



U. S. COAST AND GEODETIC SURVEY.

*F. M. Thorn* Superintendent.

State: *Mass.*

DESCRIPTIVE REPORT.

*Hydrographic* Sheets Nos. *1877,*  
*1878, 1879, 1880.*

LOCALITY:

*Vineyard*  
*and*  
*Nantucket Sounds.*

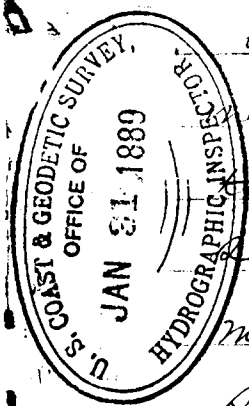
*1888.*

CHIEF OF PARTY:

*Lieut. S. C. Paine, U. S. N.*

H02224

H02225



From an examination of the plotted work  
 Proposition No. it would appear that  
 the shore line has been subjected to a very  
 slight accretive action; the change is  
 more apparent near the entrances to the  
 Small Bays & trending inland than at  
 other points:

The entrance to Waquoit Bay has moved  
 to the W<sup>d</sup> about 150 m. and the sand  
 point on the S.E. side of this entrance  
 has made out about 200 m.

Peponesset Bay has found a new  
 entrance through the narrow sand spit  
 which formerly extended directly across  
 its mouth and this sand spit has  
 extended itself in a N.E. direction  
 about 200 m.

The L'Homme Dieu Shoal has shifted  
 to the O<sup>d</sup> about 200 m.

A portion of the N.W. end of  
 Succunesset Shoal has been worn away  
 and the whole shoal seems to have swung  
 around on the remaining part of the

such as a point straining the S.W. end to the O<sup>d</sup> from  $\frac{1}{8}$  to  $\frac{1}{4}$  of a mile.

There is no change in the position of the Horse Shoe Shoal, a portion of the northern edge shows a slight cutting away at no point more than  $\frac{1}{8}$  of a mile.

Bishop and Clerks Shoal has not changed location; on the N.E. side it has extended from  $\frac{1}{8}$  to  $\frac{1}{4}$  of a mile.

Eldredge Shoal seems to have decreased slightly in width, a slight cutting away being noticeable on the Northern side.

The point of Muck Shoal extending from the main body towards the O.W. has cut away slightly; the Western Loop of the Shoal remains in its old position; the Eastern Loop seems to have swung to the O<sup>d</sup> the end moving through an arc of about  $\frac{1}{4}$  of a mile.

None of the work on Projection No 3 was done in Small Tides so it is not

possible to make any statement regarding the above line -

The shore line in Projection No 4 is apparently correct -

The shores in Projections 3 and 4 can not sufficiently developed to warrant any statement regarding them.

The Harbor of Hyannis-Port is the best and most accessible on the Northern Shore, there is no trouble in beating in for vessels drawing less than 12 ft of water, the Harbor is protected by a head water and the leading ground is good; an appropriation of two thousand dollars was used last year in dredging this Harbor (the work done was mainly near the head water) and I am informed that a like amount is on the River and Harbor this year; I think it would be expended advantageously.

The anchorage off Falmouth is much used by vessels awaiting a change of current and in strong N.E. winds, the

Loading ground is good.

Nantuxet Harbor is very snug  
 once in but there is an 8 foot spot in  
 the channel and scant room for working  
 to windward; as there is no large scale  
 chart of Nantuxet Harbor it is difficult  
 to trace the effect produced by the jetties;  
 there is now however an 8 foot channel  
 into the harbor where the chart shows  
 6 ft.; the most apparent change being  
 in the 6 foot spot which formerly extended  
 from the outer end of the jetty in an  
 Ely direction directly across the channel;  
 there is now a channel across this  
 spot varying in depth from 8 to 9 ft  
 (m.l.w.).

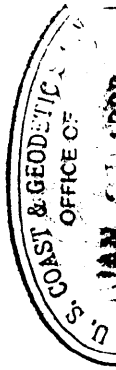
The bottom was almost entirely composed  
 of fine coarse sand with occasional rocky  
 spots of small size; on the Horse Shoe  
 Shoal hard sand and large pebbles;  
 in the Nantuxet Channel rocky  
 bottom was occasionally found.

Both Vineyard and Nantucket Buoys are well lighted; the range lights for entering Hyannis-Port and Nantucket Harbor are sufficient for the purpose; the buoys seem to be well located; in many cases their positions differ somewhat from their location on the chart, but they are placed on the safe side of the danger marked.

No tow boats are to be obtained at either Hyannis-Port or Nantucket.

Anchorages in these ports are not limited by local regulations.

At Hyannis-Port ordinary ship chandler stores can be obtained; the supply of coal is sufficient but it is difficult to obtain fresh water; the water is brought down in tanks from Hyannis by the engines of the Old Colony rail road, a branch of which enters the town, and it is not always convenient for the road to furnish engines for the purpose.



At Nantucket there is plenty of fresh water but the supply of coal is limited, (there is no chance about supplying the launches) and Ship Chandler stores are scarce. In winter repairs can be made either to vessels or machinery; New Bedford is the nearest port at which work of the description can be satisfactorily performed.

Weather Regales regulated from Boston are located at Hyannis-Port.

This town is the discharging port for supplies for that part of the Cape, last year 240 Sailing vessels loaded and discharged there, and 1650 Sailing vessels and 100 Steamers used the harbor as a port of refuge.

Nantucket is connected with Woods Hole, New Bedford and Vineyard Haven by a line of Steamers; comparatively few Sailing vessels enter here, principally Coal vessels and small fishermen.

Both Hyannis-Port and Nantucket

are frozen in during these winters.

There is more or less fog during the summer months brought in by winds from S. E. to S. W.; Northerly winds, principally N. W. prevail during the winter.

No vessels have been lost about here of late except near the Handkerchief Shoals; as a general thing vessels ashore on the shores can be gotten off even when stove, it is only a matter of expense. At those points on the shores where the current cuts across, vessels ashore will generally come off themselves with a change of current.



83  
SHA  
1880,  
2224,  
2225

U. S. Coast and Geodetic Survey  
DEC 19 1895  
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U. S. COAST AND GEODETIC SURVEY.

Gen. *W. W. Duffield*, Superintendent.

State: *Mass.*

DESCRIPTIVE REPORT.

*Hydrographic Sheets Nos. 1880,  
2224, 2225.*

LOCALITY:

*Nantucket Sound.*

*1895.*

CHIEF OF PARTY:

*Lt. Comdr. H. G. Colby, U.S.N.*



found, but a careful examination may show one shoal with four fathoms of water, which is in five or six fathoms and was not further developed owing to bad weather.

The fifteen (15) ft. spot reported on the point of the shoal about one and one half (1½) miles N N. of Pollock Rip Whistling Buoy was carefully examined, a series of lines being run and search made for least water. The least water found was eighteen and seven tenths (18 7/10) feet, which will be found by reference to the plotted works between positions 14 and 15 "a" day of whaleboat.

The examination of the spot near the Bell Buoy where the Steamer "Gloucester" reported touching drawing seventeen and one half (17½) feet failed to disclose any shoal water, but sixteen and nine tenths (16 9/10) feet were found about one half (½) mile East of the Bell Buoy, which will be found recorded at position nineteen (19) of the Gig "a" day.

An examination of the reported shoal near Red Can Buoy No. 4 where the "Essex" struck drawing eighteen and one half (18½) ft. failed to re-

veal shoal water, but a shoal spot was discovered about 50 metres East of Red Can Buoy No. 4 with only seventeen and two tenths (17.2) feet of water which will be found recorded at position 19° E day of the "Blake".

Search for the reported four (4) foot spot on the point of Bearse's Shoal near Monomoy Light House was not made on account of rough weather. There is a well known four foot spot which is already marked on the chart No. 111, and which all fishermen at the Powder Hole who were consulted say is the only one there, and which has without doubt been mistaken for a new shoal by reason of the shifting of the buoy in this vicinity.

The hydrography required on Handkerchief Shoal was completed with great difficulty. The currents on these shoals are very strong and vary in direction with the depth of the water.

and configuration of the bottom, making it impossible to allow for them in running lines. There are no natural ranges owing to the fact that the only land in sight is the long narrow flat island of Monomoy. For the same reason the signals are all in a bunch making it difficult to get angles that would plot, and necessitating the use of light vessels and buoys for signals. For a portion of this work one of the ships boats was anchored for a signal as well as the vessel. Owing to frequent shoals and dangerous tide rips, this work was all done in pulling boats and the steam launch. The lines were run as nearly as possible as indicated on the tracing. There is practically no slack water here. The tidal current runs both east and west on each tide, and as soon as it stops running one direction it changes to the other. Another great difficulty to be overcome is a strong South

West wind which prevails in this region and which causes very rough water on this shoal, making it dangerous as well as difficult to work when other conditions are favorable. A thick haze frequently prevails, the atmosphere in this vicinity often completely obscuring the signals.

The unfinished portion of the main sheet in Nantucket Sound, lying between Monomoy and Great Point presented some serious difficulties. Necessitating the running of a series of short lines with frequent turnings in a strong tide way lined with lobster pots and nets directly in the path of the immense fleet of coast-wise vessels of every description which makes Nantucket Sound a great highway of commerce, besides numerous small crafts and boats of the fishermen. More than one hundred vessels have been seen at one time passing through this channel, at times it was impossible to work in Butlers Hole and Pollock Rip Slue on this

6.

account. Add to this the fact that it was difficult to get signals giving good conditions for plotting, and some idea may be had of the difficulties of the work. In face of these difficulties, it is believed that the work will be found to be satisfactorily completed. The lines of soundings were carried out to the limit of the sheet on the same system as the original work, being run at right angles to each other and not more than 300 metres apart. This work develops the channel entrance to Nantucket Sound, the eastern ends of the lines running into shoal water on the end of Stonehorse Shoal. No material changes were found. An examination of the shoal about two (2) miles North of Great Point failed to show less than three and three quarter ( $3\frac{3}{4}$ ) fathoms which is about the same as shown on Chart No. 111. The unfinished portion on the western end of this sheet near Cross Rip Light Vessel was not completed by

reason of lack of time and good weather, though several attempts were made at it. This work lying as it does in the middle of the Sound is difficult for several reasons. Aside from the currents and prevailing winds common to this whole sound the signals are too far away to be visible from a boat except on very clear and perfect days. To accomplish the work it may be necessary to erect water signals or use the buoys as such. This work could not be reached until the season was too far advanced for good weather, and no day was found on which hydrography could be done in this vicinity.

A considerable time was spent searching for ~~rocks~~ and shoals in the vicinity of Agassiz at odd times during the season. A very careful search both with the lead and drag failed to discover any rocks in the vicinity of the buoy which is supposed to mark a dangerous rock called "Hallett's Rock" about one (1) mile north of Bishop



and Clerks Light House.

The least water found on Senator Shoal, which is in this vicinity was eleven and five tenths (11.5) feet. 724 soundings covering eight and one half (8½) miles were taken on this shoal in addition to the use of the drag.

A thorough examination of the shoal 2800 metres west of Bishop and Clerks Light was made, the least water found being ~~(fourteen)~~ and one tenth (14.1) feet. 13.

Several rocks were located a short distance south of Bishop and Clerks Light including those indicated on the tracing.

Diligent search was made with the drag and lead for the ten (10) foot spot off Point Gammon, but without success.

The investigation of the twenty three (23) foot spot a little to the southward and eastward of Colliers Ledge was made with the result that nothing less

than four (4) fathoms were found, which is located by position 18 and 19 'g' day in the steam launch.

The least water found on the shoal about three (3) miles North East of Succonisset Light Vessel was fourteen and four tenths (14.4) feet.

A search was also made for a rock supposed to be in the vicinity of Red Spar Buoy No. 2 entrance to Hyannis Harbor called "Gardiners Rock". No sign of such rock could be found.

No rock was found in the vicinity of the supposed Dead Neck Rock. A careful examination revealing a smooth even sandy bottom with about seven (7) feet of water.

The rock near the new wharf at West Chop Martha's Vineyard Island was located. This rock is marked by a red and black spar buoy close alongside it.

The work required on the tracings: North of Muskeget Channel; Woods Hole; Point

Gammon to Nobska; Sarpaulin Cove; Robinsons Hole, and Quicks Hole was not undertaken owing to the lack of time.

The character of this locality, Eastern Entrance to Nantucket Sound, is dangerous to all shipping. The frequency and denseness of fogs, the shifting shoals constantly changing, and frequent gales often coming up suddenly. The channel across Pollock Rip is well marked by buoys and Shovelful Shoal and Pollock Rip Light Vessels but it is often dangerous and wrecks are frequent. There is another channel to the Southward of Stonehorse Shoal leading out past Great Round Shoal Light Vessel. The channels through Nantucket Sound change less and being well lighted are easily navigated.

In approaching from sea the entrance is marked by a long, low, flat point of land on the North and on the South by a long narrow

point of land with small bluff mounds. When first seen both Monomoy Light House on the North and Great Point Light House on the South appear to rise out of the water. The towers being distinguished before the land appears in sight.

The Southern part of Monomoy Island is inhabited by fishermen during the fishing season from June first to October and all these men are pilots. Pilots can also be had at Chatham and Stage Harbor and Vineyard Haven. Lugboats can be had at Vineyard Haven.

The channels through Nantucket Sound change very little the currents setting strongly through the Sound East and West following as a rule the channels. The other channels through the shoals are likely to change. It is not at all unusual for a shoal forming one year to entirely disappear next. There is now a shoal forming to the South East of Pollock Rip near Red Nun ~~island~~ No. 4 but by the continual passing

of steamers over the spot and the churning of the water by their propellers together with the strong currents it is almost sure to disappear in a short time. The broken part of Pollock Rip Shoal will without doubt disappear, as all the Schooners that can and know their way pass over it going to the Eastward. There is always more or less change in the shoals in the vicinity of Monomoy and Great Point after the heavy gales of the winter. During last winter a shoal made up in the passage between the Shovelful and the Handkerchiefs Shoals. A three masted Schooner went ashore on this spot during the winter, since that time and the arrival of this party that shoal disappeared. After diligent search it could not be found, neither could the fishermen find it who knew where it had been. I mention this to show that these changes do take place and that it is advisable to keep a close watch on the shoals in this vicinity where there is so much traffic.

Chatham Roads lying between Monomoy Island and the main land of Cape Cod affords excellent anchorage during Northerly and Easterly gales, while the bay on

the south under Great Point affords protection from Southerly and Easterly gales. The harbor of Hyannis is the only harbor of refuge after leaving Vineyard Haven going east. It is a small harbor which has been dredged out to a depth of from thirteen (13) to twenty one (21) feet, and is protected by a stone breakwater on the south west. It is an excellent harbor for vessels of light draft, but it is small in area and larger crafts are compelled to anchor outside the breakwater. This harbor should be dredged to a depth of eighteen (18) feet and should be extended in area to the westward, and the bar extending east and west, about one hundred (100) yards south from Old Colony R.R. Wharf should be removed. Vessels rounding to in a southerly wind often go ashore ~~the~~ western side of the harbor or on this bar.

The tidal currents are very remarkable. At

low water at Pollock Rip the tide sets to the eastward three (3) hours and rises. Then for three (3) hours it runs west and rises. At high water the tide runs west three (3) hours and falls and then runs east three hours and falls. During the twelve (12) hours the current turns completely round with the sun with very little slack water at any time. As the currents have been so well described in publications of the Coast Survey it will be unnecessary for me to dwell upon the subject.

During some winters the ice has been known to completely cover Nantucket Sound from Great Point to the westward, and for more than ten (10) days the Sound has been closed to navigation except during northerly winds when steamers could find a passage along the North shore from Woods Hole to northward of Bishop and Clerkes Light to the Handkerchief Light Vessel, and communications could be had with Nantucket by landing over-

15.  
the ice on the eastern side of Great Point. Fog prevail at all seasons but are frequent in the early summer. In the month of June 1895 there were twenty six (26) days of fog.

In summer the prevailing winds are from South West and frequently increase to the force of gales. In winter gales are frequent from all points of the compass and it is difficult to determine, but perhaps the strongest gales come from the eastward.

Wrecks are frequent and if a vessel goes hard upon one of the numerous sand shoals she seldom survives. There is a Life Saving Station on Monomoy Island and one on Great Point about a mile South of the Light House.

There is no quarantine station or regulations. Fresh water can be had at the wharf in Hyannisport Harbor by application to the agent of the Old Colony Railroad.



16.

There is about eight (8) feet alongside the wharf at low water with soft mud bottom.

Cautionary signals (weather) are displayed at the Life Saving Station on Monomoy Island at Great Point Light House and in Hyannisport. There is no time ball.

There is no branch Hydrographic Office but the Postmaster at South Hyannis reports all vessels.

There are no docks or marine railways except a small affair at Stage Harbor.

The Old Colony railroad runs trains to the wharf in Hyannisport and a line of steamers between New Bedford, Martha's Vineyard and Nantucket Island making two trips daily during the summer and one in the winter. South Hyannis Post Office is convenient to the wharf in Hyannisport with two (2) mails daily and telephone connection with Hyannis.

There is a deputy collector of customs at Hyannisport and Chatham, and communications via. of the Old Colony Railroad with all points on Cape Cod, Boston and New York.

During the month of October very little work could be done owing to continued bad weather. This continuing during the first <sup>part of</sup> November with good prospects of lasting through the month. I deemed it expedient under my instructions to close the seasons work which was done on the 7<sup>th</sup> of November.

Very respectfully.

W. G. O. Coeby

Lieut. Comdr. U.S. Navy,

Comdg. Str. Blake.

To the

Superintendent *J. F. Moser* Lt Com'd'r, U. S. N.,  
Hydrographic Inspector C. & G. Survey,  
U. S. Coast & Geodetic Survey.

Statistics of Field Work executed by *Lieut. Comdr. H. G. Colby, U.S.N.*

Date and place of beginning field work *July 23<sup>rd</sup>, 1895 Hyannisport, Mass.*

Date and place of closing field work *Nov. 7<sup>th</sup>, 1895 New Bedford, Mass.*

RECONNAISSANCE:

Area of, in square statute miles .....  
Lines of intervisibility determined as per sketch submitted .....  
Number of points selected for scheme .....

BASE LINES:

Primary, length of .....  
Secondary, length of .....  
Beach measurements, length of .....  
Number of days employed in measurements of base .....  
Number of days employed in remeasurements .....

TRIANGULATION:

Area of, in square statute miles .....  
Signal poles erected, number of .....  
Observing tripods and scaffolds built, number of .....  
Observing tripods and scaffolds built, heights of .....  
Days occupied in opening and verifying lines of sight, number of .....  
Stations occupied for horizontal measures, number of .....  
Stations occupied for vertical measures, number of .....  
Geographical positions determined, number of .....  
Elevations determined trigonometrically, number of .....

GEODETIC LEVELING:

Elevations determined by spirit-leveling of precision, number of .....  
Lines of geodetic leveling, length of .....

LATITUDE, LONGITUDE, AND AZIMUTH WORK:

Latitude stations occupied, number of .....  
Pairs of stars observed for latitude, number of .....  
Average number of observations on a pair .....  
Longitude stations, telegraphic, number of .....  
Longitude stations, telegraphic, number of nights on which signals were exchanged .....  
Longitude stations, chronometric, etc., number of .....  
Azimuth stations, number of .....  
Number of nights of observations for azimuth .....  
Number of stars observed for azimuth .....

GRAVITY DETERMINATIONS:

Number of pendulum stations occupied

MAGNETIC WORK:

Stations occupied for observations of the magnetic declination, number of

Stations occupied for observations of the magnetic dip, number of

Stations occupied for observations of the magnetic intensity, number of

TOPOGRAPHY:

Area surveyed in square statute miles

Length of general coast-line in statute miles

Length of shore-line of rivers in statute miles

Length of shore-line of creeks in statute miles

Length of shore-line of ponds in statute miles

Length of roads in statute miles

Topographic sheets finished, number of

Topographic sheets, scales of

Topographic sheets, limits and localities of:

HYDROGRAPHY:

Area sounded in square geographical miles

Number of miles (geographical) run while sounding

Number of angles measured

Number of soundings

Number of tidal stations established

Number of specimens of bottom preserved

Current stations, number of

Hydrographic sheets finished, number of

Hydrographic sheets, scales of

Hydrographic sheets, limits and localities of:

Area sounded in square geographical miles	26 1/2
Number of miles (geographical) run while sounding	512.3
Number of angles measured	6830
Number of soundings	27312
Number of tidal stations established	2
Number of specimens of bottom preserved	1
Current stations, number of	—
Hydrographic sheets finished, number of	2
Hydrographic sheets, scales of	1, 40,000      3, 20,000

Hydrographic sheets, limits and localities of:

1 sheet East Monomoy Island, Mass.

1 sheet Handkerchief Shoal, Nantucket Sound, Mass.

1 sheet Bet Lat. 41.23 & 41.32 Long. 70.03 & 70.19 Nantucket Sound, Mass.

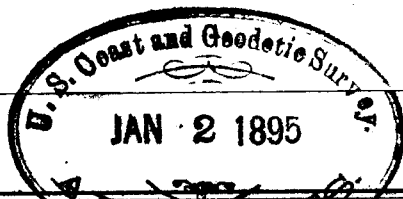
1 sheet Vicinity of Hyannis Nantucket Sound, Mass.

PHYSICAL HYDROGRAPHY:

Number of soundings on cross-sections .....	
Current stations, number of .....	
Deep-sea current stations, number of .....	
Deep-sea surface current observations, number of .....	
Deep-sea sub-surface current observations, number of .....	
Number of observations of density of water .....	
Number of observations of temperature of water .....	
Tidal stations established, number of .....	
Miles (geographical) run in deep-sea sounding .....	
Number of deep-sea soundings .....	
Number of specimens of bottom preserved .....	
Locality of work ; results, how shown, etc.:	

List of Officers.

Lieut Comdr H. G. Colby U.S.N.  
 Lieutenant J. A. Shearman "  
 " W. S. Benson "  
 Ensign A. J. Long "  
 Asst Surg. B. R. Ward "  
 Pay. Yacht W. S. Crosby "



U. S. COAST AND GEODETIC SURVEY.

*T. C. Mendenhall* +  
*Gen. W. W. Duffield*, Superintendent

State: *Mass.*

*Supplementary*  
DESCRIPTIVE REPORT.

*Hydrographic Sheet No. 1880.*

LOCALITY:

*Falmouth to*  
*Hyannis.*

1894.

CHIEF OF PARTY:

*Lieut. G. W. Mertz, U.S.N.*

DEC 29 1894 . 016798

Write me at: *Navy Yard, Brooklyn*

Telegraph me at: *do.*

My Express Office is:

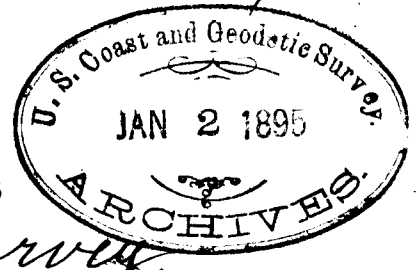
*Hydrographic Inspector* U. S. Coast and Geodetic Survey, *Str. Blake*

*for file in Archives* *Navy Yard Brooklyn*

*December 27<sup>th</sup> 1894*

2-547

*Gen. O. H. Duffield*  
*Superintendent*  
*Coast & Geodetic Survey*



*Sir;*  
I have the honor to submit  
the following <sup>*Supplementary*</sup> *Descriptive Report*  
to accompany "Tracing from Hydro-  
graphic Sheet # 1880, Falmouth to  
Hyannis"

*Respectfully yours.*

*G. W. Meutz*  
*Lieut. U. S. N. Comdg.*

Descriptive Report.

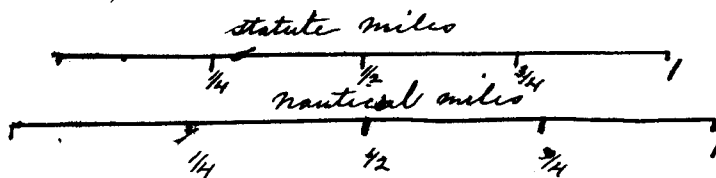
U. S. Coast & Geodetic Survey.  
Gen. W. W. Duffield,  
Superintendent.



Hydrography  
of  
Nantucket Sound  
Massachusetts  
From Falmouth to Hyannis  
By the  
Party in charge of  
Lieutenant G. W. Mentz U. S. N. Asst.  
Steamer  
G. S. Blake.

Began August 3<sup>rd</sup> 1894.  
Ended November 3<sup>rd</sup> 1894.

Scale  $\frac{1}{20,000}$





The locality of the work includes the three approaches to Hyannis Harbor, that from the South that from the East and that from the West, as well as the entrance to Centreville Harbor.

Hyannis Harbor is a very important harbor of refuge and during my stay I saw as many as twenty vessels at anchor at one time inside of the breakwater and quite as many at the same time anchored outside seeking shelter, these were mostly large schooners, three and four masted. The harbor though small is a very good one, the holding ground is good, and with the breakwater there is protection from winds in all directions. The breakwater affords protection from southerly winds.

The commerce arriving and leaving Hyannis harbor by water for the calendar year ending December 31<sup>st</sup> 1892, (a later report could not be obtained.)

was

Total tonnage - 20900 tons

" value - \$238,400.

Imports - 220500.

Exports - 17900.

Of the exports \$10400 consisted of fish, oysters, etc.

Counting each entrance and departure as one passage, the number of vessels for the same year that passed through was 4190. Of this number 925 were steam vessels and 3265 were sail vessels. The trade of the port is small and the harbor is important chiefly because it is such a good Harbor of Refuge. I could get no statistics of the number of vessels that put into this harbor for shelter in the course of last year, but am convinced from what I saw that it is large and would warrant the expenditure of a considerable sum.

of money to increase its capacity and its efficiency as a Harbor of Refuge.

If the usual precautions of keeping the lead going etc. are observed the approaches to this harbor are not difficult in thick or foggy weather. Halletts Rock in the eastern approach is the most dangerous obstruction. The 7 foot depth on N S W ledge at the turn to enter the harbor could not be found. There is a bell buoy maintained there during the summer and it is a valuable aid in foggy weather. The range lights to enter are very good and the course given on the Coast Survey Charts from the bell buoy mentioned above will keep you clear of danger.

Pilots are not needed and there are no regular pilots. Nor are there tow boats.

The best anchorage is to the northward of the breakwater. The character of the bottom is sandy, there are however places where mud and excellent holding ground are found.

It is contemplated increasing the area of the anchorage north of the breakwater by dredging, and to increase <sup>the</sup> depth to 19½ ft. at low water.

The <sup>harbor</sup> is sometimes frozen over and in December 1892 I myself saw much ice in the harbor. The Light House Tender "Azalea" was able to cut her way through however. Fogs are frequent in the summer months.

Gales from the Eastward are the most dangerous, for vessels dragging would be driven on the cluster of rocks in the western part of the harbor.

Fresh water is obtained from the R. R. wharf where an engine tender full of water is kept. Water

is also obtained from a well to the northward of the wharf and vessels supplied by filling their breakers.

There is a small ship chandler's store on R.R. wharf where the usual supplies can be purchased. There is a limited supply of bituminous coal also on the R.R. pier but it is very expensive \$6.00 per ton. Vessels are coaled at the dock.

There are two wharves, the R.R. wharf with a depth of 9 ft. at low water and where vessels are discharged, and the Hyannisport boat pier - a boat landing only with about 2 ft. alongside at low water.

Cautionary signals are displayed at a flagstaff near the Hyannis light but the service is defective, the reports reaching the harbor by telephone from Hyannis distance one mile where

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7.

is located the nearest telegraph office. There is a Post Office at Hyannisport and another at South Hyannis. Two mails per day.

The Old Colony R.R. connects Hyannis with Boston and intermediate points. Their track extends to R.R. wharf, for freight traffic only.

There are no regular passenger steamers. An excursion steamer makes a number of trips during the summer to Nantucket.

The Customhouse is located near R.R. wharf. Charges are demanded for the landing of boats at the Hyannisport Boat Pier. The better landing of the two, the R.R. wharf, being the other.

The nomenclature as given on the tracing is correct.

Respectfully submitted.

J. W. Meentz, St. U.S.C. Chief of Party.

*Str. Blake*

Statistics of Field Work executed by

*Lieut. G. W. Mentz U.S.N. Asst.*

Date and place of beginning field work

*August 3<sup>rd</sup> 1894 at Hyannis, Mass*

Date and place of closing field work

*November 3<sup>rd</sup> 1894 " "*

RECONNAISSANCE:

Area of, in square statute miles

Lines of intervisibility determined as per sketch submitted

Number of points selected for scheme

BASE LINES:

Primary, length of

Secondary, length of

Beach measurements, length of

Number of days employed in measurements of base

Number of days employed in remeasurements

TRIANGULATION:

Area of, in square statute miles

Signal poles erected, number of

Observing tripods and scaffolds built, number of

Observing tripods and scaffolds built, heights of

Days occupied in opening and verifying lines of sight, number of

Stations occupied for horizontal measures, number of

Stations occupied for vertical measures, number of

Geographical positions determined, number of

Elevations determined trigonometrically, number of

*2*

*6*

GEODETTIC LEVELING:

Elevations determined by spirit-leveling of precision, number of

Lines of geodetic leveling, length of

LATITUDE, LONGITUDE, AND AZIMUTH WORK:

Latitude stations occupied, number of

Pairs of stars observed for latitude, number of

Average number of observations on a pair

Longitude stations, telegraphic, number of

Longitude stations, telegraphic, number of nights on which signals were exchanged

Longitude stations, chronometric, etc., number of

Azimuth stations, number of

Number of nights of observations for azimuth

Number of stars observed for azimuth

GRAVITY DETERMINATIONS:

Number of pendulum stations occupied .....

MAGNETIC WORK:

Stations occupied for observations of the magnetic declination, number of .....

Stations occupied for observations of the magnetic dip, number of .....

Stations occupied for observations of the magnetic intensity, number of .....

TOPOGRAPHY:

Area surveyed in square statute miles .....

Length of general coast-line in statute miles .....

Length of shore-line of rivers in statute miles .....

Length of shore-line of creeks in statute miles .....

Length of shore-line of ponds in statute miles .....

Length of roads in statute miles .....

Topographic sheets finished, number of .....

Topographic sheets, scales of .....

Topographic sheets, limits and localities of:

Empty table grid for data entry.

HYDROGRAPHY:

Area sounded in square geographical miles .....

Number of miles (geographical) run while sounding .....

Number of angles measured .....

Number of soundings .....

Number of tidal stations established .....

Number of specimens of bottom preserved .....

Current stations, number of .....

Hydrographic sheets finished, number of .....

Hydrographic sheets, scales of .....

Hydrographic sheets, limits and localities of:

Table with handwritten data: 15, 194.6, 3214, 17459, 2, 7, Not finished, 20,000.

Nantucket Sound, Mass. From Falmouth to Hyannis.





# 2224

Diag. Cht. Nos. 1208-1 & 1209-1

Form 504

U. S. COAST AND GEODETIC SURVEY  
DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey ..... HYDROGRAPHIC

Field No. .... Office No. H-2224

### LOCALITY

State ..... MASS.

General locality ..... EASTWARD OF MONOMOY ISLAND

Locality .....

1895- ~~194~~ 05

CHIEF OF PARTY  
Lt. Com. H. G. Colby. U. S. N.  
R. B. Derickson

LIBRARY & ARCHIVES

DATE .....

# 2224

2224

U.S. AND G. SURVEY  
LIBRARY AND ARCHIVES

Diag. Cht. No. 1208-1 & 1209-1 *Doc No.*

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*W. W. Duffield*  
Superintendent.

State: *Mass.*

DESCRIPTIVE REPORT.

*Hyd. Sheet No. 2224.*

LOCALITY:

*Nantucket Sound*

*See S.H.A. 1880*

*1895*  
~~190~~

CHIEF OF PARTY:

*H. B. O. Colby*

2224  
2224

Sheet 2224

Pollock Rip Shoal

As no angles were recorded, if taken, for locating Pollock Rip Light Vessel, the projection was extended on boat sheet 2101<sup>369</sup> and the position of the Light ship transferred from the chart No 111 (Standard) and the ~~positions~~ <sup>positions</sup> ~~plotted~~ <sup>protracted</sup> then transferred to sheet 2224 and plotted. They agree almost exactly with former soundings as will be seen. T. C. Down.

2225

Diag. Ch. No. 1209-2

U.S. COAST AND GEODETIC SURVEY  
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Loc. No.

Department of Commerce and Labor

COAST AND GEODETIC SURVEY

*W. W. Duffield*  
Superintendent.

State: *Mass.*

DESCRIPTIVE REPORT.

*Hyd. C.* Sheet No. *2225*

LOCALITY:

*Nantuxet Sound*

*See S.H.A. 1880*

*1895*  
*190*

CHIEF OF PARTY:

*H. S. O. Colby*

2225