8766

Diag. Cht. No. 1231-2.

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT
(HYDROGRAPHIC)

Type of Survey Hydrographic

Field No. BE-10-2-62

Office No. H-8766

LOCALITY

State North Carolina

General Locality North Carolina Coast

Locality Ocracoke Inlet

19 62

CHIEF OF PARTY
O. C. Swindell

LIBRARY & ARCHIVES

DATE 1-23-64

☆U.S. GOVERNMENT PRINTING OFFICE: 1974-763-098

8766

Form 537
(Ed. June 1946)

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-8766

Field No. BE-10-2-62

State North Carolina

General locality North Carolina Coast

Locality Ocracoke Inlet

Scale 1:10,000 Date of survey 25 Oct. - 20 Nov. 1962

Instructions dated 13 September 1962

Vessel Launch Party Beta

Chief of party Oliver C. Swindell

Surveyed by Oliver C. Swindell

Soundings taken by fathometer, [illegible], hand lead, [illegible] and sounding pole

Fathograms scaled by GSP

Fathograms checked by JMA, JWB

Protracted by Richard D. Lynn (Norfolk Records Processing Unit)

Soundings penciled by Richard D. Lynn " " " "

Soundings in [illegible] feet at MLW [illegible]

REMARKS: Special Project 24-62

U. S. GOVERNMENT PRINTING OFFICE 16—66520-1

DESCRIPTIVE REPORT TO ACCOMPANY HYDROGRAPHIC SURVEY

H-8766 (Field No. BE-10-2-62)

A. PROJECT

A hydrographic survey, Special Project 24-62, Ocracoke Inlet, North Carolina, was executed under original instructions dated 13 September 1962.

B. AREA SURVEYED

The survey limits are shown on a copy of C&GS chart No. 419 which accompanies this report.

C. SOUNDING VESSEL

All of the hydrography of this survey was accomplished by Skiff CS-735. Violet ink was used to mark positions and day letters on the boat sheet.

D. SOUNDING EQUIPMENT

All echo sounding was done with 808-type fathometers, numbers 57-37 and 1328, calibrated for 820 fathoms/second. A sounding pole was used in shoal areas. The fathometer velocity corrections were calculated from bar checks. Pole and hand lead were also used.

E. SMOOTH SHEET

The smooth sheet will be plotted by the Norfolk Office, Hydrographic Processing Section.

F. CONTROL

All hydrography was controlled by three point sextant fixes, taken on triangulation located lights and landmarks in the area. The hydrographic signals were plotted on the boat sheet from triangulation data. A complete list of signal names accompanies this report. (Photo-hydro station from T-12270-2)

G. SHORELINE

No shoreline was furnished for the boat sheet.

See Review. (Para. 2)

H. CROSSLINES

Crosslines were run on the sheet to the extent of 8 to 10 percent of the regular system of sounding lines. Good agreement was obtained.

I. JUNCTIONS

See section J. See Review. (Para 5)

J. COMPARISON WITH PRIOR SURVEYS

A comparison with prior ~~surveys~~ ejys indicates this area has undergone extensive change in bottom configuration.

See Review (Para 6)

K. COMPARISON WITH THE CHART

See section J. See Review (Para 7)

L. ADEQUACY OF SURVEY

The survey is complete and adequate to supersede prior surveys for charting. The existence of the reported wrecked ship ALBATROSS was located at 35 03.0ΔN and 76 00.96W.

3

M. AIDS TO NAVIGATION

All floating aids to navigation within the limits of the project area were located and are plotted on the boat sheet.

See Processing Office list included in this report.

N. STATISTICS

Vessel	Number of Positions	~~N.M.~~ Stat. M. of Sounding Lines
Skiff CS-735	1641	168.4

Total area surveyed: 3.0 square nautical miles
Number of current stations: 4
Number of bottom samples: 15
Number of tide gages: 1 tide gage at Ocracoke Inlet, North Carolina

Respectfully submitted

John W. Bricker

John W. Bricker
LTJG, C&GS

TIDE NOTE

One portable tide gage was used to control the tidal data for this boat sheet. It was located at Beacon "4", Ocracoke Inlet, North Carolina, Lat. 35° 04.7N Long. 76° 02.9W. Mean low water was 3.4 feet on the staff and all heights recorded on the marigram should be corrected by this amount.

Time meridian 75W (ZD 5) was used for times at this tide gage.

..ORFO

NORFOLK RECORDS PROCESSING UNIT
FLOATING AIDS TO NAVIGATION
H-8766

BUOY	LATITUDE	LONGITUDE	DEPTH	POS. NO.	DATE
Ocracoke Inlet Junction Ltd. Buoy	35-04.28'	76-01.39'	22'	29f	11/7/62
Wallace Channel Ltd. Buoy 2	04.50	02.82	13'	34g	11/11/62
Wallace Chan. Buoy 3	04.44	02.75	8'	35g	"
Wallace Chan. Buoy 1A	04.46	02.45	8'	36g	"
Wallace Chan. Ltd. Buoy 1	04.45	02.08	13'	37g	"

N .FOLK RECORDS PROCESSING U. T
LIST OF SIGNALS
H-8766

TRIANGULATION STATIONS

OCRACOKE LIGHTHOUSE, 1851-1960

BEACON ISLAND 2, 1909-47

OCRACOKE C.G. STATION, CUPOLA, 1960

GRASS, 1960

MOUND, 1960

PORTSMOUTH C.G., CUPOLA, 1909-27

SHELBY, 1960

PORTSMOUTH, METH. CHURCH, SPIRE, 1933-60

PHOTO-HYDRO STATIONS SOURCE T-12270

GAS WAL TEA

HYDROGRAPHIC STATIONS

LET (Vol. 1, pg. 5)

ABSTRACT OF VELOCITY CORRECTIONS

(BE-10-2-62)
H-8766
Skiff CS-735

Corrections to Depth

	Corr.	Depth	
Group I a-c, e-j days (β=post. 1-29)	0.0	0.0-26.0	feet
	-0.2	26.1-35.0	
	-0.4	35.1-43.0	
	-0.6	43.1-50.0	
	-0.8	50.1-56.0	
	-1.0	56.1-62.0	
	-1.2	62.1-68.0	
Group II d,m days	0.0	0.0-40.0	
Group III n day	+0.2	0.0-16.0	
	+0.4	16.1-29.0	
	+0.6	29.1-39.0	
	+0.8	39.1-50.0	
	+1.0	50.1-60.0	
Group IV f day (post 30-88)	+0.4	0.0- 5.0	
	+0.2	5.1-12.0	
	0.0	12.1-17.0	
	-0.2	17.1-22.0	
	-0.4	22.1-27.0	
	-0.6	27.1-32.0	
	-0.8	32.1-35.0	
	-1.0	35.1-38.0	
	-1.2	38.1-41.0	
	-1.4	41.1-44.0	
	-1.6	44.1-46.0	
	-1.8	46.1-	
Group V k,l days	+0.6	2.0- 7.0	
	+0.8	7.1-15.0	
	+1.0	15.1-	

Station:

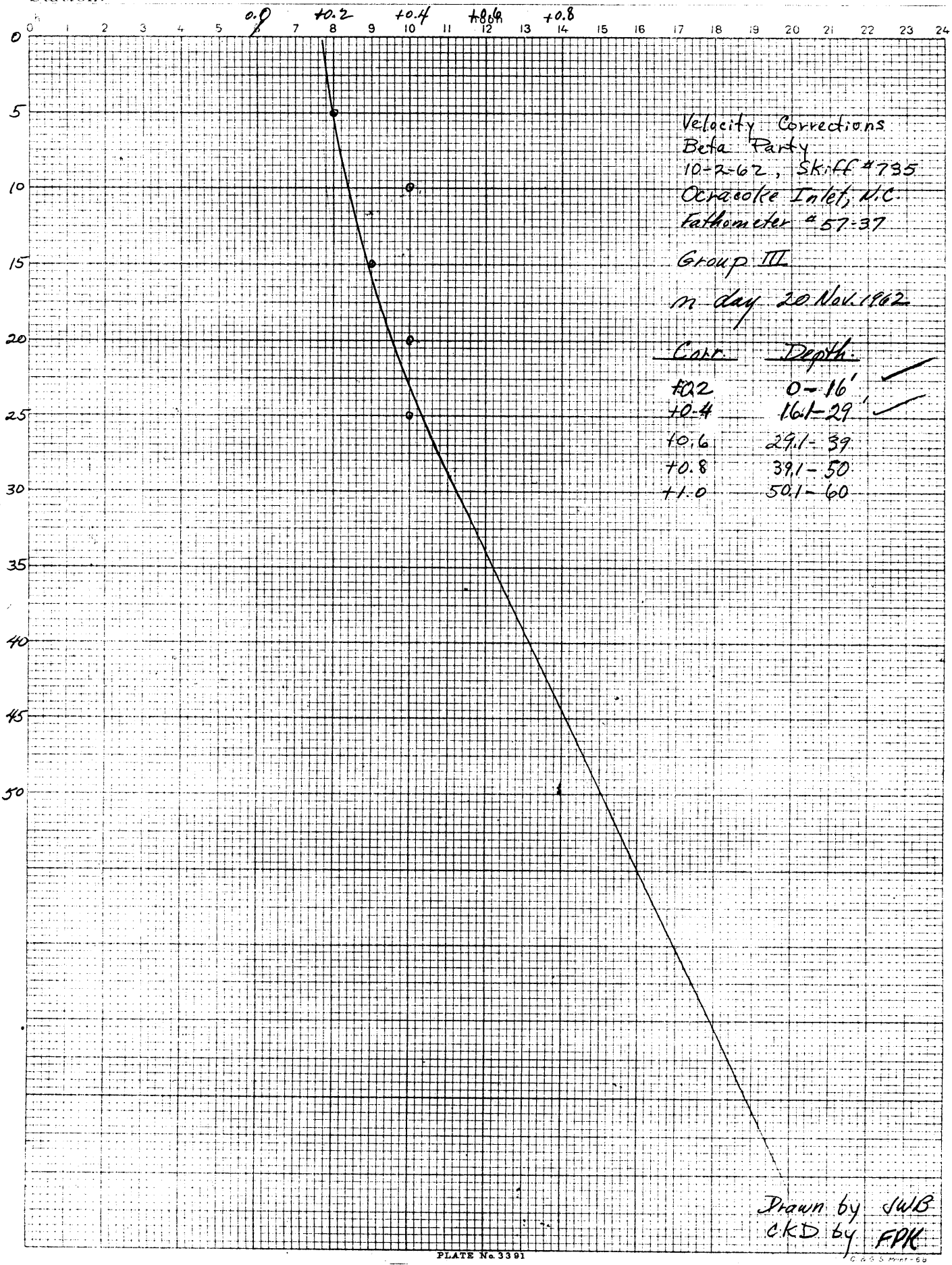
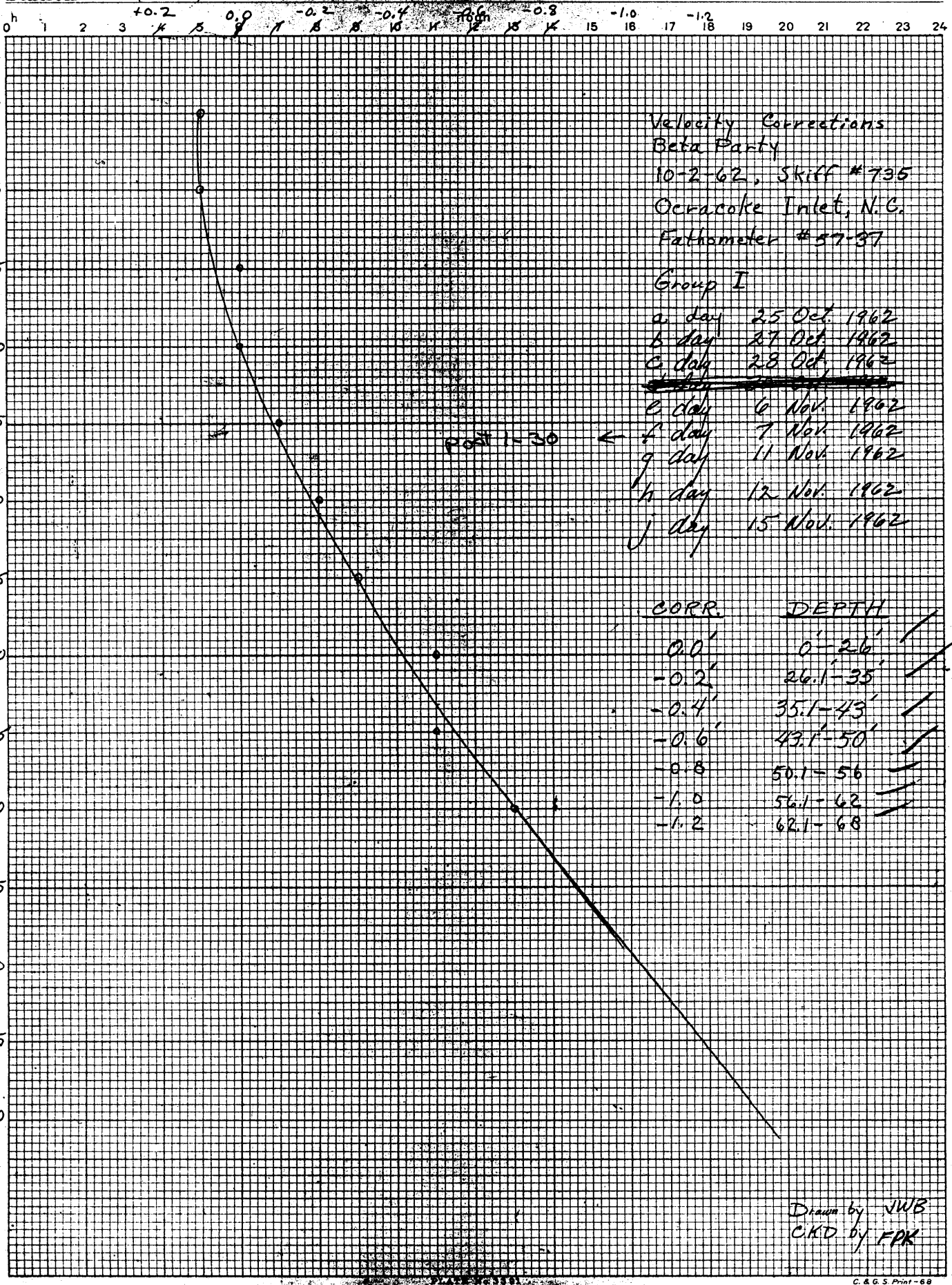


PLATE No. 3391

C & G S Print-68

Station:



Velocity Corrections
Beta Party
10-2-62, Skiff #735
Ocracoke Inlet, N.C.
Fathometer #57-37

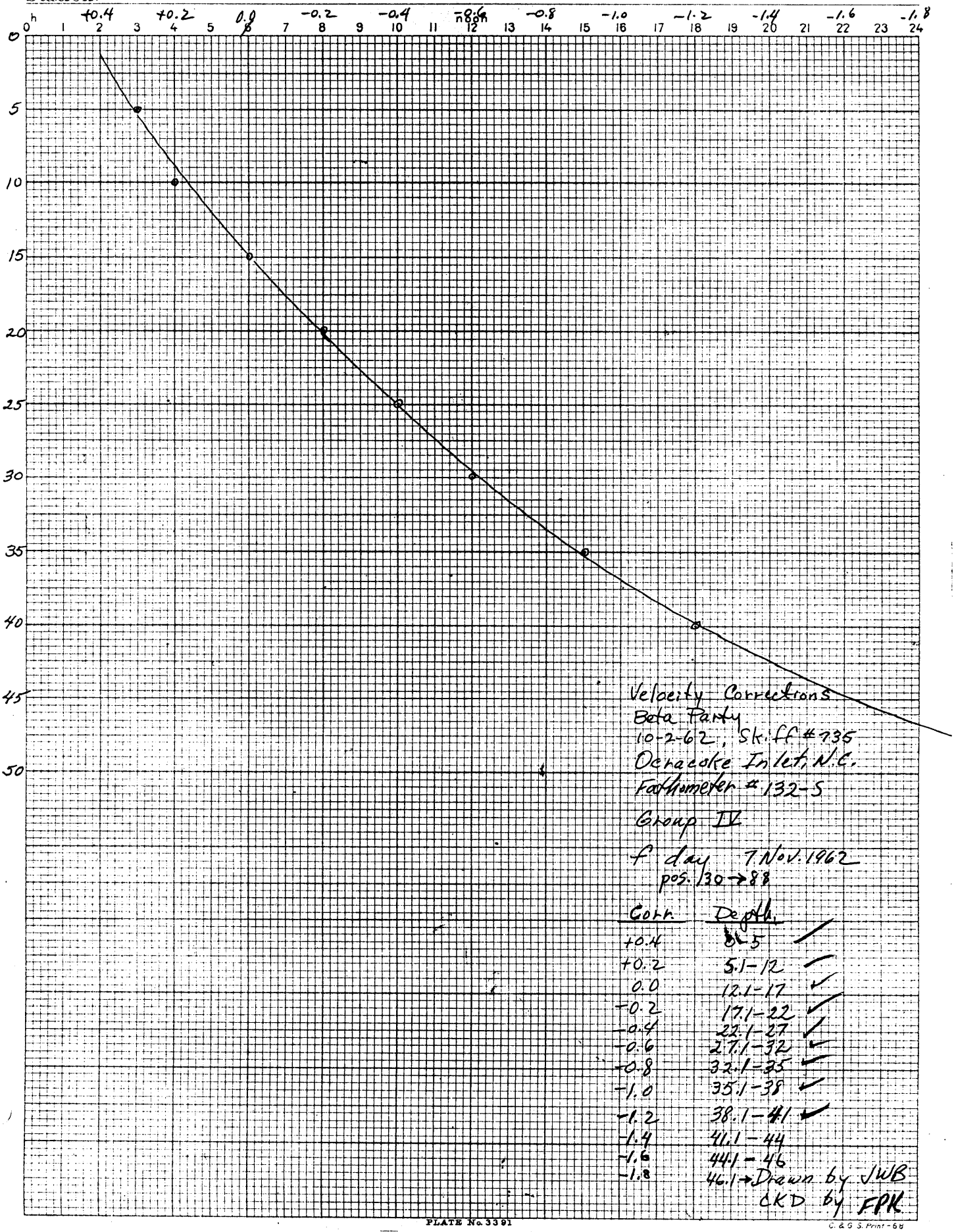
Group I

a day	25	Oct. 1962
b day	27	Oct. 1962
c day	28	Oct. 1962
~~d day~~		
e day	6	Nov. 1962
f day	7	Nov. 1962
g day	11	Nov. 1962
h day	12	Nov. 1962
j day	15	Nov. 1962

CORR.	DEPTH
0.0'	0'-26'
-0.2'	26.1'-35'
-0.4'	35.1'-43'
-0.6'	43.1'-50'
-0.8	50.1-56
-1.0	56.1-62
-1.2	62.1-68

Drawn by JWB
CKD by FPK

Station:



Velocity Corrections
Beta Party
10-2-62, Sk. ff #735
Ocracoke Inlet, N.C.
Fathometer #132-S
Group IV
f day 7 Nov. 1962
pos. 130 → 88

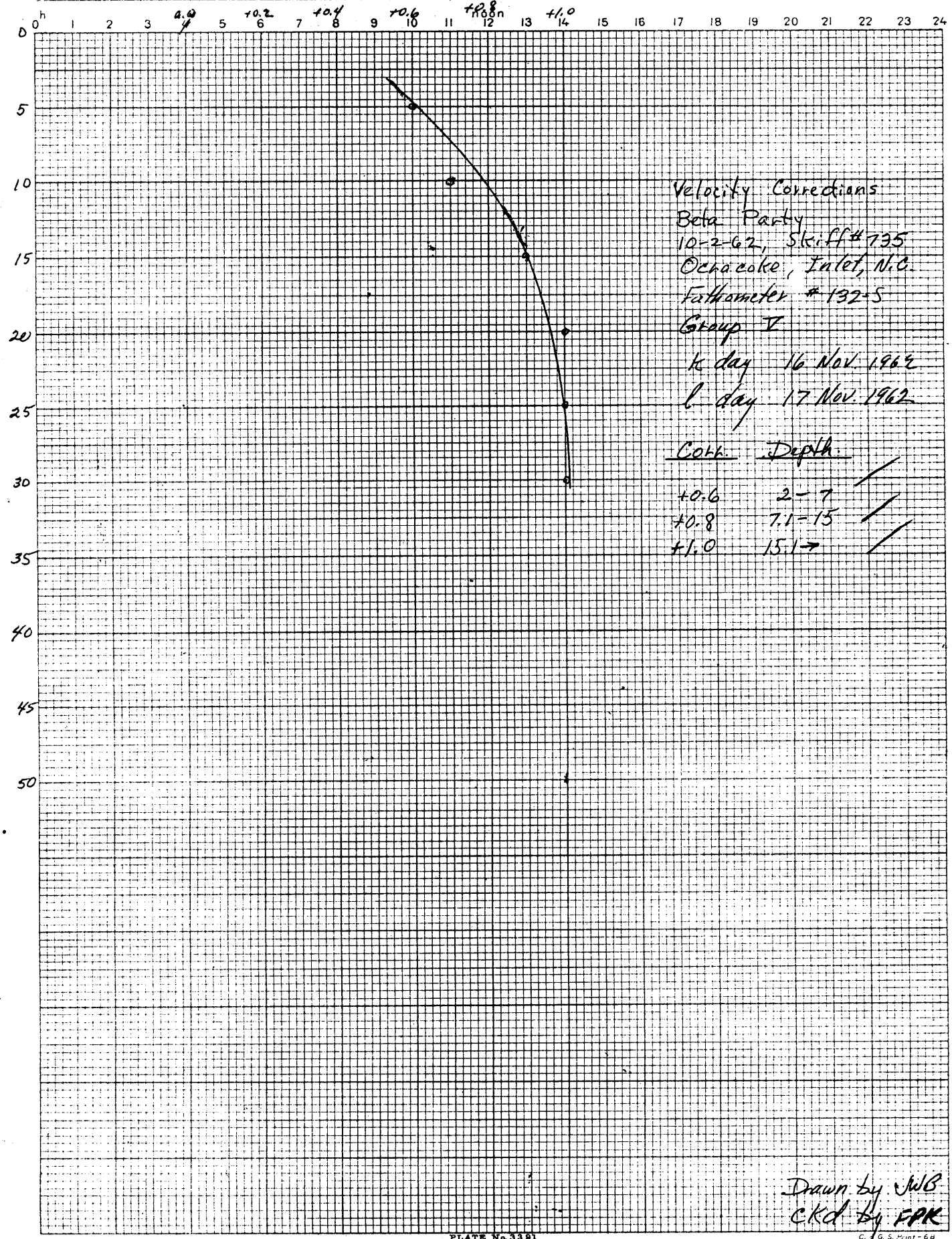
Corr	Depth
+0.4	0-5
+0.2	5.1-12
0.0	12.1-17
-0.2	17.1-22
-0.4	22.1-27
-0.6	27.1-32
-0.8	32.1-35
-1.0	35.1-38
-1.2	38.1-41
-1.4	41.1-44
-1.6	44.1-46
-1.8	46.1 →

Drawn by JWB
CKD by FPK

PLATE No. 3391

C. & G. S. Print - 62

Station:



Velocity Corrections
Beta Party
10-2-62, Skiff #735
Ocracoke, Inlet, N.C.
Fathometer #132-5
Group V
k day 16 Nov. 1962
l day 17 Nov. 1962

Corr.	Depth
+0.6	2 – 7
+0.8	7.1 – 15
+1.0	15.1 →

Drawn by JWB
Ckd by FPK

PLATE No. 3391

C. & G. S. Print - 6d

Station:

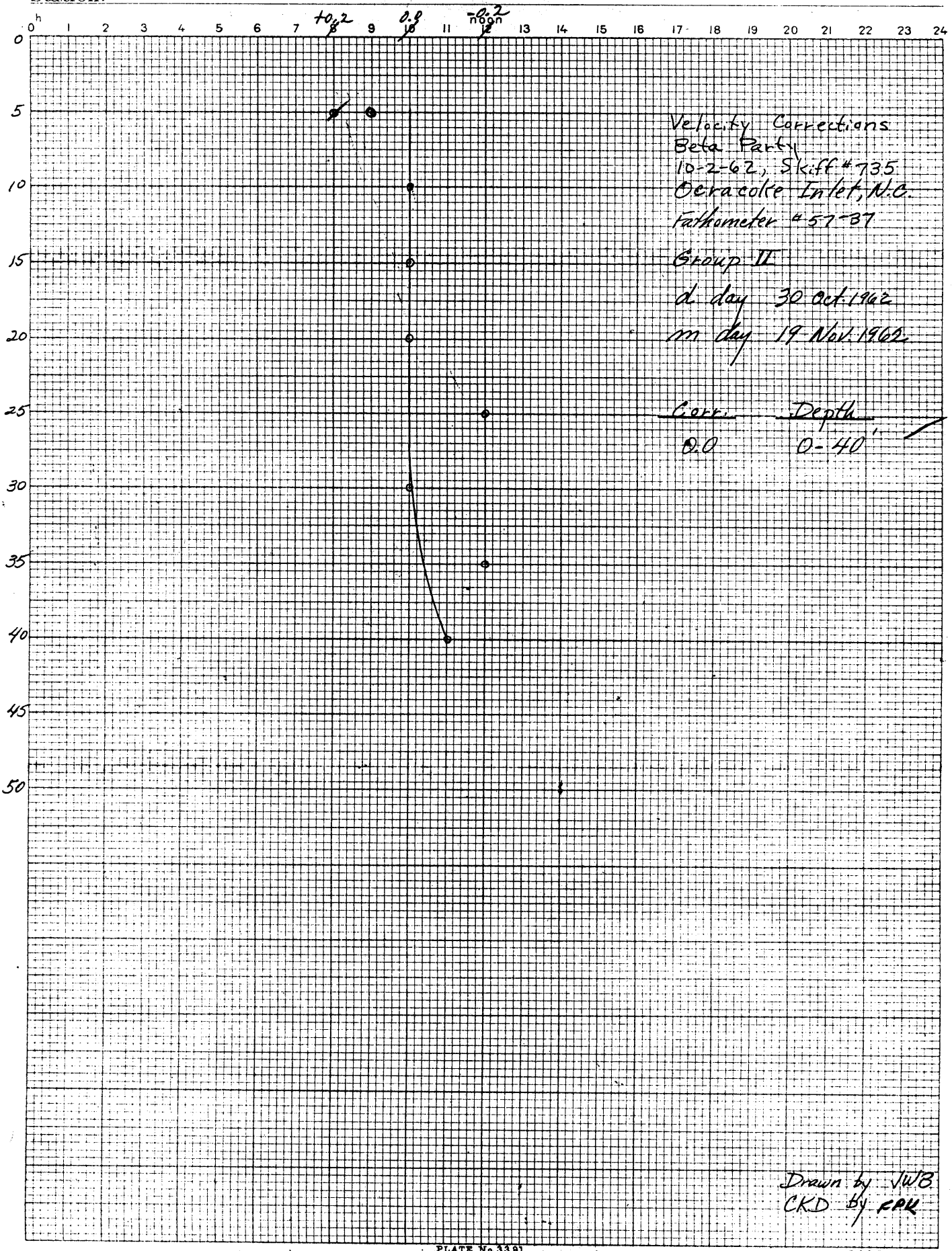


PLATE No. 3391

C & G S Print-68

APPROVAL SHEET

The boat sheet and records for this project are complete and approved. The boat sheet and sounding volumes were examined daily during this survey.

The survey is complete and adequate for charting.

Oliver C. Swindell

Oliver C. Swindell
Chief of Party

NORFOLK RECORDS PROCESSING UNIT
ADDENDUM
To Accompany

HYDROGRAPHIC SURVEY H-8766(BE-10-2-62)

GENERAL

This appears to be an excellent field survey. Soundings are in good agreement at crossings and depth curves follow normal patterns in this area of irregular and changeable bottom.

COMPARISON WITH PRIOR SURVEYS

A comparison with H-8291 (1956) shows a considerable amount of change within the area covered. The most significant of these appear to be the general shoaling at the entrance to Teaches Hole Channel, and a more Southerly trend in the direction of the main channel in the vicinity of Lat. 35-03.7' and Long. 76-01.0'.

Lat. 35-03.03' and Long. 76-00.96' -- The wreck of the Albatross was found Southwest of its reported position. A pole sounding of 5 feet was obtained on position 24n. A shoaler fathometer sounding of 4½ feet was recorded between positions 29 and 30n. The latter sounding was penciled on the smooth sheet.

Respectfully submitted,

Hugh L. Proffitt
Cartographer

Norfolk, Va.
14 January 1964

RHC

FORM C&GS-712
(4-62)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

TIDE NOTE FOR HYDROGRAPHIC SHEET

Nautical Chart Division: R.H.Carstens March 11, 1964

Plane of reference approved in
6 volumes of sounding records for

HYDROGRAPHIC SHEET 8766

Locality Ocracoke Inlet,North Carolina

Chief of Party: Oliver C. Swindell

Plane of reference is mean low water

ft. on tide staff at

ft. below B. M.

Height of mean high water above plane of reference is:1.3 ft.

Condition of records satisfactory except as noted below:

J. M. Symons
Chief, Tides and Currents Branch

USCOMM-DC 16543-P62

FORM 197
(3-16-55)

GEOGRAPHIC NAMES

Survey No. H-8766

Name on Survey	A: On Chart No. 419	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	
Beacon Island	✓									1
Blair Channel	✓									2
Ocracoke Inlet	✓									3
Ocracoke Island	✓									4
Portsmouth Island	✓									5
Wallace Channel	✓									6
Casey Island										7
										8
										9
										10
										11
										12
										13
										14
										15
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										24
										25
										26
										27

George M. Pace
March 1964

Form 946

Hydrographic Surveys (Chart Division)

HYDROGRAPHIC SURVEY NO. 8766

Records accompanying survey: Smooth sheets 1;

boat sheets 1; sounding vols. 6; wire drag vols. ;

Descriptive Reports 1; graphic recorder envelopes 6;

special reports, etc. .....

.....

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

Number of positions on sheet		1641.	
Number of positions checked		350	12
Number of positions revised		—	-
Number of soundings revised (refers to depth only)		20	10
Number of soundings erroneously spaced		10	-
Number of signals erroneously plotted or transferred		—	-
Topographic details	Time	1 hr.	-
Junctions	Time	—	-
Verification of soundings from graphic record	Time	45	8
Special adjustments	Time	—	

Verification by A.L. Baumgardner Total time 137 hr. Date 6 July 72

Reviewed by R.D. Sanocki Time 1390. Date July 73

Insp. Fannie B. Powers 26 hrs 11-12-74

Passed Carstens 6/7/76

Black line T-Sheets

US COMM C&GS DC

H-8766

Items for Future Pre-Survey Reviews

The bottom is considered adequately developed on the present survey. Significant changes were noted in the prior surveys and subsequent Corps of Engineers Surveys. These natural changes are due to strong currents and exposure to severe storms. A hurricane or similar severe storm could radically change the configuration of this area and necessitate a resurvey.

Position Index		Bottom Change	Use	Resurvey
Lat.	Long.	Index	Index	Cycle
350	0761	8	2	10 years

OFFICE OF MARINE SURVEYS AND MAPS

MARINE CHART DIVISION

HYDROGRAPHIC SURVEY REVIEW

REGISTRY NO. H-8766 FIELD NO. BE-10-2-62

North Carolina, North Carolina Coast, Ocracoke Inlet

SURVEYED: October 25 through November 20, 1962

SCALE: 1:10,000 PROJECT NO.: SP-24-62

SOUNDINGS: 808 Depth Recorder, Handlead, Sounding Pole CONTROL: Sextant Fixes on Shore Signals

Chief of Party	O. C. Swindell
Surveyed by	J. W. Bricker
Protracted by	R. D. Lynn
Soundings Plotted by	R. D. Lynn
Verified and Inked by	S. R. Baumgardner
Reviewed by	R. D. Sanocki
	Date: July 27, 1973
Inspected by	F. B. Powers

1. Description of the Area

This survey lies southwesterly of Cape Hatteras, North Carolina, between Ocracoke and Portsmouth Islands, which form part of a chain of barrier islands protecting the waters of Pamlico Sound.

In the survey area of the inlet entrance there is a natural channel which is located between island shelves of Ocracoke and Portsmouth Islands. This entrance channel is subject to positional changes due to a combination of longshore currents, tidal currents, and storms. The configuration within the inlet consists of patterns of natural channels, banks, and numerous shoals subject to frequent shifts in position.

The bottom is characterized primarily by fine white sand and, in some areas, fine white sand with small shells.

2. Control and Shoreline

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

The shoreline originates with Reviewed Photogrammetric Manuscripts T-12270, T-12271, and T-12272, all of 1962.

3. Hydrography

A. Depths at sounding line crossings are in good agreement.

B. The usual depth curves were adequately delineated. Several dashed and brown curves were added during review to emphasize important bottom features.

C. The development of the bottom configuration and the investigations of least depths are considered adequate.

4. Condition of the Survey

The field plotting, sounding records, and the Descriptive Report are adequate and conform to the requirements of the Hydrographic Manual except that daily bar checks were not taken for five of thirteen days.

5. Junctions

There are no contemporary surveys that junction with this survey. The unstable nature of this area precluded the junctioning with any of the recent prior surveys.

6. Comparison with Prior Surveys

A.

H-321(1852)	1:10,000	H-1364(1877)	1:20,000
H-538(1856)	1:40,000	H-1457(1880)	1:40,000
H-613(1857)	1:20,000	H-1871(1887-88)	1:20,000
H-661(1857-58)	1:20,000		

These early surveys cover various portions of the present survey. The sparse soundings on these prior surveys do not provide a satisfactory basis for a detail comparison with the present survey. A comparison between the prior and present surveys reveals that the area of the present survey has undergone numerous changes; there was a general southwestward movement, apparently due to natural causes, of the inlet along the barrier islands.

The present survey is adequate to supersede the above prior surveys within the common areas, including those portions of the prior surveys superseded by H-6834(1943) and H-6836 (1943).

B. H-2798(1905) 1:20,000
H-3902(1916) 1:20,000
H-4734(1927) 1:10,000

Individually, these surveys cover the entire area of the present survey. A comparison between the prior and present surveys indicates the inlet has undergone considerable change since 1905. There has been a general southwestward shift of the inlet features (shoals and channels) and of the inlet position between Ocracoke and Portsmouth Islands.

The present survey is adequate to supersede the above prior surveys within the common areas, including portions of those surveys superseded by H-6834(1943) and H-6836(1943).

C. H-6834(1943) 1:10,000
H-6836(1943) 1:10,000
H-8291(1956) 1:10,000 (Verified)

H-6834 and H-6836 are surveys of Wallace Channel, Teaches Hole Channel, and the entrance channel to Ocracoke Inlet. H-8291 is a survey of the inlet entrance and Wallace Channel.

A comparison between the above prior surveys and the present survey reveals considerable shoaling, deepening, and shifting of the inlet features. For example, in the vicinity of latitude 35°04.3'N, longitude 76°01.63'W, a trough has shoaled from 17 feet in 1956 to 2 feet on the present survey. In addition, Ocracoke Island shelf has moved southwestward shoaling the previously 37-foot entrance channel to 3 feet. Changes due to natural causes in the survey area render the previous surveys to be of little value in representing this constantly changing area.

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

7. Comparison with Chart 419, 12th Ed., June 24, 1972

A. Hydrography

The charted hydrography originates with the previously discussed prior surveys which require no further consideration and with prior and subsequent Corps of Engineers surveys, supplemented with depths from the boat sheet (Bp 63396) and present survey smooth sheet before verification and review.

Used for Reference in application of H-8766 by Joseph Pirrone 5/13/77

Soundings indicated on Bp 90206 by the reviewer as having been charted subsequent to the date of the present survey supersede the survey information and should be retained until disproved by further surveys.

Except as noted above, the present survey is adequate to supersede the charted hydrography within the common area.

B. Aids to Navigation

Numerous aids to navigation are not charted in this area because they are frequently shifted in position due to the changeable nature of the area.

The aids presently charted adequately mark the features intended.

8. Compliance with Instructions

The survey adequately complies with the Project Instructions.

9. Additional Field Work

This survey is an excellent basic survey and no additional field work is recommended.

Examined and Approved:

for Chief
Marine Chart Division

Associate Director
Office of Marine Surveys
and Maps

FIFTH COAST GUARD DISTRICT
LOCAL NOTICE TO MARINERS NO. 20

MARYLAND - CHESAPEAKE BAY - EASTERN BAY - KENT ISLAND NARROWS - Bridge information

The attached Public Notice 5-237 concerns temporary closures during Memorial Day weekend of the drawbridge across Kent Island Narrows at approximate Latitude 38°58'13" North, Longitude 76°14'50" West.

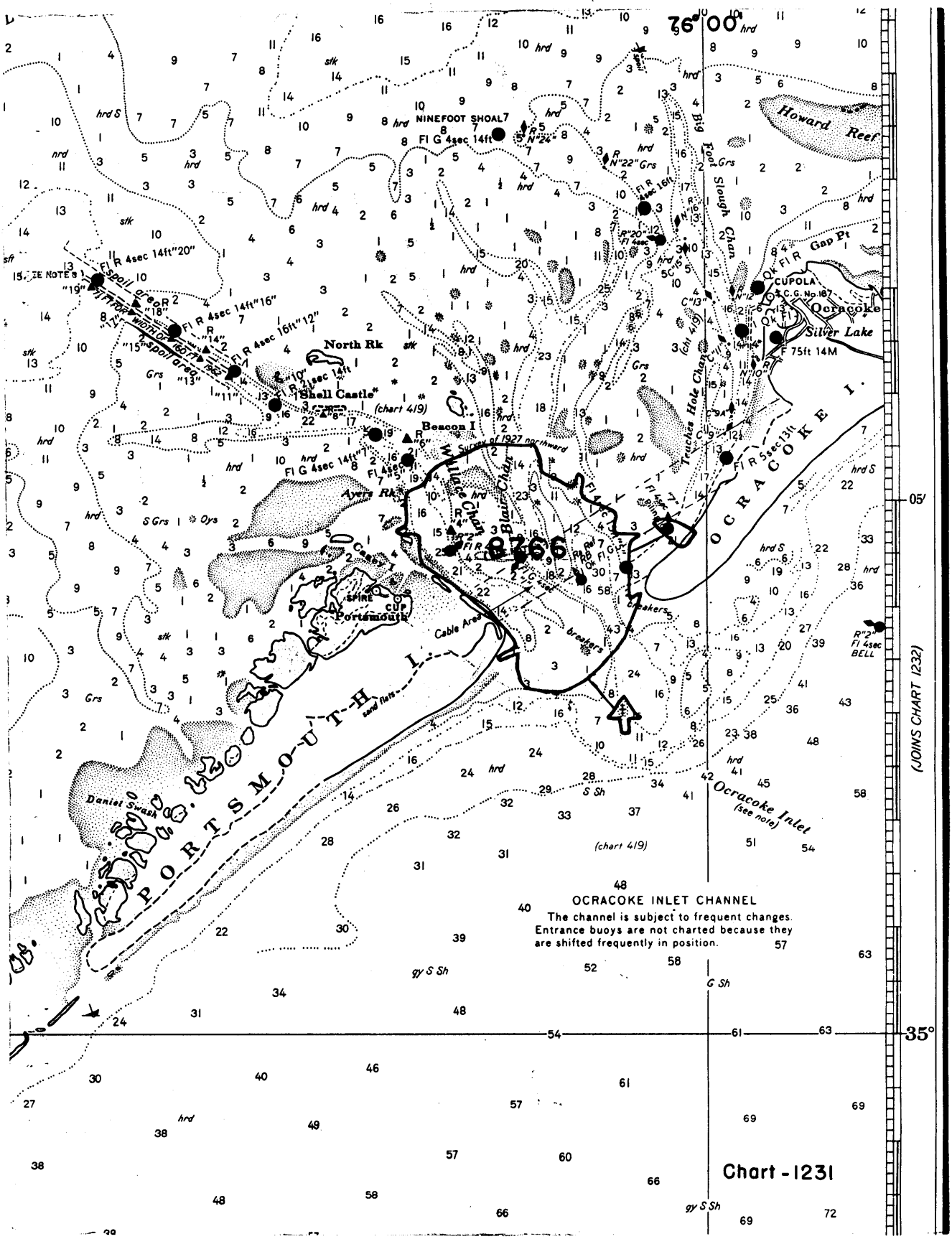
Charts C&GS 548 (N.O. 12099), C&GS 550 (N.O. 12095), 550-SC (N.O. 12107), C&GS 1225 (N.O. 12086)

U. S. Coast Pilot 3, Tenth Edition, 1972, Page 202

NORTH CAROLINA - OCRACOKE INLET - Temporary obstruction buoy discontinued

OCRACOKE INLET OBSTRUCTION BUOY (TEMPORARY) (LLP 456) previously established yards, 202.5° True from OCRACOKE LIGHT (LL 171) to mark the wreck of the fishing vessel ALBATROSS has been discontinued. The area was wire swept and the remains of the wreck could not be located. Mariners are advised that the possibility of an underwater obstruction in the area exists.

Charts C&GS 419 (N.O. 11257), C&GS 1232 (N.O. 11255),


76° 00'
NINEFOOT SHOAL
Fl G 4sec 14ft
Howard Reef
Big Foot Slough Chan
Gap Pt
CUPOLA
C.G. No. 187
Ocracoke
Silver Lake
F 75ft 14M
Fl R 4sec 14ft"20"
Fl R 4sec 14ft"16"
Fl R 4sec 16ft"12"
North Rk
Shell Castle*
(chart 419)
Beacon I
Wallace Chan
Blair Chan
Trueheart Hole Chan
Fl R 5sec 13ft
OCRACOKE I.
Avery Rk
Cable Area
Portsmouth
SPIRE
CUP
PORTSMOUTH I.
Daniel Swash
Ocracoke Inlet
(see note)
(chart 419)
OCRACOKE INLET CHANNEL
The channel is subject to frequent changes.
Entrance buoys are not charted because they
are shifted frequently in position.
35°
05'
(JOINS CHART 1232)
Chart - 1231

FORM C&GS-8352
(3-25-63)

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-8766

INSTRUCTIONS

A basic hydrographic or topographic survey supersedes all information of like nature on the uncorrected chart.
1. Letter all information.
2. In "Remarks" column cross out words that do not apply.
3. Give reasons for deviations, if any, from recommendations made under "Comparison with Charts" in the Review.

CHART	DATE	CARTOGRAPHER	REMARKS
419	1-29-64	Fannie B Powers	~~Full~~ Part Before ~~After~~ Verification Review Inspection Signed Via
1732			Drawing No.
1231	9-25-64	R.K. DeRueder	~~Full~~ Part Before ~~After~~ Verification Review Inspection Signed Via
			Drawing No. 13 Chart 419 ✓ RKD 9-25-64
1233	11-20-64	J D McEvoy	~~Full~~ Part Before ~~After~~ Verification Review Inspection Signed Via
			Drawing No. C/O Correction / RKD 12-21-64
419	5/20/77	Joseph J. Pirrone	Full ~~Part Before~~ After Verification Review Inspection Signed Via
11550			Drawing No.
1231	8/18/77	Richard L. Hogan	Full [redacted] After Verification Review Inspection Signed Via
11548			Drawing No. 95 THRU CHART 419
1232	8/18/77	Richard L. Hogan	Full [redacted] After Verification Review Inspection Signed Via
11555			Drawing No. 98 THRU CHART 419 & 1231
1233	9/16/80	Russell P Kennedy	Full ~~Part Before After~~ Verification Review Inspection Signed Via
11544			Drawing No. No Correction falls off chart.
11544	5/15/96	Dan Flick	Full ~~Part Before~~ After Verification Review Inspection Signed Via
			Drawing No. 46 Considered fully app'd.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.
			Full Part Before After Verification Review Inspection Signed Via
			Drawing No.

FORM C&GS-8352 SUPERSEDES ALL EDITIONS OF FORM C&GS-975.

USCOMM-DC 8558-P63