

8218

Diag. Cht. No. 1222-2.

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

## DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. BN-4154 Office No. H-8218

### LOCALITY

State Virginia

General locality Entrance to Chesapeake Bay.

Locality .....

1954

CHIEF OF PARTY

H. J. Seaborg

LIBRARY & ARCHIVES

DATE August 9, 1957

B-1870-1 (1)

8218

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-8218

Field No. Bn-4154

State VIRGINIA

General locality ATLANTIC OCEAN - CHESAPEAKE BAY

Locality ENTRANCE TO CHESAPEAKE BAY

Scale 1:25,000 Date of survey 6 May to 22 July 1954

Instructions dated 25 February 1954

Vessel SHIP BOWEN

Chief of party Harold J. Seaborg

Surveyed by Harold J. Seaborg, J.R. Plaggmier & R. Houlder

Soundings taken by hydrographer, graphic recorder, hand

Fathograms scaled by SHIPS PERSONNEL

Fathograms checked by NORFOLK DISTRICT OFFICE

Protracted by A.G. ATWILL

Soundings penciled by A.G. ATWILL

Soundings in XXXXXX feet at MLW XXXXXX and are true depths

REMARKS:

R.R.

# DESCRIPTIVE REPORT

to accompany

INSHORE HYDROGRAPHIC SURVEY

FIELD NO. BN - 4154

ENTRANCE TO CHESAPEAKE BAY

U.S.C. & G.S. Ship B O W E N

HAROLD J. SEABORG, COMMANDING

SCALE 1/<sup>25</sup>/~~100~~,000

6 MAY - 22 JULY 1954

1:25,000 smooth sheet ✓

## A. PROJECT

Hydrography was accomplished at the entrance to Chesapeake Bay under Instructions, Project CS-370, dated 25 February 1954; Amendment to Instructions, dated 19 April 1954; and Supplemental Instructions, dated 29 April 1954. ✓

## B. SURVEY LIMITS AND DATES

Field work commenced on 6 May 1954 and terminated on 22 July 1954. This survey embraced the eastern portion of the 'Tail of the Horseshoe' and the area between Cape Henry and Cape Charles at the immediate entrance to Chesapeake Bay. The general limits are:

	<u>Latitude</u>	<u>Longitude</u>
Southeast corner	36°-54.7'	75°-57.5'
Northeast corner	37°-10.0'	75°-45.9' ✓
Northwest corner	37°-10.9'	75°-47.9'
Southwest corner	36°-56.2'	75°-59.0'

Junction was made with contemporary survey BN-1154, and prior surveys H-7703; 1948; H-6595; 1940; H-7750; 1948; H-7791, 1949; H-1875, 1888; H-3295, 1911; H-1873, 1911; and H-4193, 1921. *See P 4 of Review* ✓

## C. VESSEL AND EQUIPMENT

The Ship BOWEN, with a turning radius of 75 meters at 10 knots, was used on this survey. Portable 808-J type fathometers were used for sounding. An armed lead was used for obtaining bottom characteristics. ✓

## D. TIDE AND CURRENT STATIONS

The tide station at Kiptopeke Beach was basic for the reduction of soundings. The boat sheet soundings were based on predicted values, and final reduction made by using observed tides as submitted by the Washington Office. ✓

There was no investigation of currents. ✓

## E. BOAT SHEETS

The boat sheet with Shoran curves was furnished by the Washington Office. ✓ A Shoran calibration sheet (31" x 24" aluminum topographic) was furnished by the Norfolk Processing Office.

## F. CONTROL STATIONS

Three triangulation stations were used as location points for the portable Shoran shore stations, namely:

Cape Henry Lighthouse	1882 - 1943
GARRETT	1912
SEAVIEW	1939

 ✓

## G. SHORELINE AND TOPOGRAPHY

No shoreline or topography was needed for this survey. (OVER) ✓

of some of the

14 - 100 0012

YERKIN, UTHMAN, ALIYEH, BASHIR, ALI

# THE IMPLACEMENT OF MODERNISM

Shoreline was applied to smooth sheet from T-11247-48 (1953-55) and T-8180 (1942) and T-8301 (1942-44) by Mr. Norfolk Proc. Office. Portions of the shoreline from T-11247-48 were revised in the Washington Office.

[illegible]

Hydrography was accomplished at the entrance to Chesapeake Bay under the following circumstances: Project 02-380, dated 27 February 1954; Amendment to Project 02-380, dated 19 April 1954; and Supplemental Instrumentation, dated 19 April 1954.

SECRETARY OF DEFENSE

1. The above information was obtained from a confidential source who has provided reliable information in the past.

1978 03 01 11 00 00 000

Latitude	Longitude	Location
36-58 N	101-01 W	Northwest corner
36-58 N	101-01 W	Northwest corner
36-58 N	101-01 W	Northwest corner
36-58 N	101-01 W	Northwest corner
36-58 N	101-01 W	Northwest corner

1941-42; 1942-43; 1943-44; 1944-45; 1945-46; 1946-47; 1947-48; 1948-49; 1949-50; 1950-51; 1951-52; 1952-53; 1953-54; 1954-55; 1955-56; 1956-57; 1957-58; 1958-59; 1959-60; 1960-61; 1961-62; 1962-63; 1963-64; 1964-65; 1965-66; 1966-67; 1967-68; 1968-69; 1969-70; 1970-71; 1971-72; 1972-73; 1973-74; 1974-75; 1975-76; 1976-77; 1977-78; 1978-79; 1979-80; 1980-81; 1981-82; 1982-83; 1983-84; 1984-85; 1985-86; 1986-87; 1987-88; 1988-89; 1989-90; 1990-91; 1991-92; 1992-93; 1993-94; 1994-95; 1995-96; 1996-97; 1997-98; 1998-99; 1999-00; 2000-01; 2001-02; 2002-03; 2003-04; 2004-05; 2005-06; 2006-07; 2007-08; 2008-09; 2009-10; 2010-11; 2011-12; 2012-13; 2013-14; 2014-15; 2015-16; 2016-17; 2017-18; 2018-19; 2019-20; 2020-21; 2021-22; 2022-23; 2023-24; 2024-25; 2025-26; 2026-27; 2027-28; 2028-29; 2029-30; 2030-31; 2031-32; 2032-33; 2033-34; 2034-35; 2035-36; 2036-37; 2037-38; 2038-39; 2039-40; 2040-41; 2041-42; 2042-43; 2043-44; 2044-45; 2045-46; 2046-47; 2047-48; 2048-49; 2049-50; 2050-51; 2051-52; 2052-53; 2053-54; 2054-55; 2055-56; 2056-57; 2057-58; 2058-59; 2059-60; 2060-61; 2061-62; 2062-63; 2063-64; 2064-65; 2065-66; 2066-67; 2067-68; 2068-69; 2069-70; 2070-71; 2071-72; 2072-73; 2073-74; 2074-75; 2075-76; 2076-77; 2077-78; 2078-79; 2079-80; 2080-81; 2081-82; 2082-83; 2083-84; 2084-85; 2085-86; 2086-87; 2087-88; 2088-89; 2089-90; 2090-91; 2091-92; 2092-93; 2093-94; 2094-95; 2095-96; 2096-97; 2097-98; 2098-99; 2099-00; 2100-01; 2101-02; 2102-03; 2103-04; 2104-05; 2105-06; 2106-07; 2107-08; 2108-09; 2109-10; 2110-11; 2111-12; 2112-13; 2113-14; 2114-15; 2115-16; 2116-17; 2117-18; 2118-19; 2119-20; 2120-21; 2121-22; 2122-23; 2123-24; 2124-25; 2125-26; 2126-27; 2127-28; 2128-29; 2129-30; 2130-31; 2131-32; 2132-33; 2133-34; 2134-35; 2135-36; 2136-37; 2137-38; 2138-39; 2139-40; 2140-41; 2141-42; 2142-43; 2143-44; 2144-45; 2145-46; 2146-47; 2147-48; 2148-49; 2149-50; 2150-51; 2151-52; 2152-53; 2153-54; 2154-55; 2155-56; 2156-57; 2157-58; 2158-59; 2159-60; 2160-61; 2161-62; 2162-63; 2163-64; 2164-65; 2165-66; 2166-67; 2167-68; 2168-69; 2169-70; 2170-71; 2171-72; 2172-73; 2173-74; 2174-75; 2175-76; 2176-77; 2177-78; 2178-79; 2179-80; 2180-81; 2181-82; 2182-83; 2183-84; 2184-85; 2185-86; 2186-87; 2187-88; 2188-89; 2189-90; 2190-91; 2191-92; 2192-93; 2193-94; 2194-95; 2195-96; 2196-97; 2197-98; 2198-99; 2199-00; 2200-01; 2201-02; 2202-03; 2203-04; 2204-05; 2205-06; 2206-07; 2207-08; 2208-09; 2209-10; 2210-11; 2211-12; 2212-13; 2213-14; 2214-15; 2215-16; 2216-17; 2217-18; 2218-19; 2219-20; 2220-21; 2221-22; 2222-23; 2223-24; 2224-25; 2225-26; 2226-27; 2227-28; 2228-29; 2229-30; 2230-31; 2231-32; 2232-33; 2233-34; 2234-35; 2235-36; 2236-37; 2237-38; 2238-39; 2239-40; 2240-41; 2241-42; 2242-43; 2243-44; 2244-45; 2245-46; 2246-47; 2247-48; 2248-49; 2249-50; 2250-51; 2251-52; 2252-53; 2253-54; 2254-55; 2255-56; 2256-57; 2257-58; 2258-59; 2259-60; 2260-61; 2261-62; 2262-63; 2263-64; 2264-65; 2265-66; 2266-67; 2267-68; 2268-69; 2269-70; 2270-71; 2271-72; 2272-73; 2273-74; 2274-75; 2275-76; 2276-77; 2277-78; 2278-79; 2279-80; 2280-81; 2281-82; 2282-83; 2283-84; 2284-85; 2285-86; 2286-87; 2287-88; 2288-89; 2289-90; 2290-91; 2291-92; 2292-93; 2293-94; 2294-95; 2295-96; 2296-97; 2297-98; 2298-99; 2299-00; 2300-01; 2301-02; 2302-03; 2303-04; 2304-05; 2305-06; 2306-07; 2307-08; 2308-09; 2309-10; 2310-11; 2311-12; 2312-13; 2313-14; 2314-15; 2315-16; 2316-17; 2317-18; 2318-19; 2319-20; 2320-21; 2321-22; 2322-23; 2323-24; 2324-25; 2325-26; 2326-27; 2327-28; 2328-29; 2329-30; 2330-31; 2331-32; 2332-33; 2333-34; 2334-35; 2335-36; 2336-37; 2337-38; 2338-39; 2339-40; 2340-41; 2341-42; 2342-43; 2343-44; 2344-45; 2345-46; 2346-47; 2347-48; 2348-49; 2349-50; 2350-51; 2351-52; 2352-53; 2353-54; 2354-55; 2355-56; 2356-57; 2357-58; 2358-59; 2359-60; 2360-61; 2361-62; 2362-63; 2363-64; 2364-65; 2365-66; 2366-67; 2367-68; 2368-69; 2369-70; 2370-71; 2371-72; 2372-73; 2373-74; 2374-75; 2375-76; 2376-77; 2377-78; 2378-79; 2379-80; 2380-81; 2381-82; 2382-83; 2383-84; 2384-85; 2385-86; 2386-87; 2387-88; 2388-89; 2389-90; 2390-91; 2391-92; 2392-93; 2393-94; 2394-95; 2395-96;

11/24/74 ON JAGGS' .

On the basis of the above, the following conclusions were drawn:

NOIT/TS THERMUS MA 2017 .

The tide station at Knapoake Beach was used for the collection of soundings. The boat sheet soundings were based on a reduced datum, and final reduction made by using observed tides as submitted by the Hydrographic Office.

There was no investigation of the

ETWINE TADU .

.. Shoran calibration sheet (31" x 24" aluminum topography) was furnished by  
.. Norfolk Processing Office.

## 340174Z 1052400 . 3

There is no evidence that the stations were used as a means of communication.

SEAVIEW  
GARDEN  
1941  
1942  
1943 - 1944

THEODORE A. SULLIVAN

no shoreline or topography was needed for this survey.

## H. SOUNDINGS

Soundings were obtained using Submarine Signal Company type 808-J fathometers. Standard procedure was used in obtaining corrections by bar check. These corrections have been completed, checked, and entered in the sounding volumes.

Leadline comparison soundings and bottom characteristics were obtained in accordance with the Hydrographic Manual.

## I. CONTROL OF HYDROGRAPHY

Calibration of Shoran equipment was by visual sextant fix comparisons. The three point sextant fix with check angle was carefully plotted on the aluminum mounted sheet. Scaled Shoran distances were then directly compared with those companion distances read at the instant of sextant fix marking.

At the beginning of the work a number of trial comparisons between sextant fix positions and Shoran positions were made for zero adjustment at the shore stations. Once this adjustment was considered satisfactory at both stations, no further change of this adjustment was made.

The initial calibration was then made, using about 10 comparative readings. Three additional calibrations were made as the work progressed. Two were taken, one before and one after, when moving station GARRETT to SEAVIEW. A final calibration was made on the last day of Shoran hydrography.

An abstract of the actual values of these corrections is appended to this report. Corrections have been entered and checked in the sounding volumes.

## J. ADEQUACY OF SURVEY

The area of this survey is complete within it's own limit, but the project remains uncompleted. Junctions with the adjoining launch work on sheet BN-1154 are satisfactory. *H 8217(1954)*

## K. CROSSLINES

Between 8 - 10 % of crosslines were run as an 'X' pattern with periodic stops for bottom characteristics.

## L. COMPARISON WITH PRIOR SURVEYS

Comparison with prior surveys as listed in paragraph B of this report show general agreement.

Results of the Preliminary Review, dated 23 February 1954, follow:

- Item No. 1 - See copy of attached report letter, dated 9 June 1954. ✓
- Item No. 2 - A general depth of between 18 to 20 feet was found over the area of this item. The system of hydrographic lines should not be considered as final proof whether or not a wreck is located at this point. *63°02.4' N 75°56.2' W* *76 Re-view. Retain on Chart*
- Item No. 3 - General depths between 24 to 28 feet were found in this area. No indication of the wreck was found. *Retain on Chart* *see P5 REVIEW*
- Unnumbered Item - The 14 foot sounding on H-6438 W.D. was not verified, although the area was closely developed. The new survey shows depths between 21 to 26 feet. *14ft carried forward to H-8218*

#### M. COMPARISON WITH CHART

Comparison was made with a copy of Chart 1222, corrected to May 31, 1954, and Chart 481, corrected to May 10, 1954.

See Item No. 1, paragraph 'L' of this report for information on the wrecks and buoys at latitude 36°-57.6', longitude 76°-00.5'. Also, refer to Acting Director's letter 83 Jec, CL-540 (1954), dated 17 June 1954. (L-5401454) ✓

The location of a 12 foot shoal at Latitude 37°-01.93' N, Longitude 75°-54.80' W, was reported in letter dated 28 June 1954. A reply by the acting Assistant Director, 83 jec, CL-591 (1954) was dated 9 July 1954. This 12 foot shoal occurs at a general charted depth of 18 feet on the chart. //

→ (13-16 ft on H-8218)

#### N. DANGERS AND SHOALS

Refer to the last paragraph of section 'M' of this report for a report on a dangerous shoal. ✓

#### P. AIDS TO NAVIGATION

A list of floating aids to navigation is attached. ✓

Respectfully submitted,

*Harold J. Seaborg*

Harold J. Seaborg  
Commander, USC&GS,  
Comdg. Ship BOWEN.  
CHIEF OF PARTY.

Ship BOWEN  
418 Post Office Building,  
Norfolk 10, Va.

9 June 1954.

TO: The Director,  
U.S. Coast and Geodetic Survey,  
Department of Commerce,  
Washington 25, D. C.

SUBJECT: Location and Depths on Sunken Wreck, Entrance to Chesapeake Bay.

REFERENCE: (a) Instructions - project CS-370, dated 25 February 1954;  
(b) Item No. 1, preliminary review for above project.

On 3 and 4 June 1954 the Ship BOWEN made a hydrographic investigation of the area covered by Item No. 1, Reference (b), above. Shore controlled hydrography, with line spacing between 50 and 75 meters, was accomplished over the charted 37 foot wreck, and also over the sunken wreck symbol just northeast of bell buoy 'CH', Latitude  $36^{\circ}-57'$  plus 870 meters, Longitude  $76^{\circ}-00'$  plus 1172 meters. The position of bell buoy 'CH' is from this survey.

Evidence of only one wreck was found in this area. Four separate and distinct fathometer soundings were obtained on the wreck, namely 43.0, 44.0, 45.0, and 45.5 feet reduced to M.L.W. by predicted tides at Kiptopeke Beach. The general bottom is between 58 - 65 feet. The four soundings are closely grouped, indicating the same wreck, and the boatest position follows:

Latitude:  $36^{\circ}-57'$  plus 1070 meters  
Longitude:  $76^{\circ}-00'$  plus 998 meters

*42.0' (actual tide)  
46.0' plotted on smooth  
sheet H-8218*

The position of a yellow can mooring buoy nearby is:

Latitude:  $36^{\circ}-57'$  plus 1120 meters  
Longitude:  $76^{\circ}-00'$  plus 1314 meters

The two yellow buoys, one north and one south of the sunken wreck symbol, as shown on Chart 481 corrected to April 19, 1954, have been removed.

*Carried forward from H-7028 (1950) 38 hang (cleared by 37).*

Harold J. Seaborg,  
Commander, USCGS,  
Comdg. Ship BOWEN.

c/c Supervisor, SE District

T I D A L   N O T E

Hourly heights for the area covered by this survey were furnished  
by the Washington Office for station Kiptopeke Beach.

Latitude: 37°-10'

Longitude: 75°-59'



STATISTICS FOR HYDRO SURVEY H -  
(FIELD) BN - 4154  
U.S.C. & G.S. Ship B O W E N  
CS - 370

<u>Date</u>	<u>Day</u>	<u>Volume</u>	<u>Number of</u>	<u>Detached</u>	<u>Statute Miles</u>
<u>1954</u>	<u>Letter</u>	<u>Number</u>	<u>Positions</u>	<u>Positions</u>	<u>of Sounding</u>
May 24	A	1 & 2	72	0	36.8
25	B	2 & 3	161	0	79.9
26	C	3 & 4	187	7	74.4
27	D	4	180	0	69.5
28	E	4 & 5	111	4	36.3
June 2	F	5	186	0	52.9
3	G	5 & 6	163	3	50.4
4	H	6	153	0	57.1
7	J	6 & 7	148	2	52.4
8	K	7	166	0	48.8
9	L	7 & 8	55	0	19.8
14	M	8	150	2	28.7
21	N	8 & 9	86	0	32.1
22	P	10	54	1	16.1
23	Q	9	143	0	65.8
24	R	11	153	0	50.3
25	S	11	99	0	42.7
29	T	11 & 12	88	0	46.0
30	U	12	121	0	50.4
July 2	V	12	63	0	34.5
7	W	13	135	15	52.5
8	X	13	112	2	44.5
13	Y	14	105	0	41.9
14	Z	14	141	1	76.7
15	AA	15	101	0	45.5
16	BA	15	92	0	33.4
19	CA	15 & 16	104	0	52.0
TOTALS -			3,329	37	1,291.4

AREA: 60.8 Square Statute Miles

PROCESSING OFFICE  
FLOATING AIDS TO NAVIGATION  
H-8218

<u>LIGHT LIST</u>	<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>DEPTH</u>	<u>POS. NO.</u>	<u>DATE</u>
N. Chan. Entr. Buoy 4	37-02.81	75-27.52 <sup>57.23</sup>	35	2J	6/7/54
N. Chan. Entr. Buoy 2	37-02.15 <sup>28</sup>	75-56.20 <sup>28</sup>	31	1J	"
N. Chan. Entr. Buoy 2A	<del>Not located</del> (C-day) Located, see Vol. No. 4, pg. 5, pos. 142				
Middle Ground South end Ltd. Bell Buoy 4	37-00.22	75-55.80	25	1Z	7/14/54
Cape Henry Buoy 1	36-54.95	75-57.90	34	24X	7/8/54
Cape Henry Junction Ltd. Whistle Buoy	36-56.50	75-55.40	41	1P8	6/22/54
Middle Ground Bank Ltd. Bell Buoy 2A	36-57.41	75-58.22	75	1420	5/26/54
Tail Of The Horseshoe Chan. Ltd. Whistle Buoy 2TH	36-58.10	75-59.50	40	141C	"
Tail Of The Horseshoe Chan. Ltd. Buoy 1 TH	36-58.28	75-59.95	41	140C	"
Tail Of The Horseshoe Chan. Ltd. Bell Buoy 3TH	36-58.63	76-00.20	40	139C	"
Tail Of The Horseshoe Chan. Ltd. Buoy 4TH	36-58.60	75-59.85	42	138C	"
Tail Of The Horseshoe Shoal Ltd. Bell Buoy 2T	36-58.41	76-02.23	36	130C	"
Tail Of The Horseshoe Buoy D	36-59.25	76-04.19	26	1G	6/3/54
Tail Of The Horseshoe Obstr. (Bell) Buoy	36-59.61	76-06.38	20	1C	5/26/54
Cape Henry Wreck Ltd. Bell Buoy CH	36-57.46	76-00.79	64	2G	6/3/54
Pilot Mooring Buoy C-4239	36-57.61	76-00.89		4G	"

*this word Bell does not  
appear on any of our charts,  
D. J. K.*

PROCESSING OFFICE  
CHART COMPARISONS

CHART 1222 (Revised 3/4/57)

<u>LATITUDE</u>	<u>LONGITUDE</u>	<u>SMOOTH SHEET</u>	<u>CHART</u>	<u>POSITION</u>
37-10.00	75-47.38	16' 17'	17'	27-28U
37-06.62	75-50.19	17' 18'	21 to 23'	39-40U
37-02.60	75-57.70	✓ 27'	42'	95-96M
37-03.40	75-53.42	22'	18'	
37-04.34	75-51.62	18' 19'	19'	
37-01.13	75-54.60	✓ 23'	27 to 34'	
37-00.53	75-55.46	17'	23'	
37-00.36	75-56.00	-	P11e	
36-59.90	75-56.13	22' 23'	28'	
36-59.16	75-56.62	24'	27'	

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURTO BE CHARTED  
~~RECOMMENDED~~

STRIKE OUT ONE

NONFLOATING AIDS ~~RECOMMENDED~~ FOR CHARTS

Chesapeake Bay Entrance

25 July

19 54

I recommend that the following objects which have ~~(nonexistent)~~ been inspected from seaward to determine their value as landmarks, be charted on ~~(deleted chart)~~ the charts indicated.

The positions given have been checked after listing by R. H. Houlder

SEE Processing Office List

Harold J. Seaborg

Chief of Party

STATE	CHARTING NAME	DESCRIPTION	SIGNAL NAME	POSITION				METHOD OF LOCATION AND SURVEY	DATE OF LOCATION	HARBOR CHART			CHARTS AFFECTED
				LATITUDE ° ' " D. M. METERS	LONGITUDE ° ' " D. M. METERS	DATUM							
	1 C	R. B. bell buoy "N"		36 - 59	29	76 - 06	26	1927	Shoran	5/26/54	X		1222
	130 C	Tail of the Horseshoe Shoal R. lighted bell buoy "2T"		36-58	25	72-02	14	"	"	"	X		"
	138 C	Fl. R. buoy "4TH"		37-58	36	75-59	51	"	"	"	X		"
	139 C	Black lighted bell buoy "3TH"		37-58	42	76-00	12	"	"	"	X		"
	140 C	Black lighted buoy "1TH"		37-58	18	76-00	00	"	"	"	X		"
	141 C	Red lighted whistle buoy "2TH"		37-58	6	75-59	30	"	"	"	X		"
	142 C	Middle ground lighted bell buoy R"2A"		37-57	24	75-58	12	"	"	"	X		"
	1 G	Red & white nun buoy		36-59	25	76-04	11	"	"	6/3/54	X		"
	2 G	Cape Henry wreck lighted bell buoy R"CH"		36-57	46	76-00	47	"	"	"	X		"
	4 G	Yellow can buoy, pilot mooring (G4239)		36-57	33	76-00	8	"	"	"	X		"
	1 J	Red buoy "2"		37-02	15	76-56	13	"	"	"	X		"
	2 J	Red buoy "4"		37-02	47	76-57	13	"	"	"	X		"
	1 P	Red & Black lighted whistle buoy		36-56	30	75-55	24	"	"	6/22/54	X		"
OFF SHEET	54 P	Chesapeake Bay Entrance lighted whistle buoy "2CB"		36-51	47	75-51	0	"	"	"	X		2

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating* aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURV.

## MANIPULATING AIDS ORIENTED IDEAS FOR CHARTS

**TO BE CHARTED**

**STRIKE OUT ONE**

CHESAPEAKE BAY 25 July, 1954

I recommend that the following objects which have (~~been~~<sup>have</sup>) been inspected from seaward to determine their value as landmarks, be charted on (~~the~~<sup>these</sup>) the charts indicated.

The positions given have been checked after listing by \_\_\_\_\_ R. H. Houlder \_\_\_\_\_

SEE Processing Office List

Harold J. Seaborg

*Chief of Party.*

[illegible]

This form shall be prepared in accordance with Hydrographic Manual, pages 800 to 804. Positions of charted landmarks and *nonfloating* aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

ADDENDUM  
To Accompany

HYDROGRAPHIC SURVEY H-8218 (Field No. Bn-4154)

GENERAL

This appears to be an excellent basic survey and no unusual conditions were encountered during the smooth plot. Permission was given by the Washington Office to change the scale of the smooth sheet to 1:25,000 in order to avoid un-due congestion of soundings and position numbers. *See #7 of Review*

SOUNDINGS

The soundings on crossline day "W" average about 1 foot deeper than surrounding hydrography. No reason could be found for this discrepancy. Soundings on the other days are in generally good agreement considering the sea conditions prevailing during the time of the survey. *See #7 of Review*

All fathograms were check scanned and the soundings reduced by template in the Processing Office. Squat corrections were applied to all soundings as follows:

*See #7 of Review* \*  $\begin{pmatrix} \pm 0.4' & 0.0' \text{ to } 15.0' \\ \pm 0.2' & 15.0' \text{ to End} \end{pmatrix}$

INSERTS

Development shown on the East edge of the boat sheet was smooth plotted in an insert. This was accomplished by enlarging the boat sheet, shoran curves on a projector and transferring them to the insert on the smooth sheet.

\* Descriptive report for H-7750 (1942-50) has a Tabulated report on settlement + squat that should have been used in conjunction with this Survey. D.J.K. Verifier

Norfolk, Va.  
6 August 1957

Respectfully submitted,

*Hugh L. Proffitt*  
Hugh L. Proffitt  
Cartographer.

## GEOGRAPHIC NAMES

Survey No. H-8218

GEOGRAPHIC NAMES											
Survey No. H-8218											
Name on Survey											
	A	B	C	D	E	F	G	H	K		
Virginia			(for title)						BGN	1	
Chesapeake Bay			( " )						"	2	
Cape Charles			( " )							3	
Cape Henry										4	
Tail of the Horseshoe				(shoal)						5	
Fisherman Island									BGN	6	
Smith Island									"	7	
										8	
										9	
										10	
										11	
Kiptopeke				(tide station)					BGN	12	
										13	
										14	
										15	
										16	
										17	
										18	
										19	
										20	
										21	
										22	
										23	
										24	
										25	
										26	
										27	

M 234

# Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8213....

## Records accompanying survey:

Boat sheets ...1...; sounding vols. .16...; wire drag vols. ....; bomb vols. ....; graphic recorder rolls 21-Envelopes special reports, etc. 1-Smooth sheet and 1-Descriptive report.. 1-Cable. Fathometer and Shore Corrections.....

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

Number of positions on sheet

3368

Number of positions checked

100

Number of positions revised

1

Number of soundings revised  
(refers to depth only)

3383

Number of soundings erroneously spaced

*It was necessary to check the spacing of numerous soundings particularly on lines that fell close to another line or directly on top of another line. D.J.K.*

Number of signals erroneously plotted or transferred

0

Topographic details

Time 8 hrs.

Junctions

Time 20 hrs.

Verification of soundings from graphic record

*126 sds were rescanned from the fathograms in order to verify the numerous shoul sds. D.J.K.*

Verification by *D.J. Kennon* ..... Total time 55.3 Date 1-22-59

Reviewed by *M. Gestlund* ..... Time 9.8 Date 5-15-59

V DRE



DIVISION OF CHARTS

Review Section - Nautical Chart Branch

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY No. H-8218

Virginia, Chesapeake Bay Entrance

Field No. BN-4154

Surveyed - May-July 1954

Scale: 1:25,000

Project No. CS-370

Soundings:

Control:

808 Depth Recorder

Shoran

Chief of Party - H. J. Seaborg

Surveyed by - H. J. Seaborg, J. R. Plaggmier and R. Houlder

Protracted by - A. G. Atwill

Soundings plotted by - A. G. Atwill

Verified and inked by - D. J. Kennon

Reviewed by - I. M. Zeskind

Inspected by - R. H. Carstens

Date: 15/May 1959

1. Shoreline and Control

The shoreline originates with unreviewed air-photographic surveys T-11247 and T-11248 of 1953-55, and reviewed air-photographic surveys T-8180 (1942) and T-8301 (1942-44).

The source of the control is given in the Descriptive Report.

2. Sounding Line Crossings

Depths at crossings are in adequate agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves supplemented by 24 and 36-ft. curves were adequately delineated.

The bottom of that portion of the survey which lies between Fisherman Island and Cape Henry is very irregular. North of Fisherman Island the bottom is fairly smooth except in the vicinity of lat.  $37^{\circ}10.0'$ , long.  $75^{\circ}48.0'$  where some bottom irregularity is noted. Submarine features such as shoals, deeps, troughs and ridges contribute to the bottom irregularity.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-8217 (1954) south of Fisherman Island. Elsewhere no contemporary surveys join the present survey. Charted depths at the limits of the present survey are in adequate agreement with present depths.

5. Comparison with Prior Surveys

a.	H-286 (1851)	1:20,000	H-2551 (1901)	1:60,000
	H-345 (1852)	1:20,000	H-2759 (1905)	1:80,000
	H-364 (1852)	1:40,000	H-3415 (1912-13)	1:40,000
	H-397 (1853)	1:40,000	H-3768 (1915)	1:40,000
	H-520 (1855)	1:40,000	H-4089 (1919)	1:40,000
	H-1873 (1881)	1:20,000	H-4193 (1921)	1:40,000
	H-1873a (1911)	1:40,000	H-4194 (1921)	1:40,000
	H-2064 (1891)	1:20,000	H-4926 (1929)	1:20,000

South of approximate lat.  $37^{\circ}05'$  the above listed surveys have been considered in the reviews of H-6595 (1940) and H-7750 (1948-50) and are superseded by these surveys within their common area.

Surveys H-364, H-1873 and H-3768 also cover the area approximately north of lat.  $37^{\circ}05.0'$ . A comparison between these prior surveys and the present survey reveals in general differences in depths of 2-4 feet, except in several areas where the differences are greater. An example of these latter differences in depths occurs in lat.  $37^{\circ}06.50'$ , long.  $75^{\circ}48.77'$  where a prior depth of 33 ft. falls in present depths of 26 ft. The deep on the present survey in the vicinity of lat.  $37^{\circ}04.7'$ , long.  $75^{\circ}54.0'$ , formerly extended about 600 meters further northeastward with corresponding differences in depths.

A few bottom characteristics have been carried forward from H-364 to the present survey. With the addition of these bottom characteristics, the present survey is adequate to supersede the prior surveys within the common area which lies north of approximately lat.  $37^{\circ}05.0'$ .

b.	H-5990 (1935)	1:40,000
	H-6595 (1940)	1:40,000
	H-7750 (1948-50)	1:40,000

These prior surveys cover the southern half of the present survey. A comparison between the prior and present surveys reveals, in general, only minor 1-3 ft. differences in depths, except in the area which lies between lat.  $36^{\circ}59.0'$  and lat.  $37^{\circ}02.0'$  and west of long.  $75^{\circ}53.0'$ , where differences in depths of as much as 9 ft. are noted. An example of these differences occurs in lat.  $37^{\circ}01.65'$ , long.  $75^{\circ}54.23'$  where

a prior depth of 32 ft. falls in present depths of 23-25 ft.

Several bottom characteristics have been carried forward from prior survey H-6595 (1940). With the addition of these bottom characteristics, the present survey is adequate to supersede the prior surveys within the common area.

- c. H-6438 WD (1939) 1:40,000
- H-6976 WD (1945-47) 1:40,000
- FE-3, 1949 WD, 1:40,000
- H-7028 WD (1950) 1:20,000

There are no conflicts between the effective wire-drag depths on the prior surveys and the present survey depths. A few depths at which groundings on wrecks or obstructions occurred on the prior wire-drag surveys, have been carried forward to the present survey. The area on H-6438 WD in the vicinity of lat.  $37^{\circ}02.0'$ , long.  $75^{\circ}56.5'$ , which was developed by hydrography, reveals differences in depths of as much as 6 ft. As for example, in lat.  $37^{\circ}02.30'$ , long.  $75^{\circ}56.43'$  where a prior depth of 30 ft. falls in present depths of 36 ft.

1. A wreck originally charted in lat.  $37^{\circ}03.3'$ , long.  $75^{\circ}51.2'$ , from HON to M 16, 1924, was subsequently cleared on FE 3, 1949 by wire drags set to effective depths of 23 ft. and 24 ft. Present soundings furnish no additional information regarding the existence of the wreck. The 23 ft. and 24 ft. cleared wire-drag depths have been charted in accordance with present cartographic practice. (See Instructions, Chief of Chart Division, dated 8 May 1958).

2. The cleared depth of 15 ft. charted in lat.  $37^{\circ}02.4'$ , long.  $75^{\circ}56.2'$  from H-6438 WD (1939) over the wreck reported by fisherman as noted in the Descriptive Report of that survey should be retained on the chart until disproved by wire drag. Some shoaling is indicated on the present survey in this area.

The cleared wire-drag depths obtained by surveys of this Bureau over several wrecks or obstructions which could not be found are charted without descriptive notations such as "wreck" or "obstruction" in accordance with Instructions, Chief of Chart Division, dated 8 May 1958 and do not appear on the present survey.

The present survey is adequate to supersede the above-mentioned hydrography of the prior survey H-6438 within the common area. All groundings have been carried forward to the present survey.

Tree Inert  
Amended  
500 memo  
25 May 1958  
RFE

6. Comparison with Chart 481 (Latest print date 12-15-58)  
Chart 1222 (Latest print date 10-6-58)

A. Hydrography

The charted hydrography originates with the previously discussed prior surveys which need no further consideration, chart letter 951 (1950) and other sources, supplemented by soundings from the present survey prior to verification and review. Only minor 2-4 ft. differences in depths are noted between the charted and present survey depths. Attention, however, is directed to the following:

1. The sunken wreck (seaplane) charted in lat.  $37^{\circ}01.3'$ , long.  $75^{\circ}53.6'$ , from H.O. Wreck List of 1957, was charted subsequent to the present survey. The wreck should be retained on the chart until disproved by wire drag. Depths of 28-30 ft. are found here on the present survey.
2. The submerged pile charted in lat.  $37^{\circ}00.44'$ , long.  $75^{\circ}55.88'$ , from HON to M 4, 1956, subsequent to the present survey should be retained on the chart until disproved by wire drag or is removed. The submerged pile is the remains of a structure which formerly supported a light.
3. The 24-ft. sounding, Rep. 1956, charted in lat.  $36^{\circ}57.6'$ , long.  $75^{\circ}55.5'$ , originates with chart Letter 742, 1956, and was charted subsequent to the present survey. Depths of 25-27 ft. were obtained on the present survey in 1954 in the vicinity of the charted 24 ft.

The present survey is adequate to supersede the charted hydrography within the common area.

B. Dredged Channels

The charted controlling depth of 38 ft. in the dredged channel in the vicinity of lat.  $36^{\circ}58.5'$ , long.  $76^{\circ}00.0'$ , originates with the present survey.

C. Aids to Navigation

The present survey positions of aids to navigation are in substantial agreement with the charted positions and adequately mark the features intended, except as follows:

- (1) The obstruction buoy charted in lat.  $36^{\circ}57.34'$ , long.  $75^{\circ}58.20'$  is not shown on the present survey. It originates with HON to M 29, 1957, and was charted subsequent to the present survey.
- (2) Bell buoy "2A" charted in lat.  $36^{\circ}57.3'$  long.  $75^{\circ}58.4'$  falls on the present survey about 350 meters northeast of its charted position. Its charted position better marks a nearby obstruction.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete and comprehensive.
- b. The smooth plotting was accurately done, except that in resolving certain discrepancies it was found that erroneous settlement and squat corrections had been applied in the Processing Office. Revisions were made in some soundings where necessary to show a more accurate determination of the depths.
- c. Revisions in the high water line were made by the verifier in order to reflect new air photographic surveys available at the time of verification.

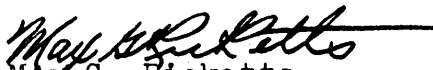
8. Compliance with Project Instructions

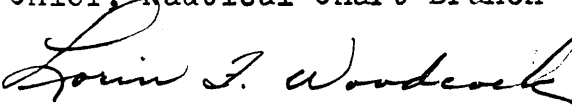
The survey adequately complies with the Project Instructions.

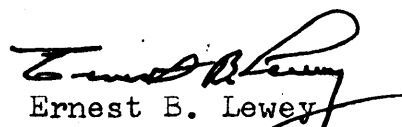
9. Additional Field Work Recommended

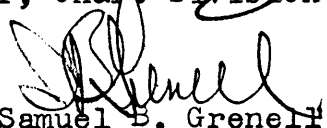
This survey is considered basic and no additional field work is recommended.

Examined and Approved:

  
Max G. Ricketts  
Chief, Nautical Chart Branch

  
Lorin F. Woodcock  
Chief, Hydrographic Branch

  
Ernest B. Lewey  
Chief, Chart Division

  
Samuel B. Grenell  
Chief, Coastal Surveys Div.

TIDE NOTE FOR HYDROGRAPHIC SHEET

Chart Division: R. H. Carstens

8 October 1957

Plane of reference approved in  
16 volumes of sounding records for

HYDROGRAPHIC SHEET 8218

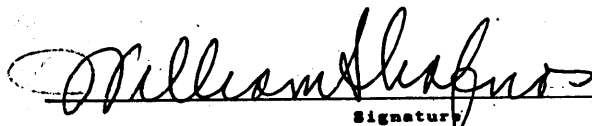
Locality Chesapeake Bay, Va.

Chief of Party: H. J. Seaborg in 1954

Plane of reference is mean low water, reading  
2.9 ft. on tide staff ~~at~~ of 1951 at Kiptopeke Beach  
11.3 ft. below B.M. 1 (1951)

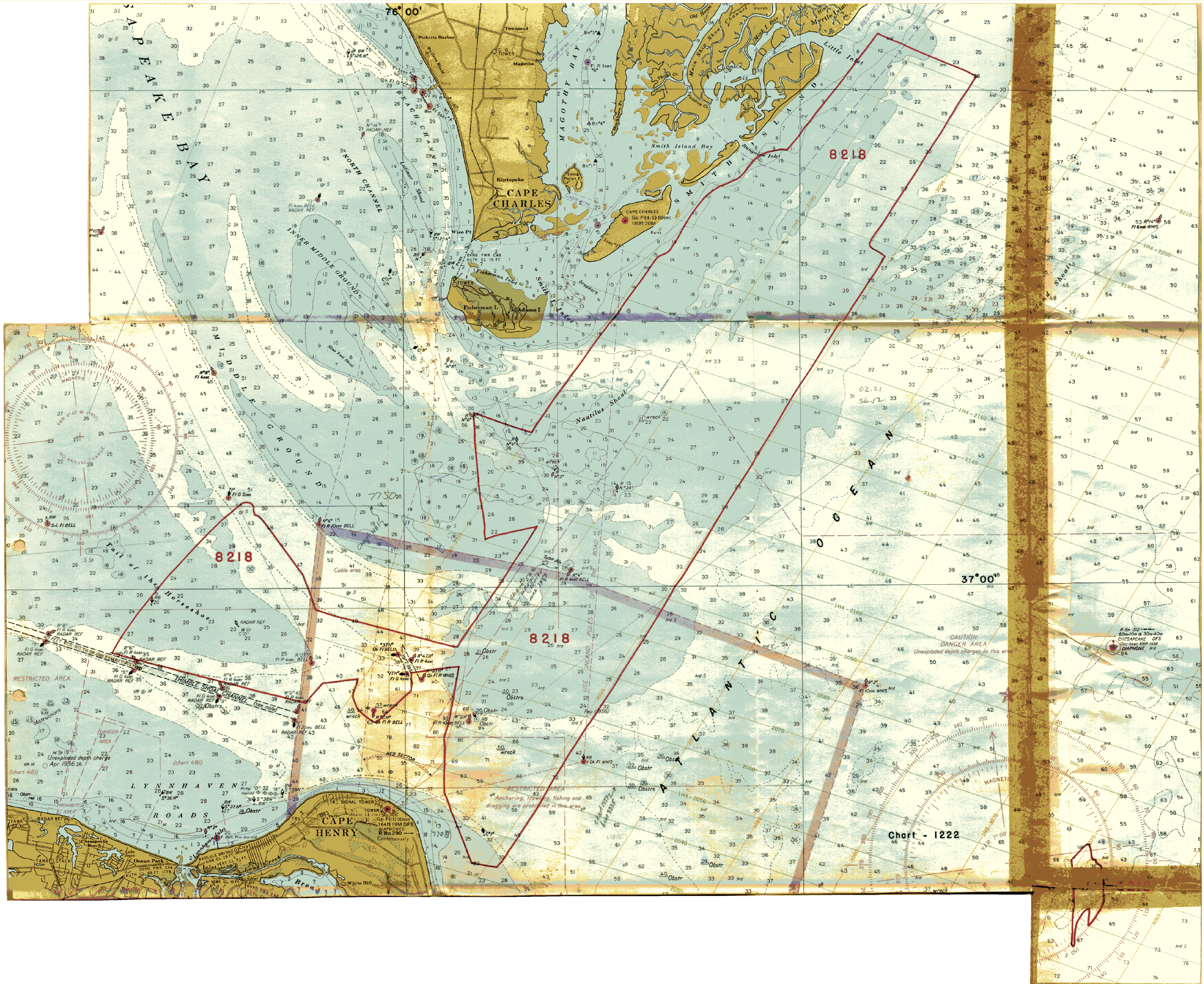
Height of mean high water above plane of reference is 2.7 feet.

Condition of records satisfactory except as noted below:

  
Signature

Chief, Tides Branch







# NAUTICAL CHARTS BRANCH

SURVEY NO. H-8218 *Review May 15/59*

## Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
11/1/57	1227	J. G. McGinn	Before <del>After</del> Verification and Review <i>Part. applied</i>
11/1/57	78	J. G. McGinn	Before <del>After</del> Verification and Review <i>Part. applied</i>
11-22-57	1222	RKD	" " " " " " <i>3MA</i>
			Before After Verification and Review
12/23/57	<sup>H-8</sup> 11940-25-2	J. G. McGinn	Before <del>After</del> Verification and Review <i>(Part. applied)</i>
4/14/58	Reconst 481	J. G. McGinn	Before <del>After</del> Verification and Review <i>(Partially)</i>
2-19-59	3335	J. M. A.	<i>no critical change</i> Before After Verification and Review <i>before</i> <i>Completely applied</i> <i>2-26-59 JMA</i>
Mar 4/59	1227	JMA	Before After Verification and Review <i>before</i> <i>via 3335 in part</i>
	1222	JMA	<i>Partial. Not considered as usual handling.</i> Before After Verification and Review <i>Only overlap from 1227 (south of 36°56')</i>
6/16/59	481	J. Walker	<del>Before</del> After Verification and Review <i>Completely</i>
7-10-59	1222	R. E. Elkins	<del>Before</del> After Verification and Review <i>Completely applied</i> <i>(a small area off thru chrt 562)</i> <i>(a small area was applied thru chrt. 481).</i>
7-10-59	1227	R. E. Elkins	<i>Completely applied after ver. and rev.</i> <i>JRKD</i> <i>thru chart 1222.</i>
7-10-59	562 (former layout)	R. E. Elkins	<i>Completely applied after ver. and rev.</i> <i>(West area applied thru chrt 481)</i>
4-6-62	562	R. E. Elkins	<i>Applied thru charts 562 (former),</i> <i>481, 3335, and H-8218.</i>
7/19/63	563	J. H. Eaton	<i>Comp. App'd.</i>
8/24/60	78	J. H. Hillan	<i>Fully thru chrt 1222 Aug '57 AFTER V &amp; R.</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.