

5737

5737

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey	Planimetric Map
Field No.	Office No. T-5737
LOCALITY	
State	Massachusetts
General locality	Cape Cod
Locality	Monomoy Island
Date of Photos:	9-lens 7-16-38 single-lens 11-21-38
	194 39
CHIEF OF PARTY	
L. W. Swanson	
LIBRARY & ARCHIVES	
DATE	

Advance print T-5737 - Applied to Chart 1208

June, 1941 - H.T.G.

Applied to Chart 1209 - Aug., 1942 - H.T.G.

DESCRIPTIVE REPORT
To Accompany
CELLULOID MAP DRAWING SHEET NO. 5737
STATE OF MASSACHUSETTS
MONOMOY ISLAND

Date of this Report: April 18, 1939.

GENERAL INFORMATION:

The field inspection of this area was made during November and December, 1938, by A.L. Wardwell.

The photographs were taken by the U.S.C. & G. S. Nine Lens Aerial Camera.

CONTROL:

The following triangulation stations fall within the tracing limits of this sheet:

Monomoy Pt. L.S.S., Cupola, 1902
Monomoy Pt. Lighthouse, 1875
Monomoy L.S.S., Cupola, 1902

RADIAL PLOT:

This sheet together with sheets Nos. 5736, 5738 and 5739 were plotted by the template method on a scale of 1:10,000 x 0.99. Dummy sheets made up the same as the map drawings with projection lines and control plotted on them were layed down on a large table. The dummy sheets were matched and secured together with scotch tape. The templates were then layed over the dummy sheets and were held by control and centers of adjacent pictures. The templates were secured together with scotch tape.

In order to make junction between sheets Nos. 5739 and 5740, it was necessary to reduce the scale plot of 5740 (which had previously been run) from 1 to 0.99. When templates were layed down, the control and radial points on sheet 5740 were held, so that good junctions were made with sheet 5739. The best control was found to be at the east and west ends of the plot; therefore, the templates were first layed down on the west end, next on the east end, and then joined together in the center of the plot by some control and flightlines. After the plot was run it was found in the area covered by photos Nos. 2401 to 2407 (inclusive) approximately 35% of the radial points are controlled by two-point intersections. There is about 60% overlap in this area. It is the opinion of this office that, with a single line of flight, 80% overlap is necessary for good intersections at radial points.

Radial to the centers of adjacent photographs were drawn on the templates and were used to supplement the control. Before making templates

several photos were checked for distortion by an aluminum check-sheet. It was found that there was no distortion, but that the centers which were mechanically pricked were wrong. New centers were found and pricked.

Hydrographic control points, as transferred from the field inspection photos to the office photos, were pricked and additional radial points added where necessary to give an approximate two inch spacing along the shoreline. Due to the single flight and lack of photos on the southern end of Monomoy Island, it was not possible to plot radial points on the S.E. side of the Island; those pricked on the S.W. side were obtained by two-cut intersections, which were usually very slim. It was not possible to get any radial points at all on the extreme southern end of the Island. On the inshore area about 4 radial points to the square mile were pricked, except in congested area or where difference of relief occurred or the pictures were off-scale.

It was noticed that on some of the photos the wings did not match. This discrepancy in some cases was thought to have caused triangles of error at radial point intersections.

DETAIL:

(a) Southern end of Island: As stated above, due to lack of photos and tilt, it was not possible to get sufficient radial points to properly delineate the shoreline and detail in that portion of the Island south of latitude $41^{\circ} 34.7'$. The shoreline and detail as shown on the map was gotten by adjusting between triangulation and radial points. This adjustment was made by means of the projector.

(b) Sand Dunes: The sandy shoreline on the west side of the Island in the approximate latitude $41^{\circ} 38'$ was shown indefinite due to the fact that this area is flat and no definite shoreline exists.

(c) Marshy Shoreline: The marshy shoreline on the west side of the Island north of latitude $41^{\circ} 37'$ is shown indefinite in accordance with notes on the field inspection photos.

COMPARISON WITH PREVIOUS SURVEYS:

T-4623: The following changes have occurred between the present survey and T-4623:

Lat. $41^{\circ} 33.3'$ Powder Hole - The sandspit has changed shape and moved eastward about 160 meters.

The southern end of the Island has moved southward about 250 meters.

Inward Point - The sand spit has made up northward until now extends around the Point.

Lat. $41^{\circ} 33'5''$ - The indentation on the west shore has filled in and the shoreline has moved westward about 90 meters.

Lat. $41^{\circ} 36'5''$ - On the eastern shore north of this latitude the shoreline has moved westward about 100 meters.

Lat. $41^{\circ} 37'6''$ and Long. $69^{\circ} 58'2''$ - This area is being filled in with sand.

Lat. $41^{\circ} 38'$ to $41^{\circ} 38'4''$ - This area on the western shore is filling in with sand.

Lat. $41^{\circ} 35'$ - North of this latitude for about 600 or 700 meters the shoreline has moved westward about 70 meters.

In general, the Island is eroding on the eastern shore and building up on the western shore.

COMPARISON WITH CHART NO. 250 (Corrected to Feb. 24, 1938):

Within the limits of this chart, the notes under heading "Comparison with previous Surveys" applies.

COMPARISON WITH CHART NO. 1209 (Corrected to Aug. 4, 1938):

Same notes as applies to Chart No. 250.

NAMES:

Geographic names shown on this sheet are listed on form M - 234 in the appendix.

LANDMARKS:

See form 567 in the appendix. *Forwarded to Nautical Charts. Chart Letter 111 - 1945*

RECOMMENDATION FOR FUTURE SURVEYS:

This sheet, north of latitude $41^{\circ} 34'6''$, is believed to be complete in all detail of importance for charting and no additional surveys are required. South of the above latitude, however, it is recommended that the next hydrographic party run a planetable survey to check the shoreline. Due to the lack of pictures, single flight line and some tilt, it was not possible to get a sufficient number of radial points on the sheet in order to map this area with the same degree of accuracy as that portion of the map to the north. This area was mapped with the aid of the projector.

North of the above mentioned latitude the probable error is not greater than 5 meters for radial points and well defined objects along the water front and in the area well controlled. The error of other detail of importance on this sheet is not greater than 10 to 12 meters.

REMARKS:

Referring to the Director's letter of April 11, 1939, attention is called to the fact that during the process of inking this sheet it was kept clean by means of ordinary household ammonia. Upon completion of this sheet no chipping of ink was noticed. Craftint black celluloid ink No. 150 L.H. was used.

Respectfully submitted,

Isadore M. Zeskand

Isadore M. Zeskand,
Photogrammetric Aid (Field)

Forwarded approved:

L.W. Swanson

L.W. Swanson,
Chief of Party.

April 24, 1939
(Date)

GEOGRAPHIC NAMES

Survey No.

T 5737

Name on Survey

	A	B	C	D	E	F	G	H	K	
	On Chart No. 1250 & 1209	On previous survey No. T-4623	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List		
Inward Point	x	x	x							1
Monomoy Point	x	x						USGB		2
Monomoy Island	x	x	x	(for title)				USGB		3
Powder Hole	x	x	x							4
Monomoy Beach										5
Shoofers Island										6
Common Flat										7
Washburn Bar										8
Cape Cod				(for title)						9
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Names underlined in red approved
by H. C. Ken on 7/10/1913

Remarks.

Decisions

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3	These names were not field inspected.	
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MEMORANDUM TO ACCOMPANY DESCRIPTIVE REPORT T-5737

This sheet was submitted from the field party as complete in 1940. When compared with the contemporary hydrographic surveys of this area there appeared to be errors amounting to 1 to 2 nm. in a north-south direction on the air photographic survey. This is not surprising in view of the location and spacing of the nine-lens photographs.

After discussion with the Chief, Topography Section, and with the Chief of the Field Party it was decided that T-5737 would be returned to the field for revision after additional field inspection to be made in 1941. All information available from the graphic control and hydrographic surveys has been assembled in color on the celluloid T-5737 so as to be available to the field party when revising the compilation. The shoreline shown in red on the celluloid is from a plane table survey No. C3-182-M, made in September 1939. This plane table survey, while on file in the office, was largely defaced by the fire on the MIKAWEE. However, shoreline details had been previously transferred to boat sheet H-6473 and thence to smooth sheet H-6473. The red shoreline and red signals on the celluloid from the plane table survey were actually transferred to the celluloid from H-6473 smooth sheet. In several cases these red signals seem to be identical with black signals shown on T-5737. Green signals on T-5737 are hydrographic stations taken from H-6473. These may be identical objects with the black signals shown on T-5737, but the hydrographic stations are not described and the identity of the objects is not certain. The blue shoreline shown on T-5737 has been drawn around the open grass symbol compiled on the original T-5737 but has been adjusted in latitude to fit

the hydrography in this area.

It is suggested that in recompiling this sheet the plane table shoreline be retained as of the date of the plane table survey, September 1939. It is further suggested that the shoreline to the north of latitude 4156.5' be retained as of the date of the original field inspection. In other words the object in revising the sheet is to correct errors in position and not to obtain a new survey of a later date. As regards the marsh shoreline on the northwest side of Monomoy Island the new field inspection should check the interpretation and sketch the most desirable position for the light line, which possibly should be inshore of the position shown in blue.

B. G. Jones,
4/7/41.

Report on 2nd compilation

DATA RECORD T-5737

NUMBER	DATE	TIME	SCALE	ALTITUDE	STAGE OF TIDE *
2409-2412	7/16/38	12:10-12:35 P.M.	1:10,000X0.990	Unknown	2.7 ft. above M.L.W.
5-116-5-121	11/21/38	12:11-12: P.M.	1:10,000X0.990	Unknown	3.3 ft. above M.L.W.

* Tide from predicted tables for Boston Mass. with time correction to Monomoy Point and Monomoy Island, Mass. Mean range 3.7 ft. Spring range 4.4. ft.

Camera: U. S. Coast and Geodetic Survey Nine lens (focal length 8 $\frac{1}{4}$ inches) and Single lens Aereo Photographic Corporation of America Geological Prints.

SUPPLEMENTAL SURVEYS

Topographic Sheet--By plane table Survey No. CS-182-M made in 1939. Shoreline Shoreline Topographic signals south of Latitude 41° 36.5'. This information was transferred from H-6473 by Washington office. *See Review of book for date of High Water line*

Field Inspection.....A. L. Wardwell.....Nov. & Dec. 1938
Field Inspection.....Lieut. (jg) L. B. Lewey..Fall of 1941
Name Investigation.....Lieut. (jg) L. B. Lewey..Fall of 1941

GENERAL INFORMATION

	Date
Chief of Party.....L. W. Swanson	
Projection by.....Washington Office--Ruling machine..Unknown	
Projection by.....Washington Office.....Unknown	
Control Plotted by.....R. A. Gilmore.....2/13/39	
Control Checked by.....W. E. Schmidt.....2/13/39	
Radial Plot by.....L. W. Swanson.....Mar. 1942	
Radial Points Pricked by.....W. E. Schmidt & L. W. Swanson.....	
Additional points pricked by.....I. M. Zeskind & H. R. Rudolph.....	
Shoreline Inked by.....H. R. Rudolph.....3/19-3/27/42	
Detail inked by.....I. M. Zeskind & H. R. Rudolph 4/5-4/20/39	
	3/19-3/27/42
Scale.....1:10,000....Scale Factor 0.990	

STATISTICS

Area (land).....4 $\frac{1}{2}$ Square Statute Miles
Shoreline (more than 200 m. from opposite shore)...18.5 statute miles
Shoreline (less than 200 m from opposite shore).... 1.5 statute miles
Roads, Trails.....14.0 statute miles
Telephone Line..... 7.6 statute miles

REFERENCE STATION

Monomoy L.S.S. Cupolâ. 1902
Latitude 41° 35' 26.666" (822.7)
Longitude 69° 59' 12.594" (291.7)

Datum N. A. 1927

$$X = 1,013,931.88$$

$$Y = 218,935.40$$

DESCRIPTIVE REPORT
TO ACCOMPANY
AIR PHOTOGRAPHIC SURVEY SHEET NO. T-5737
STATE OF MASSACHUSETTS
MONOMOY ISLAND

Date of this report

March 27, 1942

INSTRUCTIONS:

This map drawing is a part of project 227 B, the instructions for which are dated September 28, 1938.

FIELD INSPECTION:

The field inspection for this sheet was made by A. L. Wardwell in November and December 1939 and by Lieut. (jg) E. B. Lewey in the fall of 1941

The geographic name investigation was done by Lieut. (jg) E. B. Lewey in the fall of 1941.

PHOTOGRAPHS:

The photographs on this sheet were taken by the U. S. Coast and Geodetic Survey Nine lens Camera and by Aero Photographic Cooperation of America Single lens Camera.

CONTROL:

The control used on this sheet consists of four triangulation stations which are within the detail limits and are listed as follows:

Clubhouse Flagstaff, 1902
Monomoy Life Saving Station Cupola 1902
Monomoy Point Lighthouse 1875
Monomoy Point Life Saving Station Cupola 1902

Two other triangulation stations which do not fall on this sheet but were located on a dogear attached to this sheet were also used and are listed as follows:

Coast Guard Station No. 42 1920
Stag Harbor Lighthouse 1880

RADIAL PLOT:

This map drawing was plotted by the template method on a scale of 1:10,000 X 0.990. The templates were held by control and centers of adjacent pictures and were secured together by scotch tape.

Radials to the centers of adjacent photographs were drawn on the templates and were used to supplement the control. In order to strengthen control on the north end of the map drawing, a dogear was attached to the north end for triangulation stations Stag Harbor Lighthouse 1880 and Coast Guard Station No. 42 1920. By the use of these and the control points, on map drawing proper we had very strong control for photos 2411, 2412, 5-116, and 5-117. On the south end of map drawing, we had strong control with existing triangulation stations on photographs 5-120, 5-121, and 2409. In the center Photographs 2410 had strong control also and by the use of these photographs we were able to establish Secondary Control points at several Hydrographic Signals. They were marked on the field inspection Photographs.

RADIAL PLOT: (CONT.)

It should be noted that on all photographs all control points, flight lines, and centers could be held.

A number of topographic signals were transferred from H-6473. The following shown by $1\frac{1}{2}$ mm. acid ink circles were also used for control.

Chimney in center of long building
Tall (d) Steel Flag tower
Chim (d) chimney on N. Gable of Small house
How (d) W. Gable of Northerly and larger of two buildings
N. W. Corner of small shack.

HYDROGRAPHIC SIGNALS:

A number of natural objects have been located on this map drawing for use as Hydrographic Signals. These objects have been located from the field inspection photographs and are marked on the map drawing by black circles 1.5 mm in diameter.

RECOVERABLE TOPOGRAPHIC STATIONS:

No recoverable Topographic Stations appear on this map drawing.

DETAIL:

Trails were detailed according to the field inspector's notes, as shown on the field inspection prints. They are shown by a single dashed line and are labeled "S.d.L.". Only centerlines of trails are shown

Paths were detailed according to the field inspector's notes, as shown on the field inspection prints. Only center lines are shown by a single dashed line and are labeled "Paths".

The Coast Guard Telephone Line has been detailed entirely from the field inspection notes and is shown by the conventional symbol and labeled as "Coast Guard Telephone Line".

All buildings visible on the photographs have been shown except those that would interfere with triangulation and hydrographic stations.

Brush, Sand and Grass have been shown

Marsh areas are shown by standard symbol.

Marshy Shoreline on the west side of the island north of Latitude $41^{\circ} 37'$ is shown by a light black line.

Shore line south of Latitude $41^{\circ} 36.5'$ was taken from H-6473, transferred by Washington Office. *Date of this shoreline is April 1939*

COMPARISON WITH PREVIOUS SURVEYS

T-4623: The following changes have occurred between the present Survey and T-4623.

The South tip of the Island has moved Southward about 250 meters and Westward about 450 meters.

Latitude $41^{\circ} 33.3'$ Powder Hole-- The Sand spit has changed its shape and moved westward about 80 meters.

Latitude $41^{\circ} 33.5'$ Powder Hole The north end of sand spit has moved So. about 370 meters.

Latitude $41^{\circ} 33.7'$ Powder Hole--The indenture in West shoreline has filled up and a new sand spit has formed which extends Southward towards old sand spit.

Inward Point, The sand spit has moved northward until it now extends around the point

Latitude $41^{\circ} 33.5$ The East shoreline here has moved Westward about 60 meters.

Latitude $41^{\circ} 38'$ The eastern shoreline has moved Westward about 130 meters.

Latitude $41^{\circ} 39'$ The eastern shoreline has moved westward about 120 meters.

Latitude $41^{\circ} 37.6$ Longitude $39^{\circ} 58.2'$ —this area has filled up with sand. Due to grass in water only indefinite shore line is shown.

Latitude $41^{\circ} 38'$ to Latitude $41^{\circ} 38.4'$ —this area on western shore is filling in; with sand and sand spits are now formed about 80 meters west of western shoreline.

Latitude $41^{\circ} 35'$ — from this point northward for about 700 meters the eastern shoreline has moved westward about 70 meters.

In general the Island is eroding on the eastern shore and building up on the western shore.

1085a

1085a does not agree with this survey due to erosion. Shooters Island and Inward Point are in fair agreement but Great Beach as shown on 1085a has entirely disappeared from Latitude $41^{\circ} 36.5$ northward.

COMPARISON WITH CHART NO. 250 (corrected to Feb. 24, 1938)

Within the limits of this chart, the notes under "comparison with previous surveys" for T-4623 applies.

COMPARISON WITH CHART NO. 1209 (corrected to Aug. 4, 1938)

Same as for chart No. 250.

JUNCTIONS:

On the North (T-5736) Map Drawing has not been completed so no comparisons can be made.

GEOGRAPHIC NAMES:

The geographic names shown on this map drawing are listed on form M-234 in the appendix.

LANDMARKS:

Recommendation for landmarks was submitted April 18, 1939 and no further recommendations are made. *Chart Letter 111 (1945)*

RECOMMENDATION FOR FUTURE SURVEYS:

This map drawing is believed to be complete in all details of importance for charting and no additional surveys are required.

The probable error of radial points and of well defined objects along the shoreline is not greater than 0.5 mm. and the error of inland radial points and detail of importance is not greater than 1 mm with the exception of Coast Guard Telephone line which was plotted from field inspection along and may

have some slight curves, due to replacing poles at various points.

Respectfully submitted,

H. Ray Rudolph
H. Ray Rudolph
Sr. Photogrammetric Aid

Forwarded Approved

4/11/42

L. W. Swanson
L. W. Swanson
Chief of Party

GEOGRAPHIC NAMES

Survey No.

T-5737

(SEE GEOGRAPHIC NAME SHEET NO. 3)

Name on Survey

	A	B	C	D	E	F	G	H	
	On Chart 1288, 250	On previous survey dated 1959	On U. S. quadrangle Maps	From local information	On previous survey 1940	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	Previous Sur. 10 4623
<u>Shooters Island</u>			*	7	2	*			1
(Shooter's Island)								*	2
<u>Inward Point</u>	*	*	*	7				*	3
<u>Wreck Cove</u>			*	7	2	*		*	4
(Monomoy C.G.)(Abandoned)	*				2			*	5
(U. S. L. S. Station)			*						6
<u>Monomoy Beach</u>				7	2				7
(Monomoy Island)	*	*	*			*	*	*	8
(Great Beach)								*	9
(Monomoy Pt. Light House)			*	7	2	(abandoned)			10
<u>Monomoy Point</u>	*	*		7	2			*	11
<u>Powder Hole</u>	*	*	*	7				*	12
(Romp Hole)(Nearly filled in now)			*	7				*	13
<u>Common Flat</u>	*							*	14
NOTE: NAMES IN PARENTHESIS NOT RECOMMENDED									15
(Old Harbor)	*			7	2	(not known locally)			16
(Schooner Bar)	*			7	2	(not known locally)			17
<u>Dogfish Bar</u>				7					18
<u>Pollock Rip Lightship</u>	*		*				*		19
<u>Stone Horse Shoal Lightship</u>			*				*		20
(Shovel Shoal Lightship)			*						21
<u>Atlantic Ocean</u>									22
<u>Nantuxet Sound</u>									23
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Names and dates here approved

by L. Hecht 31/10/1945

Remarks.

Decisions

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4	Not in use	
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6	Entire sand spit referred to locally as "Monomoy Point" In no case is it called Island. Beach is recommended and Point reserved for the extreme southern limit	
7	No longer used	
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10	Note: NAME SHEET NO. 3 WILL BE FORWARDED WITH DATA CONCERNING GEOGRAPHIC	
11	NAMES.	
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DESCRIPTIVE REPORT

To Accompany Topographic Sheet A.

Date of Instructions: April 1, 1939; Project HT-217, Massachusetts.

LIMITS - Monomoy Island from Inward Point to Monomoy Point.

NOTE - About 90% of this sheet was burned in the accidental fire aboard the Launch MIKAWA on October 27, 1939. The shoreline and signals were transferred from the boat sheet, field No. 1006, to the smooth sheet. The Recoverable Topographic Stations attached herewith were scaled from the topographic sheet before the fire but were not checked (scaling was both forward and backward for both latitude and longitude).

← Descriptions
File under
H-6473

GENERAL DESCRIPTION OF COAST - The eastern shore is lined with sand dunes about 15 feet high above high water line. There is a flat sand area between the dunes and the high water line about 50 to 100 meters wide and 3 to 4 feet high above high water. In stormy weather this area is inundated. The section of beach between the high and low water lines is narrow and steep. The western shore is lined with low dunes 4 to 7 feet above high water. The beach slopes very gently on this shore.

The most prominent landmark is the old lighthouse tower about 45 feet high above high water. The light keeper's dwelling is to the immediate southwestward of the old lighthouse. Both the lighthouse and dwelling are privately owned and painted aluminum.

The Monomoy Point Coast Guard Station is located on the western shore of the point on the southern shore of the Powder Hole. The lookout cupola and flagpole are the most prominent objects at the station. It is planned that the wooden flagpole be replaced with a steel flag tower in the near future. There are about fifteen shacks along the southern shore of the Powder Hole that are used as summer dwellings.

About 3 miles north of Monomoy Point is the abandoned Monomoy Coast Guard Station. The cupola and steel flag tower are prominent. About $4\frac{1}{2}$ miles north of Monomoy Point, there is a small summer colony on Inward Point. There are no roads on the island but vehicles equipped with tires for use on sand beach may reach the point by following the beach or a trail that follows the middle of the island.

CHARACTER OF CONTROL USED - The sheet was controlled by three triangulation stations established in 1902 and 1875. The sheet is on North American 1927 Datum.

The signals south of Lat. $41^{\circ} 34'$ were located by cuts from set-ups near the three triangulation stations and cuts from topographic stations where needed. A traverse originating at a set-up 52.62 meters east of Monomoy Life Saving Station Cupola 1902 and closing on signal Lot had a zero closure. The distances were

measured with a steel tape as follows: set-up to Jon 472.9m. Jon to Sex 419.1m. Sex to Ink 473.4m. Ink to Boy 367.1m. Boy to Fun 374.0m. Fun to How 393.9m. How to Jig 382.9m. Jig to Kit 243.4m. Kit to Lot 409.85m.

When the signals on the eastern shore were visible, cuts were taken on them from the traverse to supplement cuts taken from the triangulation stations. A traverse was run to the northward from signal Jon to Ale and a sextant traverse run from triangulation station Clubhouse Flagstaff 1902 to signal Ale. The sextant traverse was plotted with a steel protractor on the back of this sheet. All distances were measured with a steel tape except Ale to Rye, which was measured with a telemeter rod. The sextant angles are recorded in the index of the first volume of hydrographic sheet Field No. 1006; the distances are as follows: Jon to Fuz 354.1m. Fuz to She 364.1m. She to For 547.8m. For to Ale 448.5m. Ale to Rye 261m. Rye to Gin 180.5m. Gin to Jil 262.1m. Jil to Max 409.8m. Max to Him 566.6m. Him is 3.15m north of triangulation station Clubhouse Flagstaff. The closing error was 5 meters (2.7 meters per mile), which was adjusted.

SHORELINE

The shoreline was rodded on this sheet to supplement that of sheet ~~25737~~²⁵⁷³² on which the shoreline could not be accurately drawn because of lack of coverage and overlap of air photographs. Each rod shot is shown on the sheet by a prick point. The high water line is shown in a full black ink line sketched between rod positions. The low water line was rodded in several places and shown by a dotted line.

The signals on the eastern side of the island are on the line of dunes that parallels the beach. They are generally 3 to 5 meters from the steep eastern fall of the dunes.

MAGNETIC MERIDIAN

The magnetic meridian was drawn with the declinitaire from a set-up 52.62 meters east of Monomoy Life Saving Station Cupola, 1902 with table oriented on Monomoy Point L.S.S. Cupola, 1902 and checked on Monomoy L.S.S. Point Light House, 1875. The magnetic meridian was also drawn from a set-up on line between Monomoy Point Light House and Monomoy Point L.S.S. Cupola. This latter meridian was checked with the declinometer.

Submitted by

Edward B. Brown, Jr.
Edward B. Brown, Jr.
Jr. H. & G. Engineer

Approved and forwarded:

F. L. Gallen
F. L. Gallen
H. & G. Engineer
Chief of Party

Division of Photogrammetry
Review of Planimetric Map T-5737

Field Inspection and Detailing:

This sheet was started in 1938 and the detailing was not completed until March 1942. The various steps in completing the map are described in detail in the descriptive report, but are outlined here for convenience.

1. Nine-lens photography - July 1938.
2. Severe hurricane - September 1938.
3. Single-lens photography (U.S.G.S.) - November 1938.
4. Partial and incomplete field inspection in November and December 1938 on nine-lens photographs. Very little shoreline information. High water line to be determined by planetable survey by next hydrographic party.
5. Radial plot from 1 and 4 above in February 1939. (Plot weak, especially south of Lat. $41^{\circ}36.5'$, because of lack of control and single flight of photographs.) Detailing - February 1939.
6. Planetable survey in September 1939, CS-182-M. Shoreline topographic signals south of Lat. $41^{\circ}36.5'$.
7. Fire aboard the Launch "Mikawe" October 1939. About 90% of planetable survey destroyed. However, shoreline details had previously been transferred to boat sheet H-6473 and thence to smooth sheet H-6473.
8. Map submitted from the field party as complete in 1940. When compared with contemporary hydrographic surveys there appeared to be errors amounting to 1 to 2 mm in a north-south direction on the air photographic survey. (Not surprising, considering spacing and location of nine-lens photographs.)

9. Washington Office decided to make additional field surveys. All available information shown in colors on the celluloid of T-5737. Survey returned to Baltimore Office.
10. Additional field inspection, fall 1941, using 1938 single-lens photographs.
11. Second radial plot, March 1942, using nine-lens and single-lens photographs. A number of topographic signals transferred from H-6473 were used as additional control.
12. T-5737 re-detailed in March 1942. Shoreline south of Lat. $41^{\circ}36.5'$ has been retained from the 1939 planetable survey. Shoreline north of that latitude is retained as of the date of the original field inspection, November 1938. (The sheet was revised to correct errors in position, not to obtain a new survey of a later date.)

Detailing:

This sheet was a rather easy one to detail. The shoreline was obtained as noted under section 12 of the first paragraph of this report. As stated on the field inspection, there are no roads of a permanent nature on the Island, in fact their position is apt to change considerably after each storm. The shoreline is likewise affected. The eastern shore is in the process of erosion and the western of building up at a rate much greater than is normal for the general area.

Comparison with Contemporary Hydrographic Surveys:

H-6472 and H-6473 both 1:10,000 1939

Shoreline south of $41^{\circ}36.5'$ has been detailed directly from H-6473. That section of shoreline had previously been transferred to H-6473 from CS-182-M. (Planetable survey of 1939 destroyed by fire on the "Mikawe".)

Comparison with Topographic Surveys:

424	1:20,000	1853-56
441	1:10,000	1853
441 bis	1:10,000	1873
1085a	1:10,000	1868-72
1090	1:20,000	1868-72
1683	1:10,000	1886
1705	1:10,000	1886
1706	1:10,000	1886
2393	1:20,000	1899
2604	1:20,000	1902
4623	1:20,000	1931

In comparing T-5737 with the above surveys, the same general outline of the peninsula is about the only resemblance most of the surveys have to each other. The entire land area is moving constantly westward and as each survey was applied in chronological order to T-5737, the change could be estimated at from 100 to 200 meters average difference in the position of the mean high water line.

Comparison with Charts:

No immediate corrections are indicated.

50		
70		
250	1:40,000	Feb. 1938
1107		
1108		Apr. 1944
1208	1:80,000	May 1942
1209	1:80,000	Dec. 1941

Comparison with Quadrangles:

Monomoy Point, Mass., 7½', 1:31,680, 1942

This quadrangle is in very good agreement with survey T-5737 in all features.

Reviewed by: Harold R. Brooks
Harold R. Brooks
March 7, 1945

Inspected by: Ralph Moore Berry
Ralph Moore Berry
March 7, 1945

APPROVED BY:

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NAUTICAL CHARTS BRANCH

SURVEY NO. T-5737

Record of Application to Charts

[illegible]

M-2168.1

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.