

7162

Diag'd. on diag. ch. No. 78-2

Form 504

U. S. COAST AND GEODETIC SURVEY
DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey HYDROGRAPHIC
Field No. FA-1144 Office No. H-7162

LOCALITY

State VIRGINIA
General locality JAMES RIVER
Locality PAGAN RIVER

1944-1946-7

CHIEF OF PARTY

Ronald R. Moore

LIBRARY & ARCHIVES

DATE **SEP 24 1947**

B-1870-1 (1)

7162

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REG. NO. H7162

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-7162

Field No. FA-1144

State VIRGINIA

General locality JAMES RIVER

Locality PAGAN RIVER

Scale 1:10000 Date of survey 1944 - 1946-7

Instructions dated 16 October 1940; 17 November 1942; 13 September 1944

Vessel Ship COWIE

Chief of party W.R. Porter, Ronald R. Moore

Surveyed by W.R. Porter, Ronald R. Moore

Soundings taken by fathometer, graphic recorder, hand lead, wire Pole

Protracted by A. G. Atwill

Soundings penciled by A.G. Atwill

Soundings in fathoms feet at MLW MLLW

REMARKS: This sheet was commenced by Lt. Comdr. W.R. Porter on the FARIS
in 1944

This survey was processed in the Hydrographic Section of the S.E. District,
at Norfolk, Va.

DESCRIPTIVE REPORT

TO ACCOMPANY

HYDROGRAPHIC SHEET H-7162 (144-47)

FIELD NUMBER FA-1144

USC&GSS COWIE

SCALE 1:10000

Ronald R. Moore, Comdg.

SURVEY BY

Ronald R. Moore

A. This survey was made under Instructions for Project CS-255 dated 16 October 1940 and supplemental instructions dated 17 November 1942 and 13 September 1946. ✓

B. This is a survey of the Pagan River and its approaches from a junction with Sheet H-6928⁽⁶⁴³⁻⁴⁷⁾ in longitude 76°33' and includes Cypress Creek and Jones Creek to the head of navigation. The hydrography from Briggs Wharf Beacon (O Wax) to Smithfield was executed by the FARIS in 1944-~~45~~ using the same boat sheet. Some additional work was done in the vicinity of Bob's Shoal and the entrance to Jones Creek. ✓

C. Field work was commenced on 10 December 1946 and was finished on 9 January 1947. ✓

D. A portable automatic tide gage was established at the entrance to Cypress Creek and used for the reduction of soundings. It was not known at the time of installation that a gage had been installed at Smithfield in 1944. For the work at the entrance, a time correction of minus one hour (-1) was used. ✓

E. The smooth sheet was plotted at the Norfolk Processing Office. ✓

F. The control is based on triangulation accomplished by various chiefs of party from 1932 to 1938. ✓

Topographic and hydrographic stations previously located and plotted on the sheet identified and used. The old signals were still standing. ✓

Two additional hydrographic stations were located by sextant cuts and sextant fixes taken at the station. ✓

G. The shoreline was previously plotted on the boat sheet. ✓

No changes were noted in the shoreline. ✓

The low water was determined as nearly as possible by running lines adjacent to shoreline at high tide. ✓

H. The soundings were obtained with an 808 type portable fathometer. In depths under 2 feet a sounding pole was used. Bar checks were taken at the beginning and end of each day and correction curves drawn. Additional checks on the fathometer was made with numerous pole soundings taken at frequent intervals as noted in the record. ✓

I. All positions at the entrance and upstream as far as Smithfield depend on three point fixes on objects located as noted in H. In the Pagan River from Smithfield upstream and in Jones and Cypress Creeks positions depend on references to topographic features, mostly ditch entrances and prominent points, as shown on the topographic sheets. (par. 1, Review) ✓

J. The survey is complete and adequate to supersede previous surveys in the area. ✓

At the entrance, sounding lines were spaced approximately 200 meters apart in depths under 6' and 100 meters in depths over 6'. Four lines were run in the channel and one on each side in the shoaler water. Intermediate lines were run where indications of shoaler water were shown. ✓

The junction with Sheet H-6928 ^(1943, 44, 47) was satisfactory in so far as predicted tides were used for the reduction of soundings. ✓

K. The percentage of crosslines is about 10%, not counting the numerous channel lines. Where crossing work done by this party, the crossings are in good agreement considering the use of predicted tides. Where crossing the work previously done by the FARIS, at the entrance and in the vicinity of Bob Shoal, there appears to be a consistent difference of 2' to 2½', which will probably iron out after the various corrections are applied. ✓

Differences were eliminated by correct tide reduction values ✓

L. No copies of previous surveys are available.

M. Comparison with Chart 529, print date 6-1-46. This survey is in close agreement with the chart insofar as predicted tides are used for the reduction of soundings. The charted 1½' sounding in Lat. 37° 00.5 Long. 76° 33.5 was searched for on Pos. 31 to 40h day, the least depth found being 3'. The dredged channel from Aaron Shoal Buoy #4 appears to have a depth of at least 8' ^{4.5} ~~6.2~~ however it is shoaler offshore as found on Sheet H-6928. The dredged channel in the vicinity of Bob Shoal has a controlling depth of 5 feet. The areas offshore from Gaps Shoal Beacon out side of the channel are studded with fish traps. ✓

N. No new dangers to navigation were found. ✓

O. The area around the entrance is used extensively by oyster and fishing boats. At times, about a hundred boats have been noticed in Jones Creek moored or tied up in the vicinity of the bridge. There is practically no traffic in either creek above the bridges or in the Pagan River above Smithfield. There ~~was~~ numerous remains of abandoned docks noticed.

P. Fixed aids to navigation are:

- GAP SHOAL LIGHT (GAP)
- BRIGGS WHARF LIGHT (WAX)
- JONES CREEK 1 (ONE)
- JONES CREEK 2 (JONES)
- BOB SHOAL (BOB)
- WRIGHT'S POINT (SOL)
- Battery Park Light (Bat)

Q. Floating aids to navigation are:

DREDGED CHANNEL	Lat.	Long.	Depth	Position
ENTRANCE BUOY 2	37 00.83	76 32.26	10.3	1f
LIGHTED CHANNEL BUOY 3	37 00.75	76 32.30	9.8	2f
AARON SHOAL BUOY 4	37 00.80	76 32.90	11.3(8)	3f
DREDGED CHANNEL BUOY 6	37 00.75	76 32.50	11.2	22c
GOODWIN BEND BUOY 8	37 00.63	76 34.27	9.5	22h
RED POINT BUOY 9	36 59.87	76 36.75	8.9	47g
CHALMER PT. BUOY #10	36 59.8	76 37.1	8.0	83a (blue)
PAGAN R. BUOY #11	36 59.35	76 37.27	9.0	70a (blue)

Respectfully submitted
Ronald R. Vance
Lt. Comdr. USCG

H-7162 (1944-47)

TIDAL NOTE

The portable automatic tide gage at Smithfield was used for the reduction of soundings. MLW corresponds to a reading of 0.3 feet on the staff. For the hydrography in the creeks, in the vicinity of Bob Shoal, and the upper reaches of the Pagan River, the tides can be used without correction. For the work at the entrance a time correction of minus 1 hour should be introduced.

STATISTICS FOR H-7162 (1944-47)

VOL.NO.	DATE	NO.POS.	STAT.MILES	BAR CHECK	H.L.POLE	DAY LETTER	SHIP	BOAT
1	11-28-44	96	12.7	3	---	a-blue	FARIS	Launch 102
1	11-29-44	37	3.1	1	---	b-blue	FARIS	Catamaran
1	12-5-44	79	6.7	2	---	c-blue	FARIS	Catamaran
2	12-6-44	111	13.0	2	---	d-blue	FARIS	Catamaran
2	12-7-44	152	14.4	3	---	e-blue	FARIS	Catamaran
3	12-10-46	36	5.6	---	.21	a-green	COWIE	Skiff
3	12-11-46	82	9.9	---	27	b-green	COWIE	Skiff
3&4	12-12-46	177	19.6	2	73	c-green	COWIE	Skiff
4	12-13-46	45	5.7	1	12	d-green	COWIE	Skiff
4	12-16-46	20	2.4	---	6	e-green	COWIE	Skiff
4	12-17-46	102	11.7	2	43	f-green	COWIE	Skiff
4	1-8-47	101	11.0	1	114	g-green	COWIE	Skiff
4&5	1-9-47	85	9.1	1	9	h-green	COWIE	Skiff

Totals 1123 124.9

305

LIST OF SIGNALS H-7162 (1444-47)

TRIANGULATION

DAY (VCF), 1938
 GODWIN (VCF), 1938-42
 JONES CREEK LIGHT #2, 1938
 PAGAN (USE), 1938
 RAINBOW (VCF), 1938
 SMITHFIELD MUNICIPAL W.T., 1932-44
 UPTON FARM BARN, N.E. GABLE, 1938
 WHITE SHOALS L.H., 1905-32

TOPOGRAPHIC

Aze	T-8062
Boa	T-8062
Bob Shoal Beacon	T-8062
Box	8067
Cross	8062
Gam	8062
Gap Shoal Light	8062
Green	8067
His	8067
Kim	8067
Nat	8062
Nor	T-8061
Out	8062
Peg	8062
Rat	8062
Red	8067
Shed	8061
Sip	8062
Sol	8067
Spire	8067
Stem	8062
Tan	8062
Ven	8067
War	8061
Wes	8067
Zag	

AIRPHOTO

Dol	T-8062
Fed	T-8062

HYDROGRAPHIC

Ace	Flag	Lad	Quo
Amy	Fox	Lag	Sin
Bar	Gal	Map	Stack
Bat	Gas	Max	Sty
Cap	Hag	Moo	Tel
Cop	Ida	Mud	Tip
Doc	Jap	One	Tom
Dog	Joe	Per	Vim
End	Key	Pie	Wax
Eva	Kid	Pil	
Fat			

A D D E N D U M

to accompany

HYDROGRAPHIC SURVEY H-7162 (Field No. FA - 1144)

aids to navigation

on page 3


NOTE: The ~~corrections~~ shown in red in the preceding pages of this report were ~~made~~ by the Norfolk Processing Office.
added

Respectfully submitted,


Esadore M. Zeskind
Cartographic Engineer

Norfolk, Va.
September 19, 1947

Approved and Forwarded


George L. Anderson
Supervisor S.E. District

6 day 12/10/46

6 day 12/11/46

Sheet FA-1144

Pole	Fath	P-F
15.0	15.5	-0.5
4.0	4.0	0.0
12.5	12.0	0.5
10.0	9.0	1.0*
10.0	12.0	-2.0*
3.0	3.0	0.0
5	5.0	-0.5
7.0	10.0	-3.0*
15.0	15.5	0.5
12.0	12.0	0.0
10.0	10.0	0.0
7.0	7.0	0.0
4.0	4.0	0.0
6.5	6.5	0.0
4.0	4.0	0.0
10.0	8.0	2.0*
3.0	3.5	-0.5
5.0	5.0	0.0
3.0	3.0	0.0
3.5	3.0	0.5
3.5	4.0	-0.5
Total 17		-0.5
Ave		-0.03

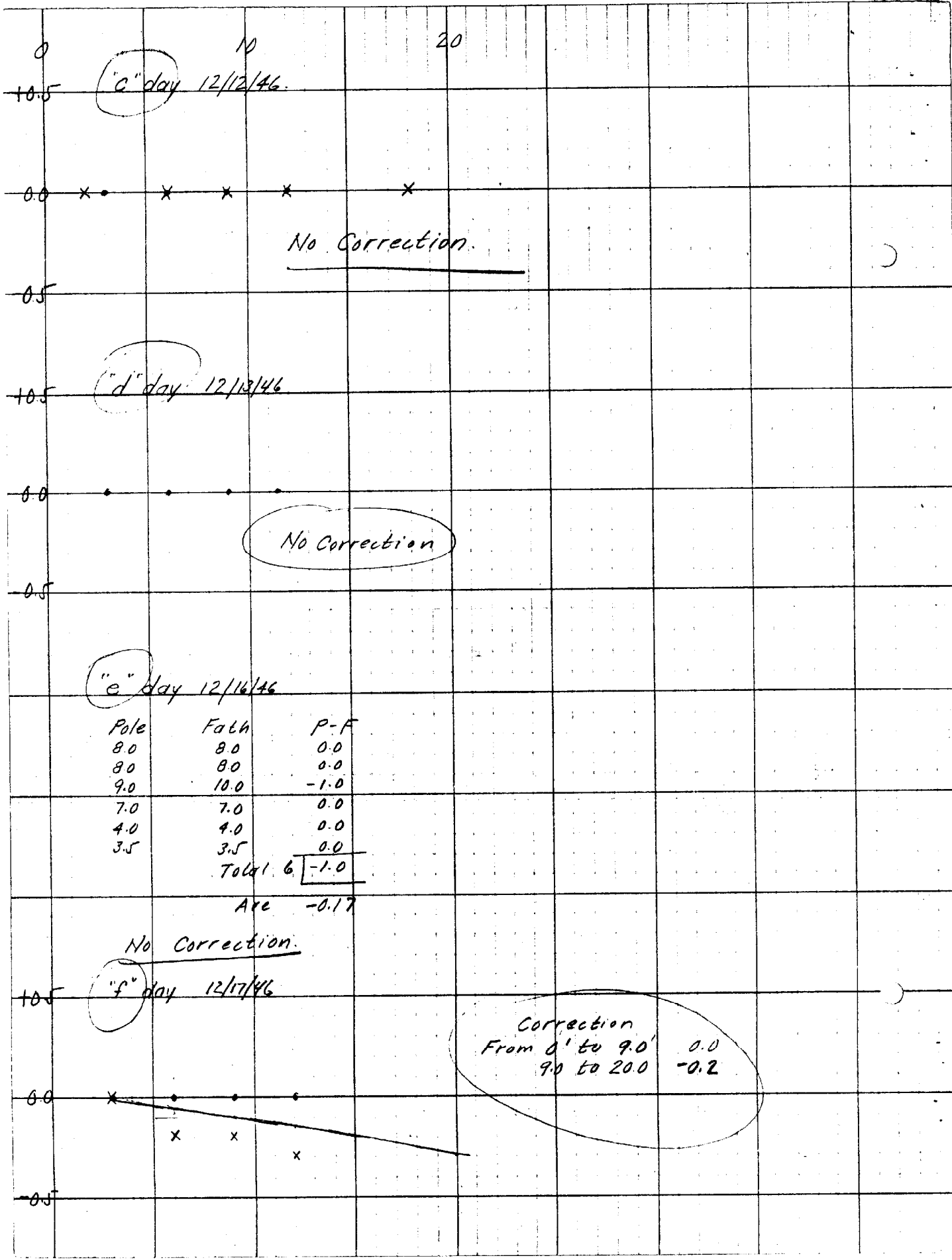
Pole	Fath	P-F
9.0	9.0	0.0
8.5	8.0	0.5
7.5	7.5	0.0
7.0	7.0	0.0
5.0	5.0	0.0
13.0	11.0	2.0*
8.0	9.0	-1.0
10.0	8.5	1.5*
8.0	8.0	0.0
7.0	9.0	-2.0*
9.0	8.0	1.0
5.0	4.0	1.0
5.0	5.0	0.0
4.0	4.0	0.0
3.0	3.0	0.0
10.0	10.0	0.0
7.0	8.0	-1.0
7.5	8.0	-0.5
10.5	11.0	-0.5
8.0	10.0	-2.0*
9.0	8.0	1.0
7.5	8.0	-0.5
10.0	10.0	0.0
5.0	3.5	1.5*
4.0	3.0	1.0
8.0	8.5	-0.5
8.0	7.5	0.5
7.5	8.0	-0.5
9.5	10.0	-0.5
2.0	3.5	-1.5*
2.5	2.0	0.5
3.0	3.0	0.0
Total 27		-0.5
Ave		-0.02

* Not taken into consideration as pole and fath are on opposite sides of bank & channel bank step.

No Correction.

No correction.

10.5



"c" day 12/12/46

No Correction.

"d" day 12/13/46

No Correction

"e" day 12/16/46

Pole	Fath	P-F
8.0	8.0	0.0
8.0	8.0	0.0
9.0	10.0	-1.0
7.0	7.0	0.0
4.0	4.0	0.0
3.5	3.5	0.0
Total 6		-1.0

Ave -0.17

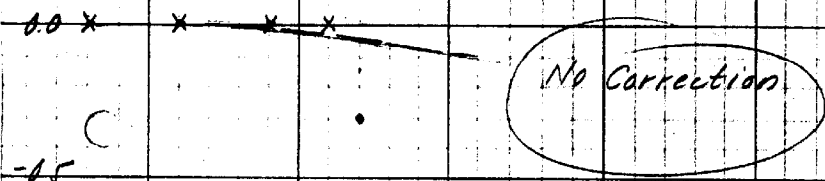
No Correction.

"f" day 12/17/46

Correction
 From 0' to 9.0' 0.0
 9.0 to 20.0 -0.2

Pa 1144

5 10 15 20
+0.5 "g" day 1/8/47



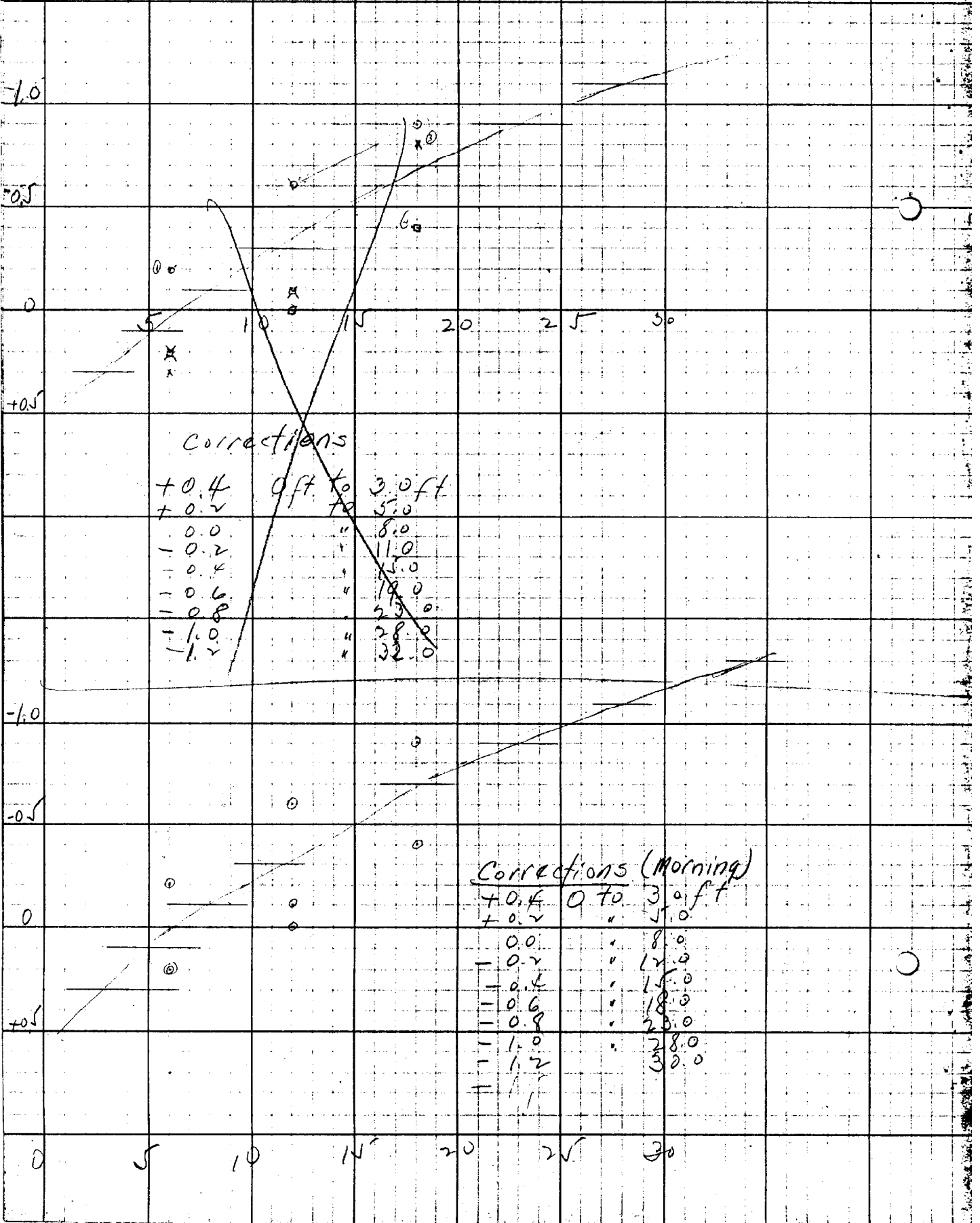
+0.5 "h" day 1/9/47

Pa/G	Fath	P-F
3.0	3.0	0.0
6.0	6.5	-0.5
9.0	9.5	-0.5
12.0	12.3	-0.3
11.5	11.0	0.5
8.5	8.5	0.0
9.5	9.5	0.0
11.5	11.5	0.0
6.5	6.5	0.0
7.5	7.5	0.0
8.0	8.0	0.0
7.0	7.5	-0.5
4.5	5.0	-0.5
Total 13		-1.8
		-0.14

Bar Check

No Correction

Nov 28, 1944, a day



Bar Check

H-7162

-1.0

-0.5

0

+0.5

0 5 10 15 20 25 30 35

Corrections (P.M)

+0.4	to	5.0 ft
+0.2	"	9.0 "
+0.0	"	13.0 "
+0.2	"	15.0 "
-0.4	"	18.0 "
+0.6	"	20.0 "
-0.8	"	23.0 "
-1.0	"	28.0 "
-1.2	"	35.0 "

C

Nov. 29, 1944 (b) day
(all day)

-1.0

-0.5

0

0

5 10 15 20 25 30

Corrections	
- 0.4	to 7.0 ft
- 0.6	" 10.0
- 0.8	" 13.0
- 1.0	" 22.0
	" 35.0

Dec. 5, 1944 (c) day
(all day)

-1.0

-0.5

0

Dec. 5, 1944 (d) day (PM)

Corrections	
- 0.2	to 5.0 ft
- 0.4	" 8.0 ft
- 0.6	" 12.0
- 0.8	" 15.0
- 1.0	" 18.0
- 1.2	" 25.0
- 1.4	" 31.0

-0.5

0

-0.5

Dec 6, 1944 (d) day

-2.0

-1.5

-1.0

-0.5

0

5

10

15

20

25

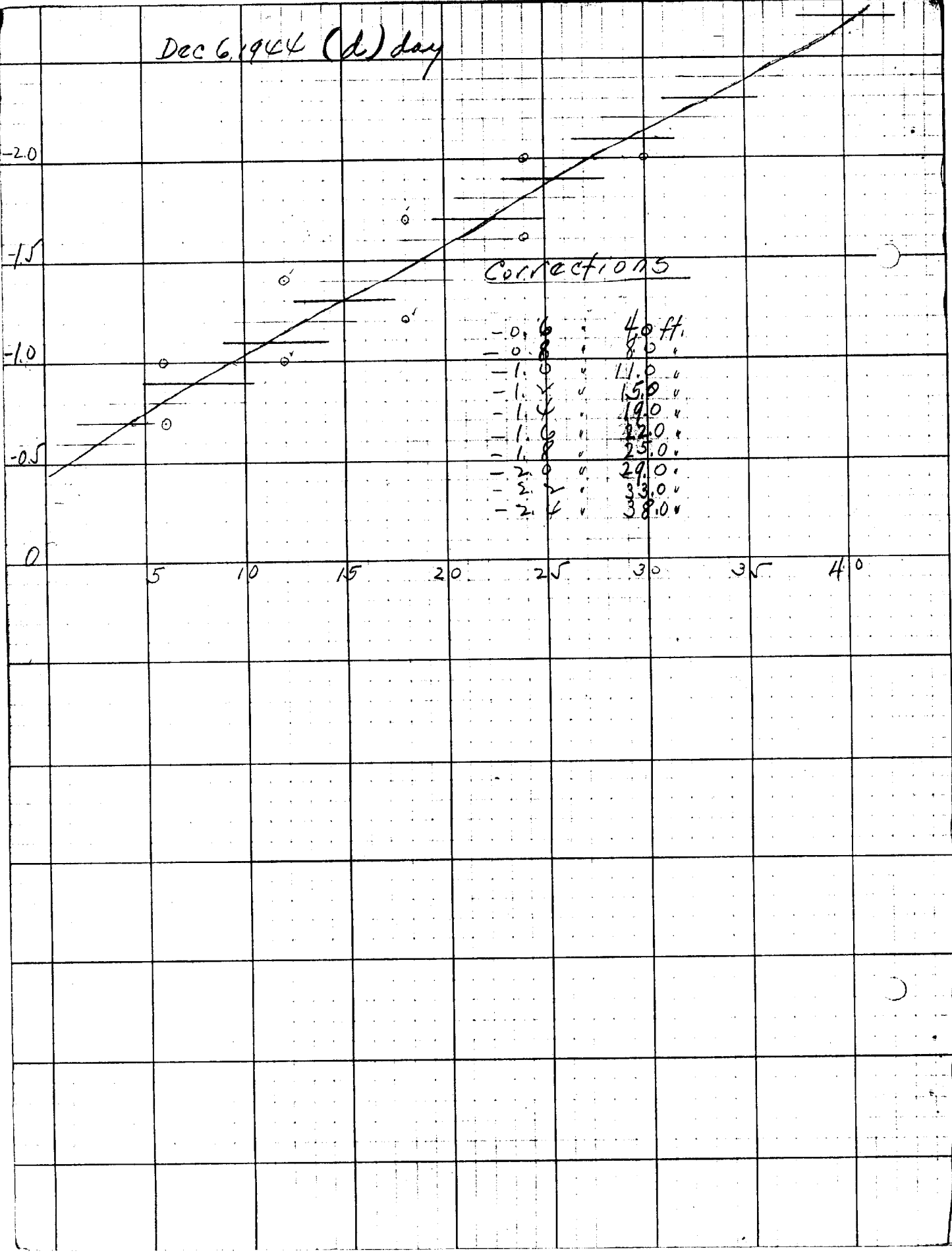
30

35

40

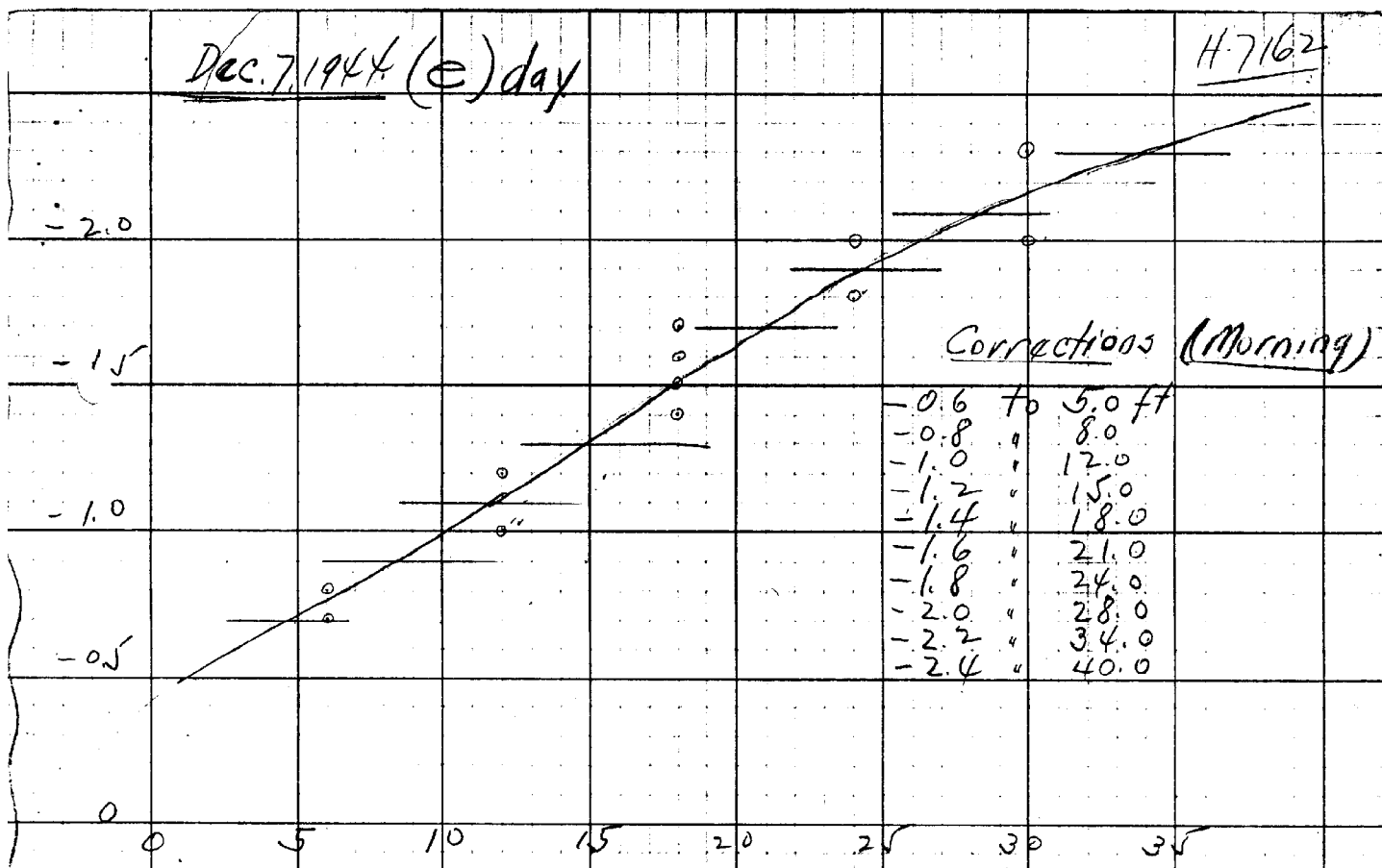
Corrections

-0.6	4.0 ft.
-0.8	8.0 "
-1.0	11.0 "
-1.2	15.0 "
-1.4	19.0 "
-1.6	22.0 "
-1.8	25.0 "
-2.0	29.0 "
-2.2	33.0 "
-2.4	38.0 "



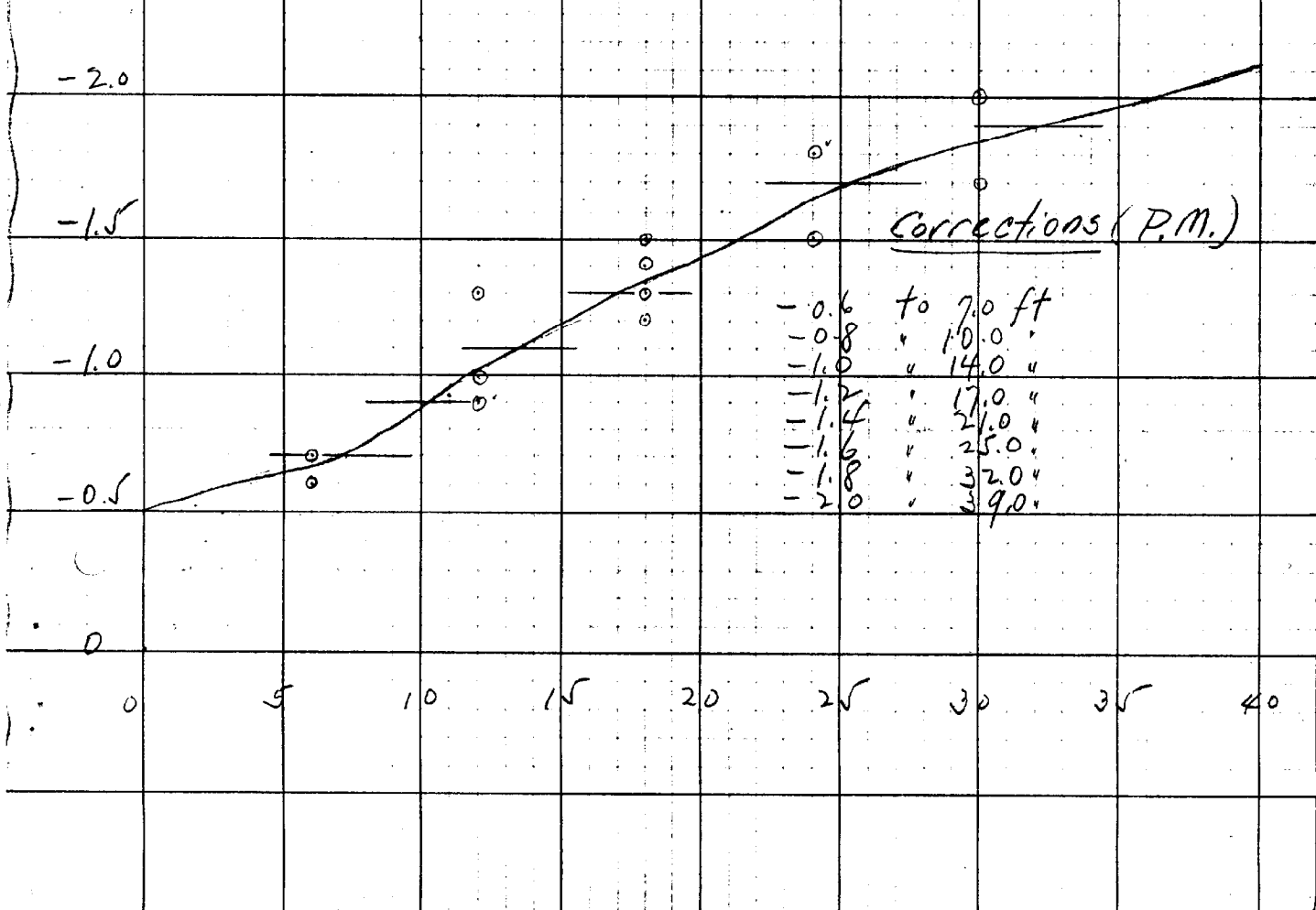
Dec. 7, 1944 (e) day

H-7162



Corrections (Morning)

-0.6	to	5.0 ft
-0.8	"	8.0
-1.0	"	12.0
-1.2	"	15.0
-1.4	"	18.0
-1.6	"	21.0
-1.8	"	24.0
-2.0	"	28.0
-2.2	"	34.0
-2.4	"	40.0



Corrections (P.M.)

-0.6	to	7.0 ft
-0.8	"	10.0
-1.0	"	14.0
-1.2	"	17.0
-1.4	"	21.0
-1.6	"	25.0
-1.8	"	32.0
-2.0	"	39.0

GEOGRAPHIC NAMES

Survey No.

H7162

Name on Survey

On Chart No. On previous survey No. On U. S. Quadrangle Maps From local information On local Maps P. O. Guide or Map Rand McNally Atlas U. S. Light List

	A	B	C	D	E	F	G	H	K
<u>Virginia</u>			(for title)					USGB	1
<u>James River</u>			" "					"	2
<u>Pagan River</u>			" "					"	3
<u>Days Point</u>								"	4
<u>Goodwin Point</u>									5
<u>Jones Creek</u>									6
<u>Titus Creek</u>									7
<u>Carrollton Branch</u>									8
<u>Morris Creek</u>									9
<u>Tormentor Creek</u>									10
<u>Cypress Creek</u>									11
<u>Champion Swamp</u>									12
<u>Smithfield</u>			(location of tide staff)						13
<u>Chalmers Point</u>								USGB	14
<u>Bob Shoal</u>								Names underlined on red app approved. 1/14/48 L. Heck	15
									16
									17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. **A7162**

Records accompanying survey:

Boat sheets ¹.....; sounding vols. ⁵.....; wire drag vols. ⁰.....;
 bomb vols. ⁰.....; graphic recorder rolls ¹³.....;
 special reports, etc. ³ Sheets Fathometer Corrections.....

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

Number of positions on sheet	.....	1123
Number of positions checked	.....	101
Number of positions revised	.....	3
Number of soundings revised (refers to depth only)	.....	8
Number of soundings erroneously spaced	.....	79
Number of signals erroneously plotted or transferred	.....	0
Topographic details	Time	..... 8 hrs.
Junctions	Time	..... 8 hrs.
Verification of soundings from graphic record	Time	..... 5 hrs.

Verification by..... R.K. De Lawder..... Total time 109 hrs. Date 11-19-47

Reviewed by..... *J.A. Dinsmore*..... Time 18 hrs. Date 1/15/48

TIDE NOTE FOR HYDROGRAPHIC SHEET

~~Division of Hydrography and Topography~~

October 16, 1947

Division of Charts: H. W. MURRAY

Plane of reference approved in
5 volumes of sounding records for

HYDROGRAPHIC SHEET 7162

Locality - Pagan River, James River, Virginia

Chief of Party: W. R. Porter, R. R. Moore in 1944-1946

Plane of reference is mean low water, reading

2.6 ft. on tide staff at Smithfield (1944)

0.3 ft. ~~below B.M. 1~~ on tide staff at Smithfield (1946)

6.3 ft. below B.M. 1 (1944)

Height of mean high water above plane of reference is 2.8 feet.

Condition of records satisfactory except as noted below:

E. C. McKay
Section
Chief, ~~Division of Tides and Currents.~~

DIVISION OF CHARTS

REVIEW SECTION - NAUTICAL CHART BRANCH

REVIEW OF HYDROGRAPHIC SURVEY

REGISTRY NO. H-7162 -

FIELD NO. FA-1144

Virginia, James River, Pagan River
Surveyed in 1944-45, Dec. 1946-Jan. 1947 Scale 1:10,000
Project No. CS-255

Soundings:

Control:

808 Depth Recorder
Pole

Sextant fixes on shore signals

Chief of Party - W. R. Porter and R. R. Moore
Surveyed by - W. R. Porter and R. R. Moore
Protracted by - A. G. Atwill
Soundings plotted by - A. G. Atwill
Verified and inked by - R. K. DeLawder
Reviewed by - T. A. Dinsmore, January 15, 1948
Inspected by - H. W. Murray

1. Shoreline and Signals

The shoreline originates with air photographic manuscripts T-8061, T-8062, T-8067 and T-8068 of 1941 (scale 1:10,000) and has been compared with topographic quadrangles T-8305, T-8306, T-8311 and T-8312 of 1942 (scale 1:20,000).

It was considered advisable to retain the larger-scale shoreline of 1941 on the smooth sheet because of the greater amount of detail shown. Many hydrographic positions are dependent on such detail as small creeks, ditches and irregularities in the shoreline which do not show on the smaller-scale (8300) series of 1942.

The signals are from previously established triangulation stations and the same surveys as the shoreline. The fixes for supplementary hydrographic signals are recorded in the sounding volumes of the present survey.

2. Sounding Line Crossings

Depths at crossings are in good agreement.

3. Depth Curves and Bottom Configuration

The usual depth curves are adequately delineated.

Much of the river channel has been dredged. Extensive flats flank the marked channel at the mouth of the river and in the vicinity of Bob Shoal. The depths of the bottom along the axis of the river channel, between Smithfield and the mouth of the river, varies from 5 feet at lat. $36^{\circ} 59.88'$, long. $76^{\circ} 36.52'$, to 35 feet at lat. $36^{\circ} 59.97'$, long. $76^{\circ} 34.53'$.

4. Junctions with Contemporary Surveys

An adequate junction was effected with H-6928 (1943-47) on the east and northeast. No contemporary survey is registered on the north, however, charted information here is in good agreement with the present survey.

5. Comparison with Prior Surveys

H-529(1855), H-1179a(1872) and H-3045(1910) 1:20,000

Of the above surveys, H-529 and H-3045 cover the approaches to the mouth of the river. H-1179a covers most of the area of the present survey. A comparison with the present survey indicates some changes in the bottom have taken place. Increased shoaling is noted in the vicinity of Bob Shoal. Prior depths of 7 to 10 feet here are now superseded by 4- and 6-ft. depths. Major shoaling is indicated in Jones Creek at lat. $36^{\circ} 59.47'$, long. $76^{\circ} 33.80'$, where a 19-ft. sounding (charted) originating with H-1179a is now superseded by 2-ft. depths.

Discrepancies noted are as follows:

The $1\frac{1}{2}$ -ft. sounding (charted) in lat. $37^{\circ} 00.50'$, long. $76^{\circ} 33.50'$, originates with H-1179a. Falling in 3-ft. depths on the present survey, the $1\frac{1}{2}$ is considered disproved by present development and should be disregarded.

The 3-ft. sounding (charted) in Jones Creek at lat. $36^{\circ} 58.98'$, long. $76^{\circ} 34.13'$, originates with a 13-ft. sounding on H-1179a. The shoreline of the creek has merged with the numeral one resulting in an erroneous charting of 3 feet. Depths of 13 feet are found here on both prior and present surveys.

Except for two low-water spots and a few bottom characteristics, which have been carried forward, the present survey is adequate to supersede the prior surveys within the common area.

6. Comparison with Chart 529 (Latest print date 10/20/47)

a. Hydrography

Charted hydrography originates with the previously discussed surveys and needs no further consideration.

b. Dredged Channels

The 6½-ft. controlling depth, charted at the channel entrance, originates with Chart Letter 385 (1946) and Corps of Engineers blueprint 41188. Depths on the present survey are in agreement with the charted controlling depth.

The charted controlling depths of 9 feet near Smithfield and the 8½ feet south of Chalmers Point are from a Coast Pilot inspection report (Chart Letter 339, 1946). Inasmuch as the channel hydrography between Briggs Wharf Light and Smithfield was accomplished on the present survey in 1944, the charted controlling depths supersede the shoaler depths appearing on the present survey.

c. Aids to Navigation

- (1) The buoys marking the channel entrance on the present survey at lat. $37^{\circ} 00.75'$, long. $76^{\circ} 32.31'$, and lat. $37^{\circ} 00.82'$, long. $76^{\circ} 32.27'$, are 110 meters and 150 meters east by northeast, respectively, from their charted positions. The buoys adequately mark the entrance in either position.
- (2) Buoy N-9 on the present survey at lat. $36^{\circ} 59.88'$, long. $76^{\circ} 36.75'$, is 70 meters north of the charted position. This buoy, marking the left side of the channel, would more adequately serve its purpose at a position midway between the survey and charted positions.
- (3) Buoy C-11 on the present survey at lat. $36^{\circ} 59.34'$, long. $76^{\circ} 37.28'$, is 165 meters northwest of the charted position. The buoy adequately serves its purpose in either position.

With the exceptions noted above, all other survey positions of aids are in substantial agreement with their charted positions and adequately mark the features intended.

7. Condition of Survey

- a. The sounding records and Descriptive Report are complete.
- b. The smooth plotting was accurately done.
- c. The survey provides very good coverage for the area, however, it is to be noted that the two charted low-water spots carried forward from 1179a (1872) should have been investigated. These low-water spots are in lat. $37^{\circ} 00.81'$, long. $76^{\circ} 33.41'$, and lat. $37^{\circ} 00.92'$, long. $76^{\circ} 33.75'$.

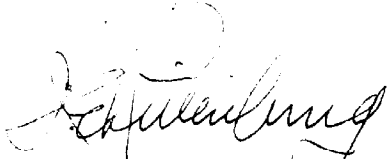
8. Compliance with Project Instructions

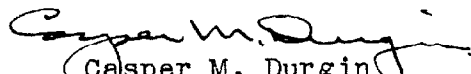
The survey adequately complies with the Project Instructions except as noted in paragraph 7c.


9. Additional Field Work

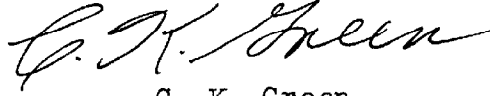
This is a basic survey and no additional field work is required.

Examined and approved:


I. E. Rittenburg
Chief, Nautical Chart Branch


Casper M. Durgin
Chief, Division of Charts


K. G. Crosby
Chief, Section of Hydrography


C. K. Green
Chief, Division of Coastal Surveys

NAUTICAL CHARTS BRANCH

SURVEY NO. H7162

Record of Application to Charts

DATE	CHART	CARTOGRAPHER	REMARKS
12/3/48	529	Goodrich	Before After Verification and Review
			<i>Critical soundings only</i>
11/7/49	<i>reconstruction</i> 529	McAlinden	Before After Verification and Review <i>Completely Applied</i>
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review
			Before After Verification and Review

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.