul. Windmill 2.
			N 25 53 W	S 25 53 E	2,545	
			N 69 12 W	S 69 14 E	3,753	

APPLEGARTH.

(Hooper Strait—Chart No. 40.)

1	38 12 51.50	76 05 47.84	S 10 27 E	N 10 27 W	3,121	Okahanikan. Hooper Strait Light. Norman.
			N 52 49 E	S 52 50 W	2,496	
			N 6 55 W	S 6 55 E	5,267	
2	38 13 49.00	76 06 46.30	S 83 04 E	N 83 03 W	3,570	Hooper Strait Light. Norman. Applegarth.
			N 15 38 E	S 15 38 W	3,416	
			N 84 37 W	S 84 38 E	2,593	
3	38 14 13.98	76 06 03.62	S 62 08 E	N 62 07 W	2,723	Hooper Strait Light. Norman. Applegarth.
			N 5 00 W	S 5 00 E	2,457	
			S 80 50 W	N 80 49 E	3,765	
4	38 13 13.88	76 05 05.12	N 74 52 W	S 74 54 E	5,463	Applegarth. Hooper Strait Light. Okahanikan.
			N 48 29 E	S 48 29 W	1,137	
			S 8 30 W	N 8 29 E	3,866	

Survey of Oyster Bars, Dorchester County, Md.

HOOPER STRAIT.

(Hooper Strait—Chart No. 40.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' "	° / ' "	° / '	° / '	Yards.	
1	38 12 30.24	76 07 05.96	S 48 21 E	N 48 20 W	3,540	Okahanikan. Hooper Strait Light. Applegarth.
			N 61 18 E	S 61 19 W	4,636	
			N 35 23 W	S 35 24 E	3,555	
2	38 12 48.96	76 07 29.02	S 47 31 E	N 47 30 W	4,418	Okahanikan. Hooper Strait Light. Applegarth.
			N 71 12 E	S 71 14 W	4,943	
			N 32 31 W	S 32 31 E	2,689	
3	38 13 11.04	76 06 56.76	S 32 47 E	N 32 46 W	4,433	Okahanikan. Hooper Strait Light. Applegarth.
			N 77 28 E	S 77 30 W	3,914	
			N 56 32 W	S 56 33 E	2,761	
4	38 12 54.18	76 06 02.80	S 16 58 E	N 16 58 W	3,304	Okahanikan. Hooper Strait Light. Applegarth.
			N 59 13 E	S 59 14 W	2,771	
			N 60 47 W	S 60 48 E	4,284	

RICHLAND.

(Hooper Strait—Chart No. 40.)

1	38 12 37.64	76 08 23.88	S 61 07 E	N 61 05 W	5,389	Okahanikan. Applegarth. Hooper Island Light.
			N 0 18 E	S 0 18 W	2,650	
			N 62 13 W	S 62 17 E	11,910	
2	38 12 50.28	76 08 24.76	S 57 26 E	N 57 24 W	5,627	Okahanikan. Applegarth. Hooper Island Light.
			N 0 57 E	S 0 57 W	2,224	
			N 64 00 W	S 64 04 E	11,697	
3	38 12 50.40	76 08 12.76	S 55 34 E	N 55 32 W	5,363	Okahanikan. Applegarth. Hooper Island Light.
			N 7 15 W	S 7 15 E	2,238	
			N 64 41 W	S 64 46 E	11,983	
4	38 12 37.72	76 08 12.58	S 59 28 E	N 59 27 W	5,129	Okahanikan. Applegarth. Hooper Island Light.
			N 6 11 W	S 6 11 E	2,663	
			N 62 53 W	S 62 57 E	12,176	

Survey of Oyster Bars, Dorchester County, Md.

BLOODSWORTH.

(Hooper Strait—Charts Nos. 40 and 41.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 12 12.66	76 02 41.75	S 88 13 E	N 88 11 W	Yards. 5,551 2,570 4,088	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 28 04 E	S 28 04 W		
			N 46 26 W	S 46 27 E		
2	38 12 24.55	76 02 57.30	S 84 30 E	N 84 28 W	5,990 2,474 3,513	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 41 00 E	S 41 00 W		
			N 46 31 W	S 46 32 E		
3	38 12 20.54	76 03 02.14	S 85 53 E	N 85 51 W	6,107 2,660 3,517	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 41 11 E	S 41 12 W		
			N 43 28 W	S 43 29 E		
4	38 12 34.28	76 03 38.26	S 82 43 E	N 82 40 W	7,108 3,118 2,548	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 60 26 E	S 60 27 W		
			N 34 55 W	S 34 56 E		
5	38 12 54.98	76 03 37.04	S 77 10 E	N 77 07 W	7,199 2,808 2,040	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 72 35 E	S 72 37 W		
			N 46 59 W	S 47 00 E		
6	38 12 42.22	76 02 47.02	S 78 23 E	N 78 21 W	5,807 1,854 3,358	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 46 42 E	S 46 43 W		
			N 57 10 W	S 57 11 E		
7	38 12 18.85	76 02 34.19	S 85 56 E	N 85 54 W	5,360 2,292 4,100	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 26 05 E	S 26 05 W		
			N 50 29 W	S 50 30 E		

HOPKINS COVE.

(Hooper Strait—Chart No. 41.)

1	38 12 53.07	76 02 33.80	S 73 57 E	N 73 55 W	5,553 1,347 3,492	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 47 46 E	S 47 47 W		
			N 65 22 W	S 65 23 E		
2	38 13 03.37	76 03 17.05	S 73 49 E	N 73 47 W	6,755 2,219 2,307	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 75 27 E	S 75 28 W		
			N 61 17 W	S 61 17 E		
3	38 13 13.92	76 03 13.52	S 70 42 E	N 70 40 W	6,774 2,064 2,247	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 84 23 E	S 84 24 W		
			N 70 25 W	S 70 26 E		
4	38 13 04.22	76 02 32.48	S 70 11 E	N 70 09 W	5,635 1,098 3,387	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 61 11 E	S 61 12 W		
			N 71 24 W	S 71 25 E		
5	38 12 58.42	76 02 26.23	S 71 32 E	N 71 30 W	5,413 1,076 3,608	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 47 41 E	S 47 41 W		
			N 69 18 W	S 69 19 E		

Survey of Oyster Bars, Dorchester County, Md.

RED SECTOR.

(Hooper Strait—Chart No. 41.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 12 23.72	76 02 11.56	S 83 27 E	N 83 26 W	4,776	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 12 05 E	S 12 06 W	1,938	
			N 57 00 W	S 57 02 E	4,489	
2	38 12 39.64	76 02 27.89	S 78 12 E	N 78 10 W	5,291	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 31 45 E	S 31 45 W	1,597	
			N 60 12 W	S 60 13 E	3,839	
3	38 12 48.03	76 02 15.00	S 74 15 E	N 74 13 W	5,025	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 24 50 E	S 24 50 W	1,184	
			N 66 08 W	S 66 10 E	4,017	
4	38 12 36.16	76 02 02.08	S 77 54 E	N 77 52 W	4,595	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 5 57 E	S 5 57 W	1,484	
			N 63 15 W	S 63 17 E	4,498	

BELL BUOY.

(Hooper Strait—Charts Nos. 41 and 42.)

1	38 11 25.80	76 01 22.21	N 67 41 E	S 67 42 W	3,709	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 13 16 W	S 13 16 E	3,953	
			N 49 07 W	S 49 09 E	6,717	
2	38 11 40.82	76 02 00.26	N 78 31 E	S 78 33 W	4,535	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 1 48 E	S 1 48 W	3,343	
			N 46 15 W	S 46 14 E	5,627	
3	38 12 22.84	76 01 56.04	S 83 14 W	N 83 12 E	4,362	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 0 12 W	S 0 12 E	1,925	
			N 59 22 W	S 59 23 E	4,856	
4	38 12 24.96	76 01 41.42	S 81 33 E	N 81 32 W	3,986	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 12 03 W	S 12 04 E	1,895	
			N 62 15 W	S 62 17 E	5,160	
5	38 12 57.84	76 01 40.72	S 66 39 E	N 66 37 W	4,275	Sharkfin Shoal Light. Frog. Head.
			N 72 00 E	S 72 03 W	7,982	
			N 29 06 W	S 29 06 E	852	
6	38 13 04.38	76 01 19.76	S 60 22 E	N 60 21 W	3,874	Sharkfin Shoal Light. Frog. Head.
			N 72 18 E	S 72 20 W	7,384	
			N 61 40 W	S 61 41 E	1,105	
7	38 12 31.84	76 00 11.98	S 62 24 E	N 62 24 W	1,763	Sharkfin Shoal Light. Frog. Head.
			N 57 25 E	S 57 27 W	6,209	
			N 59 43 W	S 59 44 E	3,214	
8	38 11 58.90	76 01 19.76	N 85 02 E	S 85 03 W	3,379	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 19 35 W	S 19 36 E	2,899	
			N 57 28 W	S 57 30 E	6,100	

Survey of Oyster Bars, Dorchester County, Md.

JANE.

(Upper Tangier Sound—Chart No. 41.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 11 25.80	76 00 45.38	S 88 22 E	N 88 19 W	6,861	Room.
			N 60 06 E	S 60 07 W	2,828	Sharkfin Shoal Light.
			N 26 07 W	S 26 08 E	4,286	Head.
2	38 11 42.26	76 00 45.56	S 83 45 E	N 83 43 W	6,903	Room.
			N 70 49 E	S 70 50 W	2,601	Sharkfin Shoal Light.
			N 29 45 W	S 29 46 E	3,793	Head.
3	38 11 35.12	76 00 19.80	S 85 17 E	N 85 13 W	6,197	Room.
			N 58 16 E	S 58 17 W	2,082	Sharkfin Shoal Light.
			N 36 00 W	S 36 01 E	4,368	Head.
4	38 11 25.83	76 00 19.40	S 88 11 E	N 88 07 W	6,170	Room.
			N 51 20 E	S 51 21 W	2,255	Sharkfin Shoal Light.
			N 33 50 W	S 33 51 E	4,630	Head.

MUD (DORCHESTER COUNTY).

(Upper Tangier Sound—Chart No. 41.)

1	38 09 26.74	76 00 23.48	S 10 55 W	N 10 55 E	2,838	Senator.
			S 87 10 E	N 87 07 W	5,546	Deal Island Church.
			N 32 41 W	S 32 41 E	2,607	Crab.
2	38 10 15.54	75 59 41.40	N 11 13 E	S 11 13 W	3,853	Sharkfin Shoal Light.
			N 77 45 W	S 77 46 E	2,587	Crab.
			S 20 31 W	N 20 30 E	4,732	Senator.
3	38 10 22.44	75 59 20.74	N 3 13 E	S 3 13 W	3,552	Sharkfin Shoal Light.
			N 84 08 W	S 84 09 E	3,094	Crab.
			S 25 20 W	N 25 19 E	5,162	Senator.
4	38 09 53.08	75 59 18.00	N 67 28 W	S 67 29 E	3,411	Crab.
			S 31 50 W	N 31 49 E	4,325	Senator.
			S 72 57 E	N 72 58 W	3,970	Deal Island Church.
Thence along county boundary as delineated on Chart No. 41 to corner No. 1.						

Survey of Oyster Bars, Dorchester County, Md.

SHARKFIN SHOAL.

(Upper Tangier Sound—Chart No. 41.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / //	° / //	° /	° /	Yards.	
1	38 11 34.68	75 58 49.07	N 29 51 E N 30 05 W N 54 32 W	S 29 53 W S 30 05 E S 54 34 E	6,079 1,283 6,114	Frog. Sharkfin Shoal Light. Head.
2	38 12 51.20	76 00 03.11	S 42 05 E N 61 41 E N 72 11 W	N 42 04 W S 61 43 W S 72 12 E	1,981 5,675 3,163	Sharkfin Shoal Light. Frog. Head.
3	38 13 04.38	76 01 19.76	S 60 22 E N 72 18 E N 61 40 W	N 60 21 W S 72 20 W S 61 41 E	3,874 7,384 1,105	Sharkfin Shoal Light. Frog. Head.
4	38 13 14.35	76 00 47.66	N 84 08 W S 48 09 E N 72 50 E	S 84 09 E N 48 08 W S 72 51 W	1,835 3,374 6,470	Head. Sharkfin Shoal Light. Frog.
5	38 13 26.27	76 00 09.33	S 85 41 W S 29 22 E N 73 42 E	N 85 40 E N 29 22 W S 73 44 W	2,853 3,043 5,377	Head. Sharkfin Shoal Light. Frog.
6	38 13 30.68	75 59 55.08	S 83 34 W S 21 41 E N 74 07 E	N 83 33 E N 21 40 W S 74 10 W	3,245 3,014 4,972	Head. Sharkfin Shoal Light. Frog.
7	38 12 21.93	75 58 43.47	S 58 38 W S 60 00 E N 38 02 E	N 58 38 E N 59 58 W S 38 03 W	927 4,173 4,671	Sharkfin Shoal Light. Room. Frog.

WARE SANDS.

(Fishing Bay—Chart No. 41.)

1	38 12 57.84	76 01 40.72	S 66 39 E N 72 00 E N 29 06 W	N 66 37 W S 72 03 W S 29 06 E	4,275 7,982 852	Sharkfin Shoal Light. Frog. Head.
2	38 13 23.40	76 01 40.22	N 17 12 W S 74 40 W S 56 50 E	S 17 12 E N 74 39 E N 56 48 W	3,799 444 4,672	Croch. Head. Sharkfin Shoal Light.
3	38 14 00.09	76 01 56.44	S 0 09 E S 48 52 E N 16 08 W	N 0 09 W N 48 50 W S 16 08 E	1,355 5,767 2,490	Head. Sharkfin Shoal Light. Croch.
4	38 14 03.76	76 01 49.12	S 7 22 W S 46 38 E N 21 21 W	N 7 22 E N 46 37 W S 21 21 E	1,491 5,705 2,435	Head. Sharkfin Shoal Light. Croch.
5	38 13 14.35	76 00 47.66	N 84 08 W S 48 09 E N 72 50 E	S 84 09 E N 48 08 W S 72 51 W	1,835 3,374 6,470	Head. Sharkfin Shoal Light. Frog.
6	38 13 04.38	76 01 19.76	S 60 22 E N 72 18 E N 61 40 W	N 60 21 W S 72 20 W S 61 41 E	3,874 7,384 1,105	Sharkfin Shoal Light. Frog. Head.

SAND SHOAL.

(Fishing Bay—Chart No. 41.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 13 26.27	76 00 09.33	S 85 41 W	N 85 40 E	2,853	Head. Sharkfin Shoal Light. Frog.
			S 29 22 E	N 29 22 W	3,043	
			N 73 42 E	S 73 44 W	5,377	
2	38 14 47.44	76 01 32.07	N 59 25 W	S 59 25 E	1,556	Croch. Head. Sharkfin Shoal Light.
			S 12 19 W	N 12 19 E	3,021	
			S 34 26 E	N 34 25 W	6,534	
3	38 14 31.10	75 59 47.39	N 71 56 W	S 71 57 E	4,337	Croch. Head. Sharkfin Shoal Light.
			S 55 00 W	N 55 01 E	4,186	
			S 10 38 E	N 10 38 W	4,922	
4	38 13 30.68	75 59 55.08	S 83 34 W	N 83 33 E	3,245	Head. Sharkfin Shoal Light. Frog.
			S 21 41 E	N 21 40 W	3,014	
			N 74 07 E	S 74 10 W	4,972	

CLAY ISLAND.

(Fishing Bay—Chart No. 41.)

1	38 13 38.82	75 59 28.94	S 80 45 W	N 80 44 E	3,972	Head. Sharkfin Shoal Light. Frog.
			S 7 44 E	N 7 44 W	3,104	
			N 75 07 E	S 75 09 W	4,229	
2	38 14 21.04	75 59 32.36	S 61 42 W	N 61 41 E	4,348	Head. Sharkfin Shoal Light. Frog.
			S 6 27 E	N 6 27 W	4,528	
			S 85 23 E	N 85 21 W	4,192	
3	38 14 30.64	75 58 19.12	S 67 33 W	N 67 31 E	6,250	Head. Sharkfin Shoal Light. Frog.
			S 16 38 W	N 16 37 E	5,033	
			S 73 30 E	N 73 29 W	2,326	
4	38 13 50.82	75 58 50.54	S 78 05 W	N 78 03 E	5,050	Head. Sharkfin Shoal Light. Frog.
			S 9 51 W	N 9 51 E	3,532	
			N 77 27 E	S 77 26 W	3,141	

Survey of Oyster Bars, Dorchester County, Md.

EVANS.

(Fishing Bay—Chart No. 41.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' "	° / ' "	° / ' "	° / ' "	Yards.	
1	38 14 31.10	75 59 47.39	N 71 56 W S 55 00 W S 10 38 E	S 71 57 E N 55 01 E N 10 38 W	4,337 4,186 4,922	Croch. Head. Sharkfin Shoal Light.
2	38 14 47.44	76 01 32.07	N 59 25 W S 12 19 W S 34 26 E	S 59 25 E N 12 19 E N 34 25 W	1,556 3,021 6,534	Croch. Head. Sharkfin Shoal Light.
3	38 15 24.82	76 01 17.20	N 73 49 E N 9 56 W S 75 00 W	S 73 50 W S 9 56 E N 74 59 E	3,702 2,987 1,797	Fish. Roast. Croch.
4	38 15 43.82	76 00 57.10	N 82 37 E N 24 31 W S 64 02 W	S 82 36 W S 24 31 E N 64 01 E	3,046 2,528 2,525	Fish. Roast. Croch.
5	38 15 10.00	75 59 43.39	N 34 41 E N 3 39 W N 89 32 W	S 34 42 W S 3 39 E S 89 34 E	1,863 4,623 4,230	Fish. Ear. Croch.
6	38 14 44.60	75 59 23.83	S 54 51 W S 3 03 E S 74 01 E	N 54 49 E N 3 03 W N 74 00 W	4,961 5,301 4,110	Head. Sharkfin Shoal Light. Frog.

GOOSE CREEK.

(Fishing Bay—Chart No. 41.)

1	38 15 24.82	76 01 17.20	N 73 49 E N 9 56 W S 75 00 W	S 73 50 W S 9 56 E N 74 59 E	3,702 2,987 1,797	Fish. Roast. Croch.
2	38 15 52.25	76 01 56.97	S 26 00 W N 88 41 E N 15 03 E	N 26 00 E S 88 43 W S 15 03 W	1,546 4,613 2,089	Croch. Fish. Roast.
3	38 16 37.70	76 01 46.32	S 71 46 E N 60 53 E N 28 09 E	N 71 44 W S 60 54 W S 28 09 W	4,558 3,402 549	Fish. Ear. Roast.
4	38 16 39.67	76 00 32.78	S 57 51 E N 32 38 E N 11 43 W	N 57 50 W S 32 39 W S 11 43 E	2,803 1,888 3,905	Fish. Ear. Elliott.
5	38 15 43.82	76 00 57.10	N 82 37 E N 24 31 W S 64 02 W	S 82 38 W S 24 31 E N 64 01 E	3,046 2,528 2,525	Fish. Roast. Croch.

Survey of Oyster Bars, Dorchester County, Md.

155

DUCK ISLAND.

(Fishing Bay—Chart No. 41.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / "	° / "	° / "	° / "	Yards.	
1	38 15 44.16	75 59 59.19	N 2 05 E	S 2 05 W	3,463	Ear.
			N 48 31 W	S 48 32 E	3,456	Roast.
			S 73 39 W	N 73 38 E	3,970	Croch.
2	38 15 58.34	76 00 14.96	N 10 21 E	S 10 21 W	3,033	Ear.
			N 50 08 W	S 50 09 E	2,826	Roast.
			S 64 48 W	N 64 47 E	3,747	Croch.
3	38 16 33.56	76 00 17.72	S 56 55 E	N 56 54 W	2,356	Fish.
			N 18 59 E	S 18 59 W	1,900	Ear.
			N 16 29 W	S 16 30 E	4,203	Elliott.
4	38 16 42.24	76 00 00.44	N 23 51 W	S 23 51 E	4,086	Elliott.
			N 82 37 W	S 82 38 E	2,577	Roast.
			S 50 50 W	N 50 48 E	4,870	Croch.
5	38 16 09.32	75 59 33.72	N 11 55 W	S 11 55 E	2,671	Ear.
			N 66 12 W	S 66 13 E	3,570	Roast.
			S 66 21 W	N 66 19 E	4,898	Croch.

BUNGAY.

(Fishing Bay—Chart No. 41.)

1	38 16 33.56	76 00 17.72	S 56 55 E	N 56 54 W	2,356	Fish.
			N 18 59 E	S 18 59 W	1,900	Ear.
			N 16 29 W	S 16 30 E	4,203	Elliott.
2	38 17 18.81	76 01 03.08	S 48 31 E	N 48 29 W	4,244	Fish.
			N 81 35 E	S 81 36 W	1,844	Ear.
			N 0 17 E	S 0 17 W	2,503	Elliott.
3	38 17 48.46	76 01 12.58	S 70 37 E	N 70 37 W	2,200	Ear.
			N 9 59 E	S 9 59 W	1,528	Elliott.
			N 50 09 W	S 50 10 E	3,259	Farm.
4	38 17 53.27	76 00 58.09	S 62 11 E	N 62 11 W	1,912	Ear.
			N 5 07 W	S 5 07 E	1,347	Elliott.
			N 56 18 W	S 56 19 E	3,471	Farm.
5	38 16 42.24	76 00 00.44	N 23 51 W	S 23 51 E	4,086	Elliott.
			N 82 37 W	S 82 38 E	2,577	Roast.
			S 50 50 W	N 50 48 E	4,870	Croch.

Survey of Oyster Bars, Dorchester County, Md.

OLD HOUSE.
(Fishing Bay—Chart No. 41.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' "	° / ' "	° / ' "	° / ' "	Yards.	
1	38 17 24.57	76 01 45.83	N 88 32 E N 26 26 E N 29 13 W	S 88 33 W S 26 26 W S 29 14 E	2,960 2,580 3,316	Ear. Elliott. Farm.
2	38 17 30.80	76 01 56.02	S 87 37 E N 34 03 E N 26 40 W	N 87 35 W S 34 03 W S 26 41 E	3,234 2,535 3,004	Ear. Elliott. Farm.
3	38 18 27.98	76 01 48.36	S 5 32 E N 81 57 E N 20 06 E	N 5 32 W S 81 57 W S 20 07 W	3,249 1,228 3,081	Roast. Elliott. Thoro.
4	38 18 26.80	76 01 35.94	S 0 18 W N 76 33 E N 13 58 E	N 0 18 E S 76 33 W S 13 58 W	3,195 911 3,018	Roast. Elliott. Thoro.

POINT.
(Fishing Bay—Chart No. 41.)

1	38 18 33.79	76 01 19.90	S 7 22 W S 87 01 E N 6 24 E	N 7 21 E N 87 01 W S 6 25 W	3,459 460 2,713	Roast. Elliott. Thoro.
2	38 18 36.44	76 01 24.92	S 5 02 W S 79 11 E N 9 30 E	N 5 02 E N 79 11 W S 9 30 W	3,533 604 2,643	Roast. Elliott. Thoro.
3	38 18 44.20	76 01 18.54	S 7 13 W S 84 49 E N 6 29 E	N 7 13 E N 84 48 W S 6 29 W	3,811 1,003 2,361	Roast. High. Thoro.
4	38 18 41.50	76 01 13.66	S 9 22 W N 89 59 E N 3 13 E	N 9 22 E S 89 58 W S 3 13 W	3,740 669 2,441	Roast. High. Thoro.

HILL.
(Fishing Bay—Chart No. 41.)

1	38 18 41.16	76 01 36.80	S 0 06 E S 73 18 E N 17 04 E	N 0 06 W N 73 18 W S 17 04 W	3,677 950 2,561	Roast. Elliott. Thoro.
2	38 18 49.24	76 01 47.96	S 4 23 E S 65 40 E N 25 43 E	N 4 23 W N 65 40 W S 25 44 W	3,963 1,322 2,415	Roast. Elliott. Thoro.
3	38 19 11.08	76 01 16.30	N 8 12 E S 73 49 W S 6 33 W	S 8 12 W N 73 48 E N 6 33 E	1,454 2,502 4,719	Thoro. Farm. Roast.
4	38 19 05.24	76 01 00.84	N 1 15 E S 79 00 W S 8 59 W	S 1 15 W N 78 59 E N 8 59 E	1,636 2,624 4,547	Thoro. Farm. Roast.

Survey of Oyster Bars, Dorchester County, Md.

157

THOROUGH.

(Fishing Bay—Chart No. 41.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 18 51.58	76 02 09.22	S 12 09 E	N 12 09 W	4,123	Roast. Elliott. Thoro.
			S 70 34 E	N 70 34 W	1,877	
			N 37 34 E	S 37 35 W	2,645	
2	38 19 08.52	76 02 28.22	S 16 37 E	N 16 36 W	4,802	Roast. Elliott. Thoro.
			S 62 17 E	N 62 16 W	2,570	
			N 54 10 E	S 54 11 W	2,606	
3	38 19 24.34	76 01 51.32	S 4 22 E	N 4 22 W	5,150	Roast. Elliott. Thoro.
			S 36 49 E	N 36 49 W	2,159	
			N 48 54 E	S 48 55 W	1,506	
4	38 19 10.48	76 01 41.70	S 1 40 E	N 1 40 W	4,670	Roast. Elliott. Thoro.
			S 39 28 E	N 39 28 W	1,634	
			N 31 09 E	S 31 09 W	1,705	

HALF WAY MARK.

(Fishing Bay—Chart No. 41.)

1	38 19 05.24	76 01 09.84	N 1 15 E	S 1 15 W	1,636	Thoro. Farm. Roast.
			S 79 00 W	N 78 59 E	2,624	
			S 8 59 W	N 8 59 E	4,547	
2	38 19 11.08	76 01 16.30	N 8 12 E	S 8 12 W	1,454	Thoro. Farm. Roast.
			S 73 49 W	N 73 48 E	2,502	
			S 6 33 W	N 6 33 E	4,719	
3	38 19 23.76	76 00 57.74	N 15 47 W	S 15 47 E	1,051	Thoro. Farm. High.
			S 68 46 W	N 68 45 E	3,108	
			S 17 24 E	N 17 24 W	1,493	
4	38 19 17.46	76 00 18.58	N 47 17 W	S 47 18 E	1,804	Thoro. Farm. Elliott.
			S 76 57 W	N 76 55 E	4,041	
			S 38 01 W	N 38 01 E	1,900	
5	38 19 05.54	76 01 00.18	N 7 44 W	S 7 44 E	1,641	Thoro. Farm. Elliott.
			S 79 46 W	N 79 45 E	2,877	
			S 3 23 W	N 3 23 E	1,097	

FLAT ROCK.

(Fishing Bay—Chart No. 41.)

1	38 19 17.46	76 00 18.58	N 47 17 W	S 47 18 E	1,804	Thoro. Farm. Elliott.
			S 76 57 W	N 76 55 E	4,041	
			S 38 01 W	N 38 01 E	1,900	
2	38 19 23.76	76 00 57.74	N 15 47 W	S 15 47 E	1,051	Thoro. Farm. High.
			S 68 46 W	N 68 45 E	3,108	
			S 17 24 E	N 17 24 W	1,493	
3	38 19 57.00	76 00 09.42	S 86 01 W	N 86 00 E	1,573	Thoro. Farm. High.
			S 61 45 W	N 61 43 E	4,746	
			S 18 13 W	N 18 12 E	2,679	
4	38 19 52.57	76 00 00.66	N 88 44 W	S 88 45 E	1,802	Thoro. Farm. High.
			S 64 35 W	N 64 33 E	4,886	
			S 24 05 W	N 24 05 E	2,622	

Survey of Oyster Bars, Dorchester County, Md.

FROG POINT.

(Upper Tangier Sound—Chart No. 41.)

Corner of bar	Latitude ° / ' "	Longitude ° / ' "	True bearing		Distance Yards.	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 13 29.62	75 57 27.69	S 45 27 W	N 45 25 E	3,941	Sharkfin Shoal Light. Room. Frog.
			S 20 05 E	N 20 04 W	4,651	
			N 31 41 E	S 31 41 W	1,641	
2	38 13 39.90	75 57 30.22	S 41 22 W	N 41 21 E	4,147	Sharkfin Shoal Light. Room. Frog.
			S 19 26 E	N 19 26 W	5,000	
			N 41 30 E	S 41 30 W	1,403	
3	38 13 46.05	75 56 49.90	N 9 37 W	S 9 37 E	855	Frog. Sharkfin Shoal Light. Room.
			S 48 58 W	N 48 56 E	5,057	
			S 6 51 E	N 6 50 W	4,957	
4	38 13 37.18	75 56 47.81	N 9 51 W	S 9 51 E	1,159	Frog. Sharkfin Shoal Light. Room.
			S 52 01 W	N 52 00 E	4,909	
			S 6 36 E	N 6 36 W	4,653	

NEW.

(Nanticoke River—Chart No. 41.)

1	38 15 07.92	75 56 01.04	N 41 30 E	S 41 30 W	2,020	Roar. Cow. Frog.
			N 29 39 W	S 29 39 E	2,093	
			S 36 57 W	N 36 56 E	2,399	
2	38 15 13.00	75 55 57.48	N 42 50 E	S 42 50 W	1,829	Roar. Cow. Frog.
			N 34 26 W	S 34 27 E	1,998	
			S 36 21 W	N 36 21 E	2,593	
3	38 15 09.30	75 55 53.30	N 37 41 E	S 37 41 W	1,852	Roar. Cow. Frog.
			N 35 00 W	S 35 02 E	2,164	
			S 40 00 W	N 40 00 E	2,563	

HILLS AND HOLES.

(Nanticoke River—Chart No. 41.)

1	38 15 23.48	75 55 55.68	N 50 26 E	S 50 26 W	1,552	Roar. Cow. Frog.
			N 42 26 W	S 42 27 E	1,754	
			S 32 59 W	N 32 58 E	2,911	
2	38 15 36.38	75 55 56.96	N 65 47 E	S 65 47 W	1,348	Roar. Cow. Frog.
			N 53 05 W	S 53 06 E	1,430	
			S 28 20 W	N 28 19 E	3,269	
3	38 15 34.76	75 55 49.04	N 59 11 E	S 59 12 W	1,187	Roar. Cow. Frog.
			N 55 59 W	S 56 00 E	1,634	
			S 31 58 W	N 31 58 E	3,327	

ROARING POINT WEST.

(Nanticoke River—Chart No. 41.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / '	° / '		
1	38 15 46.36	75 55 49.20	N 78 01 E	S 78 02 W	1,047	Roar.
			N 30 35 E	S 30 34 W	4,228	Rag.
			N 68 50 W	S 68 50 E	1,448	Cow.
2	38 16 07.10	75 55 50.68	S 82 20 W	N 82 20 E	1,323	Cow.
			S 65 35 E	N 65 35 W	1,167	Roar.
			N 36 41 E	S 36 42 W	3,667	Rag.
3	38 16 07.78	75 55 43.22	S 82 29 W	N 82 28 E	1,522	Cow.
			S 59 42 E	N 59 42 W	1,002	Roar.
			N 86 14 E	S 86 15 W	2,083	Nanticoke Church.

Thence along county boundary as delineated on Chart No. 41 to corner No. 1.

BEAN SHOAL.

(Nanticoke River—Chart No. 41.)

1	38 17 32.06	75 55 52.90	S 40 49 E	N 40 48 W	3,574	Nanticoke Church.
			N 88 05 E	S 88 05 W	2,251	Rag.
			N 22 07 W	S 22 07 E	1,424	Okay.
2	38 17 38.48	75 56 00.78	S 41 03 E	N 41 03 W	3,876	Nanticoke Church.
			S 86 42 E	N 86 41 W	2,463	Rag.
			N 16 30 W	S 16 30 E	1,149	Okay.
3	38 17 44.04	75 55 52.22	S 36 42 E	N 36 41 W	3,878	Nanticoke Church.
			S 81 38 E	N 81 37 W	2,255	Rag.
			N 31 12 W	S 31 12 E	1,070	Okay.

OUTER HOLE.

(Nanticoke River—Chart No. 41.)

1	38 17 33.54	75 55 22.32	S 28 56 E	N 28 56 W	3,148	Nanticoke Church.
			N 61 53 E	S 61 54 W	3,612	Bivalve Church.
			N 46 44 W	S 46 45 E	1,851	Okay.
2	38 17 49.98	75 55 33.62	S 28 51 E	N 28 50 W	3,778	Nanticoke Church.
			N 71 46 E	S 71 47 W	3,670	Bivalve Church.
			N 55 43 W	S 55 43 E	1,269	Okay.
3	38 17 55.16	75 55 18.02	N 69 44 W	S 69 44 E	1,559	Okay.
			S 2 42 E	N 2 42 W	4,131	Roar.
			S 61 59 E	N 61 58 W	1,498	Rag.

Thence along county boundary as delineated on Chart No. 41 to corner No. 1.

Survey of Oyster Bars, Dorchester County, Md.

LOWER NEWFOUNDLAND.

(Nanticoke River—Chart No. 41.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / ' / "	° / ' / "		
1	38 19 10.26	75 54 48.56	S 55 45 E	N 55 44 W	2,769	Bivalve Church. Juliet. Ar.
			N 69 30 E	S 69 31 W	3,088	
			N 66 21 W	S 66 22 E	1,008	
2	38 19 18.72	75 54 40.88	S 48 30 E	N 48 30 W	2,783	Bivalve Church. Juliet. Ar.
			N 73 30 E	S 73 31 W	2,805	
			N 83 59 W	S 83 59 E	1,134	
3	38 19 15.10	75 54 36.78	S 48 56 E	N 48 55 W	2,615	Bivalve Church. Juliet. Ar.
			N 70 24 E	S 70 25 W	2,738	
			N 78 58 W	S 78 58 E	1,260	

UPPER NEWFOUNDLAND.

(Nanticoke River—Chart No. 41.)

1	38 19 22.74	75 54 37.36	S 45 10 E	N 45 09 W	2,807	Bivalve Church. Juliet. Ar.
			N 75 43 E	S 75 44 W	2,678	
			S 89 13 W	N 89 13 E	1,220	
2	38 19 31.22	75 54 34.46	S 40 12 E	N 40 11 W	2,966	Bivalve Church. Juliet. Ar.
			N 81 32 E	S 81 32 W	2,547	
			S 76 53 W	N 76 52 E	1,332	
3	38 19 34.96	75 54 25.58	S 35 03 E	N 35 04 W	2,922	Bivalve Church. Juliet. Ar.
			N 83 46 E	S 83 47 W	2,297	
			S 74 23 W	N 74 23 E	1,592	
4	38 19 28.28	75 54 22.42	S 36 21 E	N 36 20 W	2,690	Bivalve Church. Juliet. Ar.
			N 77 49 E	S 77 50 W	2,250	
			S 82 50 W	N 82 50 E	1,631	

NORTHWEST MIDDLEGROUND.

(Chesapeake Bay—Off Holland Island—Chart No. 42.)

1	38 06 15.00	76 10 16.74	S 59 10 E	N 59 07 W	8,409	Holland Island Bar Light. Holland Island Church Okahanikan. [Spire.
			N 76 16 E	S 76 19 W	8,292	
			N 36 52 E	S 36 55 W	12,872	
2	38 06 26.08	76 12 00.79	S 64 53 E	N 64 57 W	11,039	Holland Island Bar Light. Holland Island Church Okahanikan. [Spire.
			N 81 26 E	S 81 30 W	10,948	
			N 46 34 E	S 46 38 W	14,448	
3	38 08 03.16	76 11 24.40	S 48 36 E	N 48 32 W	12,032	Holland Island Bar Light. Holland Island Church Okahanikan. [Spire.
			S 80 20 E	N 80 16 W	9,999	
			N 55 02 E	S 55 06 W	11,621	
4	38 07 38.78	76 10 49.45	S 48 36 E	N 48 33 W	10,789	Holland Island Bar Light. Holland Island Church Okahanikan. [Spire.
			S 84 31 E	N 84 28 W	8,966	
			N 48 58 E	S 49 01 W	11,392	

SOUTHEAST MIDDLEGROUND.

(Chesapeake Bay—Off Holland Island—Chart No. 42.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 05 41.56	76 09 36.60	S 62 39 E	N 62 37 W	Yards. 6,925 7,641 13,222	Holland Island Bar Light. Holland Island Church Okahanikan. [Spire.
			N 66 05 E	S 66 08 W		
			N 30 13 E	S 30 16 W		
2	38 06 15.00	76 10 16.74	S 59 10 E	N 59 07 W	8,409 8,292 12,872	Holland Island Bar Light. Holland Island Church Okahanikan. [Spire.
			N 76 16 E	S 76 19 W		
			N 36 52 E	S 36 55 W		
3	38 06 29.56	76 09 05.00	S 47 53 E	N 47 51 W	7,157 6,319 11,401	Holland Island Bar Light. Holland Island Church Okahanikan. [Spire.
			N 76 28 E	S 76 30 W		
			N 30 39 E	S 30 42 W		
4	38 05 51.32	76 08 46.80	S 53 57 E	N 53 56 W	5,964 6,300 12,311	Holland Island Bar Light. Holland Island Church Okahanikan. [Spire.
			N 63 55 E	S 63 58 W		
			N 25 39 E	S 25 41 W		

BOUNDARY.

(Entrance to Kedge Straits—Chart No. 42.)

1	38 04 34.32	76 04 32.26	S 65 05 W	N 65 04 E	2,164 5,903 6,730	Holland Island Bar Light. Fog 2. Solomons Lump Light.
			S 33 24 E	N 33 24 W		
			S 59 26 E	N 59 24 W		
2	38 04 40.24	76 04 39.44	S 57 52 W	N 57 52 E	2,091 6,177 6,997	Holland Island Bar Light. Fog 2. Solomons Lump Light.
			S 33 52 E	N 33 50 W		
			S 58 49 E	N 58 47 W		
3	38 05 12.18	76 04 05.82	S 50 37 W	N 50 36 E	3,450 6,707 6,927	Holland Island Bar Light. Fog 2. Solomons Lump Light.
			S 22 18 E	N 22 17 W		
			S 47 17 E	N 47 15 W		
4	38 05 10.20	76 04 00.70	S 52 53 W	N 52 52 E	3,516 6,593 6,780	Holland Island Bar Light. Fog 2. Solomons Lump Light.
			S 21 25 E	N 21 24 W		
			S 46 56 E	N 46 54 W		
5	38 04 40.76	76 04 14.80	Thence along county boundary as delineated on Chart No. 42 to corner No. 5.		2,677 5,840 6,452	Holland Island Bar Light. Fog 2. Solomons Lump Light.
			S 65 04 W	N 65 03 E		
			S 28 28 E	N 28 27 W		
			S 55 41 E	N 55 39 W		
Thence along county boundary as delineated on Chart No. 42 to corner No. 1.						

Survey of Oyster Bars, Dorchester County, Md.

HOLLAND STRAITS.
(Holland Straits—Chart No. 42.)

Corner of bar	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' / "	° / ' / "	° / ' / "	° / ' / "	Yards.	
1	38 05 14.62	76 04 36.82	N 14 01 W	S 14 02 E	4,132	Holland Island Church Spire.
			S 39 01 W	N 39 01 E	2,923	Holland Island Bar Light.
			S 51 03 E	N 51 02 W	7,607	Solomons Lump Light.
2	38 05 45.00	76 05 15.10	S 13 51 W	N 13 51 E	3,427	Holland Island Bar Light.
			S 49 55 E	N 49 52 E	9,067	Solomons Lump Light.
			N 0 22 E	S 0 22 W	2,951	Holland Island Church Spire.
3	38 06 20.12	76 04 58.40	N 62 42 E	S 62 44 W	7,636	Senator.
			N 13 19 W	S 13 19 E	1,840	Holland Island Church Spire.
			S 15 47 W	N 15 46 E	4,654	Holland Island Bar Light.
4	38 06 57.60	76 04 39.70	N 70 23 E	S 70 25 W	6,674	Senator.
			N 59 53 W	S 59 53 E	1,068	Holland Island Church Spire.
			S 17 04 W	N 17 04 E	6,007	Holland Island Bar Light.
5	38 07 50.85	76 04 48.22	S 28 55 W	N 28 54 E	1,441	Holland Island Church Spire.
			S 11 31 W	N 11 31 E	7,695	Holland Island Bar Light.
			N 86 06 E	S 86 08 W	6,529	Senator.
6	38 08 00.80	76 04 39.00	S 26 25 W	N 26 24 E	2,119	Holland Island Church Spire.
			S 12 18 W	N 12 17 E	8,370	Holland Island Bar Light.
			S 88 13 E	N 88 12 W	6,271	Senator.
7	38 08 10.36	76 03 50.91	S 45 02 W	N 45 01 E	3,143	Holland Island Church Spire.
			S 19 50 W	N 19 48 E	9,035	Holland Island Bar Light.
			S 84 05 E	N 84 03 W	5,014	Senator.
8	38 07 53.56	76 04 28.45	S 42 11 W	N 42 10 E	1,823	Holland Island Church Spire.
			S 15 08 W	N 15 07 E	7,905	Holland Island Bar Light.
			N 86 38 E	S 86 39 W	5,997	Senator.
9	38 06 44.38	76 04 31.24	N 66 06 E	S 66 08 W	6,630	Senator.
			N 49 30 W	S 49 32 E	1,511	Holland Island Church Spire.
			S 20 35 W	N 20 34 E	5,659	Holland Island Bar Light.
10	38 06 13.50	76 04 44.66	N 59 52 E	S 59 54 W	7,422	Senator.
			N 21 23 W	S 21 23 E	2,173	Holland Island Church Spire.
			S 20 59 W	N 20 58 E	4,558	Holland Island Bar Light.
11	38 06 03.55	76 04 48.96	N 16 01 W	S 16 02 E	2,454	Holland Island Church Spire.
			S 21 09 W	N 21 09 E	4,204	Holland Island Bar Light.
			S 44 08 E	N 44 06 W	8,961	Solomons Lump Light.
12	38 05 29.14	76 04 20.70	N 22 07 W	S 22 08 E	3,798	Holland Island Church Spire.
			S 39 26 W	N 39 25 E	3,575	Holland Island Bar Light.
			S 46 09 E	N 46 07 W	7,608	Solomons Lump Light.

BOUNDARIES OF CRAB BOTTOMS.

EXPLANATION.

The laws providing for the survey of the oyster bars of Maryland also contain a section which requires "an accurate survey of and delineation upon the maps and charts aforesaid of all bottoms of the tributaries of the Chesapeake Bay where grass grows and it is profitable to scrape for soft shell or shedder crabs, and shall have such bottoms properly designated by permanent objects on the shore, as provided hereinbefore for natural oyster beds, bars, and rocks, which said crabbing sections shall be exempt from leasing for oyster culture."

As far as is known, the crab bottoms of Maryland¹ were the first of their kind to be surveyed and therefore they presented a new problem, which was found to differ² in many ways from that of a survey of oyster bars.

In a general way, it can be stated that the boundaries of the crab bottoms as established by the Maryland Shell Fish Commission and delineated on the "Maryland Oyster Charts" published by the Coast and Geodetic Survey, are confined to waters between the 1-fathom contour (6 feet depth of water) and the shore line. Therefore, in most cases the mean low water line of the shore has been adopted as an inner boundary for the crab bottoms, but the same system of straight lines and numbered corners used to delineate the oyster bars has been retained for defining the off-shore water boundaries.

The boundaries of the crab bottoms of Maryland, as established by the Shell Fish Commission and shown on the Coast and Geodetic Survey charts and projections and on the "leasing charts" of the Commission, are technically defined and described by a method but little different from that used for the description of the boundaries of oyster bars.

METHOD OF DESCRIBING BOUNDARIES.

The descriptions have been arranged in tabular form, thus avoiding many hundred repetitions of the same words by making one explanation of the tables sufficient for all crab bottoms in each county.

Title.—At the top of each tabular form is given the legal name of the crab bottom to be described, and the one by which it is known and designated in the published records and on the oyster charts. The adopted name of the crab bottom is the one used locally, as nearly as could be ascertained by the hydrographic engineer of the Commission; and when there was no local name in common use, a name was selected from one of the prominent features of the vicinity that would naturally suggest the section of the waters where the crab bottom was located.

Underneath the name, in parentheses, is given the general locality of the crab bottom and the serial number of the "Maryland Oyster Chart," on which its legal boundaries are shown.³

First column.—This column, under the heading of "Corner of bottom," gives the number corresponding to the corner of the boundary as shown on the charts and to the

¹ Crab bottoms within the meaning of the laws of Maryland were found only in Somerset and Dorchester Counties.

² See pages 69 to 70 of "First Annual Report of Maryland Shell Fish Commission" for description of "Survey of crabbing grounds."

³ These charts can be obtained by application to the Superintendent of the Coast and Geodetic Survey at Washington, D. C.

number on the buoy marking the actual corner of the bottom. The numbers of the corners have been assigned by naming the southernmost point No. 1, thence proceeding in a clockwise direction around the bottom. Where a corner of a crab bottom is identical with the corner of the boundaries of one or more other crab bottoms or oyster bars, only the number of the corner of the crab bottom being described in the table is given in this column.

Second and third columns.—These two columns, under the headings of "Latitude" and "Longitude," give the geographic positions of the corners. These positions have been adopted by the 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 relocated from distant triangulation stations of the survey, even though all the landmarks and buoys originally used for their location have been destroyed by natural or other causes.

Fourth and fifth columns.—These two columns, under the general heading of "True bearing"¹ and the specific headings "Forward" and "Back," give bearings measured from a true north-and-south line. The three "Forward" bearings are from the corner of the boundary designated in the first column to the triangulation stations named on the corresponding lines in the last column, and the three "Back" bearings are from these same stations in the last column to the corresponding corner of boundary in the first column. The difference in minutes or arc between the forward and back bearings shown in some cases is actual and not accidental, and is due to the fact that the computations took into account the spheroidal shape of the earth.

Sixth column.—This column, under the heading of "Distance," gives the three computed distances in yards from the corner of the bottom noted in the first column to the three triangulation stations named on the corresponding lines in the last column, and vice versa.

Seventh column.—This column, under the heading of "U. S. C. & G. S. triangulation station,"² gives the names of the landmarks from which were computed the corresponding "Latitude," "Longitude," "True bearing," and "Distance" of the "Corner of bottom" designated in the first column. A full description of the location and markings of these triangulation stations is given in another part of this publication under the heading of "Descriptions of Triangulation Stations."

Notes.—The descriptive notes relating to the shore line boundaries which appear between the descriptions of corners located on land require no explanation other than the statement that the laws of Maryland reserve to riparian owners all waters of "any creek, cove, or inlet less than one hundred yards in width at its mouth at low tide."

SURVEYING METHODS FOR RELOCATION OF BOUNDARIES.

There are a number of methods that can be used in the relocation of the actual boundaries of the crab bottoms as technically described in this publication and delineated on the published charts of the Coast and Geodetic Survey, and the "leasing charts" of the Maryland Shell Fish Commission, but as they are practically the same as those

¹ The mean magnetic variation for Dorchester County was 6° 00' west of north in 1911 and increasing at the rate of 5' yearly.

² Geographic positions of these triangulation stations can be obtained by application to the Superintendent of the Coast and Geodetic Survey, Washington, D. C.

required for the relocation of oyster-bar boundaries, the description of the "Surveying Methods for Relocation of Boundaries" given in this publication under the heading of "Boundaries of Oyster Bars" will be sufficient to indicate several methods that can be used in the relocation of crab-bottom boundaries.

BOUNDARIES OF CRAB BOTTOMS.

FOX CREEK.

(Honga River—Chart No. 40.)

Corner of bottom	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 16 57.05	76 07 36.02	S 59 07 W	N 59 06 E	2,533	Windmill 2
			S 33 12 E	N 33 11 W	410	Paul.
			S 75 42 E	N 75 41 W	2,374	Duck.
Thence from corner No. 1 along the mean low-water line of the shore to corner No. 2, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
2	38 17 52.78	76 06 35.64	S 49 55 W	N 49 54 E	4,939	Windmill 2
			S 31 51 W	N 31 51 E	2,616	Paul.
			S 15 46 E	N 15 46 W	2,562	Duck.
3	38 17 55.54	76 06 27.32	S 50 42 W	N 50 41 E	5,168	Windmill 2.
			S 34 41 W	N 34 40 E	2,815	Paul.
			S 10 31 E	N 10 31 W	2,602	Duck.
Thence from corner No. 3 along the mean low-water line of the shore to corner No. 4, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
4	38 17 20.78	76 06 46.32	S 59 00 W	N 58 58 E	4,077	Windmill 2.
			S 43 49 W	N 43 48 E	1,584	Paul.
			S 35 15 E	N 35 15 W	1,697	Duck.
5	38 17 13.78	76 07 01.00	S 59 01 W	N 59 00 E	3,621	Windmill 2.
			S 37 55 W	N 37 55 E	1,149	Paul.
			S 49 59 E	N 49 59 W	1,789	Duck.

WINGATE.

(Honga River—Chart No. 40.)

1	38 16 28.98	76 06 26.00	S 10 16 E	N 10 16 W	2,138	Norman.
			N 50 39 E	S 50 39 W	569	Duck.
			N 69 46 W	S 69 46 E	1,744	Paul.
2	38 16 48.48	76 06 33.10	S 87 52 W	N 87 51 E	1,449	Paul.
			S 11 39 E	N 11 39 W	2,820	Norman.
			S 64 42 E	N 64 42 W	696	Duck.
3	38 17 13.78	76 07 01.00	S 59 01 W	N 59 00 E	3,621	Windmill 2.
			S 37 55 W	N 37 55 E	1,149	Paul.
			S 49 59 E	N 49 59 W	1,789	Duck.
4	38 17 20.78	76 06 46.32	S 59 00 W	N 58 58 E	4,077	Windmill 2.
			S 43 49 W	N 43 48 E	1,584	Paul.
			S 35 15 E	N 35 15 W	1,697	Duck.
Thence from corner No. 4 along the mean low-water line of the shore to corner No. 5, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
5	38 16 39.67	76 06 09.46	S 80 57 W	N 80 55 E	4,531	Windmill 2.
			S 1 22 W	N 1 22 E	2,466	Norman.
			S 63 20 E	N 63 19 W	3,154	St. Thomas Church Spire.

Survey of Oyster Bars, Dorchester County, Md.

DUCK POINT COVE.
(Honga River—Chart No. 40.)

Corner of bottom	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' "	° / ' "	° / ' "	° / ' "	Yards.	
1	38 15 48.74	76 05 35.62	N 27 39 W N 56 38 W S 52 03 W	S 27 39 E S 56 39 E N 52 03 E	1,939 3,593 1,215	Duck. Paul. Norman.
2	38 16 19.95	76 05 54.86	N 30 16 W N 69 47 W S 13 57 W	S 30 16 E S 69 48 E N 13 57 E	770 2,627 1,855	Duck. Paul. Norman.
3	38 16 28.98	76 06 26.00	S 10 16 E N 50 39 E N 69 46 W	N 10 16 W S 50 39 W S 69 46 E	2,138 569 1,744	Norman. Duck. Paul.
4	38 16 39.67	76 06 09.46	S 80 57 W S 1 22 W S 63 20 E	N 80 55 E N 1 22 E N 63 10 W	4,531 2,466 3,154	Windmill 2. Norman. St. Thomas Church Spire.
Thence from corner No. 4 along the mean low-water line of the shore to corner No. 5, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
5	38 16 44.75	76 05 19.00	S 82 43 W S 81 20 W S 27 59 W	N 82 43 E N 81 18 E N 27 58 E	1,352 5,884 2,986	Duck. Windmill 2. Norman.
6	38 16 38.01	76 05 11.42	N 87 55 W S 83 45 W S 33 38 W	S 87 56 E N 83 42 E N 33 37 E	1,544 6,053 2,893	Duck. Windmill 2. Norman.
Thence from corner No. 6 along the mean low-water line of the shore to corner No. 7, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
7	38 16 12.97	76 04 48.16	N 67 23 W N 74 55 W S 54 49 W	S 67 24 E S 74 56 E N 54 49 E	2,341 4,389 2,717	Duck. Paul. Norman.
8	38 16 03.79	76 04 45.18	N 61 38 W N 71 25 W S 61 22 W	S 61 39 E S 71 26 E N 61 21 E	2,546 4,555 2,620	Duck. Paul. Norman.
Thence from corner No. 8 along the mean low-water line of the shore to corner No. 1, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						

JENNY ISLAND.

(Hooper Strait—Charts Nos. 40 and 41.)

1	38 13 13.92	76 03 13.52	S 70 42 E N 84 23 E N 70 25 W	N 70 40 W S 84 24 W S 70 26 E	6,774 2,064 2,247	Sharkfin Shoal Light. Head. Hooper Strait Light.
2	38 13 22.80	76 03 51.18	N 67 53 W N 81 11 W S 31 37 W	S 67 53 E S 81 13 E N 31 36 E	1,204 7,327 4,844	Hooper Strait Light. Applegarth. Okahanikan.
3	38 13 52.32	76 04 14.88	N 88 53 W S 41 48 W S 20 26 W	S 88 55 E N 41 47 E N 20 25 E	6,611 727 5,464	Applegarth. Hooper Strait Light. Okahanikan.
4	38 14 06.46	76 04 02.62	S 87 08 W S 38 31 W S 21 46 W	N 87 05 E N 38 30 E N 21 45 E	6,944 1,302 6,026	Applegarth. Hooper Strait Light. Okahanikan.
Thence from corner No. 4 along the mean low water line of the shore to corner No. 5, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
5	38 13 24.50	76 03 00.86	N 80 49 W N 82 55 W S 42 50 W	S 80 50 E S 82 58 E N 42 51 E	2,486 8,644 5,703	Hooper Strait Light. Applegarth. Okahanikan.

OKAHANIKAN.

(Hooper Strait—Charts Nos. 40, 41, and 42.)

Corner of bottom.	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	38 11 40.58	76 05 25.20	N 19 34 E	S 19 34 W	4, 130	Hooper Strait Light. Applegarth. Okahanikan.
			N 46 02 W	S 46 03 E	6, 586	
			S 3 05 W	N 3 05 E	678	
2	38 11 53.24	76 05 37.34	N 26 12 E	S 26 13 W	3, 870	Hooper Strait Light. Applegarth. Okahanikan.
			N 46 49 W	S 46 50 E	6, 057	
			S 14 33 E	N 14 33 W	1, 142	
3	38 12 54.98	76 03 37.04	S 77 10 E	N 77 07 W	7, 199	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 72 35 E	S 72 37 W	2, 808	
			N 46 59 W	S 47 00 E	2, 040	
4	38 12 34.28	76 03 38.26	S 82 43 E	N 82 40 W	7, 108	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 60 26 E	S 60 27 W	3, 118	
			N 34 55 W	S 34 56 E	2, 548	
Thence from corner No. 4 along the mean low water line of the shore to corner No. 1, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						

GRASSY.

(Hooper Strait—Charts Nos. 40 and 41.)

1	38 12 20.54	76 03 02.14	S 85 53 E	N 85 51 W	6, 107	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 41 11 E	S 41 12 W	2, 660	
			N 43 28 W	S 43 29 E	3, 517	
Thence from corner No. 1 along the mean low water line of the shore to corner No. 2, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
2	38 12 34.28	76 03 38.26	S 82 43 E	N 82 40 W	7, 108	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 60 26 E	S 60 27 W	3, 118	
			N 34 55 W	S 34 56 E	2, 548	

BISHOP HEAD.

(Hooper Strait—Chart No. 41.)

1	38 12 22.84	76 01 56.04	S 83 14 W	N 83 12 E	4, 362	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 0 12 W	S 0 12 E	1, 925	
			N 59 22 W	S 59 23 E	4, 856	
2	38 12 36.16	76 02 02.08	S 77 54 E	N 77 52 W	4, 595	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 5 57 E	S 5 57 W	1, 484	
			N 63 15 W	S 63 17 E	4, 498	
3	38 12 48.03	76 02 15.00	S 74 15 E	N 74 13 W	5, 025	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 24 50 E	S 24 50 W	1, 184	
			N 66 08 W	S 66 10 E	4, 017	
4	38 12 58.42	76 02 26.23	S 71 32 E	N 71 30 W	5, 413	Sharkfin Shoal Light. Head. Hooper Strait Light.
			N 47 41 E	S 47 41 W	1, 076	
			N 69 18 W	S 69 19 E	3, 608	

Survey of Oyster Bars, Dorchester County, Md.

BISHOP HEAD—Continued.

(Hooper Strait—Chart No. 41)—Continued.

Corner of bottom.	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
			° / '	° / '		
5	38 13 04.22	76 02 32.48	S 70 11 E N 61 11 E N 71 24 W	N 70 09 W S 61 12 W S 71 25 E	5,635 1,098 3,387	Sharkfin Shoal Light. Head. Hooper Strait Light.
6	38 13 13.92	76 03 13.52	S 70 42 E N 84 23 E N 70 25 W	N 70 40 W S 84 24 W S 70 26 E	6,774 2,064 2,247	Sharkfin Shoal Light. Head. Hooper Strait Light.
7	38 13 24.50	76 03 00.86	N 80 49 W N 82 55 W S 42 50 W	S 80 50 E S 82 58 E N 42 51 E	2,486 8,644 5,703	Hooper Strait Light. Applegarth. Okahamikan.
Thence from corner No. 7 along the mean low-water line of the shore to corner No. 8, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
8	38 12 53.00	76 01 56.41	S 70 34 E N 0 11 E N 70 43 W	N 70 33 W S 0 11 W S 70 45 E	4,604 908 4,416	Sharkfin Shoal Light. Head. Hooper Strait Light.
9	38 12 57.84	76 01 40.72	S 66 39 E N 72 00 E N 29 06 W	N 66 37 W S 72 03 W S 29 06 E	4,275 7,982 852	Sharkfin Shoal Light. Frog. Head.
10	38 12 24.96	76 01 41.42	S 81 33 E N 12 03 W N 62 15 W	N 81 32 W S 12 04 E S 62 17 E	3,986 1,895 5,160	Sharkfin Shoal Light. Head. Hooper Strait Light.

BLOODSWORTH ISLAND.

(Hooper Strait—Charts Nos. 41 and 42.)

1	38 10 56.72	76 01 30.98	N 56 54 E N 7 56 W N 42 02 W	S 56 55 W S 7 57 E S 42 03 E	4,375 4,875 7,237	Sharkfin Shoal Light. Head. Hooper Strait Light.
Thence from corner No. 1 along the mean low-water line of the shore to corner No. 2, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
2	38 12 20.54	76 03 02.14	S 85 53 E N 41 11 E N 43 28 W	N 85 51 W S 41 12 W S 43 29 E	6,107 2,660 3,517	Sharkfin Shoal Light. Head. Hooper Strait Light.
3	38 12 24.55	76 02 57.30	S 84 30 E N 41 00 E N 46 31 W	N 84 28 W S 41 00 W S 46 32 E	5,990 2,474 3,513	Sharkfin Shoal Light. Head. Hooper Strait Light.
4	38 12 12.66	76 02 41.75	S 88 13 E N 28 04 E N 46 26 W	N 88 11 W S 28 04 W S 46 27 E	5,551 2,570 4,088	Sharkfin Shoal Light. Head. Hooper Strait Light.
5	38 11 40.82	76 02 00.26	N 78 31 E N 1 48 E N 46 15 W	S 78 33 W S 1 48 W S 46 14 E	4,535 3,343 5,627	Sharkfin Shoal Light. Head. Hooper Strait Light.
6	38 11 25.80	76 01 22.21	N 67 41 E N 13 16 W N 49 07 W	S 67 42 W S 13 16 E S 49 09 E	3,709 3,953 6,717	Sharkfin Shoal Light. Head. Hooper Strait Light.

GREAT COVE.

(Upper Tangier Sound—Charts Nos. 41 and 42.)

Corner of bottom	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / //	° / //	° /	° /	Yards.	
1	38 08 50.58	76 01 53.42	S 32 59 W S 20 28 E S 49 51 E	N 32 56 E N 20 27 W N 49 50 W	11,384 6,653 2,431	Holland Island Bar Light. Miles. Senator.
Thence from corner No. 1 along the mean low-water line of the shore to corner No. 2, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
2	38 10 56.72	76 01 30.98	N 56 54 E N 7 56 W N 42 02 W	S 56 55 W S 7 57 E S 42 03 E	4,375 4,875 7,237	Sharkfin Shoal Light. Head. Hooper Strait Light.
3	38 11 25.80	76 01 22.21	N 67 41 E N 13 16 W N 49 07 W	S 67 42 W S 13 16 E S 49 09 E	3,709 3,953 6,717	Sharkfin Shoal Light. Head. Hooper Strait Light.
4	38 11 25.80	76 00 45.38	S 88 22 E N 60 06 E N 26 07 W	N 88 19 W S 60 07 W S 26 08 E	6,861 2,828 4,286	Room. Sharkfin Shoal Light. Head.
5	38 11 25.83	76 00 19.40	S 88 11 E N 51 20 E N 33 50 W	N 88 07 W S 51 21 W S 33 51 E	6,170 2,255 4,630	Room. Sharkfin Shoal Light. Head.
6	38 10 15.54	75 59 41.40	N 11 13 E N 77 45 W S 20 31 W	S 11 13 W S 77 46 E N 20 30 E	3,853 2,587 4,732	Sharkfin Shoal Light. Crab. Senator.
7	38 09 26.74	76 00 23.48	S 10 55 W S 87 10 E N 32 41 W	N 10 55 E N 87 07 W S 32 41 E	2,838 5,546 2,607	Senator. Deal Island Church. Crab.
Thence along county boundary as delineated on Chart Nos. 41 and 42 to corner No. 1.						

NORTHEAST ISLAND.

(Holland Straits—Chart No. 42.)

1	38 08 19.36	76 03 50.91	S 45 02 W S 19 50 W S 84 05 E	N 45 01 E N 19 48 E N 84 03 W	3,143 9,035 5,014	Holland Island Church Spire. Holland Island Bar Light. Senator.
2	38 08 56.20	76 04 11.50	S 25 49 W S 14 29 W S 72 22 E	N 25 48 E N 14 28 E N 72 20 W	3,847 10,062 5,808	Holland Island Church Spire. Holland Island Bar Light. Senator.
Thence from corner No. 2 along the mean low water line of the shore to corner No. 3, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
3	38 09 16.60	76 04 28.12	S 16 32 W S 11 14 W S 67 44 E	N 16 32 E N 11 14 E N 67 42 W	4,330 10,634 6,460	Holland Island Church Spire. Holland Island Bar Light. Senator.
4	38 09 30.80	76 04 19.64	S 17 29 W S 11 54 W S 63 03 E	N 17 29 E N 11 53 E N 63 00 W	4,853 11,148 6,453	Holland Island Church Spire. Holland Island Bar Light. Senator.
Thence from corner No. 4 along the mean low water line of the shore to corner No. 5, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
5	38 08 49.36	76 03 08.60	S 46 02 W S 23 18 W S 68 25 E	N 46 00 E N 23 17 E N 68 24 W	4,657 10,395 4,151	Holland Island Church Spire. Holland Island Bar Light. Senator.

Survey of Oyster Bars, Dorchester County, Md.

ADAM ISLAND.

(Holland Straits—Chart No. 42.)

Corner of bottom	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
1	° / ' / '' 38 08 09.80	° / ' / '' 76 04 39.00	° / ' / '' S 26 25 W	° / ' / '' N 26 24 E	Yards. 2, 119	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 12 18 W	N 12 17 E	8, 370	
			S 88 13 E	N 88 12 W	6, 271	
2	38 08 16.36	76 05 08.96	S 6 41 W	N 6 41 E	8, 457	Holland Island Bar Light. Holland Island Church Spire. Senator.
			S 3 54 W	N 3 54 E	2, 125	
			S 86 38 E	N 86 35 W	7, 078	
Thence from corner No. 2 along the mean low water line of the shore to corner No. 3, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
3	38 09 14.66	76 05 14.00	S 0 09 W	N 0 09 E	4, 081	Holland Island Church Spire. Senator. Okahanikan.
			S 71 42 E	N 71 39 W	7, 584	
			N 4 31 W	S 4 31 E	4, 255	
4	38 09 23.78	76 05 09.08	S 1 51 W	N 1 51 E	4, 395	Holland Island Church Spire. Senator. Okahanikan.
			S 69 10 E	N 69 07 W	7, 563	
			N 6 45 W	S 6 45 E	3, 962	
Thence from corner No. 4 along the mean low water line of the shore to corner No. 5, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
5	38 09 30.80	76 04 19.64	S 17 29 W	N 17 29 E	4, 853	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 11 54 W	N 11 53 E	11, 148	
			S 63 03 E	N 63 00 W	6, 453	
6	38 09 16.60	76 04 28.12	S 16 32 W	N 16 32 E	4, 330	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 11 14 W	N 11 14 E	10, 634	
			S 67 44 E	N 67 42 W	6, 460	
Thence from corner No. 6 along the mean low water line of the shore to corner No. 7, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
7	38 08 56.20	76 04 11.50	S 25 49 W	N 25 48 E	3, 847	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 14 29 W	N 14 28 E	10, 062	
			S 72 22 E	N 72 20 W	5, 808	
8	38 08 19.36	76 03 50.91	S 45 02 W	N 45 01 E	3, 143	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 19 50 W	N 19 48 E	9, 035	
			S 84 05 E	N 84 03 W	5, 014	

SPRING ISLAND (DORCHESTER COUNTY).

(Holland Straits—Chart No. 42.)

1	38 06 39.86	76 03 17.80	S 37 30 W	N 37 28 E	6, 484	Holland Island Bar Light. Miles. Senator.
			S 68 15 E	N 68 13 W	4, 926	
			N 55 19 E	S 55 20 W	4, 992	
2	38 07 24.24	76 03 49.60	S 80 53 W	N 80 52 E	2, 288	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 25 01 W	N 25 00 E	7, 329	
			N 74 50 E	S 74 52 W	5, 131	
Thence from corner No. 2 along the mean low-water line of the shore to corner No. 3, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						

Survey of Oyster Bars, Dorchester County, Md.

SPRING ISLAND (DORCHESTER COUNTY)—Continued.

(Holland Straits—Chart No. 42)—Continued.

Corner of bottom.	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station	
			Forward	Back			
3	38 07 57.56	76 03 57.44	S 54 04 W	N 54 03 E	Yards. 2,532	Holland Island Church Spire.	
			S 20 25 W	N 20 24 E	8,286	Holland Island Bar Light.	
			N 87 34 E	S 87 36 W	5,166	Senator.	
4	38 08 19.36	76 03 50.91	S 45 02 W	N 45 01 E	3,143	Holland Island Church Spire.	
			S 19 50 W	N 19 48 E	9,035	Holland Island Bar Light.	
			S 84 05 E	N 84 03 W	5,014	Senator.	
5	38 08 49.36	76 03 08.60	S 46 02 W	N 46 00 E	4,657	Holland Island Church Spire.	
			S 23 18 W	N 23 17 E	10,395	Holland Island Bar Light.	
			S 68 25 E	N 68 24 W	4,151	Senator.	
6	38 08 50.58	76 01 53.42	Thence from corner No. 5 along the mean low-water line of the shore to corner No. 6, excluding any creek cove, or inlet less than 100 yards in width at its mouth at low tide.				
			S 32 59 W	N 32 56 E	11,384	Holland Island Bar Light.	
			S 20 28 E	N 20 27 W	6,653	Miles.	
			S 49 51 E	N 49 50 W	2,431	Senator.	
Thence along county boundary as delineated on Chart No. 42 to corner No. 1.							

HOLLAND ISLAND.

(Holland Straits—Chart No. 42)

1	38 06 20.12	76 04 58.40	N 62 42 E	S 62 44 W	7,636	Senator.
			N 13 19 W	S 13 19 E	1,849	Holland Island Church Spire.
2	38 06 36.42	76 05 31.58	S 15 47 W	N 15 46 E	4,654	Holland Island Bar Light.
			S 4 20 W	N 4 20 E	5,044	Holland Island Bar Light.
			N 68 56 E	S 68 59 W	8,217	Senator.
3	38 08 06.56	76 05 27.80	N 20 07 E	S 20 06 W	1,332	Holland Island Church Spire.
			S 3 25 W	N 3 25 E	8,083	Holland Island Bar Light.
			S 11 17 E	N 11 17 W	1,824	Holland Island Church
4	38 08 16.36	76 05 08.96	S 89 21 E	N 89 18 W	7,568	Senator. [Spire.
			S 6 41 W	N 6 41 E	8,457	Holland Island Bar Light.
			S 3 54 W	N 3 54 E	2,125	Holland Island Church
5	38 08 09.80	76 04 39.00	S 86 38 E	N 86 35 W	7,078	Senator. [Spire.
			S 26 25 W	N 26 24 E	2,119	Holland Island Church Spire.
			S 12 18 W	N 12 17 E	8,370	Holland Island Bar Light.
6	38 07 50.85	76 04 48.22	S 88 13 E	N 88 12 W	6,271	Senator.
			S 28 55 W	N 28 54 E	1,441	Holland Island Church Spire.
			S 11 31 W	N 11 31 E	7,695	Holland Island Bar Light.
7	38 06 57.60	76 04 39.70	N 86 06 E	S 86 08 W	6,529	Senator.
			N 70 23 E	S 70 25 W	6,674	Senator.
			N 59 53 W	S 59 53 E	1,068	Holland Island Church Spire.
			S 17 04 W	N 17 04 E	6,007	Holland Island Bar Light.

Survey of Oyster Bars, Dorchester County, Md.

PRY ISLAND.

(Holland Straits—Chart No. 42.)

Corner of bottom.	Latitude	Longitude	True bearing		Distance	U. S. C. & G. S. triangulation station
			Forward	Back		
	° / ' "	° / ' "	° / ' "	° / ' "	Yards.	
1	38 05 44.11	76 03 44.60	S 44 43 W	N 44 42 E	4,594	Holland Island Bar Light. Fog 2. Solomons Lump Light.
			S 15 12 E	N 15 11 W	7,546	
			S 38 05 E	N 38 03 W	7,318	
2	38 06 13.50	76 04 44.66	N 59 52 E	S 59 54 W	7,422	Senator. [Spire. Holland Island Church Holland Island Bar Light.
			N 21 23 W	S 21 23 E	2,173	
			S 20 59 W	N 20 58 E	4,558	
3	38 06 44.38	76 04 31.24	N 66 06 E	S 66 08 W	6,630	Senator. [Spire. Holland Island Church Holland Island Bar Light.
			N 49 30 W	S 49 32 E	1,511	
			S 20 35 W	N 20 34 E	5,659	
4	38 07 53.56	76 04 28.45	S 42 11 W	N 42 10 E	1,823	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 15 08 W	N 15 07 E	7,905	
			N 86 38 E	S 86 39 W	5,997	
5	38 08 19.36	76 03 50.91	S 45 02 W	N 45 01 E	3,143	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 19 50 W	N 19 48 E	9,035	
			S 84 05 E	N 84 03 W	5,014	
6	38 07 57.56	76 03 57.44	S 54 04 W	N 54 03 E	2,532	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 20 25 W	N 20 24 E	8,286	
			N 87 34 E	S 87 36 W	5,166	
Thence from corner No. 6 along the mean low water line of the shore to corner No. 7, excluding any creek, cove, or inlet less than 100 yards in width at its mouth at low tide.						
7	38 07 24.24	76 03 49.60	S 80 53 W	N 80 52 E	2,288	Holland Island Church Spire. Holland Island Bar Light. Senator.
			S 25 01 W	N 25 00 E	7,329	
			N 74 50 E	S 74 52 W	5,131	
8	38 06 39.86	76 03 17.80	S 37 30 W	N 37 28 E	6,484	Holland Island Bar Light. Miles. Senator.
			S 68 15 E	N 68 13 W	4,926	
			N 55 19 E	S 55 20 W	4,992	
Thence along county boundary as delineated on Chart No. 42 to corner No. 1.						

A P P E N D I X E S .

APPENDIX A.—LAWS RELATING TO THE COOPERATION OF THE COAST AND GEODETIC SURVEY AND BUREAU OF FISHERIES WITH THE MARYLAND SHELL FISH COMMISSION.

The work of the Coast and Geodetic Survey and of the Bureau of Fisheries, in cooperation with the Maryland Shell Fish Commission, in surveying the oyster bars, establishing permanent landmarks at triangulation stations, and preparing for publication the necessary charts and technical and legal descriptions of boundaries and landmarks shown on these charts, has been executed in compliance with a request from the governor of the State of Maryland to the Secretary of Commerce and Labor, and by the authority of the following laws of the United States and Maryland:

[Act of Congress approved May 26, 1906.]

AN ACT To authorize the Secretary of Commerce and Labor to cooperate, through the Bureau of the Coast and Geodetic Survey, and the Bureau of Fisheries, with the shellfish commissioners of the State of Maryland in making surveys of the natural oyster beds, bars, and rocks in the waters within the State of Maryland.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of Commerce and Labor be, and he is hereby, authorized and directed, upon the request of the governor of the State of Maryland, to designate such officers, experts, and employees of the Bureau of the Coast and Geodetic Survey and of the Bureau of Fisheries as may be necessary to cooperate with the Maryland State board of shellfish commissioners in making a survey of and locating the natural oyster beds, bars, and rocks in the waters within the State of Maryland; and the Secretary of Commerce and Labor is hereby authorized and directed to furnish to the officers, experts, and employees of said bureaus so detailed as aforesaid such instruments, appliances, and steam launches as may be necessary to make the survey aforesaid; and the Secretary of Commerce and Labor is hereby authorized to have made in the Bureau of the Coast and Geodetic Survey all the plats necessary to show the results of the aforesaid survey and the locations of the said natural oyster beds, bars, and rocks in the waters within the State of Maryland, and to furnish to the board of shellfish commissioners of the State of Maryland such copies as may be necessary, and for this purpose to employ, in the District of Columbia and elsewhere, such technically qualified persons as may be necessary to carry out the purpose of this act.

SEC. 2. That the Secretary of Commerce and Labor is hereby further authorized to have erected or constructed by the officers so detailed as aforesaid, while making such survey, such structures as may be necessary to mark the points of triangulation, so that the same may be used for such future work of the Coast and Geodetic Survey as the said bureau may be hereafter required to perform in prosecuting the Government coast survey of the navigable waters of the United States located within the State of Maryland.

* * * * *
SEC. 4. That this act shall take effect from the date of its passage.

Survey of Oyster Bars, Dorchester County, Md.

[Act of Congress approved June 30, 1906.]

AN ACT Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, nineteen hundred and seven, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and the same are hereby, appropriated, for the objects hereinafter expressed, for the fiscal year ending June thirtieth, nineteen hundred and seven, namely: * * *

COAST AND GEODETIC SURVEY: * * * For any special surveys * * * including the expenditures authorized under Public Act Numbered One hundred and eighty-one, approved May twenty-sixth, nineteen hundred and six, and contingent expenses incident thereto, five thousand dollars, together with the unexpended balance under this appropriation for nineteen hundred and six and prior years which is hereby reappropriated and made available on this account for the fiscal year nineteen hundred and seven. * * *

[Act of Congress approved March 4, 1907.]

AN ACT Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, nineteen hundred and eight, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and the same are hereby, appropriated, for the objects hereinafter expressed, for the fiscal year ending June thirtieth, nineteen hundred and eight, namely: * * *

COAST AND GEODETIC SURVEY: * * * For any special surveys * * * including expenses of surveys in aid of the shellfish commission of the State of Maryland, to be immediately available and to continue available until expended, twenty-five thousand dollars. * * *

[Act of Congress approved May 27, 1908.]

AN ACT Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, nineteen hundred and nine, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and the same are hereby, appropriated, for the objects hereinafter expressed, for the fiscal year ending June thirtieth, nineteen hundred and nine, namely: * * *

COAST AND GEODETIC SURVEY: * * * For any special surveys * * * including expenses of surveys in aid of the shellfish commission of the State of Maryland, which expenses, including cost of plats and charts, shall not exceed fifteen thousand dollars in any one year, to be immediately available, twenty thousand dollars.

[Act of Congress approved March 4, 1909.]

AN ACT Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, nineteen hundred and ten, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and the same are hereby, appropriated, for the objects hereinafter expressed, for the fiscal year ending June thirtieth, nineteen hundred and ten, namely: * * *

COAST AND GEODETIC SURVEY: * * * For any special surveys * * * including expenses of surveys in aid of the shellfish commission of the State of Maryland, which expenses, including cost of plats and charts, shall not exceed fifteen thousand dollars in any one year, to be immediately available, twenty thousand dollars.

[Act of Congress approved June 25, 1910.]

AN ACT Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, nineteen hundred and eleven, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and the same are hereby, appropriated, for the objects hereinafter expressed, for the fiscal year ending June thirtieth, nineteen hundred and eleven, namely: * * *

COAST AND GEODETIC SURVEY: * * * For any special surveys * * * including expenses of surveys in aid of the shellfish commission of the State of Maryland, to be immediately available, fifteen thousand dollars.

Survey of Oyster Bars, Dorchester County, Md.

[Act of Congress approved March 4, 1911.]

AN ACT Making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, nineteen hundred and twelve, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the following sums be, and the same are hereby, appropriated, for the objects hereinafter expressed, for the fiscal year ending June thirtieth, nineteen hundred and twelve, namely: * * *

COAST AND GEODETIC SURVEY: * * * For any special surveys * * * including expenses of surveys in aid of the shellfish commission of the State of Maryland, to be immediately available, thirteen thousand dollars * * *

[Act of the Legislature of Maryland approved April 2, 1906.]

AN ACT To establish and promote the industry of oyster culture in Maryland, to define and mark natural oyster beds, bars and rocks lying under the waters of this State, to prescribe penalties for the infringement of the provisions of this Act, and * * *

SECTION 1. Be it enacted by the General Assembly of Maryland, That the following sections be, and they are hereby, added to article 72 of the Code of Public General Laws, title "Oysters." * * *

SEC. 86. The Board of Shell Fish Commissioners shall, as soon as practicable after the passage of this act, cause to be made a true and accurate survey of the natural oyster beds, bars and rocks of this State, said survey to be made with reference to fixed and permanent objects on the shore, giving courses and distances, to be fully described and set out in a written report of said survey, as hereinafter required. A true and accurate delineation of the same shall be made on copies of published maps and charts of the United States coast and geodetic survey, which said copies shall be filed in the office of the said commissioners in the city of Annapolis, and the said commissioners shall further cause to be delineated upon copies of the published maps and charts of the United States coast and geodetic survey, of the largest scale, one copy for each of the counties of this State in the waters of which there are natural oyster beds, bars and rocks, all natural beds, bars and rocks lying within the waters of such county, which maps shall be filed in the offices of the clerks of the Circuit Court for the respective counties wherein the grounds so designated may lie * * *

SEC. 87. The governor of this State is hereby requested to ask the assistance of the United States Coast and Geodetic Survey, and of the United States Fish Commissioner, to aid in the carrying out of the provisions of the preceding section.

* * * * *

SEC. 89. As soon as practicable after the first day of April, 1906, the said commissioners shall organize, and shall at once proceed, with the assistance of such person or persons as may be detailed by the United States Coast and Geodetic Survey and the United States Fish Commissioner, to aid them in their work, and of such persons as may be appointed under the preceding section, to have laid out, surveyed and designated on the said charts, the natural beds and bars, and shall cause to be marked and defined as accurately as practicable the limits and boundaries of the natural beds, bars, and rocks as established by said survey, and they shall take true and accurate notes of said survey in writing, and make an accurate report of said survey, setting forth such a description of landmarks as may be necessary to enable the said board, or their successors, to find and ascertain the boundary lines of the said natural oyster beds, bars, and rocks, as shown by a delineation on the maps and charts provided in this act; said report shall be completed and filed in the office of the board in the city of Annapolis within ninety days after the completion of the survey of any county. Said commissioners shall cause the same to be published in pamphlet form, and transmit copies of the same to the clerks of the circuit court for the respective counties, where the charts have been filed or directed to be filed as hereinafter provided; the said report to be filed by the clerks of the several counties in a book kept for that purpose. And the said survey and report, when filed, subject to the right of appeal hereafter provided for in this act, shall be taken in all of the courts of this State as conclusive evidence of the boundaries and limits of all natural oyster beds, bars, and rocks, lying within the waters of the county wherein such survey and report are filed, and shall be construed to mean in all of the said courts that there are no natural oyster beds, bars, or rocks lying within the waters of the counties wherein such report and survey are filed other than those embraced in the survey authorized by this act, and that all areas of the Chesapeake Bay and its tributaries within the State of Maryland, not shown in the survey to be natural

oyster beds, bars, or rocks shall be construed in all the courts of the State to be barren bottoms and open for disposal by the State for the purpose of private planting or propagation of oysters thereon under the provisions of this act; provided, that the said survey and report shall not be construed as to affect in any manner the holdings by citizens of this State in any lot which may have been appropriated or taken up under the laws of this State prior to the approval of this act.

The law of the State of Maryland, passed March 9, 1842, authorizing officers of the United States Coast and Geodetic Survey to enter upon the lands within the State limits for the purposes of the survey, is as follows:

AN ACT Concerning the Survey of the Coast of Maryland.

SECTION 1. *Be it enacted by the General Assembly of Maryland,* That it shall and may be lawful for any person or persons employed under and by virtue of an act of the Congress of the United States, * * * at any time hereafter to enter upon lands within this State for the purpose of exploring, surveying, triangulating, or leveling, or doing any other matter or thing which may be necessary to effect the objects of said act, and to erect any works, stations, buildings, or appendages requisite for that purpose, doing no unnecessary injury to private or other property.

SEC. 2.¹ *And be it enacted,* That in case the person or persons employed under the act of Congress aforesaid, can not agree with the owners or possessors of the land so entered upon and used as to the amount of damage done thereto by reason of the removal of fences, cutting of trees or injury to the crop or crops growing on the same, it shall and may be lawful for the said parties or either of them to apply to the chief justice for the time being or one of the associate judges of the judicial district in which such land may be situated, who shall thereupon appoint three disinterested and judicious freeholders, residents of the same judicial district, to proceed with as much dispatch as possible to the examination of the matter in question, and the faithful assessment of the damages sustained by the owners or possessors aforesaid, and the said freeholders or a majority of them, having first taken and subscribed an oath or affirmation before the chief or associate justice aforesaid or other person duly authorized to administer the same, that they will well and truly examine and assess as aforesaid, and having given five days' notice to both parties of the time of their meeting, shall proceed to the spot, and then and there upon their own view and if required, upon the evidence of witnesses (to be by them sworn or affirmed and examined), shall assess the said damages, and shall afterward make report thereof and of their proceedings in writing under their hands and seals and file the same within five days thereafter in the office of the clerk of the county in which the land aforesaid is situated, subject to an appeal by either party to the county court of the said county within ten days after filing as aforesaid, and the said report so made as aforesaid if no appeal as aforesaid be taken, shall be held to be final and conclusive as between the said parties, and the amount so assessed and reported shall be paid to the said owners or possessors of the land so damaged within twenty days after the filing of said report, and the said chief or associate justice as aforesaid, shall have authority to tax and allow upon the filing of said report, such costs, fees, and expenses to the said freeholders for the performance of their duty as he shall think equitable and just, which allowance shall be paid by the person or persons employed under the act of Congress aforesaid, within the time last above limited, but if an appeal as aforesaid be taken, the case shall be set down for hearing at the first term of county court aforesaid, ensuing upon and after appeal, and it shall be lawful for either party immediately after the entry of such appeal, to take out summons for such witnesses as may be necessary to be examined upon the hearing aforesaid, and the said court shall have power in its discretion to award costs against which ever the final judgment shall be entered, and such appeal at the option of either party may and shall be heard before and the damage assessed by a jury of twelve men to be taken from the regular panel and elected as in other cases.

SEC. 3. *And be it enacted,* That if any person or persons shall wilfully injure or deface or remove any signal, monument, or building or any appendage thereto, erected, used, or constructed under and by virtue of the act of Congress aforesaid, such person or persons so offending shall severally forfeit and pay the sum of fifty dollars with costs of suit to be sued for and recovered by any person who shall first

¹ Under the rulings of the Comptroller of the Treasury no damages can be collected except through the United States Court of Claims unless an agreement has been made in advance.

prosecute the same before any justice of the peace of the county where the person so offending may reside, and shall also be liable to pay the amount of damages thereby sustained, to be recovered with costs of suit in an action on the case, in the name and for the use of the United States of America, in any court of competent jurisdiction.

APPENDIX B.—THE HAMAN OYSTER CULTURE LAW.

[Extract from Second Report of Shell Fish Commission.]

OBJECT.

“The legislature in placing chapter 711 of the acts of 1906, better known as the Haman Oyster Culture Law, upon the statute books of Maryland, had a twofold object in view.

1. To encourage an industry in oyster culture upon the *barren bottoms* beneath the tidewaters of the State.
2. To prevent the leasing of natural oyster bars for the purpose of oyster culture.”

SURVEY.

“To make the leasing of barren bottoms possible and the leasing of natural bars impossible, provision was made for a survey of the natural bars for the purpose of accurately locating and marking the same. It was definitely provided that no barren bottoms should be leased in any part of the State until the natural bars of that region had been surveyed, charted, and marked with buoys.”

DEFINITION OF A NATURAL OYSTER BAR.

NATURAL BAR NOT DEFINED.

“The Shell Fish Commission is instructed by section 90 of the Haman Oyster Culture Law to exercise its judgment liberally in favor of the natural bars when surveying, charting and buoying them, but other than this the Commission is uninstructed in this important matter. The responsibility of defining a natural bar is placed upon the Commission.”

DIVERSITY OF OPINION.

“No definition of a natural oyster bar could be formulated by any man or body of men which would meet with the approval of all parties concerned. Oystermen, as a rule, hold that all bottoms where oysters grow or have grown naturally even though now practically barren of oysters should be considered natural bars. Other citizens of the State who are not directly interested in the oyster business, but interested in the oyster industry from the standpoint of revenue, hold, as a rule, that no bottoms should be excluded from leasing for oyster culture which, by methods known to oyster culturists, may be made to yield a greater number of oysters than they now produce.”

“It should be evident to every one that neither of these definitions could be adopted by the Commission as a working basis for determining which of the grounds surveyed are natural oyster bars.”

THE GOLDSBOROUGH DEFINITION.

The definition of a natural oyster bar which very nearly approaches a reasonable and satisfactory compromise between the views of the subject held by *oystermen* on one hand and by *oyster culturists* on the other is that contained in an opinion rendered by Judge Charles F. Goldsborough in the circuit court for Dorchester County in the July term, 1881, in the case of William T. Windsor and George R. Todd v. Job T. Moore.

This definition has been adopted by the Shell Fish Commission as the basis for the determination of the status of the various oyster bottoms surveyed, and is as follows:

What then is a natural bar or bed of oysters? It would be a palpable absurdity for the State to attempt to promote the propagation and growth of oysters and to encourage its citizens, by a grant of land, to engage in their culture, if the lands authorized to be taken up were only those upon which

oysters do not and can not be made to grow. That there may be lands covered by water in the State where no oysters can be found, but where, if planted, they could be cultivated successfully, may be possible, but, if so, I imagine that their extent must be too limited for them to be of much practical, general advantage for the purposes of such a law as the one under discussion; but there are thousands of acres of hard and shifting sands where oysters not only are not found, but where it would be folly to plant them, and these latter it can not be supposed that the State intended to offer to give away, for the simple reason that the State could not help knowing that nobody would have them.

Upon the other hand there are large and numerous tracts where oysters of natural growth may be found in moderate numbers, but not in quantities sufficient to make it profitable to catch them, and yet where oysters may be successfully planted and propagated. In my opinion these can not be called natural bars or beds of oysters, within the meaning of the act of assembly, and it is just such lands as these that the State meant to allow to be taken up under the provisions of the above-mentioned section of the act.

But there is still another class of lands where oysters grow naturally and in large quantities and to which the public are now and have been for many years in the habit of resorting with a view to earning a livelihood by catching this natural growth, and here, I think, is the true test of the whole question. Land can not be said to be a natural oyster bar or bed merely because oysters are scattered here and there upon it, and because if planted they will readily live and thrive there; but whenever the natural growth is so thick and abundant that the public resort to it for a livelihood, it is a natural oyster bar or bed and comes within the above-quoted restriction in the law, and can not be located or appropriated by any individual.

APPLICATION OF DEFINITION.

Before this definition may be of use in determining, accurately and scientifically, the status of an oyster ground, its central idea, "livelihood," must be expanded into accurately determinable factors, and these factors must be combined into a practical scheme of investigating the condition of the ground under consideration.

Stated briefly, a *livelihood* is represented by a *sum of money* obtained from the sale, at a fixed *price*, of a certain *quantity of oysters* gathered in a given *time* from an allotted *area* of ground.

Knowing the value of each of these factors it becomes possible to calculate the number of oysters an oyster ground must produce per square yard in order that oystermen may secure a livelihood by working upon it.

NOTE.—The factors into which the commission resolved the livelihood problem, the value assigned to each factor, and the scheme devised for practical use in examining and applying the definition to oyster bottoms are given in outline in their second report under the heading of the preceding extract, and in detail in their first report on pages 32 to 69.

APPENDIX C.—SUMMARY OF THE PARTICULAR SURVEYING OPERATIONS WHICH CONSTITUTE AN "OYSTER SURVEY" AS NOW BEING CARRIED ON IN MARYLAND.

Explanation.—A brief account of the particular surveying operations which constitute an "oyster survey" as now being carried on in Maryland will assist in the interpretation of records contained in the technical part of this report, and will be of interest to many who may not understand the necessity for the great amount of work being done or its complicated character.

To those familiar with methods used in surveying and charting the characteristic features of large bodies of water there is an evident necessity for the various operations performed, especially when it is known that the boundaries of the public oyster bars and of the private lots leased for purposes of oyster culture must be surveyed and charted with the greatest practical accuracy. To others it will be sufficient to state that the actual experience gained from oyster surveys in other States has proven that in order to avoid endless dissatisfaction and litigation it is necessary to accurately locate and permanently establish oyster boundaries as is now being done in Maryland.

Triangulation survey.—Such refinement of survey work as that demanded by the conditions of an oyster survey when carried on at considerable distances offshore can only be obtained by the use of a system of triangulation as a framework or foundation. Therefore, a triangulation survey including the permanent marking of the positions of landmarks with monuments and a record of the descriptions of their locations for future recovery is a necessary operation of a complete oyster survey.

Topographic survey.—The technical records which establish the relation between the offshore oyster boundaries and triangulation landmarks are sufficient for the requirements of engineers in making

resurveys, but do not supply the needs of others who are interested in the same boundaries by reason of their occupation as oystermen concerned as to the public oyster bars, or oyster culturists concerned as to the leasable bottoms. For these it is necessary to have the charts of the survey show the relation of the shore line and other topographic features to the boundaries of the public oyster bars and private oyster farms. Therefore, a topographic survey is a necessary operation of a complete oyster survey.

Hydrographic survey.—In the settlement of the important question of what is, or what is not, a natural oyster bar, and in the consideration of bottoms to be selected for purposes of oyster culture, information as to the depth of water and the character of the bottom is required. Therefore, a hydrographic survey is a necessary operation of a complete oyster survey.

Necessary foundation for an oyster survey.—Consequently, the necessary components of a satisfactory foundation for a complete oyster survey are the three classes of survey operations technically named triangulation, topography, and hydrography, or, stated in another way, the foundation of a practical oyster survey includes the surveying operations usually followed by the Coast and Geodetic Survey leading up to the preparation and publication of nautical charts.

Special surveys and investigations pertaining to oysters.—Having obtained this cartographic survey for a foundation, partly by new work and partly from records of previous work of the Government, the combined operations¹ making up an "oyster survey" are completed by superimposing on this foundation special surveys and investigations pertaining particularly to oysters or other shell fish.

The special surveys pertaining to oysters furnish information as to the location and outline of oyster-shell bottoms, and are carried on by the sounding boat party in addition to the usual hydrographic work.² This operation consists of the observation and record of the character of vibration of a wire and chain apparatus which is dragged over the bottom, the vibrations or lack of vibrations indicating the presence and quantity of shells or absence of shells.

The special oyster investigations³ consist of the actual determination of the kind and quantity of oysters on the bottom, and such economic and biological studies of the supply of oyster food, density of water, character of the bottom, and other important matters as affects the growth of oysters. In this work the oyster investigation stations are located and buoyed by the hydrographic party while engaged in the survey of the oyster-shell limits. They are selected with the view of obtaining characteristic data which can be used for the interpretation of the recorded vibrations of the chain apparatus at all other points covered by the survey.

Preparation of results.—The actual surveying operations and oyster investigations having been completed for any one county, there still remains technical work of nearly equal magnitude to that described.⁴ This work consists of the preparation of charts and technical descriptions of boundaries and landmarks for publication by the Government, the preparation of that part of the annual report of the commission covering the special oyster surveys and investigations, the making of the leasing charts and finished projections, and finally the filing of the oyster charts and records with the courts and the commission, thus opening a county for oyster culture.

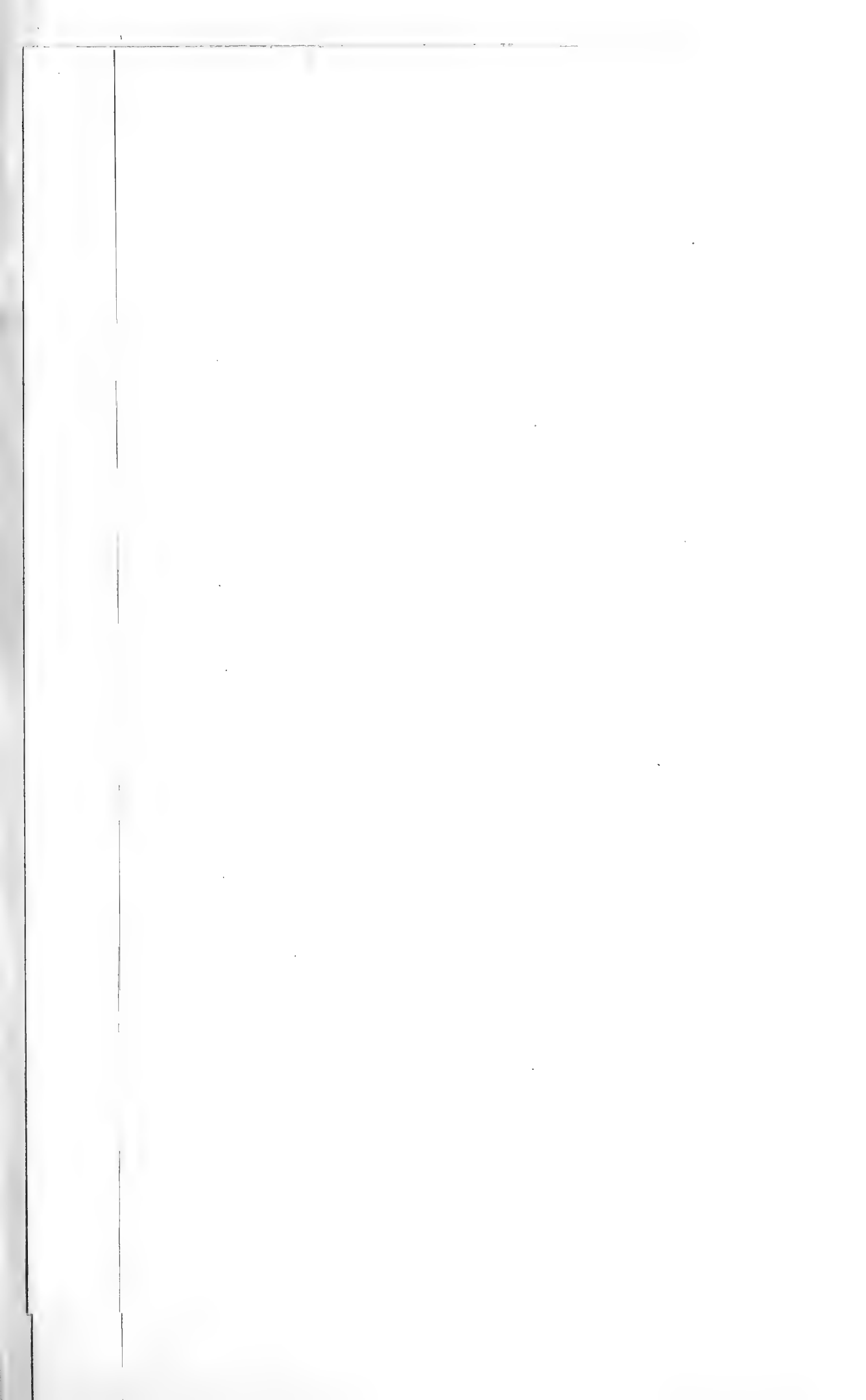
Summary.—From the foregoing account it can be seen that a complete oyster survey properly conducted so as to answer all practical requirements of the present and permanency of results for the future is a very complicated affair, involving many lines of surveying and other scientific work, and requiring the professional services of experts in the various operations of cartographic surveying and shell-fish investigations.

¹ See Appendix D of this publication for "Statistics of results of combined operations of the Government and State."

² See pp. 104 to 123 of First Annual Report of Maryland Shell Fish Commission.

³ See pp. 30 to 67 and 129 to 199 of First Annual Report of Maryland Shell Fish Commission.

⁴ No mention is made here of the large amount of administrative work of the commission, which is greatly complicated and increased by the effect of the oyster-survey operations on many thousands of people whose interests are more or less involved; or of the large amount of survey work involved in the survey and record of the boundaries of oyster lots leased from the State by private individuals for the purposes of oyster culture.







LIBRARY OF CONGRESS



0 002 896 798 6

