

8497

Diag. Cht. No. 1209-3.

Form 504

U. S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. GI-1258 Office No. H-8497

LOCALITY

State Massachusetts

General locality Nantucket Sound

Locality North Side Nantucket Island

1958-59

CHIEF OF PARTY

C. A. Schoene and H. W. Keith, Jr.

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DATE March 6, 1961

USCOMM-DC 5087

8497

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

REGISTER No. H - 8497

Field No. GI - 1258

State MASSACHUSETTS

General locality NANTUCKET SOUND

Locality North side
NANTUCKET ISLAND ~~NORTH~~

Scale 1:10,000 Date of survey 1958 - 1959

Revised Instructions dated 21 October 1957; Supplemental Instructions dated 13 October 1958

Vessel U. S. C. & G. Survey Ship GILBERT
Charles A. Schoene, Commander, C&GS;

Chief of party Hubert W. Keith, Jr., Lt. Cdr., C&GS.

Surveyed by Lt. C. D. Upham; Lt. D. L. Campbell; Ens. W. M. Crabler; Ens. R. M. Davidson; QMS J. D. Lewis, Jr.

Soundings taken by fathometer, graphic recorder, hand lead, wire and pole.

Fathograms scaled by J. Hernandez; H. W. Tittle; J. D. Lewis, Jr.; L. K. Styron; R. L. Scott.

Fathograms checked by C. D. Upham; J. Hernandez; J. D. Lewis, Jr.; H. W. Tittle; R. L. Scott.

Protracted by A. K. Schugeld (Norfolk Processing Office)

Soundings penciled by A. K. Schugeld " " "

Soundings in fathoms feet at MLW ~~MLW~~ and are true depths.

REMARKS: _____

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Notes to Accompany

DESCRIPTIVE REPORT

HYDROGRAPHIC SURVEY H-8497

(FIELD NO. GI-1258)

NANTUCKET SOUND - NANTUCKET ISLAND NORTH

1958-59 FIELD SEASON

SCALE - 1:10,000

USC&GS Ship GILBERT, Cdr C. A. Schoene, Comdg;
LtCdr H. W. Keith, Comdg.

SURVEYED BY: Lt D. L. Campbell
Lt C. D. Upham
Ens. W. M. Grabler
Ens. R. M. Davidson
CQS J. D. Lewis, Jr.

PROJECT

Project CS-369, Revised Instructions dated 21 October 1957 and Supplemental Instructions dated 13 ~~October~~ ^{Aug.} 1958.

SURVEY LIMITS AND DATES

This survey is located in Nantucket Sound, along the north shore of Nantucket Island, from Nantucket Harbor on the east, westward to Tuckernuck Island. The survey extends from a junction with H-8172 (1:20,000-1955) at Lat. $41^{\circ}19'.5$ on the north to Nantucket Island on the south, and from a junction with H-8449 (1:10,000-1958) at Long. $70^{\circ}05'.7$ on the east to a junction with 1:10,000 scale inshore surveys to be completed during the 1960 Field Season on the west. (See index of sheets appended to this report.) H-8631 (1960-61) ^{Junction with unverified H-8631 (1960) not bad.}

Field work was accomplished on this survey during the 1958-59 Field Seasons, between the following dates:

1958 Field Season - 6 September through 25 September 1958

1959 Field Season - 17 July through 8 October 1959

VESSELS AND EQUIPMENT

The hydrography that was done on this sheet during the 1958 Field Season was accomplished primarily with LAUNCH CS-180, equipped with 808 fathometer 159-SPX, calibrated at 820 fm/sec. Acoustic units were mounted inside of the hull. This launch operated at 8 knots and had a turning radius of about 30 meters.

This survey was completed during the 1959 Field Season with LAUNCH CS-1176, using 808 fathometers 159-SPX and 162-SPX, calibrated at 820 fm/sec. Acoustic units were mounted inside of the hull. This launch operated at 8 knots and had a turning radius of about 20 meters.

A 16-ft aluminum skiff was used in Nantucket Harbor, to take hand-lead soundings along the wharves and piers. ^{green days a, b, c, in 1958}

VESSELS AND EQUIPMENT (continued)

Two 16-ft skiffs were secured together, catamaran style, and were used to obtain hand-lead and pole soundings in Maddaket Harbor and surrounding shoal areas. ✓
Purple days a, b, c, d, e, in 1959

The launches and skiffs operated from the Ship GILBERT, which was moored alongside the Ferry Pier in Nantucket Harbor. ✓

TIDES AND CURRENTS

Three portable automatic tide gages were installed at the following points:

<u>Location</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Dates Maintained</u>
Brant Point ✓	41°17.35'N ✓	70°05.50'W ✓	9/6/58 - 9/25/58 & 7/17/59-10/8/59
Eel Point ✓	41°17.48'N ✓	70°12.52'W ✓	8/4/59 - 10/8/59
Smith Point ✓	41°17.08'N ✓	70°14.27'W ✓	8/12/59 - 10/8/59

Tide reducers obtained from the Brant Point Tide Gage were applied to soundings (except Launch Days b, c, and d (blue)) in the areas extending from the easterly limit of the sheet west to Long. 70°10'.0 W. ✓

The Eel Point Tide Gage was used to obtain tide reducers for the remaining area of this survey. ✓

No time or range corrections were applied to tidal data from either of these tide stations used in the reduction of soundings. ✓

The Boston Standard Tide Gage was used to obtain tide reducers from 29 July through 31 July 1959, covering Launch Days b, c, and d (blue). A + ½-hour time correction and 0.3 range correction were applied to this tidal data used in the reduction of soundings as indicated in attachment to letter 36-330-982 gi, dated 11 September 1958. ✓

No current stations were occupied within the limits of this survey. ✓

SMOOTH SHEET

The Smooth Sheet projection was ruled in the Washington Office and will be plotted at a later date, ~~either by personnel of the Ship GILBERT or by the Norfolk Processing Office.~~ ^{W/O's} Shoreline and control stations by "GILBERT" see processing notes. ✓

CONTROL STATIONS

The following ~~marked~~ ^{Intersection} Triangulation/Stations were used:

- BRANT POINT Lighthouse, 1867 (Nantucket County, Mass. - E.R.McC., 1949) ✓
- BRANT POINT LIGHTHOUSE, 1910 (Nantucket County, Mass. - E.H.K., 1955)
- EAST JETTY LIGHT, 1955 (Nantucket County, Mass. - E.H.K., 1955)
- WATER TOWER, 1932 (Nantucket County, Mass. - L.O.C., 1932)
- NANTUCKET UNITARIAN CHURCH, SOUTH TOWER, 1835 -(Nan. County, Mass. - E.H.K., 1955)
- CLIFF HOTEL CUPOLA, 1893 (Nantucket County, Mass., - H.L.M., 1893)
- NANTUCKET ISLAND WEST CONSOLAN TOWER, 1956 (Nan. Co., Mass. - C.A. Shelton)
- NANTUCKET ISLAND TELEPHONE REFLECTOR TOWER, 1956 (Nantucket County, Mass. - C. A. Shelton)

The following marked Triangulation Stations were used:

- SMITH POINT 2, 1955 (Nantucket County, Mass., E.H.K.)
- POST, 1955 (Nantucket County, Mass., E.H.K.)

CONTROL STATIONS (continued)

The following signals were located by standard hydrographic methods:

Ale	Bus	Ken	Odd
Ann	Cap	Key	Rat
Azo	Day	Lax	Sip
Bud	Hen	Low	Sta

One signal, "Sit", was located by plane table methods, on Plane Table Sheet GI-A-59. *Shoreline on South + West sides (Smith Pt) of applied to 11 8 47, GI-A 59 marked for destruction*

The remainder of the control originates from Manuscripts T-11219 and T-11220. *of 1955*

Signal "Mid", which was located by hydrographic methods during the 1958 Field Season, was re-located by photogrammetric methods in 1959 and re-named "Dim".

A list of control stations used on this survey is appended to this report and a copy has been placed in the front of Volume 1 of the hydrographic records. *O'Cab' questioned. Only PLANIMETRIC of T-11220 available.*

SHORELINE AND TOPOGRAPHY

The shoreline was transferred from Manuscripts T-11219 and T-11220. *see P2 Review*

Approximately two and one-half miles of shoreline in the vicinity of Smith Point, Nantucket Island was revised, using plane table methods, on Planetable Sheet GI-A-59. *(GI-A-59 marked for destruction)*

In all areas, sounding lines were run as close to the shoreline as practicable. However, due to the small tide range, it was impossible to completely define the Mean Low Water Line by sounding.

SOUNDINGS

Soundings were taken with 808 fathometer, sounding pole, and standard leadline.

CONTROL OF HYDROGRAPHY

Hydrography was controlled by three-point sextant fixes taken on objects ashore which had been located by triangulation, topographic methods, photogrammetric methods, or standard hydrographic methods.

ADEQUACY OF SURVEY

This survey is complete and adequate to supersede prior surveys for charting. *PLG Review*

On the boat sheet, junctions with adjoining surveys are satisfactory, no holidays exist and depth curves can be adequately drawn at the junctions. However, it is believed that a more thorough discussion of this should be made after the smooth sheet has been plotted. *See verifier's notes. PLG Review*

CROSS LINES

Approximately 8% cross lines were run. Depths at crossings on the boat sheet are in satisfactory agreement with maximum differences of 1 to 2 feet, at most crossings. These discrepancies are attributed to the differences between actual tides and predicted tides used to reduce boat sheet soundings.

COMPARISON WITH PRIOR SURVEYS AND CHART

A comparison of the boat sheet with Surveys H-1878 (1:20,000, 1888), H-2209 (1:10,000, 1894), H-2531 (1:40,000, 1901), H-3254 (1:10,000, 1910) and Charts 343 (5/18/53, 9/1/58), 1209 (5/18/59) indicate a good general agreement. *PG Review*

A comparison was also made with the U.S. Corps of Engineers After Dredging Survey Sheet No. Nt-202 (1:2,400, Sept. 1958), and the depths at the junctions were in good agreement. A copy of this survey will be forwarded with the hydrographic records. *Verify did not make this comparison.* *See P7C Review*

The small island charted at Lat. $41^{\circ}17.6'N$, Long. $70^{\circ}13.1'W$ on Chart 1209 (5/18/59) was found to bare at low water but to cover at high water. *Zero depths on S.S.* *Completed*

The rock (Whale Rock) shown at Lat. $41^{\circ}17.8'N$, Long. $70^{\circ}07.0'W$ on Chart 1209 (5/18/59) symbolized as a rock which bares at MHW, bares one (1) foot only at MLW. The position of this rock determined this season at Lat. $41^{\circ}17.83'N$, Longitude $70^{\circ}07.07'W$ was found to differ with the charted position on Charts 1209 and 343. It is recommended that the position as determined by this survey be charted. *See P6A-1 Review*

The shoal area northeast of Eel Point, at Lat. $41^{\circ}18.0'N$, Long. $70^{\circ}11.8'W$, was investigated and found to have changed considerably in shape, as compared to the chart. The other shoals in this area compare favorably with the chart. This survey is considered to be complete and it is recommended that all previous depths not in agreement be deleted. *(See P6A Review)*

A portion of the shoreline in the vicinity of Smith Point, Nantucket Island, was revised using planetable methods, on Planetable Sheet GI-A-59.

(Graphic Control GI-A-59 marked for destruction.)

The rock shown on Manuscript T-11219 at Lat. $41^{\circ}17.88'N$, Long. $70^{\circ}14.41'W$ should be deleted, and charted at Lat. $41^{\circ}17.86'N$, Long. $70^{\circ}14.41'W$. (Signal RAT)

DANGERS AND SHOALS

A rock located at Lat. $41^{\circ}17.83'N$, Long. $70^{\circ}07.07'W$, known as Whale Rock, was found to bare one (1) foot at MLW. The position of the rock disagrees with the charted position on Charts 1209 and 343. *(See P6A-1 Review)*

The shoal area northeast of Eel Point, Lat. $41^{\circ}18.0'N$, Long. $70^{\circ}11.8'W$, was found to have changed in size and shape as compared to the chart. *(See P6A Review)*

COAST PILOT INFORMATION

The dredged channel from Nantucket Sound into Nantucket Harbor is adequately described in the Coast Pilot. The controlling depth of the channel can be obtained from the smooth sheet or from U.S. Corps of Engineers survey dated September 1958, scale 1:2,400, sheet No. Nt-202. *(Controlling depth $13\frac{1}{2}$ feet according to charts 343 and 1209. Minimum 13 feet inked on smooth sheet.)* *(See P7B Review)*

The following changes to the Coast Pilot, Atlantic Coast, Section B, are recommended:

- Page 157 - Line 18, read: The depth at the wharves ranges from 3 to 16 feet.
- Lines 20-22, read: Unpainted pile dolphins mark the former pier head. The water westward of the dolphins is foul.
- Lines 26-27, read: The depth at the float is about 5 feet.

AIDS TO NAVIGATION

The positions of all fixed aids to navigation located in this area have been previously determined.

All floating aids to navigation have been located and are listed below.

<u>AID</u>	<u>LATITUDE</u> ° 'N	<u>LONGITUDE</u> ° 'W	<u>DEPTH</u> Feet	<u>POSITION NO.</u>	<u>DATE</u>
G#1 ⁿ	41 18.73	70 06.13	17.0	148a(red)	9/21/58
"3 ⁿ	41 18.40	70 05.95	18.0	149a "	"
"5 ⁿ	41 17.97	70 05.78	16.0	150a "	"
"7 ⁿ	41 17.73	70 05.69	15.0	151a "	"
"9 ⁿ	41 17.52	70 05.46	14.0	152a "	"
N#2 ⁿ	41 18.66	70 06.17	15.5	146a "	"
"4 ⁿ	41 18.29	70 06.01	17.5	145a "	"
"6 ⁿ	41 17.92	70 05.85	16.5	144a "	"
"8 ⁿ	41 17.75	70 05.77	15.5	143a "	"
"10 ⁿ	41 17.60	70 05.71	15.5	142a "	"
BW Bell	41 19.07✓	70 06.33✓	31.0	1d(blue)✓	7/31/59
Anchorage Buoy #C ⁿ ✓	41 16.91✓	70 05.52✓	8.6	103d(red)✓	9/25/58
Nantucket Yacht Club Buoy - Orange/White	41 18.88✓	70 09.14✓	25.5	157g(blue)✓	8/15/59
Marker Buoy orange w/ black dots (Private)	41 18.67✓	70 11.75✓	5.5	72 1(blue)✓	9/20/59

The following is a list of aids to navigation which are privately maintained in the vicinity of Maddaket Harbor.

(Day Beacons)				(catamaran)	
Black	41 16.47✓	70 12.14✓	2.8	14a(purple)✓	10/2/59
White	41 16.49✓	70 12.16✓	2.8	15a "	"
Black	41 16.51✓	70 12.13✓	3.8	16a "	"
White	41 16.53✓	70 12.12✓	2.3	17a "	"
"	41 16.58✓	70 12.06✓	2.3	18a "	"
"	41 16.64✓	70 12.03✓	3.8	19a "	"
"	41 16.70✓	70 12.04✓	2.8	20a "	"
"	41 16.76✓	70 12.05✓	2.3	21a "	"
"	41 16.82✓	70 12.06✓	6.3	22a "	"
"	41 17.33✓	70 12.12✓	3.0	36c "	"
Marker Buoy (Day Beacons)	41 17.04✓	70 12.23✓	7.6✓	37c "	10/4/59
White	41 17.11✓	70 12.74✓	5.4✓	60c ✓	"
"	41 17.10✓	70 12.55✓	5.4	67c "	"
				68c "	"

There are two (2) submarine cables within the limits of this survey. One crossing is located just north of Brant Point Lighthouse, 1910. Its termini are at Lat. 41°17.40', Long. 70°05.45' and Lat. 41°17.68', Long. 70°05.10'. The other crossing is between Smith Point and Tuckernuck Island, the termini being at Lat. 41°17.05', Long. 70°14.23' and Lat. 41°17.08', Long. 70°14.52'. Note error.

Two ferry companies use the channel from Nantucket Sound into Nantucket Harbor. The New Bedford-Woods Hole Ferry docks at the Steamer Wharf (Lat. 41°17.17', Long. 70°05.75'). The excursion ferry from Hyannis, Mass. docks at Straight Wharf (Lat. 41°17.08', Long. 70°05.70')

LANDMARKS FOR CHARTS

There are no changes recommended in the landmarks for charts within the area of this survey. ✓

GEOGRAPHIC NAMES

Handwritten initials

Geographic names as shown on Manuscripts T-11219 and T-11220 are adequate and no additional names are recommended. ✓

MISCELLANEOUS

Hand-lead soundings taken from the catamaran in the deeper water just north of Smith Point (approx. Lat. 41°17.35', Long 70°14.30') are questionable. Using LAUNCH CS-1176, the area was re-run with a system of crosslines. It is recommended that the soundings obtained from the fathometer be plotted first and the hand-lead soundings applied to fill in where necessary. (4 and 5 ft. differences in

Fath. sdgs. smooth plotted, supplemented by several sdgs. obtained by L.L.

40 and 45% errors in shoal water ????? -> 9 to 15 ft. of water, handlead being the deeper. See overlay #4

TABULATION OF APPLICABLE DATA

<u>Data</u>	<u>Date Forwarded to W.O.</u>
Tide Marigrams, Brant Point	11/14/58; 8/26, 9/23, & 10/22/59
" " Eel Point	8/26, 9/23, & 10/22/59
" " Smith Point	8/26, 9/23, & 10/22/59
Fathometer Report, Ship GILBERT, 1959	1/11/60
Boat Sheet GI-1258	To Norfolk District Office w/ Report
Smooth Sheet GI-1258	"
Fathograms, a-Day through t-Day, LAUNCH CS-1176	"
" a-Day " d-Day, LAUNCH CS-180	" ✓
Manuscripts T-11219 and T-11220	"
Sounding Volumes 1 through 18	"

Respectfully submitted,

Robert M. Davidson
Robert M. Davidson,
Ensign, C&GS.

APPROVED AND FORWARDED:

Clinton D. Upham
Clinton D. Upham,
Lieutenant, C&GS,
Comdg Ship GILBERT.

S T A T I S T I C S

for

HYDROGRAPHIC SURVEY H-8497

(FIELD NO. GI-1258)

1958 - 1959 FIELD SEASONS

U.S.C. & G.S. Ship GILBERT

PROJECT NO. CS - 3 6 9

Volume No.	Day Letter	Date		Number of Nautical Miles		
				Positions	of Sounding	
		1958				
1	a (green)	September	6	362	1.5	
1	b "		18	121	0.3	
1	c "		21	90	0.7	
2✓	a (red)✓		21✓	260✓	31.5	
2✓ & 3✓	b "✓		23✓	261✓	38.2	
3✓	c "✓		24✓	49✓	3.5	
3✓	d "✓		25✓	148✓	15.3	
4.	a (blue).	1959				
4.	b "✓	July	21	8.	1.2	
4			29.	172.	22.9	
4 & 5✓	c "✓		30✓	168✓	13.0	
5✓	d "✓		31.	104.	13.3	
5 & 6✓	e "✓	August	13✓	88✓	9.7	
6 & 7✓	f "✓		14✓	203✓	30.8	
7 & 8✓	g "✓		15✓	233✓	27.6	
8✓	h "✓		17✓	228✓	26.8	
9✓	j "✓		18✓	60✓	8.7	
9 & 10✓	k "✓	September	18✓	196✓	34.0	
10 & 11✓	l "✓		20✓	229✓	34.1	
11✓	m "✓		21✓	174✓	24.9	
11 & 12✓	n "✓		30✓	133✓	21.0	
12✓	p "✓	October	1✓	19✓	3.4	
12 & 13✓	q✓ "✓		4✓	193.	24.5	
13 & 14✓	r "✓		5✓	227✓	36.6	
14 & 15✓	s "✓		6✓	180✓	15.4	
15✓	t "✓		7✓	168✓	24.7	
16	a (purple)		2	170	11.6	
16	b "		3	199	24.3	
17	c "		4	135	11.6	
17	d "		5	165	19.8	
18	e "		6	147	16.0	
				TOTALS -	4,890	546.9

green - Skiff (1958)
 red - LAUNCH CS-180 (1958)
 blue - LAUNCH CS-1176 (1959)
 purple - Catamaran (1959)

TOTAL AREA OF SURVEY: 21 Square Nautical Miles

T I D E N O T E

for

HYDROGRAPHIC SURVEY H-8497

(FIELD NO. GI-1258)

PROJECT CS-369

NANTUCKET SOUND

U.S.C. & G.S. Ship GILBERT

1958 - 1959 FIELD SEASONS

Portable automatic tide gages were installed at Brant Point, Lat. $41^{\circ}17.35'N$, Long. $70^{\circ}05.50'W$; Eel Point, Latitude $41^{\circ}17.48'N$, Long. $70^{\circ}12.52'W$; and Smith Point, Lat. $41^{\circ}17.08'N$, Long. $70^{\circ}14.27'W$; and operated during the periods of field work. No time or range corrections were applied to this tidal data used in the reduction of soundings. Tide Sta. is hydro signal "KEN" at Eel Point "LOW" at Smith Point (Vol. 4, p. 2)

The Boston Standard Tide Gage was used to obtain tide reducers from 29 July through 31 July 1959. A $+\frac{1}{2}$ -hour time correction and 0.3 range correction were applied to this tidal data used in the reduction of soundings, as indicated in attachment to letter 36-330-982 gi, dated 11 September 1958.

Tidal data from the Brant Point tide gage and the Boston tide gage corrected as explained above, were used to reduce all soundings in the area extending from the easterly limit of the sheet west to Long. $70^{\circ}10.0'W$. Mean Low Water at Brant Point corresponded to a staff reading of 3.5 feet on staff used during the 1959 season, and 2.8 feet on the staff used during the 1958 season.

The Eel Point tide gage was used to obtain tide reducers for the remaining area of this survey. Mean Low Water corresponded to a staff reading of 2.2 feet.

HYDROGRAPHIC SURVEY H-8497

(FIELD NO. GI-1258)

1958 - 1959 FIELD SEASONS

U.S.C. & G.S. Ship GILBERT

PROJECT NO. CS - 369

ABSTRACT OF FATHOMETER CORRECTIONS

LAUNCH CS-180 (1958):

Fathometer No. 159-SPX

Day Letter	Fathometer Depth (feet)	Correction (feet)
a, b, c, d (red)	0.0 to 51.0 (A Scale)	0.0
	51.0 to 70.0 (B Scale)	+0.5

LAUNCH CS-1176 (1959):

Fathometer No. 162-SPX

Day Letter	Fathometer Depth (feet)	Correction (feet)
a, b, c, e, f, g, h (blue)	0.0 to 55.0 (A Scale)	0.0
j, k, l, m, n, p, q, r, s, t (blue)	0.0 to 26.0 "	0.0
	26.1 to 45.0 "	+0.2

Fathometer No. 159-SPX

Day Letter	Fathometer Depth (feet)	Correction (feet)
b, d, t (blue)	0.0 to 55.0 (A Scale)	0.0

HYDROGRAPHIC SURVEY H-8497 (FIELD NO. GI-1258)

U.S.C. & G.S. Ship G I L B E R T

1958 - 1959 FIELD SEASONS PROJECT CS - 3 6 9

A P P R O V A L S H E E T

The boat sheet was inspected daily, and the hydrographic records periodically, during the progress of field work. The boat sheet and records are approved.

The survey, which is considered complete and adequate to supersede prior surveys for charting, is herewith approved.



Clinton D. Upham,
Lieutenant, C&GS,
Comdg Ship GILBERT.

List of

CONTROL STATIONS

HYDROGRAPHIC SURVEY H-8497

(FIELD NO. GI-1258)

PROJECT GS-369

NANTUCKET SOUND

U.S.C. & G.S. Ship GILBERT

1958 - 1959 FIELD SEASONS

<u>NAME</u>	<u>ORIGIN</u>	<u>NAME</u>	<u>ORIGIN</u>
Ace	T-11220	Lip	T-11220
Ale	Hydro, Page 42-43, Vol. 5	Liz	T-11220
Ann	Hydro, Page 2, Vol. 4	Log	T-11220
Azo	Hydro, Page 48-49, Vol. 1	Look	T-11220
Bet	T-11220	Low	Hydro, Page 2, Vol. 4
Bob	T-11219	Mal	T-11220
Box	T-11220	Mug	T-11220
△BRAN	BRANT POINT LIGHTHOUSE, 1910	△NAN	NANTUCKET UNITARIAN CHURCH SOUTH TOWER, 1835
Bud	Hydro, Page 2, Vol. 4	Nut	T-11220
Bus	Hydro, Page 27, Vol. 1	Odd	Hydro, Page 27, Vol. 1
Cab	T-11220 <i>Wreck pos. questioned</i>	Ora	T-11219
Cap	Hydro, Page 40, Vol. 16	Pep	T-11220
Cow	T-11219	POI	SMITH POINT 2, 1955
Cry	T-11220	△POINT	BRANT POINT LIGHTHOUSE, 1867
△CUP	CLIFF HOTEL CUPOLA, 1893	Pole	T-11220
Daw	T-11219	Pop	T-11219
Day	Hydro, Page 2, Vol. 4	POST	POST, 1955
Deb	T-11220	Pup	T-11220
Dim	T-11220	Rag	T-11220
Don	T-11220	Rat	T-11219
Duo	T-11220	Red	T-11220
Elm	T-11219	She	T-11219
End	T-11220	Sip	Hydro, Page 28, Vol. 1
Eva	T-11219	Sit	Planetable Survey GI-A-59
Fed	T-11220	Sta	Hydro, Page 28, Vol. 1
Geo	T-11220	Sue	T-11220
Hen	Hydro, Page 2, Vol. 4	△TEL	NANTUCKET ISLAND TELEPHONE REFLECTOR TOWER, 1956
His	T-11220	Tex	T-11220
Hop	T-11220	Tom	T-11220
Hub	T-11220	Van	T-11220
Ivy	T-11219	Vim	T-11220
Jap	T-11220	△WAT	WATER TOWER, 1932
Jef	T-11220	△WES	NANTUCKET ISLAND WEST CONSOLAN TOWER, 1956
△JET	EAST JETTY LIGHT, 1955	Wid	T-11220
Joe	T-11219	Yet	T-11219
Jut	T-11220	Zag	T-11219
Ken	Hydro, Page 2, Vol. 4	Zoo	T-11220
Key	Hydro, Page 27, Vol. 1		
Lad	T-11219		
Lax	Hydro, Page 27, Vol. 1		

NORFOLK PROCESSING OFFICE
 FLOATING AIDS TO NAVIGATION

H-8497

<u>BUOY</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
<u>NANTUCKET HARBOR</u>					
Chan. Buoy 1 ^h	41-18.72	70-06.13	17'	148a	9/21/58
Chan. Buoy 2 ^h	18.64	06.17	15'	146a	"
Chan. Buoy 3 ^h	18.40	05.95	18'	149a	"
Chan. Buoy 4 ^h	18.29	06.01	17'	145a	"
Chan. Buoy 5 ^h	17.95	05.80	16'	150a	"
Chan. Buoy 6 ^h	17.92	05.85	16'	144a	"
Chan. Buoy 7 ^h	17.73	05.69	15'	151a	"
Chan. Buoy 8 ^h	17.76	05.77	15'	143a	"
Chan. Buoy 9 ^h	17.52	05.46	14'	152a	"
Anchorage Buoy C (pos. 103-104 "d")	16.91 (red)	05.54 (vol. 3)	8' (page 14)	Ref. (p. 49)	9/25/58
Fox Buoy #10 see Field Report # "Aids to Navigation" (pos. 142 "a", red.)					

NANTUCKET SOUND

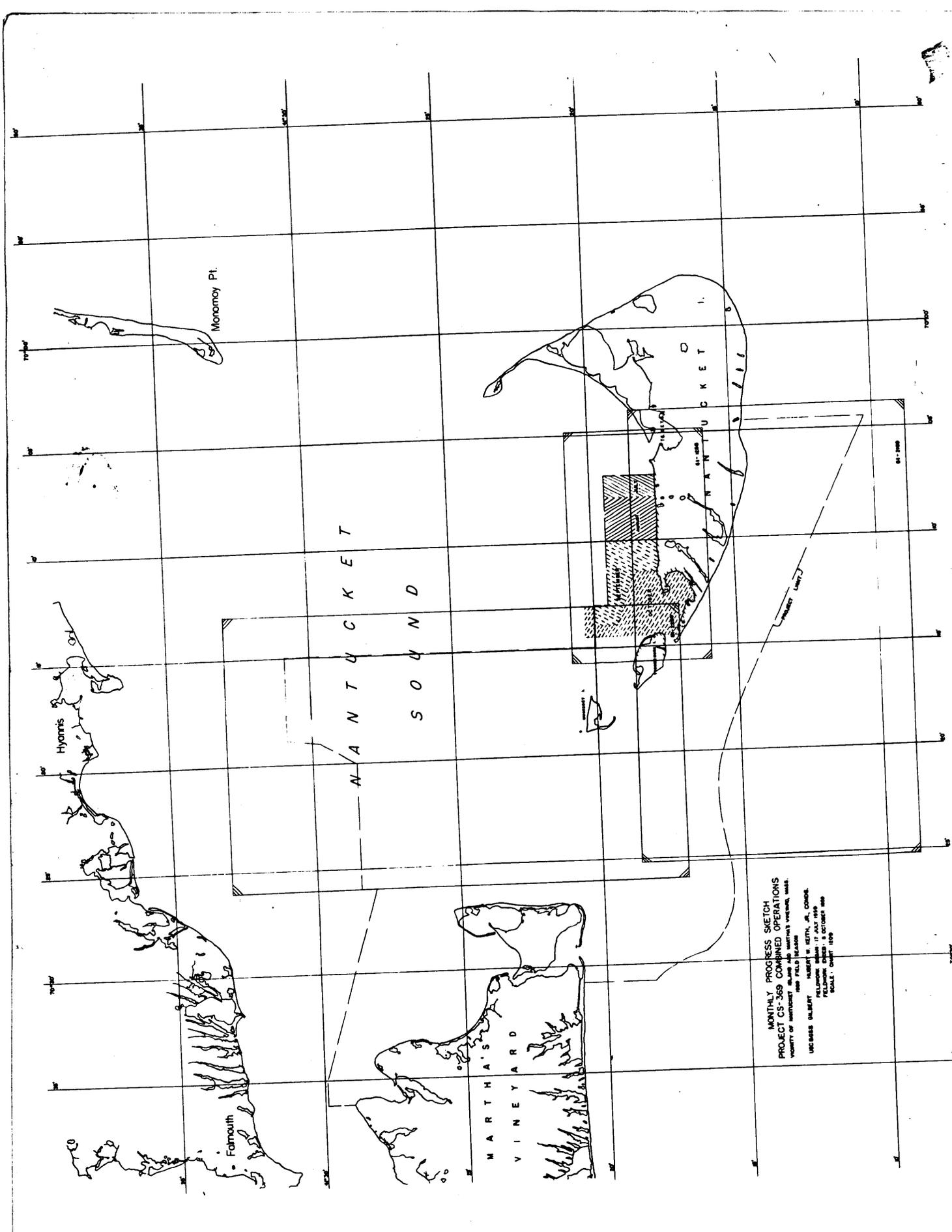
Nantucket Bar Bell Buoy ^h	19.07 ^h	06.33 ^h	30'	(blue) 1d ^h	7/31/59 ^h
Yacht Racing Buoy ^h	18.81 ^h	09.14 ^h	25' ^h	157g ^h	8/15/59 ^h
Yacht Racing Buoy ^h	18.67 ^h	11.75 ^h	5'	721 ^h	9/20/59 ^h

Privately Maintained Buoy 17.04 12.25 7' 60c 10/4/59

For additional aids see Field Report # "Aids to Navigation"...

Mooring buoy mentioned in vol. 17, p. 38, was not inked on smooth sheet.

X



Monomoy Pt.

ATLANTIC
SOUND

MARTHA'S
VINEYARD

NANTUCKET I.

MONTHLY PROGRESS SKETCH
PROJECT CS-369 COMBINED OPERATIONS
VICINITY OF NANTUCKET ISLAND, MASSACHUSETTS, U.S.A.
BASED ON DATA FROM THE MONTHLY PROGRESS REPORTS
FOR THE PERIOD FROM 1 JULY 1959 TO 31 OCTOBER 1959
SCALE: 1:50,000

OFFICE OF CARTOGRAPHY

REVIEW SECTION - NAUTICAL CHART DIVISION

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-8497

FIELD NO. GI-1258

Massachusetts, Nantucket Sound, North Side Nantucket Island

PROJECT NO. CS-369

SURVEYED: September 1958
October 1959

SCALE: 1:10,000

SOUNDINGS: 808 Depth Recorder
Leadline

CONTROL: Sextant fixes
on shore signals

Chief of Party-----C. A. Schoene
H. W. Keith
Surveyed by-----C. D. Upham
D. L. Campbell
W. M. Grabler
R. M. Davidson
J. D. Lewis, Jr.
Protracted by-----A. K. Schugeld
Soundings Plotted by-----A. K. Schugeld
Verified and Inked by-----S. Rose
Reviewed by-----I. M. Zeskind
Inspected by-----R. H. Carstens

Date: 10/23/63

1. Description of Area

This is an inshore survey on the north side of Nantucket Island between Brant Point and Tuckernuck Island. The bottom is very irregular in depths less than 18 ft. and fairly smooth in greater depths. Submarine features such as deeps, shoals, spits and ridges contribute to the bottom irregularity.

2. Control and Shoreline

The source of the control is adequately described in the Descriptive Report.

The shoreline originates with the incomplete photogrammetric surveys T-11219 and T-11220 of 1955. The shoreline at the west end of Nantucket Island which is shown in red, originates with graphic control survey GI-A-59, which is marked for destruction.

3. Hydrography

Depths at crossings are in good agreement. The usual depth curves were adequately delineated, except close inshore where, because of the small tide range (2-3 ft.), it was not always possible to define the low-water line. The 3-ft., 24-ft. and 36 ft. curves were drawn to better define the bottom configuration.

4. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth-plotting was accurately done.
- c. It was necessary to eliminate or revise a number of soundings on q (blue) day because of incorrect or erratic operation of the fathometer. Reducers were applied which resulted in depths consistent with the adjacent hydrography.
- d. In the vicinity of the entrance to Maddaket Harbor, the shoaler fathometer soundings were accepted over the deeper soundings by the handlead. Differences here of 2-5 ft. in depths were attributed in part to strong current.

5. Junctions

Adequate junctions were effected with H-8449 (1958) on the east and H-8172 (1954-56) on the north. The junction with H-8631 (1960-61) on the west will be considered in the review of that survey. The project survey on the southwest covering the area between Smith Pt. and Tuckernuck Island has not yet been received in the Washington Office.

6. Comparison with Prior Surveys

- A. H-180 (1846), 1:10,000
 H-181 (1846), 1:20,000
H-527 (1855-56), 1:30,000

These early reconnaissance surveys cover the area of the present survey. A comparison between the prior and present surveys shows considerable changes in the bottom configuration and the shoreline. These changes are attributed to natural and artificial causes, such as the action of the current and the storms on the bottom, the accretion and the erosion of land, the construction of jetties and piers, and the reclaiming of land. The construction of the jetties leading into Nantucket Harbor and the dredging of a channel between these jetties has caused considerable changes in depths here. Changes in depths caused by the shifting of the bottom in the area between Eel Point and the east side of Tuckernuck Island is also noted. The north side of Nantucket Island has eroded as much as 100 meters. Land has been reclaimed in the vicinity of the west side of the west jetty.

The following differences between the prior and present surveys are noted:

1. Whole Rock charted in lat. $41^{\circ}17.77'$, long. $70^{\circ}07.0'$, is from H-181 (1846), where it was misplotted. The feature actually falls about 160 meters to the north northwestward where it is located on the present survey and on photogrammetric survey T-11220 (1955). The charted location should be revised to agree with that shown on the present survey.
2. The below listed charted sunken rocks originate with H-181 (1846), where they are believed to symbolize shoal areas. These features are not shown on the subsequent prior survey H-2209 (1894) or on the present survey. The present survey is considered to adequately delineate the bottom configuration, the sunken rocks, therefore, should be deleted from the charts.

<u>Latitude</u>	<u>Longitude</u>
41°17.87'	70°07.06'
41°17.90'	70°07.25'

dit 343

3. A sunken rock from H-181 (1846) in lat. 40°17.88', long. 70°07.53', was erroneously charted as a rock awash during reproduction. The sunken rock which symbolizes a shoal area on H-181 is not shown on either the subsequent prior survey H-2209 (1894) or on the present survey in which the feature falls. The present survey adequately delineates the bottom configuration and, therefore, it is recommended that the feature be deleted from the charts.

343

The present survey is adequate to supersede the prior surveys within the common area.

B. H-1877 (1888), 1:5,000	H-2168 (1893), 1:10,000
H-1878 (1888), 1:20,000	H-2209 (1894), 1:10,000
H-1942 (1889), 1:20,000	H-2531 (1901), 1:40,000
<u>H-1947 (1889), 1:20,000</u>	<u>H-3254 (1910), 1:40,000</u>

These prior surveys together cover the area of the present survey. A comparison between the prior and present surveys reveals natural and artificial changes in the bottom configuration and the shoreline which are attributed to causes similar to those mentioned in paragraph A above. The greatest changes in depths occur in the vicinity of the jetties leading into Nantucket Harbor, and in the area between Smith Point and the east side of Tuckernuck Island. However, elsewhere throughout the area of the present survey in depths of less than 18 ft., the bottom is in a state of constant flux. Here both shoaling and deepening are noted. An example of deepening occurs in lat. 41°17.85', long. 70°12.45' where a prior shoal which was formerly awash at M.L.W. is now covered by 6 ft. of water. An example of shoaling occurs in lat. 41°18.40', long. 70°11.65' where a prior depth of 2 ft. now uncovers 2 ft. at M.L.W. Marked erosion and shifting in the sand ridges off the north shore of Nantucket Island has occurred. Changes in depth of as much as 9 ft are noted in the natural channel on the west side of Eel Point in lat. 41°17.13', long. 70°13.29'.

Smith Point has eroded about 350 meters in the vicinity of lat. $41^{\circ}17.0'$, long. $70^{\circ}14.5'$. The north shore of Nantucket Island has eroded as much as 70 meters. The southeast end of Tuckernuck Island in the vicinity of $41^{\circ}17.6'$, long. $70^{\circ}14.5'$ has accreted about 150 meters, and in the vicinity of lat. $41^{\circ}17.56'$, long. $70^{\circ}15.0'$, it has eroded about 300 meters, with the resultant changes in the passage-way between Smith Point and the east end of Tuckernuck Island. The former passage-way between Smith Point and Tuckernuck Island has shifted about 300 meters to the northward. The eastern shore of Moddaket Harbor has eroded about 150 meters. In Nantucket Harbor, Brandt Point has accreted about 75 meters. The construction of the jetties has caused the present depths generally to be 3-16 ft. deeper than the prior depths, except at the north end of the east jetty where the present depths are as much as 8 ft. shoaler, as for example in lat. $41^{\circ}18.83'$, long. $70^{\circ}06.10'$, where a prior depth of 21 ft. falls in present depths of 13 ft.

Attention is directed to the following differences between the prior and present surveys:

1. The sunken rock charted in lat. $41^{\circ}17.81'$, long. $70^{\circ}07.36'$ from H-1878 (1888) where it symbolizes a type of bottom should be deleted from the chart. The feature falls on the present survey on a shoal whose least depth is 5 ft. chart 343
2. The 28-ft. soundings charted in lat. $41^{\circ}19.18'$, long. $70^{\circ}06.48'$ and lat. $41^{\circ}19.17'$, long. $70^{\circ}06.37'$ respectively, from H-3254 (1910) fall in present depths of 34 ft. These charted soundings are considered to be discredited by present depths and should, therefore, be deleted from the chart. 343

The present survey is adequate to supersede the prior surveys in the common area.

7. Comparison with Chart 265 (Latest print date 6/17/63)
Chart 343 (Latest print date 10/15/62)

A. Hydrography

The charted hydrography originates principally with the present survey prior to verification and review, with the previously discussed prior surveys which need no further consideration, and the U. S. Corps of Engineers' surveys of 1948 (Bp 44451) and 1961 (Bps 61038 and 61039).

The following discrepancies in the charted data are noted:

1. The symbol "Rk" charted in Lat. $41^{\circ}17.83'$, Long. $70^{\circ}14.25'$, from a subsequent manuscript of incomplete photogrammetric survey T-11219 (1955) as revised in 1961 should be deleted from the chart. The symbol actually refers to the rock which is charted about 200 meters to the westward.
2. The piles charted in lat. $41^{\circ}17.06'$, long. $70^{\circ}05.65'$, are not shown on the present survey. These piles originate with air photographs of 1960, but are not shown on the color photographs of 1962. The piles are considered to be non-existent and should be removed from the chart. 343
3. The 12-ft. sounding charted in lat. $41^{\circ}18.84'$, long. $70^{\circ}06.26'$, from the U. S. Corps of Engineers' survey of 1948 (Bp 44451), falls in present depths of 15-19 ft. The 12-ft. sounding is discredited by the subsequent U. S. Corps of Engineers' statement in chart letter 1145 (1963). The 12-ft. sounding should be deleted from the chart. 345
4. The following charted features which were not located on the present survey, originate with a subsequent manuscript of photogrammetric survey T-11220 (1955) which was revised from photographs of 1961.

<u>Objects</u>	<u>Location</u>	
	<u>Latitude</u>	<u>Longitude</u>
Dolphins and Pier	41°17.17'	70°05.85' ³⁴³
2 Rocks Awash	41°16.78'	70°05.62' ³⁴³
1 Rock Awash	41°16.82'	70°05.68' ³⁴³
1 Bare Rock	41°17.50'	70°05.75' ³⁴³
2 Dolphins	41°16.99'	70°05.73' ³⁴³

The groins on the north shore of Nantucket Island between the west jetty and Brant Point.

5. The below-listed rocks awash were transferred to the present survey from photogrammetric survey T-11220 (1955) which was revised subsequent to the present survey from photographs of 1961. The rocks awash are located as follows:

<u>Latitude</u>	<u>Longitude</u>
41°17.69'	70°07.08' ³⁴³
41°17.69'	70°08.98'
41°17.68'	70°07.27' ³⁴³

6. The 21-ft. sounding charted in lat. 41°19.08', long. 70°06.20', from H. O. N to M 49, 1958, originates with the boat sheet (Bp 57338) where it is shown as 24 ft. The charted 21 ft. should be revised to 24 ft. from the smooth sheet. 343
7. The inlet charted in lat. 41°16.5', long. 70°12.9', from Drawing No. 1 of chart No. 265 (Bp 63168) is not shown on the present survey. see H-8845
This inlet was formed by storm action subsequent to the present survey.
8. The 5-ft. sounding charted in lat. 41°17.68', long. 70°05.77', from the U. S. Corps of Engineers' survey of 1948 (Bp 44452), falls in present depths of 10 ft. The 5-ft. sounding is considered to be discredited by present depths, and it, therefore, should be deleted from the the chart. 343

The present survey is adequate to supersede the charted hydrography within the common area except for soundings charted from subsequent Corps of Engineers surveys.

B. Dredged Channels

The charted controlling depth of 13 1/2 ft. in the channel leading into Nantucket Harbor originates with the U. S. Corps of Engineers' condition surveys of 1964 (Bps 61038-39), which were accomplished subsequent to the present survey.

C. Aids to Navigation

The present survey positions of aids to navigation are in substantial agreement with the charted aids and adequately mark the features intended. The nomenclature of the following buoys on the present survey was revised subsequent to the present survey in accordance with H.O. N to M 15, 1961:

<u>Location</u>		<u>Nomenclature</u>	
<u>Latitude</u>	<u>Longitude</u>	<u>Smooth Sheet</u>	<u>Chart</u>
41°17.52'	70°05.46'	C"9"	C"11"
41°17.74'	70°05.69'	C"7"	C"9"

8. Compliance with Project Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work Recommended

This is a good basic survey and no additional field work is recommended.

Examined and Approved:

Wallace A. Bruder
 Acting Chief
 Marine Chart Division

William A. Abel
 Associate Director
 Hydrography and Oceanography

Information for Future Presurvey Reviews

Continuing natural changes in the shoreline and bottom configuration are to be expected throughout the area of the present survey. The greatest changes should occur in the passageway between Tuckernuck Island and Nantucket Island which is in a state of constant flux, with the channel through the passageway constantly shifting in position. Changes to a lesser degree should continue to occur in Nantucket Harbor and vicinity. Dredging operations and the revision or addition of harbor facilities are to be expected here.

Information regarding the amount the rock awash in lat. $41^{\circ}17.7'$, long. $70^{\circ}08.2'$ uncovered or was covered was not available in the records and should be obtained on any future survey of the area.

NORFOLK PROCESSING OFFICE
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8497 (G1-1258)

GENERAL

Except for the discrepancies listed below, this appears to be an excellent basic survey.

All shoreline and control stations were applied to the smooth sheet by personnel of Ship Gilbert before it was forwarded to this Office for smooth plotting.

Soundings are in generally good agreement at crossings, however, there are some obvious jumps, sometimes amounting to one foot when tides are at, or near maximum, at Long. 70-10' where the tide junction between gages was established. An intermediate zone between the two gages would undoubtedly have resulted in a better junction. This is evidenced by the irregularity in the 24' curve and by differences in the tide reducers where sounding lines crossed the junction. When changing gages, reducers differed by 1.4' between 181-182q, 1.4' between 218-219r and 1.2' between 35-36j. *Soundings where tide gage junctions occur are satisfactory.*

DISCREPANCIES

Lat. 41-19.57' and Long. 70-08.38' On line 128 thru 133n soundings averaged one foot deeper than surrounding hydrography. This line falls in the Brant Point tide zone while the record shows entries are from Eel Point. Tidal entries should be checked before soundings are inked. Vol. 12, p. 33, 34. Corrected and inked

Catamaran
Overlay number 4 shows questionable hand-lead soundings recorded on b and e days that average 2 to 5 feet deeper than fathometer soundings observed in the area. The bottom is irregular but it is believed this condition could hardly account for such radical differences in the two soundings methods. Soundings on the overlay were not penciled on the smooth sheet. *Fath. work given preference.*

All soundings on q day are considered questionable. Personnel of this Office made a thorough investigation of the situation and it is believed the discrepancies are caused by varying fathometer speeds which are not indicated on the fathogram.

(con't)

It will be noted that the one bar check observed on q day differed considerably from the mean of the other days and was rejected in the Field. This Office compiled corrections for the day from the results of this bar check and used them to reduce all soundings. These velocity corrections were applied with templates and the resulting reduced soundings were recorded in the "Office Column".

It was found that soundings reduced with corrections derived from the single bar check appear to be in agreement in some areas while those reduced with the mean corrections agree in others. *True! One of the other soundings used, depending upon surrounding depths in area. See verified notes on "q" day.*

In order to show this situation with some degree of clarity, soundings on q day were penciled as follows:

Soundings between positions 89 and 174q were penciled directly on the smooth sheet using those recorded in the "Office Column". They appear to agree with surrounding hydrography.

✓ Overlay # 1 shows soundings between 34-88q. They were taken from the "Office Column" and appear to be in agreement except for those between 36-39q. *Also disagrees with H-8631 (1960). (all sdgs between pos 34-88q) except 36-39q sm both plotted.*

✓ Overlay # 2 shows soundings between 1-33q. They were taken from the "Field Column" using the original Field corrections. Agreement with surrounding hydrography is good. *also a few depths from office column inked on smooth sheet for better agreement with junction.*

Overlay # 3 shows soundings between 175-193q. They were taken from the "Office Column". These soundings average 1 to 2' shoaler than surrounding hydrography while those in the "Field Column" average 1 to 2' deeper. *Area adequately covered by hydrography on other days. Only a few sdgs between 175-193q sm both plotted.*

Lat. 41-16.55' and Long. 70-12.30' Shoreline change indicated on position 131a (purple) was not applied to the smooth sheet. It is believed this fix is questionable as position 132a indicates the launch went around the point of land shown on the air-photo compilation. *See vol. 16, p. 24 --- A depth of zero at pos. 131 "a" (purple) accents the low-water line and thus conforms to the boatsheet.*

Norfolk, Va.
27 Feb. 1961

Respectfully submitted,

Hugh L. Proffitt
Hugh L. Proffitt
Cartographer

GEOGRAPHIC NAMES

Survey No. H-8497

Name on Survey	Source										BGN
	A	B	C	D	E	F	G	H	K		
Brant Point	x										1
Eel Point	x										2
Hither Creek	x										3
Maddaket Harbor	x									x	4
Nantucket	x										5
Nantucket Harbor	x										6
Nantucket Island	x										7
Smith Point	x										8
Tuckernuck Island	x										9
Whale Rock	x										10
											11
Coatue Pt											12
											13
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											26
											27

George W. Case
 Geographic Names Section
 17 March 1961

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. ..8497...

Records accompanying survey: Smooth sheets ..1..;
 boat sheets ..1..; sounding vols. ..18..; wire drag vols.;
 Descriptive Reports ..1..; graphic recorder envelopes ..11..;
 special reports, etc. 4-Overlays, Soundings.....

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet		4,890
Number of positions checked		71
Number of positions revised		0
Number of soundings revised (refers to depth only)		Twenty or thirty in order to straighten curves.
Number of soundings erroneously spaced		0
Number of signals erroneously plotted or transferred		0 {The position of the wreck at "Cab" is questioned}
Topographic details	Time	9 hrs.
Junctions	Time	45 hrs. including unverified A. 531 in order to solve "Q" day)
Verification of soundings from graphic record	Time	15 hrs.
Special adjustments	Time	120 hrs.

Junctional details. See verifier's report # 32. Also, shoal curves quite involved. Also sub plan. *also note overlays*
 "Q" day (blue) vol. 12-13 and
 "E" day (purple) vol. 18 and
 "B" day (purple) vol. 16
 Much time spent considering whether peaks are strays. Pos. 13-14 "B" (red) vol. 2, p. 51, good example.

Verification by *A. Rose* Total time *463 hrs.* Date *June 7, 1963*

Reviewed by *Im Zeshind* Time *144* Date *10-23-63*

RHC

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Coastal Surveys~~

19 May 1961

Division of Charts: R.H. Carstens

Plane of reference approved in
18 volumes of sounding records for

HYDROGRAPHIC SHEET 8497

Locality North Side Nantucket Island, Mass.

C.A. Schoene (1958)
Chief of Party: H.W. Keith Jr. (1959)
Plane of reference is mean low water reading
2.2 ft. on tide staff at Eel Point
9.1 ft. below B. M. 1 (1959)
2.8 ft. on tide staff at Brant Point (1958)
3.5 ft. on tide staff at Brant Point (1959)
5.5 ft. below B.M. 10a (1910)

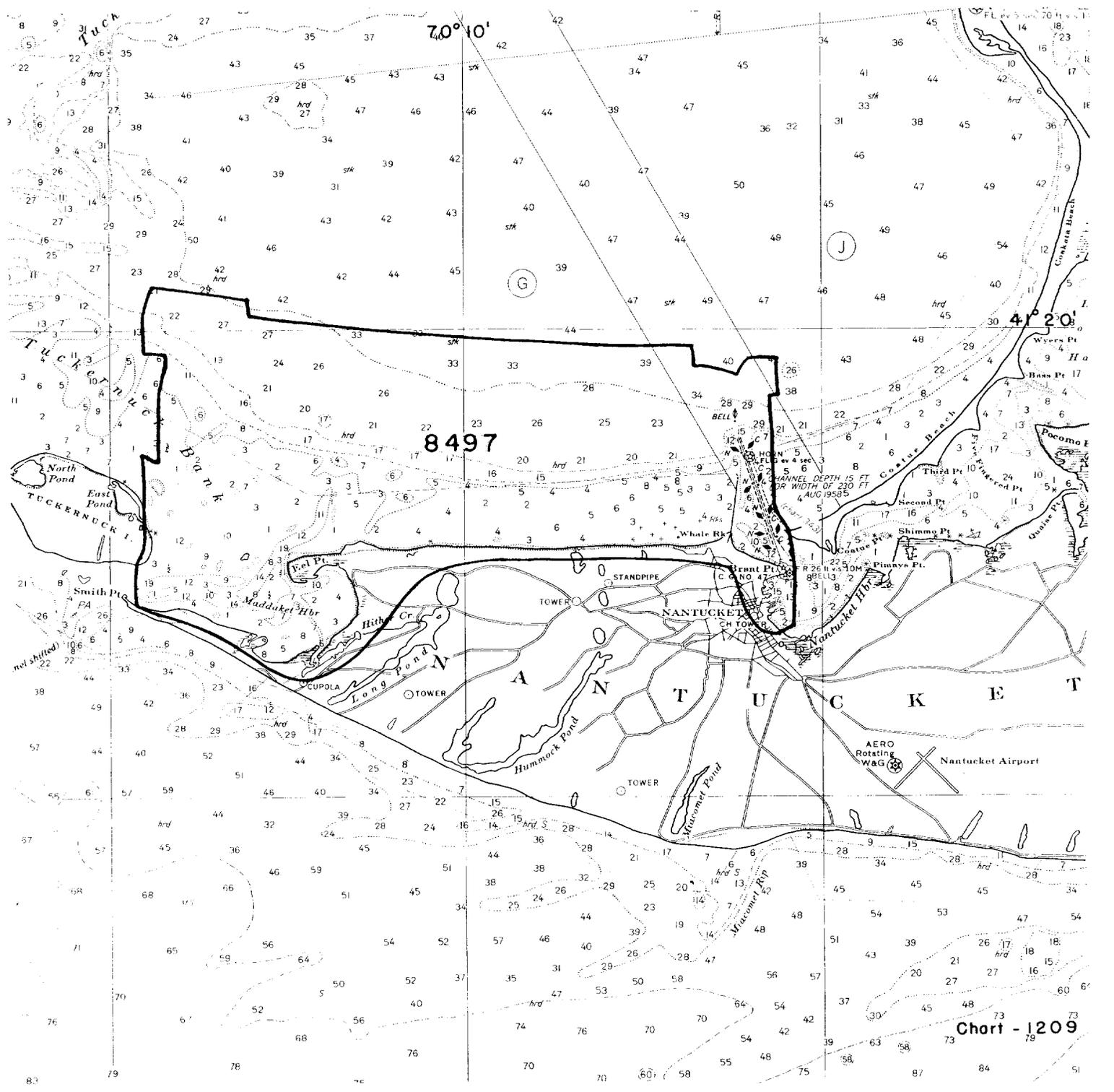
Height of mean high water above plane of reference is:
Brant Point 3.0 ft.
Eel Point 2.3 ft.

Condition of records satisfactory except as noted below:

Burt W. Wilson

Chief, Tides and Currents Branch

~~Chief, Division of Tides and Currents~~



NAUTICAL CHARTS BRANCH

SURVEY NO. H-8497

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
9-21-61	343	R. K. de Landau	<i>Partially applied</i> Before After Verification and Review
10-10-61	NEW CHT 265	R. K. de Landau	<i>Complete application</i> Before After Verification and Review. Area covered by chrt 343 appl thru that chrt.
4/18 62	1209	J. J. Streifler	<i>Partial application</i> Before After Verification and Review
9-19-62	1108	G. R. Johnson	Before After Verification and Review <i>No Correction</i> <i>Partial application thru chrt 1209</i>
9-24-62	71	G. R. Johnson	Before After Verification and Review <i>Partly Applied</i> <i>through chrt 1108 drg #30</i>
10-16-62	70	G. R. Johnson	Before After Verification and Review <i>Partly Applied</i> <i>through chrt 71 drg #16 No. Corr.</i>
12-21-62	1107	G. R. Johnson	Before After Verification and Review <i>Partly Appl'd</i> <i>Exam thru 1108 drg #30. No Corr.</i>
5/24/66	1108	W. H. Macell	Before After Verification and Review <i>Exam. No hydro</i> <i>in area of sheet, consider fully applied</i>
7/13/66	71	F. R. Scarcella	Before After Verification and Review <i>(Fully)</i> <i>Exam No hydro in area of sheet</i>
7-25-66	70	H. Radden	Before After Verification and Review <i>Exam only</i> <i>No hydro show in area of chrt.</i>
12-8-67	1107	W. H. Macell	<i>Exam after review, No hydro</i> <i>in area of sheet, consider fully app.</i>
10-14-68	1209	W. H. Macell	<i>Exam after V & R. Apply Reviewer's</i> <i>Report only.</i>
2/28/68	343	J. S. McMillan	<i>APPLIED IN FULL AFTER VERIFICATION, REVIEW</i> <i>& INSPECTION</i>

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.

