9195

Diag. Cht. No. 1237.

FORM C&GS-504

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Hydrographic

Field No. WH-10-1-71 Office No. H-9195

LOCALITY

State North and South Carolina

General locality North and South C. Coast Long Bay

Locality Approaches to Little River Inlet, S. C.

1971

CHIEF OF PARTY

CDR. Charles H. Nixon

LIBRARY & ARCHIVES

DATE 1-7-74

USCOMM-DC 37022-P66

Charts
8355c
1231
1237
1110

9195

FORM C&GS-537
(5-66)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET

REGISTER NO.
H-9195

FIELD NO.
WH-10-1-71

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

State North and South Carolina

General locality ~~Coast of North and South Carolina~~ Long Bay

Locality Approaches to Little River Inlet, ~~South Carolina~~

Scale 1:10,000 Date of survey 11March to 5May 1971

Instructions dated 8 January 1971 Project No. OPR-437-WH-71

Vessel NOAA Ship WHITING

Chief of party CDR. Charles H. Nixon

Surveyed by * CDR C.H.Nixon, LCDR J.W.Carpenter, LT P.L.Campbell, LtjgD.W.Nostrant, Ltjg J.D.Busman, ENS D.W.Yeager, CST W.A.Hill

Soundings taken by echo sounder, ~~hand lead~~, pole Echo sounder and pole

Graphic record scaled by * As above - Ships Officers

Graphic record checked by * As above - Ships Officers

Protracted by N/A Automated plot by AMC - CALCOMP 618

Soundings penciled by ~~* As above~~ NGA

Soundings in ~~fathoms~~ feet at MLW ~~MLLW~~ Feet at MLW

REMARKS:

Applied to stds 3-6-74

Chart
1237 # 8
1236 # 12
8355c #
1110 too small to scale for 1237

USCOMM-DC 37009-P66

DESCRIPTIVE REPORT

To Accompany

Hydrographic Survey H-9195

WH 10-1-71

OPR 437

Coast of North and South Carolina

11 March 1971 to 5 May 1971

Scale 1:10,000

NOAA Ship WHITING

Charles H. Nixon, CDR, NOAA, Commanding

A. PROJECT:

This survey was accomplished in accordance with Project Instructions for OPR 437, coast of North and South Carolina, dated 8 January, 1971, as amended 5 February, 1971, 9 February, 1971 and 8 March, 1971.

B. AREA SURVEYED:

The area surveyed extends from shoreward approximately two miles, and from east to west for approximately 4 miles, and centered to include both Little River Inlet and Mad Inlet. This sheet junctioned exclusively with WH 20-1-71, a contemporary survey run by NOAA Ship WHITING and her launches. The limits of the various sheets are shown on a diagram included in this report.

C. SOUNDING VESSELS:

In this survey, WHITING Launch I, WHITING Launch II, and WHITING Whaler 1 were used.

D. SOUNDING EQUIPMENT:

The sounding instruments used were Raytheon DE-723D survey fathometers. The "D" suffix denotes a unit with digitized output, but in this operation the digitized output was not used. The fathometer used in Launch I was serial no. 37019, and in Launch II the serial no. was 37018. The skiff used a sounding pole.

Bar checks were taken twice daily, weather permitting, with the check at 10 feet made as per Hydrographic Manual section 5-110 with deeper checks made as conditions permitted. No check was made on the digital output since it was not being used.

The WHITING's computer plotter system plotted all soundings after reducing them for predicted tides and TRA corrections. No velocity corrections for the survey fathometers were applied at this time. These corrections should be applied before plotting the smooth sheet. A table of velocity corrections is appended to this report.

E. SMOOTH SHEET:

The smooth sheet will be plotted on the computer system at the Atlantic Marine Center, Norfolk, Virginia. Position corrections have already been applied.

F. CONTROL:

Two basic methods of control were used during the survey: Visual and

hypervisual. The major portion of the survey was controlled hypervisually. The sounding vessel would follow the hyperbolic lane running normal to the depth curves. The position of the vessel on the arc was located by a single sextant angle shot to signals which straddle the inshore extensions of the hyperbolic arc. The hydrographic signals were located by third order traverse from existing second order triangulation stations.

Detached positions on aids to navigation, detached positions for shore line deliniation, and control for skiff hydro utilized visual control solely. All such data is in volumes, on tapes, and printouts.

The location of the three Hi-Fix sites follow:

STATION	NAME	LATITUDE	LONGITUDE
Master	Cabana, 1970	33°49'33.004"N.	78°38'57.788"W.
Slave 1	Pawley, 1970	33°25'57.764"N.	79°07'09.929"W.
Slave 2	Ben, 1970	33°53'26.79"N.	78°01'50.95"W.

All stations were located by third order methods. Master was at Cherry Grove Beach, South Carolina, Slave 1 was located on Pawley's Island, South Carolina and Slave 2 was placed near Fort Caswell, North Carolina on Oak Island.

G. SHORELINE:

At the time of the survey, no T sheets had been provided for use in transfering shore line to boat sheets. Project Instructions had specified that shoreline would be provided, but none was available. Extensive changes are evident from shoreline as shown on prior surveys, but recent photo work has not been available for comparison.
Shoreline penciled on smooth sheet from incomplete manuscript

H. CROSSLINES: T-12295(2)

Crosslines composed 6.8% of the total length of the sounding lines. The agreement between crosslines and the main system of lines was poor due to the large discrepancies between predicted tides and smooth tides. See the Sounding Line Comparison Report.

I. JUNCTIONS:

H-9195 H-9229

The agreement between WH 10-1-71 and WH 20-1-71 was plagued on all three sides by the problems encountered with predicted tides. A smooth tide plot of all work should remedy all problems. See the Sounding Line Comparison Report.

J. COMPARISON WITH PRIOR SURVEYS:

Pre Survey Review Item

The sunken wreck charted in latitude 33°52.0'N., longitude 78°30.4'W originates with H-4450, 1924. The wreck was located by ships personnel to be at latitude 33°52.05'N., and longitude 78°30.47'W. The wreck is barely visible as it is covered by sand. It plots near the Sunset Beach pier but is of no consequence to navigation. It is recommended the wreck be deleted from all charts.

The area marked "BREAKERS" at latitude 33°50.8'N., longitude 78°33.2'W., and latitude 33°51.2'N., longitude 78°32.1'W. could not be surveyed without undue risk to the safety of the sounding vessel and its personnel. These areas are shoal and not navigable waters.

The survey compares favorably with prior survey H-4615, 1926, 1:40,000 on its southern edge. A one to two foot scouring prevails.

The area near Little River Inlet is compared with H-5656, 1935, 1:10,000. The Little River Inlet of WH 10-1-71 has little resemblance to this survey. The shoreline of Waiter Island, for example, has extended over one-half mile eastward since 1934. In areas further from the shoreline, but not seaward from the 18' curve, comparison indicates a shoaling of approximately one to two feet.

K. COMPARISON WITH THE CHART:

WH 10-1-71 was compared with C&GS chart 1237 dated 4 September, 1968. There exists a constant shoaling of one to three feet throughout the inshore areas. The area away from the inlet shows 1'-2' scouring. The area of Little River Inlet is subject to constant change and should be marked accordingly. Mad Inlet, as indicated by H-5656, 1934, 1:10,000 is not navigable.

L. ADEQUACY OF THE SURVEY:

The survey is complete, accurate and adequate.

M. AIDS TO NAVIGATION: This location disagrees with the boat sheet location of Φ 33°50.46' λ 78°32.26' - Not plotted on Smooth Sheet - no location found in field records

Red whistle buoy 2LR, flashing 4 second, was located by launch personnel to be at latitude 33°50.46'N., longitude 78°32.47'W. It is charted at latitude 33°50.4'N., longitude 78°32.5'W. Its location and function should be considered adequate.

Little River Inlet is marked with private buoys which consist ot 50 gallon cans painted red. These buoys move often with unfavorable weather. Fishing vessel CHIPPEWA from Little River, South Carolina moves these buoys frequently. No meaningful position could be obtained for these aids.

N. STATISTICS:

VESSEL	NAUTICAL MILES OF SOUNDING LINE	NO. OF POSITIONS
Launch 1	50.7	311
Launch 2	104.9	559
Skiff	3.5	222
TOTALS	169.1	1092

gpb

Area of sheet = 5.0 square nautical miles

Total bottom samples = 12

O. MISCELLANEOUS:

All hypervisual and visual data for WH 10-1-71 use corrector tapes for plotting the smooth sheet.

Little River Inlet was not developed further due to unfavorable weather conditions and shortness of field season. The controlling depth for entering the inlet at the time of the survey was 6 feet.

P. RECOMMENDATIONS:

The nydrographer recommends both Little River Inlet and Mad Inlet be marked appropriately to indicate the areas are subject to continually shifting shoals.

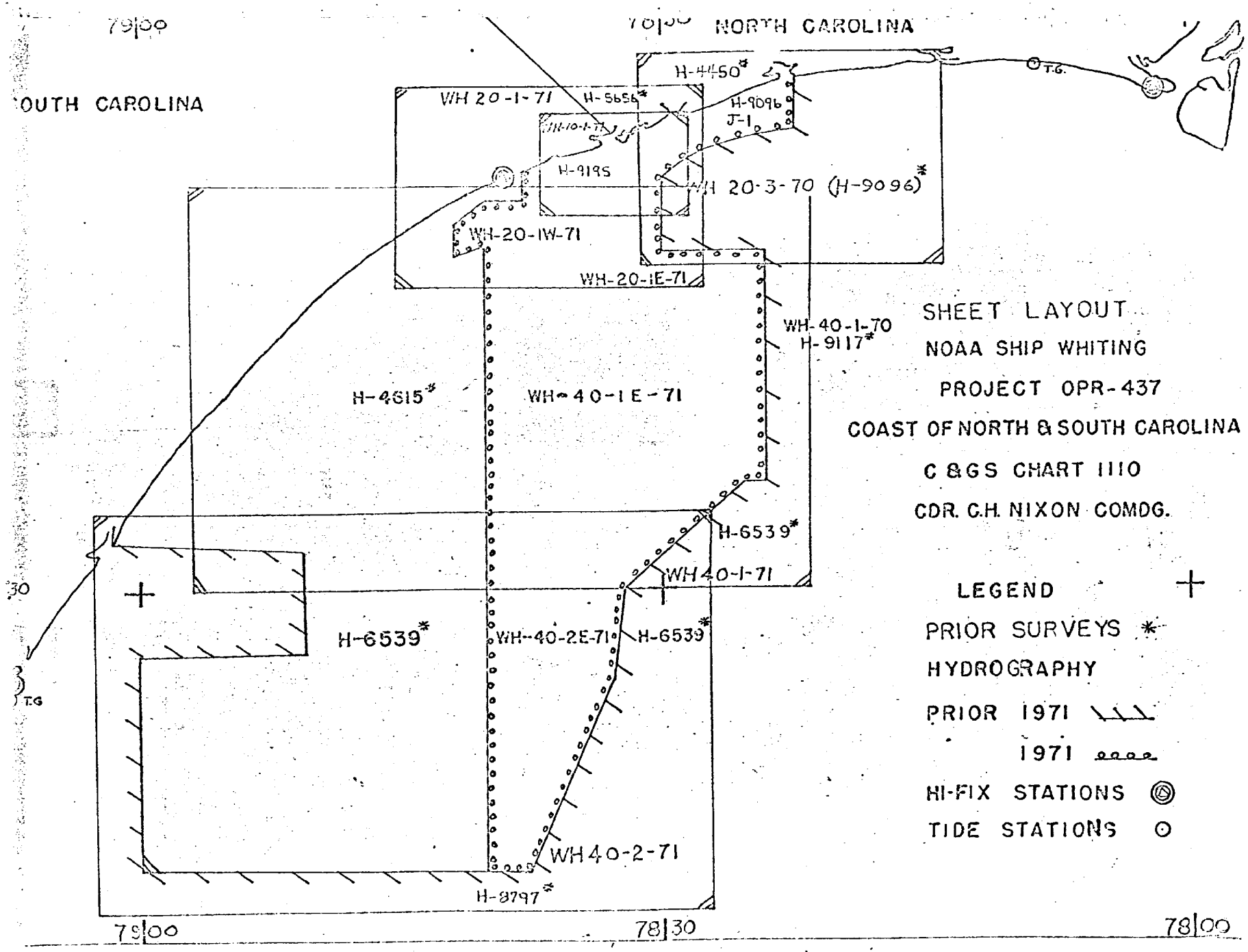
Q. REFERENCES TO REPORTS:

1. Hi-Fix Report, OPR 437, coasts of North and South Carolina, 1971.

2. Corrections to Echo Soundings, OPR 437, coasts of North and South Carolina, 1971.

3. Sounding Line Comparison Report, NOAA Ship WHITING, coasts of North and South Carolina, 1971 field season.

4. Coast Pilot Report, OPR 437-71, Coasts of North and South Carolina, NOAA Ship WHITING, 1971 field season.


79|00
NORTH CAROLINA
SOUTH CAROLINA
H-4450*
WH 20-1-71
H-5656*
H-9096
J-1
H-9195
WH 20-3-70 (H-9096)*
WH-20-1W-71
WH-20-1E-71
WH-40-1-70
H-9117*
H-4615*
WH-40-1E-71
H-6539*
WH40-1-71
H-6539*
WH-40-2E-71
H-6539*
WH40-2-71
H-8797*
T.G.
T.G.
30
79|00
78|30
78|00
SHEET LAYOUT
NOAA SHIP WHITING
PROJECT OPR-437
COAST OF NORTH & SOUTH CAROLINA
C&GS CHART 1110
CDR. C.H. NIXON COMDG.
LEGEND
PRIOR SURVEYS *
HYDROGRAPHY
PRIOR 1971
1971
HI-FIX STATIONS
TIDE STATIONS

GEOGRAPHIC NAME LIST

1. Bird Island
2. Little River Inlet
3. Mad Inlet
4. Waiter Island

PARAMETER TAPE LISTING

WHIC-1-71

FGWT=70000

CLAT=3674000

CMER=282600

GRID=30

PLSCL=10000

PLAT=33/48/25

PLON=78/35/05

MLAT=33/49/33.004

MLON=78/38/57.788

S1LAT=33/25/57.764

S1LON=79/07/09.929

S2LAT=33/53/26.794

S2LON=78/01/50.951

Q=1799.6

VES=2930

YR=71

NOAA SHIP WHITING 1971

OPR 437 COAST OF NORTH AND SOUTH CAROLINA

VELOCITY USE TABLE

TABLE NO.	FATHOMETER	DAYS (JULIAN)
1	DE 723	060-098
3	DE 723	099-132
2	ROSS	060-098
4	ROSS	099-132

VELOCITY CORRECTOR TABLES
OPR--437

```
3000082 0 0000 0001 000 000000 000000
000181 0 0002
000277 0 0004
000375 0 0006
000474 0 0008
000572 0 0010
000669 0 0012
000770 0 0014
000060 0 0000 0002 000 000000 000000
000119 0 0002
000175 0 0004
000235 0 0006
000292 0 0008
000358 0 0010
000422 0 0012
000487 0 0014
000552 0 0016
000616 0 0018
000680 0 0020
000745 0 0022
000050 0 0000 0003 000 000000 000000
000148 0 0002
000246 0 0004
000343 0 0006
000439 0 0008
000535 0 0010
000631 0 0012
000729 0 0014
000031 0 0000 0004 000 000000 000000
000090 0 0002
000146 0 0004
000206 0 0006
000269 0 0008
000335 0 0010
000400 0 0012
000465 0 0014
000526 0 0016
000591 0 0018
000656 0 0020
000720 0 0022
```

SIGNAL TAPE LISTING

OPR-437-71

099	33	55	1666	078	01	1292
100	33	52	2406	078	00	0234
101	33	53	3573	078	01	0989
102	33	53	3354	078	02	0677
103	33	53	3172	078	02	0448
104	33	53	3692	078	02	3478
105	33	53	4545	078	03	0626
106	33	53	5219	078	03	3368
108	33	53	5996	078	04	0073
109	33	54	0728	078	04	2890
110	33	54	0451	078	04	5906
111	33	54	1584	078	05	0467
112	33	54	2328	078	05	3996
113	33	54	2652	078	06	0437
114	33	54	2963	078	06	2482
119	33	54	1975	078	05	2324
120	33	54	2478	078	05	5076
124	33	54	3004	078	06	3238
126	33	54	3260	078	06	4638
[3] 128	33	54	3520	078	07	0434
130	33	54	3732	078	07	1617
132	33	54	3904	078	07	3099
[2] 134	33	54	4111	078	07	4634
136	33	54	4289	078	08	0009
138	33	54	4415	078	08	1350

140	33	54	4548	078	08	2874
142	33	54	4643	078	08	4306
144	33	54	4767	078	08	5788
146	33	54	4888	078	09	1464
148	33	54	4967	078	09	2616
150	33	54	5050	078	09	4244
152	33	54	5084	078	09	5802
154	33	54	5113	078	10	1348
156	33	54	5131	078	10	2934
158	33	54	5630	078	10	4917
160	33	54	5120	078	11	0277
162	33	54	5114	078	11	2102
164	33	54	5079	078	11	3580
166	33	54	5058	078	11	4972
168	33	54	5044	078	12	0648
170	33	54	4965	078	12	1911
172	33	54	4864	078	12	3518
174	33	54	4800	078	12	4986
176	33	54	4750	078	13	0141
178	33	54	4676	078	13	1846
180	33	54	4629	078	13	2941
182	33	54	5150	078	13	5406
183	33	54	5345	078	13	5675
184	33	54	5807	078	14	2741
186	33	54	5071	078	14	4370
188	33	54	5080	078	14	5925
190	33	54	5038	078	15	1451
192	33	54	5023	078	15	3045

194	33	54	5130	078	15	3771
196	33	54	4926	078	15	4782
198	33	54	4806	078	16	0218
200	33	54	4695	078	16	1758
202	33	54	4563	078	16	3336
204	33	54	4445	078	16	4765
206	33	54	4320	078	17	0593
208	33	54	4149	078	17	2061
210	33	54	4070	078	17	3246
212	33	54	3922	078	17	4688
214	33	54	3737	078	18	1007
216	33	54	3611	078	18	2438
218	33	54	3492	078	18	3801
220	33	54	3319	078	18	5464
222	33	54	3180	078	19	0983
224	33	54	3008	078	19	2583
226	33	54	2897	078	19	4390
228	33	54	2727	078	19	5864
230	33	54	2537	078	20	1654
232	33	54	2367	078	20	3277
234	33	54	2221	078	20	5136
236	33	54	1978	078	21	0672
238	33	54	2121	078	21	2446
240	33	54	1695	078	21	3829
242	33	54	1441	078	22	0058
244	33	54	1147	078	22	3029

246	33	54	0591	078	23	0712
248	33	53	5086	078	23	2270
250	33	53	4687	078	23	3981
252	33	53	4538	078	23	5536
254	33	53	4339	078	24	0947
256	33	53	4119	078	24	2292
260	33	53	3114	078	25	0127
262	33	53	2781	078	25	1459

7/17/73

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

TIDE NOTE FOR HYDROGRAPHIC SHEET

Processing Division: Atlantic Marine Center

Hourly heights are approved for

Tide Station Used (NOAA form 77-12): Myrtle Beach, S.C.

Period: Feb. 18-May 14, 1970

HYDROGRAPHIC SHEET: H-9096 H-9115 H-9195

OPR: 437

Locality: Coast of S.C.

Plane of reference (mean ~~lower~~ low water): 4.6 ft. for

Height of Mean High Water above Plane of Reference is 5.1 ft.

Remarks: Zoning:

Recommend use of multiple gage zoning between Long Beach and Myrtle Beach.

Myrtle Beach -
subtract from hourly heights
1970 4.6
1971 8.4
1972 7.6
Per. Instruction w. Mr Hubbard, 8/10/73. A memo will follow. WFT

Robert A Cunningham

Chief, Tides Branch

TIDE NOTE

Smooth tides for WH 10-1-71 were obtained from a fixed bubbler tide gage located at Ocean Crest Pier, Long Beach, North Carolina; latitude 33°54'48"N., longitude 78°08'50"W.

The gage was installed February 22, 1971 and maintained by ships personnel. Mean low water was 4.4 feet on the staff.

The time meridan used was 0° (GMT). No smooth tides were used in plotting the work from 1971. Smooth tides will be utilized by the Atlantic Marine Center when the final plot is made.

All boat sheet soundings use predicted tides from Shallotte Inlet, North Carolina.

ATLANTIC MARINE CENTER
VERIFICATION OF SMOOTH TIDES

SURVEY H-9195

PLANE OF REFERENCE MLW OR ~~MLLW~~*
TIME MERIDIAN GMT
HEIGHT DATUM ON STAFFS 1. 4.0 2. 8.4 3. _____

TIDE STATIONS	POSITION	TYPE GAGE	TIME CORR. H.W.	TIME CORR. L.W.	HEIGHT CORR. * H.W.	HEIGHT CORR. * L.W.
1. Long Beach, N.C.	Ø 33 55' Y 78 09'		0	0	0	0
2. Myrtle Beach, S.C.	Ø 33 41' Y 78 53'		0	0	0	0
3.	Ø Y					

HOURLY HEIGHTS [X] FROM ROCKVILLE OFFICE
[ ] FROM FIELD MARIGRAMS VERIFIED BY: Rockville Office

TIDE ZONING [ ] NOT APPLICABLE
[X] BY COMPUTER
[X] FROM TWO OR MORE GAGES

LIMITS AND DESCRIPTION OF ZONING METHODS

Multiple gage zoning between Long Beach, N.C. and Myrtle Beach, S.C.

TIDE CORRECTIONS COMPILED [X] BY COMPUTER VERIFIED BY: BTD
[ ] MANUALLY VERIFIED BY: _____

HEIGHT OF MHW ABOVE PLANE OF REFERENCE [5.0] (5.1 Myrtle Beach, S.C.) (4.8 Long Beach, N.S.)

TIDE CORRECTIONS VERIFIED ON SOUNDING PRINTOUT BY: BTD

DATE OF VERIFICATION 8/22/73

*OR RATIO

EXAMINED & APPROVED

[signature]

CFN3-1
4-6-71

ATLANTIC MARINE CENTER

PROJECTION PARAMETERS

POLYCONIC OR MODIFIED TRANSVERSE MERCATOR

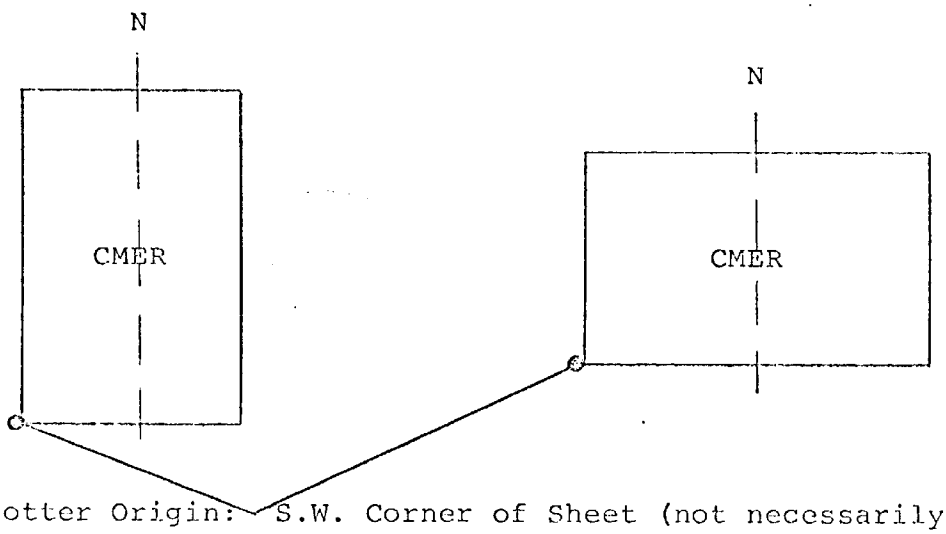
1. Project No. OPR 437
2. Reg. No. H-9195
3. Field No. WH 10-1-71
4. Requested By _____
5. Ship or Office WHITING
6. Date Required _____

7. Polyconic [X] Modified Transverse Mercator [ ]
8. Central Meridian of Projection 78 ° 32 ' 30 "
9. Survey Scale: 1:10,000
10. Size of Sheet (check one):

    36 x 54 [ ] 36 x 60 [ ] Other [X] Specify 36 x 32

11. Sheet Orientation (check one):

    NYX = 1 [ ] NYX = Ø [X]



12. Plotter Origin: S.W. Corner of Sheet (not necessarily a grid intersection)

    Latitude 33 ° 48 ' 25 "

    Longitude 78 ° 35 ' 05 "

13. G.P.'s of triangulation and/or signals attached. [X]
14. Material Desired: Tracing Paper [ ] Mylar [ ]

    Smooth Sheet [X] Other [ ] Specify _____

15. Remarks: _____

CFN3-2
4-6-71

ATLANTIC MARINE CENTER

ELECTRONIC CONTROL PARAMETERS

1. Project # OPR- 437 2. Reg. # H-9195 3. Field # WH 10 - 1 - 71

4. Type of Control HI-FIX (Hi-Fix, Raydist, EPI, etc.)

5. Frequency 1799.6 (for conversion of electronic lanes to meters)

6. Mode of Operation (check one):

Range-Range [ ] Range-Visual [ ]

Range One (R_1) Station I.D.		Lat.	° ' "
		Long.	° ' "
Range Two (R_2) Station I.D.		Lat.	° ' "
		Long.	° ' "

Hyperbolic (3-station) [ ] Hyper-Visual [X]

Slave One Station I.D.	PAWLEY	Lat.	33 ° 25 ' 57.764 "
		Long.	79 ° 07 ' 09.929 "
Master Station I.D.	CABANA	Lat.	33 ° 49 ' 33.004 "
		Long.	78 ° 38 ' 57.788 "
Slave Two Station I.D.	BEN	Lat.	33 ° 53 ' 26,794 "
		Long.	78 ° 01 ' 50.951 "

7. Location of Survey:

Range-Range [ ] Imagine an observer is standing at R_1 Station and looking directly at R_2 (check one):

Survey area is to observer's Right [ ] A=Ø

Survey area is to observer's Left [ ] A=1

Hyperbolic [X] Looking from survey area toward Master Station:

Slave One must be to observer's Left.

Slave Two must be to observer's Right.

8. [ ] This form is submitted as an aid in preparing a boat sheet.

[X] This form applies to all data on this survey.

[ ] This form applies to part of the data on this survey.

Vessel EDP #	From Time	Day	To Time	Day	Position Numbers (inclusive)	
						to
						to
						to

9. Remarks:

CALIBRATION ABSTRACT
HYPERVISUAL
WH 10-1-71

			LAUNCH						
070	USE	-0.18	II						
090	"	-0.15	II						
091	"	-0.08	II						
091	"	-0.15	I						
098	"	-0.19	I						
098	"	-0.03	II						
105	"	-0.11	I						
105	"	-0.08	II						
109	"	-0.66	II						
110	"	-0.17	II						
131	"	-0.15	II						
131	"	-0.14	II						

APPROVAL SHEET

Submitted by

John D. Busman

John D, Busman
LTJG, NOAA

Supervision of field and office work on this hydrographic survey was continuous on a day to day basis to insure completeness of the survey and to insure that the work was in accordance with instructions.

Hydrography completed on this boat sheet is complete and adequate to supersede prior surveys for charting.

Approved/Forwarded

Charles H. Nixon

Charles H. Nixon
CDR, NOAA
Commanding Officer, NOAA Ship WHITING

ATLANTIC MARINE CENTER
APPROVAL SHEET
FOR
AUTOMATED SURVEY H-9195

A. All revisions and additions made on the smooth sheet during verification have been entered in the magnetic tape records for this survey. A new final position printout has/has not been made. A new final sounding printout has/has not been made.

Date: Dec.12,1973

Signed: William L Jones

Title: Chief, Verification Branch

B. The verified smooth sheet has been inspected, is complete, and meets the requirements of the Hydrographic and AMC Manuals. Exceptions are listed in the verifier's report.

Date: Dec.12,1973

Signed: for Gregg M Bass
C.Dale North,LCDR

Title: Chief, Processing Division

GEOGRAPHIC NAMES

Survey No.

H-9195

Name on Survey	On Chart No. A	On previous survey No. B	On U. S. quadrangle Maps C	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
BIRD ISLAND										1
LITTLE RIVER INLET										2
LONG BAY										3
MAD INLET										4
WATIES ISLAND										5
										6
										7
										8
										9
										10
										11
										12
										13
										14
										15
										16
										17
										18
										19
										20
										21
					Approved by:					22
					Chas. L. Harrington					23
					Staff Geographer					24
					27 March 1974					25
										26
										27
										M 234

VERIFICATION NOTES
SURVEY H-9195 (WH-10-1-71) OPR 437

GENERAL

This appears to be an excellent basic survey. Soundings are in good agreement at crossings and the depth curves form natural configurations except along the shoreline and in the inlets where the hydro is insufficient.

Problems encounted during verification and the methods used to resolve them are explained in the accompanying Plotter Notes.

Dec.12,1973

William L.Jonns
Chief,Verification Br.,AMC

FORM C&GS-946
(REV. 11-65)
(PRESC. BY
HYDROGRAPHIC
MANUAL 20-2,
6-94, 7-131)

U.S. DEPARTMENT OF COMMERCE
ENVIRONMENTAL SCIENCE SERVICES ADMINISTRATION
COAST AND GEODETIC SURVEY
NAUTICAL CHART DIVISION

HYDROGRAPHIC SURVEY STATISTICS

HYDROGRAPHIC SURVEY NO. H-9195
WH-10-71

RECORDS ACCOMPANYING SURVEY: To be completed when survey is registered.

RECORD DESCRIPTION	AMOUNT	RECORD DESCRIPTION	AMOUNT
SMOOTH SHEET & PNO	1	BOAT SHEETS	1
DESCRIPTIVE REPORT	1	OVERLAYS	6

DESCRIPTION	DEPTH RECORDS	HORIZ. CONT. RECORDS	PRINTOUTS	TAPE ROLLS	PUNCHED CARDS	ABSTRACTS/SOURCE DOCUMENTS
ENVELOPES						
CAHIERS	1					
VOLUMES	1					
BOXES			1			

T-SHEET PRINTS (List) [illegible] not available at time of verification

SPECIAL REPORTS (List)

OFFICE PROCESSING ACTIVITIES

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

PROCESSING ACTIVITY	AMOUNTS			
	PRE-VERIFICATION	VERIFICATION	REVIEW	TOTALS
POSITIONS ON SHEET				1,092
POSITIONS CHECKED		200		
POSITIONS REVISED		37		
DEPTH SOUNDINGS REVISED		200		
DEPTH SOUNDINGS ERRONEOUSLY SPACED		0		
SIGNALS ERRONEOUSLY PLOTTED OR TRANSFERRED		0		
	TIME (MANHOURS)			
TOPOGRAPHIC DETAILS				
JUNCTIONS		16		
VERIFICATION OF SOUNDINGS FROM GRAPHIC RECORDS		8		
SPECIAL ADJUSTMENTS				
ALL OTHER WORK		214		
TOTALS		238		

	BEGINNING DATE	ENDING DATE
VERIFICATION BY Dorthy C. Calland Harry R. Smith	7-3-73	11-21-73
REVIEW BY	BEGINNING DATE	ENDING DATE

Fig. 20.

FORM C&GS-946A
(REV. 11-65)
(PRES. BY HYDROGRAPHIC MANUAL, 6-94)

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

VERIFIER'S REPORT

HYDROGRAPHIC SURVEY, H 9195 WH-10-1-71

INSTRUCTIONS - This form serves to identify items of a check list in verification together with items which are separately reported to the Reviewer. The form is not to be forwarded to the Reviewer. A report, which is prepared for the Reviewer, should identify items by number and letter and will be filed in the Descriptive Report until the survey is reviewed.

CL - Check List Items: should be checked as having been completed during the verification processes.

R - Report Item: This column refers to those items reported to the reviewer and is used to indicate the items discussed.

Part I - DESCRIPTIVE REPORT **Note:** The verifier should first read the Descriptive Report for general information and problems.	CL	R
1. The Descriptive Report was consulted, paragraphs checked if found satisfactory, and notations were made in soft black pencil regarding action taken. Remarks Required: -- None	X	
2. Soundings originating with the survey and mentioned in the Descriptive Report have been verified and checked in soft black pencil, including latitude and longitude, together with position identification. Remarks Required: -- None	X	
3. All reference to survey sheets mentioned in the Descriptive Report should include registry number and year. Remarks Required: -- None	X	
Part II - SHORELINE AND SIGNALS 4. Source of shoreline signals Remarks Required: -- List all surveys T 12295 (2)		
a. Give earliest and latest dates of photographs.	or	
final shoreline not available		
b. Field inspection date		
c. Field Edit date PENDING FEB 29 72	X	
d. Reviewed-Unreviewed		
5. The transfer of contemporary topographic information was carefully examined and reconciled with the hydrography. Remarks Required: -- Discuss remaining differences.	X	
6. The plotting of all triangulation stations, topographic stations and hydrographic signals has been checked and noted in processing stamp No. 42 on the smooth sheet. Remarks Required: -- None	X	
7. Objects on which signals are located and which fall outside of the high-water line have been described on the sheet. Remarks Required: -- List those signals still unidentified. no description avaiable	X	X
Part III - JUNCTIONS **Note:** Make a cursory comparison preliminary to inking soundings in area of overlap.		
8. All junctions of contemporary or overlapping sheets were transferred in colored ink and overlapping curves were made identical. Remarks Required: -- None	X	
9. The notation in slanted lettering "JOINS H---- (19)" was added in colored ink for all verified contemporary adjoining or overlapping sheets. Those not verified are shown in pencil. Remarks Required: -- None	X	

Part III - JUNCTIONS (Continued)	CL	R
10. Junctions with contemporary surveys were satisfactory except as follows: Remarks Required: -- Consider conditions after adjustments have been made; note adjustments made. Make special notes of **Butt** junctions and areas which are **SUPERSEDED.**	X	
Part IV - VOLUMES 11. All items affecting the plotting of the survey which are entered in the remarks columns of the sounding records were noted and check marked. In all cases appropriate action wa taken and exceptions noted in the volumes. Remarks Required: -- None	X	
12. Condition of sounding records was satisfactory except as follows: Remarks Required: -- Mention deficiencies in completeness of notes or actions for the following: (a) rocks (b) line turns (c) position values of beginning and ending of lines (d) bar check or velocity correctors (e) time recording (f) notes or markings on fathograms (g) was reduction of soundings accurately done ? (h) was scanning accurate? (i) were peaks at uneven intervals missed? (j) were stamps completed? (k) references to adjacent features	X	
Part V - PROTRACTING 13. All positions verified instrumentally were check marked in color in the sounding records, and verifier initialed the processing stamp. Remarks Required: -- None	X	
14. The protracting and plotting of all unsatisfactory crossings were verified. Remarks Required: -- None	X	
15. All detached positions locating critical soundings, rocks, buoys, breakers, obstructions, kelp, etc., were verified and the position numbers are legible. Remarks Required: -- None	X	

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FIG. 18.

DESCRIPTIVE REPORT DATA RECORD		
PART I SMOOTH SHEET PREPARATION	PREPARED BY/OPERATOR	DATE
A. PLOTTER OPERATOR		
B. DISTORTION MARKS PLOTTED	none	
C. PROJECTION INTERSECTIONS PLOTTED	EDP-AMC	
D. POINTS OF ELECTRONIC CONTROL ARCS PLOTTED	EDP-AMC	
E. OVERLAYS PREPARED BY	"	
1. POSITION NUMBER	"	
2. EXCESS SOUNDINGS	"	
3. PRELIMINARY SMOOTH PLOT	"	
4. LIST OTHERS		
A.		
B.		
F. SOUNDING SELECTION BY	EDP-AMC	
G. PLOTTER INPUT — PREPARED		
H. — CHECKED		
I. DESCRIPTIVE REPORT ADDENDUMS		
PART II SMOOTH SHEET COMPLETION		
	CARTOGRAPHER	DATE
A. DISTORTION SCALE TICKS IDENTIFIED BY NOTE	none	
B. PROJECTION INTERSECTIONS VERIFIED BY	HRS	11-8-73
C. PROJECTION LINES RULED BY	~~EDP-AMC~~	
D. ELECTRONIC CONTROL ARCS RULED AND LOCATION VERIFIED	EDP-AMC HRS	11-8-73
E. OVERLAYS COMPLETED BY		
1. POSITION NUMBER LEADERS ADDED	HRS	11-21-73
2. EXCESS SOUNDING OVERLAY COMPARED	DCC HRS	10-10-73 11-21-73
3. PRELIMINARY SMOOTH PLOTS COMPARED	DCC HRS	10-10-73 11-21-73
4. OTHERS UTILIZED		
A.		
B.		
F. DESCRIPTIVE REPORT ADDENDUM		
G. CONTROL STATIONS VERIFIED	RRH	7-3-73
H. POSITIONS MANUALLY PLOTTED	RRH	7-20-73
I. MANUAL PLOT VERIFIED	DCC	10-10-73
J. SHORELINE APPLIED	Final shoreline not available	
K. [illegible]	HRS	11-21-73
L. [illegible]	HRS	11-21-73

Fig. 20 (Cont'd.)
Form 946A (back of form)

Part V - PROTRACTING (Continued)	CL	R
16. The protracting was satisfactory except as follows: Remarks Required: -- Refers to protracting in general except for specific faults repeated often, or faults in control information, which required considerable replotting or adjustments.	X	
17. The protractor has been checked within the last three months. Remarks Required: -- Date of check, type of protractor and number.	X	9 20 73
Part VI - SOUNDINGS		
18. All soundings are clear and legible, and critical soundings are a little larger than adjacent soundings. Remarks Required: -- None	X	
19. Sounding line crossings were satisfactory except as follows: Remarks Required: -- Discuss adjustments.	X	
20. The spacing of soundings as recorded in the records was closely followed; Remarks Required: -- None	X	
21. The scanning, reduction, spacing, plotting of questionable soundings have been verified. Remarks Required: -- None	X	
22. The smooth plotting of soundings was satisfactory except as follows: Remarks Required: -- Refer to legibility, errors in spacing, and errors in numbers - but not to errors in scanning.	X	
Part VII - CURVES		
23. The depth curves have been inspected before inking. Remarks Required: -- By whom was the penciled curves inspected. GFT	X	
24. The low-water line and delineation of shoal areas have been properly shown in accordance with the following: a. From T-Sheet in dotted black lines b. From soundings in orange c. Approximate position of sketched curve is dashed orange d. Approximate position of shoal area not sounded in black dashed Remarks Required: -- None ~~final shoreline not available~~		
25. Depth curves were satisfactory except as follows: (This statement should not refer to the manner in which the curves were drawn). Remarks Required: -- Indicate areas where curves could not be drawn completely because of lack of soundings. For some inshore areas a general statement is sufficient.	X	

Part VIII - AIDS TO NAVIGATION	CL	R
26. All fixed aids located together with those on the contemporary topographic sheets, have been shown on the survey. Remarks Required: -- Conflicts of any nature listed.	X	
27. All floating aids listed in the Descriptive Report should be verified and checked in soft black pencil, including latitude and longitude and position identification. Remarks Required: -- None	X	
Part IX - BOAT SHEET		
28. The boat sheet was constantly compared with the smooth sheet with reference to notes, position of sounding lines and supplemental information. Remarks Required: -- None	X	
29. Heights of rocks awash were correctly reduced and compared with topographic information. Remarks Required: -- Note excessive conflicts with topographic information.	X	
Part X - GENERAL		
30. All information on the sheet is shown in accordance with figures 82 and 83 in the Hydrographic Manual (Pub. 20-2). Remarks Required: -- None	X	
31. Unnecessary pencil notes have been removed from the sheet. Remarks Required: -- None	X	
32. Degree, minute values and symbols have been checked; also electronic distance arcs have been properly identified and checked on the smooth sheet. Remarks Required: -- None	X	
33. The bottom characteristics are adequately shown. Remarks Required: -- None	X	
Part XI - NOTES TO THE REVIEWER		
34. Unresolved discrepancies and questionable soundings.	X	
35. Notation of discrepancies with photogrammetric survey inserted in report of unreviewed photogrammetric survey or on copy.	X	
36. Supplemental information.		

Verified by Harry R. Smith
Harry R. Smith

Date 11-21-73

FORM C&GS-946A (11-65)

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VERIFIER: R. R. HILL

JULY 3,1973

VERIFICATION BRANCH
PLOTTER NOTE TO EDP (AMC)
SURVEY H-9195 (WH-10-1-71)

This branch has completed the verification of the signal overlay for this survey. There is only one change to be made. Signal #400 should be plotted as a triangle.

After the above change has been made , please furnish this office with a position overlay.

William L Jonns

WILLIAM JONNS
CHIEF VERIFICATION BRANCH
(ACTING)

VERIFIER: R. HILL JULY23, 1973

VERIFICATION NOTE TO EDP (AMC)

SURVEY H-9195 OPR-437 (WH-10-1-71)

Verification of the position overlay for this sheet is not yet completed.

There was found to be many positions(126) omitted from the sheet, along with sounding data. Seventy nine (79) positions are for day 091, twenty nine for day 110, and eighteen (18) for day 125.

We are returning the postion printout with all needed changes marked in red pencil.

All corrections have been key punched by personnel of this branch.

Please furnish this branch with a new position overlay and printout.

William L Jonns

William L. Jonns
Chief of Verification
(Acting)

VERIFIER: E. FIELDS AUGUST 8, 1973

VERIFICATION NOTE TO EDP (AMC)
SURVEY H -9195 OPR (WH-10-1-71)
437

This office has completed verification of the preliminary position overlay.

There are about three changes to be made, one time change, one deletion and one positional change.

After these changes are made please furnish this office with a sounding overlay.

William L. Jonns
Chief of Verification
(Acting)

Verier: B.T. Davis

Note to EDP (AMC)
Survey H-9195 (WH-10-1-71)

This office has completed the verification of the preliminary printout made to check the corrections prior to the sounding overlay. The following list is the results of this check.

(1) velocity corrections checked O.K.

(2) There were approximately 55 sounding changes on day 131, Lch. 2

(3) The TRA corrections are in error on all the Lch. work. See attached note.

(4) Tide correctors checked O.K.

Cards have been punched for the above changes. After these cards have been inserted, furnish this office with a new printout and sounding overlay.

B.T. Davis H-9195 (WH-10-1-71)

The TRA corrector for Lch. 1 and 2 on this survey should be as follows:

-0.5 initial corrector
+0.7 settlement and squat corrector
(full speet or standard hydro speed)
+0.3 settlement and squat corrector
(slow speed)

Therefore the total corrector applied to the sounding will be +0.2 at standard speed and -0.2 at slow speed.

It is assumed that this survey was done at standard speed. There were no notes to indicate otherwise. Therefore a +0.2 TRA corredtor should be used for the entire survey for Lch. 1 and 2.

Sounding pole was used for all soundings taken by skiff therefore the TRA should remain 0.0.

Verifier; D. Calland October 29, 1973

NOTE TO EDP - AMC
SURVEY H-9195 WH 10-1-71
OPR 437

This office has completed the verification of the preliminary sounding overlay.

There are 3 positions to be destroyed(bottom samples without descriptive notes), 3 additional sounding to be put into excess, 5 additional position changes (position 8000 record number13, position 7519 record number 400, position 7520 record 401, position 282 record number 1838 and position 2138 record number 2627) and approximately 79 sounding changes.

Correctional cards have been keypunched by this branch. Desired location of signal numbers are indicated on the signal l Please plotter label the arcs.

After these changes have been made, please furnish this bra a smooth sheet and sounding printout.

W. L. Jonns
Chief Verification Branch

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

NAUTICAL CHART DIVISION

RECORD OF APPLICATION TO CHARTS

FILE WITH DESCRIPTIVE REPORT OF SURVEY NO. H-9195

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
1110	9/19/74	L Moore	~~Full~~ Part Before ~~After Verification~~ Review Inspection Signed Via
			Drawing No.
835SCA	10/8/74	D.A. Clements	~~Full~~ Part Before ~~After Verification~~ Review Inspection Signed Via
			Drawing No.
1237	12-3-74	G. Moore	~~Full~~ Part Before ~~After Verification~~ Review Inspection Signed Via
			Drawing No.
835	4/25/76	J. Sherman	Full Part Before After Verification Review Inspection Signed Via
			Drawing No. (SCOPE - CATEGORY 1) Adequately appl'd
1237	7-27-78	J. Briggs	Full Part Before After Verification Review Inspection Signed Via
(11535)			Drawing No. (Adequately applied thru 835 & direct)
11536	9 May 79	Max Radicheviel	~~Full~~ Part Before After Verification Review Inspection Signed Via
(1236)			Drawing No. ADEQUATELY APP'D thru ch. 11534 A/E
			ADEQUATE CAT. 1 - SCOPE
11520	10/21/82	Mark J. Price	~~Full Part~~ Before ~~After Verification~~ Review Inspection Signed Via
			Drawing No. All Adequately app'd thru Charts 11535 & 11536
			Adequate
~~11089~~	~~4-7-83~~	~~B.F. Edwards~~	~~Full Part Before After Verification Review Inspection Signed Via~~
			Drawing No. ~~All Adequately appl'd thru ch. 11520~~
			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

Mercator Projection N. A. Datum of 1927