

4089

Additional work 1940

4089

Additional work 1940

Form 504 Rev. Dec. 1933	
DEPARTMENT OF COMMERCE U.S. COAST AND GEODETIC SURVEY R. S. PATTON, DIRECTOR	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. H- 4809
State	Virginia
LOCALITY	
Entrance To Chesapeake Bay	
East of Cape Henry	
1940	
CHIEF OF PARTY	
F. L. Peacock	

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

REG. NO.

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.

Field No. _____

H5990 *H-4089*

REGISTER NO. _____

Additional work

State Virginia _____

General locality Entrance to Chesapeake Bay, ~~Atlantic Coast~~

Locality *East of Cape Henry*
off Entrance to Chesapeake Bay _____

Scale 1-40,000 Date of survey April 10, 19 40

Vessel Oceanographer _____

Chief of Party Fred. L. Peacock _____

Surveyed by C. D. Meaney and J. P. Lushene _____

Protracted by J. P. Lushene _____

Soundings penciled by J. C. Mathisson _____

Soundings in ~~fathoms~~ feet

Plane of reference M. L. W. _____

Subdivision of wire dragged areas by _____

Inked by *H.F. Stegman* _____

Verified by *H.F. Stegman* _____

Instructions dated March 26, 1940, 19 _____

Remarks: _____

DESCRIPTIVE REPORT
to accompany
Chesapeake Bay Entrance Sheet

1. Instructions

The work was executed in accordance with supplemental instructions of March 26, 1940, to investigate a report that a vessel drawing $26\frac{5}{4}$ feet touched bottom near the entrance to Chesapeake Bay on the following cross bearings: Cape Charles Light House, 352 degrees 45 minutes true; Cape Henry Light House, 263 degrees true.

Lat. $36^{\circ} 56.3'$
Long. $75^{\circ} 52.6'$

2. Survey Methods

After leaving Norfolk, Virginia on April, ¹⁰1940, enroute to the northern working grounds, a short line of soundings was run in this locality to investigate the depth of water and the possibility of shoaling as reported. From a definite departure at Cape Henry junction buoy (QK FL W Whistle) which is $4\frac{1}{2}$ miles eastward of Cape Henry Light, a line was run such that Cape Henry Light had a bearing of 263 degrees true. The line extended from the junction buoy to the Chesapeake Light Ship, and was controlled by visual three point fixes to position #14. The objects used for the fixes were: Cavalier Hotel, Virginia Beach; Cape Henry Light House; and Cape Charles Light House. Soundings were taken every thirty seconds with the Dorsey III fathometer and fixes recorded every two minutes. A profile of the sounding line was made by means of the Hughes Echo Recorder. Visual three point fixes were taken out to position #14 and the line to this point is excellently controlled; but since it was desirable to run beyond this point

Buoy moved
subsequently.

to the vicinity of the Light Ship, a combination of dead reckoning, bearings on aids to navigation, and fixes on buoy "2" and Chesapeake Light Ship was used. The positions of buoy "2" and the Light Ship were scaled from Chart 1222. Therefore the portion of the line from position #14 to the Light Ship should be treated as precise dead reckoning being controlled by time, bearings, and angles wherever obtainable. Pos. 17 to and not plotted.

3. Vertical Control

A serial and fathometer comparisons were taken at Lat. 36-56.26; Long. 75-55.70 in the vicinity of the line so as to correct the fathometer soundings. The soundings shown on the sheet are the final ~~corrected~~ soundings having been corrected for tide, temperature, salinity, draft, index and settlement. The tidal data was obtained from the Washington Office being scaled from the automatic tide gage records of the station at Old Point Comfort, Virginia.

4. Previous Surveys

The depths on the sheet are to the nearest foot having dropped the half feet. The depths vary from those shown on Chart 1222 by one and two feet. Had the soundings been shown on the sheet to the nearest half foot the variation would be about one and one half feet. Generally it can be said that the variation between the sheet and Chart 1222 is not materially different. The six fathom bank as shown on the chart should extend 0.3 to 0.4 miles farther north. Differences of 4 and 5 ft.

5. Remarks

The intersection of the bearing of 352 degrees and 45 minutes to Cape Charles Light House and 263 degrees to Cape Henry Light House falls on the sounding line and the depth recorded and reduced at the intersection is $35\frac{1}{2}$ feet. There appears to be no shoaling to the extent that a vessel drawing $26\frac{3}{4}$ feet would touch. It is hoped that this line is adequate to cover your instructions of March 26, 1940.

6. Statistics

Statute miles of sounding	11.0
Number of soundings	113
Number of positions	29

Respectfully Submitted

Joseph P. Lushéne
Joseph P. Lushéne
Jr. H. & G. Engr.

Approved:

Fred. L. Peacock
Fred. L. Peacock, Comdg.
Ship Oceanographer.

Field Records Section (Charts)

H4089
HYDROGRAPHIC SHEET NO. H5.990

Additional work 1940

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

Number of positions on sheet29
Number of positions checked9
Number of positions revised1
Number of soundings recorded113
Number of soundings revised1
Number of soundings erroneously spaced—
Number of signals erroneously plotted or transferred—

Date: June 21, 1940

Verification by H.F. Stegman

Time: 11 hrs.

Review by J.A.M. Cormick, 6/26/40.

Time: 4 hrs.

H4089

HYDROGRAPHIC SURVEY NO. H5990 Additional work *1940*

Smooth Sheet Yes

Boat Sheet No

Records; Sounding 1 Vols., Wire Drag Vols., Bomb Vols.

Descriptive Report Yes

Title Sheet Yes

List of Signals No

Landmarks for Charts (Form 567) No

Statistics No

Approved by Chief of Party Yes

Recoverable Station Cards (Form 524) ---

Special Chart for Lighthouse Service No
(Circular Nov.30, 1933)

Hydrography: Total Days 1 ; Last Date April 10, 1940

Remarks _____

GEOGRAPHIC NAMES

Survey No.

~~H5990~~

H4089

Name on Survey

	A. On Chart No.	B. On previous survey No.	C. On U. S. quadrangle Maps	D. From local information	E. On local Maps	F. P. O. Guide or Map	G. Rand McNally Atlas	H. U. S. Light List	K.
Chesapeake Bay									1
Cape Henry									2
									3
									4
									5
									6
									7
									8
									9
									10
									11
									12
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									25
									26
									27

LAC
HLL

TIDE NOTE FOR HYDROGRAPHIC SHEET

June 8, 1940

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. H. R. Edmonston

Tide Reducers are approved in
1 volumes of sounding records for

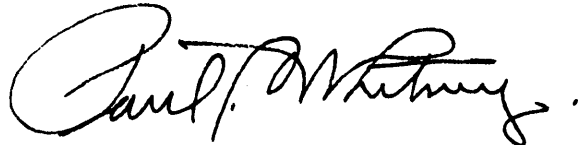
HYDROGRAPHIC SHEET 5990 additional work

Locality Chesapeake Bay Entrance

Chief of Party: Fred L. Peacock in 1940
Plane of reference is mean low water reading
2.8 ft. on tide staff at Old Point Comfort
10.6 ft. below B.M. 1

Height of mean high water above plane of reference is 2.5 feet

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY DESCRIPTIVE REPORT PHOTOSTAT OF	}	No. H H5990 No. T (Addl. Wk.) No. T 1940	{ received May 31, 1940 registered June 7, 1940 verified reviewed approved
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This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24	✓		
25	✓	<i>A.J.M.</i>	
26			
30			
40			
62			
63			
82			
83	✓		<i>Shoaling not found</i>
88			
90			

RETURN TO

82	T. B. Reed
----	-------------------

✓ *TBR*

VERIFICATION REPORT
ON H-4089 (ADD'L WK 1940)

This work consists of a single line of soundings run by the Ship Oceanographer on April 10, 1940 to investigate a reported depth of 27 feet or less. (A vessel drawing $26\frac{3}{4}$ feet had reported touching bottom at $\phi-36^{\circ}56.3' \lambda-75^{\circ}52.6'$)

The control for pos. 1-14A consisted of 3 pt fixes on triangulation stations. Pos 15-29A were located by log distances, bearings on Cape Henry Lt, and angles and bearings to buoy #2 and Chesapeake Light vessel. The latter two objects were plotted from the chart, and thus it was felt that the soundings after pos 16A were not sufficiently accurate in position to be inked on the smooth sheet. By instruction of the Chief of Section these soundings were not shown on the sheet. (H-4089)

The verifier verified the positions (1-29A) on the smooth sheet furnished by the field party, and then transferred them (with a datum correction) to H-4089 (1919). The position Nos were inked in blue. The datum correction

was very small at this scale (1:40,000) being about 0.4 mm. ✓

Soundings between pos 1-16A were inked in green. In general they are 1 to 5 feet shoaler than adjacent soundings of H-4089. However there is an uneven bottom in this locality and there are soundings of H-4089 (1919) in the vicinity of the 1940 line which are just as shoal as the 1940 soundings. ✓

The 1940 line of soundings crossed the reported position of the grounding (Cape Henry Lt bearing 263° T., Cape Charles Lt. bearing $352^{\circ}45'$ T) with soundings of 35 feet. ✓ This point is 330 meters south of a line of 40 ft soundings and 200 meters north of 38 ft and 39 ft soundings, all of H-4089 (1919).

The shoalest soundings obtained on the 1940 line were nine 34 ft soundings between $\lambda-75^{\circ}53'$ and $\lambda-75^{\circ}54'$, and just north of $\phi-36^{\circ}56'$. ✓

The 30 ft curve on H-4089 extends to $\phi-36^{\circ}58.6'$ and $\lambda-75^{\circ}53.0'$. From this pt. Cape Charles Lt bears 353° T., and Cape Henry Lt bears 243° T. This is 2.4 mi N.ward of the reported grd. ✓

There is a shoal on H-4089 with least depth of 32 ft, 2.4 mi Sward of the reported grounding, at

ϕ - $36^{\circ}54'$ λ - $75^{\circ}52.4'$. From this point Cape Charles Lt bears 353° T. and Cape Henry Lt bears 283° T. An extensive area on this shoal has soundings of 33 ft, with sounding lines spaced over 400 meters, and it appears possible that the 27 foot depth may exist there, at present.

June 21, 1940

Respectfully submitted

Harold F. Stegman

No connection Cht 78 - Same.

4089

4089

U.S. COAST AND GEODETIC SURVEY
JUN 15 1919
Acc. No.

4089

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: *Virginia*

11-5813

DESCRIPTIVE REPORT.

Hyd. Sheet No. *4089*

LOCALITY:

Entrance to
Chesapeake Bay.

1919

CHIEF OF PARTY:

Searan, H. A.

DESCRIPTIVE REPORT

to accompany

HYDROGRAPHIC SHEET No. _____

APPROACHES TO CHESAPEAKE BAY.

H. A. Seran, H. & G. Engineer,
Chief of Party.

Instructions dated June 3, 1919.

As this sheet covers an area accurately described in the various editions of the Coast Pilot, no description of the coast line and approaches is considered necessary. The landmarks are all noted on the present editions of the charts of this region.

OUTLYING DANGERS.

There is a 37 foot spot, hard sandy bottom, surrounded by 54 feet in Lat. 36 54' 30" N and Long. 75 42' 30" W. This spot is in the direct approach to Hampton Roads from either the North or East, and while it is shown on the present edition of Chart 1222, in my mind it constitutes a decided menace to navigation entering this port and should be either marked or removed. I think it would be well to move Cape Charles Light Vessel from its present location to this spot.

About 6 miles due East of the spot mentioned above, there is a broken area, least depth found 48 feet. This place needs further development with buoys placed to give accurate fixes. On our present charts we show a depth of 56 feet in this immediate vicinity.

There is a depth of 31 feet on a direct line connecting Entrance Buoy 2 CB and entrance buoy 2. I think it would be advisable to mark the western edge of this shoal with a buoy. The currents here are very erratic and a vessel taking a close departure from entrance buoy 2 CB and heading for Tail of the Horseshoe Light Vessel could very easily be set up on this shoal without noticing it.

Following the line of the survey buoys about 10 - 12 miles off-shore the bottom is very irregular. This section was developed as closely as the scale of the sheet and local conditions would allow. It is doubtful if any real dangers exist in this area, even if we did not get the least water, as traffic has been very heavy through this region for years and someone would undoubtedly have discovered a menace.

REPORTED DANGERS.

Dangers of 27 and 31 feet had been reported as follows: Lat. 36 53' N Long. 75 47' W; Lat. 36 55' N Long 75 46' 30" W; and Lat. 36 59' 30" N and Long 75 47' 30" W. Soundings were taken immediately over the positions reported with no indications of shoaling.

SCOURING OF CHANNEL NORTH OF CAPE HENRY.

A comparison of the present survey with the survey of 1915 and the still later survey of 1917 shows the channel North and East of Cape Henry is scouring rapidly. The northern slope of this channel is very abrupt, the depth dropping from 28 feet to 100 feet in less than one half mile. Where the eastern limit of the 1917 survey shows a depth of 59 feet, the present survey shows a depth of 100 feet. A close development of this channel was made. East and West lines were run as closely as they could be spaced and these were crossed by two North and South lines for check soundings. The agreement on the two series of lines was excellent.

METHOD OF SURVEY.

All the soundings were taken from the vessel with lead line. To the eastern limit of fixed positions on the buoys the soundings were taken with hand line. The precise dead-reckoning work was done with lead line and trolley gear.

LOCATION OF BUOYS/

The survey buoys were located from anchorages of the vessel. The positions of the anchorages were computed from three point fixes using shore objects. Computing the positions of the anchorages and drafting the cuts to the buoys by their azimuths reduced the errors due to distortion of the sheet to a minimum and excellent intersections for the locations of the buoys were thus obtained.

PRECISE DEAD RECKONING WORK.

This work was done in the same manner as has previously obtained on similar work except that the current observations were of necessity made at more frequent intervals. Where splits were run the soundings were made on one direction of the line, only, the return run being made at full speed.

CROSSING OF SOUNDINGS.

The East and West sounding lines were crossed at intervals of about 2 miles by North and South lines. This in depths less than 10 fathoms. The crossings are in general excellent, indicating that the tidal reductions were very good. One line from 1 J' toward 2J' has soundings superimposed upon the N day line from position 28 N to position 33N. The soundings on J' day are greater than those on the N day line and the soundings on N day should be retained. The soundings on J' day were, up to where I have drawn a vertical line in pencil at Long. 75 36', were made by a new leadman and where his soundings do not check with N day they should not be given any weight.

LINES TRANSFERRED FROM THE 80,000 SHEET.

Those portions of T day and B' day coming within the limits of this sheet have been transferred from the 80,000 sheet. They are also plotted on the latter sheet.

The first two hour lap of E' day has been plotted on this sheet. The balance of this day has not been plotted as shortly after the first lap a stiff breeze sprang up and enough allowance for leeway was not made. As a consequence such a large closing error was found that the entire line was rejected.

ABSTRACTS OF PRECISE DEAD-RECKONING LINES.

An abstract of each dead reckoning line is furnished and forms a part of the original records of this work. These abstracts have been compiled from the sounding records and present the information as to the location of the lines in a more compact form.

TIDAL REDUCTIONS.

A tide staff was maintained at Fisherman's Island and an automatic tide gauge was maintained at Assateague Anchorage throught the season. Tidal reducers were entered in integral feet as follows:

(a) All soundings west of a line joining Cape Henry Light House with Lat. 37 04' N and 75 54' W were referred to the staff at Fisherman's Island direct. Plane of reference 3.7 ft.

(b) All soundings between above line and the meridian of 75 47' 30" were referred to the gauge at Assateague, time 1/2 hour later, plane of reference 4.2 ft.

(c) All soundings between above meridian and the meridian of 75 26' 30" - same as above, except time 1/4 hour later.

(d) All soundings between above meridian and the meridian of 75 05' 30" referred to Assateague direct.

(e) All soundings between above meridian and the meridian of 74 44' 30" were referred to Assateague, time 1/4 hour earlier.

(f) All soundings east of 74 44' 30" were referred to Assateague, time 1/2 hour earlier.

CHARACTER OF BOTTOM.

Except for the channel just North and East of Cape Henry the bottom in the entire region is of hard white sand. In the channel the bottom is of soft silt and mud.

H. A. Seran

H. A. Seran,
H. & G. Engineer.

STATISTICS SHEET NO.

Includes 2 days on 8900 sheet.

Date	Letter	Vol.	Pos.	Sdgs.	Miles. (stat)	Vessel.
1919.						
July 25	A	1	82	480	23	BACHE.
28	B		127	648	35.5	"
29	C	1 & 2	169	887	45	"
30	D	2 & 3	203	1038	57	"
31	E	3	142	643	39.5	"
Aug. 1	F		161	709	42.3	"
12	G	3 & 4	149	788	40	"
14	H	4	203	858	57	"
15	J	4 & 5	252	1008	58	"
18	K	5	106	547	22.5	"
19	L		220	840	57	"
20	M	6	184	714	40	"
21	N	7	147	621	49.5	"
22	O		191	911	58.5	"
26	P	7 & 8	132	530	33	"
27	Q	8	208	795	60.5	"
28	R	8 & 9	243	929	64	"
29	S	9	120	594	26	"
Sept. 10	T	10		322	39	"
11	U			253	33.5	"
16	V		83	366	21.5	"
17	W			517	100	"
18	X	10 & 11	137	672	43.5	"
19	Y	11	219	971	56	"
24	Z	11 & 12	140	523	35.5	"
Oct. 1	A'	12	8	345	37	"
2	B'		24	866	117	"
3	C'	12 & 13	164	783	42	"
6	D'	13	73	332	18	"
7	E'		25	651	122.5	"
9	F'	13 & 14	132	645	32	"
10	G'	14	122	546	32	"
14	H'		8	194	18.5	"
15	J'		14	331	32	"
16	K'	14 & 15	113	557	43.5	"
17	L'	15	30	89	5	"
20	M'		40	237	9.5	"
21	N'		15	161	13.5	"
24	P'		46	133	10	"

Total 4432 23024 1669.3

Soundings plotted in feet. ¹¹³ 23137 ¹¹ 1680
 Plane of reference 3.7 at Fisherman's Island
 4.2 at Assateague Anchorage.

At Assateague: Lowest tide observed 2.8 ft. July 27th
 Highest tide " 10.0 ft. Aug. 13th

See Descriptive Report for division of tide reductions
 between Fisherman's Island and Assateague.

H.A. Seran,
 Chief of Party.

C. & G. SPERRY
L. S. S. S.
~~7-10-57~~
App. No.

POSITIONS

Datum. N.A. *State* Virginia.

BACK AZIMUTH. " "	TO STATIONS.	DISTANCE METERS.	LOGARITHMS.
Positions on this sheet were located by sextant angles and obtained by scaling from smooth sheet.			

11-4034

Locality

Approaches to Chesapeake Bay.

STATIONS.	LATITUDE AND LONGITUDE.		SECONDS IN METERS.	AZIMUTH.
	°	"		
Mink	d.m.	36 53	25	
		75 59	434	
Near	d.m.	37 06	1089	
		75 55	703	
Ship	d.m.	37 12	692	
		75 50	716	
Mid 2	d.m.	37 10	1663	
		75 49	924	
E. Gable, Oyster House		37 09	120	
		75 51	241	
Camp	d.m.	37 08	84	
		75 52	800	
N. Gable, L.S.S. Boat House		37 07	1199	
		75 54	1042	
Red Beacon		37 07	682	
		75 55	80	
N. Black Beacon		37 09	563	
		75 55	467	
S. Black Beacon		37 08	1013	
		75 55	207	

ADDRESS THE SUPERINTENDENT
U. S. COAST AND GEODETIC SURVEY

AND REFER TO NO. 41-EMK

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY
WASHINGTON

January 29, 1920.

✓ Division of Hydrography and Topography:

✓ Division of Charts:

Tidal reductions have been approved in
15 volumes of sounding records for

HYDROGRAPHIC SHEETS 4089, 4090

Approaches to Chesapeake Bay, Va.
H. A. Seran in 1919

Plane of reference is
Mean low water, reading

3.7 ft. on tide staff at Fisherman's Island Wharf, Va.*
3.7 " " " " " Assateague Island, Va.*

*Allowance made for difference in tide at place
of sounding.

Condition of records, very satisfactory.

W. A. Seran

Chief, Section of Tides
and Currents.

Recommend approval:

W. A. Seran
Chief, Div. of Hyd'y & Top'y.



DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

4-MEM

SECTION OF FIELD RECORDS

Report on Hydrographic Sheets Nos. 4089 & 4090.

Surveyed in 1919.

Chief of Party: H. A. Seran.

Surveyed by party of Str.
Bache.

Protracted by Field Party.

Soundings plotted by Field
Party.

Verified and inked-4089 by H. E. MacEwen, 4090 by E. K. Ellis.

1. The records conform to the requirements of the General Instructions.
2. The plan and character of development fulfill the requirements of the General Instructions.
3. The plan and extent of development satisfy the specific instructions with the following exceptions:
For about two-thirds of the height of the survey the sounding was carried out only to depths of 17 fathoms, instead of 100 fathoms as directed.
A buoy was not dropped on the 48 foot spot at lat. $36^{\circ} 54'$, long. $75^{\circ} 34'$, as directed by paragraph 4 of the instructions.
Although directed to extend the work inshore to include approximately the 12 foot curve, at no place does it include the 18 foot curve.
4. The sounding line crossings are adequate.
5. The soundings were sufficiently accurate and the development complete enough to enable the curves to be completely drawn.
6. The field plotting was completed to the extent prescribed in General Instructions.
7. The office draftsman did not have to do over again any part of the drafting done by field party.
8. Older hydrography that adjoins and overlaps 4089 and 4090 was not shown because of the time required and the fact that the bottom is changeable.

AND REFER TO NO.

DEPARTMENT OF COMMERCE

U. S. COAST AND GEODETIC SURVEY

WASHINGTON

(4089 and 4090)

9. In order to carry the surveying over the area outlined in the instructions it will be necessary to do additional development in the northeastern part of the work from depths of 17 fathoms out to 100 fathoms. Also the 48 foot shoal in lat. $36^{\circ} 54'$, long $75^{\circ} 34'$. Also inshore development inside of the 5 fathom curve. If this latter work is ordered it should be carried across the deep channel to check the conflicting surveys of this area. *Surveyed*
1875
10. The field drafting was carefully done but is subject to the criticism that the position numbers and day letters are too large. The size of the penciled soundings was also very excessive, which necessitated the omission of many soundings and the best judgment was not always shown in the selection of the soundings to be retained. These omissions were supplied by the office draftsman. The field plotting of the ship's course ^{on the day reckoning lines} was accepted unverified, but the plotting of the 15 minute log readings and the soundings were checked.
11. Rating of the work: Character and scope of the surveying-Excellent.
Field drafting(quality)-----Good
12. Reviewed by E. P. Ellis, Oct. 29, 1920.
13. Two copies of this report to be sent to Hydrography and Topography Divisions.

4089

Dead reckoning.

The work as a whole is very good and the ground sufficiently well covered.

Plotting of soundings by field party in the most part good.

On 13th day a change was made necessary due to an error by the field party in plotting of soundings near position 24 B'

A. E. Mac Ewen

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

The finished Hydrographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4089

State VIRGINIA.

General locality APPROACHES TO CHESAPEAKE BAY,

Locality Virginia Beach to Cape Henry.

Chief of party H. A. Seran, H. & G. Engineer.

Surveyed by party of Ship Bache.

Date of survey July - October 1919.

Scale 1:40,000

Soundings in Feet.

Plane of reference 3.7 at Fisherman's Island; 4.2 at Assateague.

Protracted by Field Party Soundings in pencil by Field Party.

Inked by Verified by

Records accompanying sheet (check those forwarded):

Des. report, 3 Tide books, # Marigrams, 2 Boat sheets,

14 Sounding books, ~~Wire-drag~~ books, _____ Photographs.

Data from other sources affecting sheet

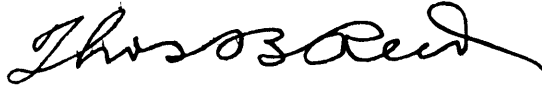
Remarks: # Marigrams have been forwarded to the Office at various dates.

reported to have struck a shoal while drawing 27 feet (Chart Letter 310 of 1940). The reported position placed the vessel about 1.6 miles west of the previously reported 26 and in charted depths of 37 to 38 feet. This second grounding was investigated by the U. S. Coast Guard and a lead line sounding of 5 fathoms (unreduced) was obtained about midway between the positions reported by the two merchant vessels. The position reported by the Coast Guard was crossed by the OCEANOGRAPHER's line with depths of 34 feet.

5. Additional Field Work Recommended.

Resurvey of the bay approaches to a junction with H-5990 (1935) on the east is recommended.

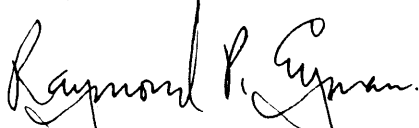
Examined and approved:



T. B. Reed,
Chief, Section of Field Records.



Chief, Division of Charts.



Chief, Section of Field Work.



Chief, Division of H. & T.

(Lich Proof)

1940 Addl. Work applied to Chart 1222. Nov. 5/40 S.R. -
194 Addl Work applied to Chart 78 Dec. 5, 1940 G.C.M.

1940 Add'l. Work applied to Cht. 1109 Oct. 29, 1940 K.R.