T-12437-12438-12440
12442 - 12562

Form 504

U. S. DEPARTMENT OF COMMERCE

COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT

Type of Survey Shoreline

Field No. PH 6309 Office No. T-12437, T-12438 T-12440 T-12442-T-12562

LOCALITY

State North Carolina

General locality Outer Banks

Locality Hatteras Island

1963 - 1965

CHIEF OF PARTY

J. E. Waugh
Division of Photogrammetry, Wash, D. C.

LIBRARY & ARCHIVES

DATE FEB 4 - 1966

COMM-DC 61300

T-12437-12438-12440
12442-12562

T-12437-12438-12440
12442-12562

FORM C&GS-181a
(12-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

T- 12438, 12440, 12442, & 12437+12562

PROJECT NO. (II): Ph 6309 21068	
FIELD OFFICE (II): Manteo, N.C.	CHIEF OF PARTY: William M. Reynolds
PHOTOGRAMMETRIC OFFICE (III): Washington, D.C.	OFFICER-IN-CHARGE: J. E. Waugh
INSTRUCTIONS DATED (II) (III): 8-8-63 4-6-64 (Reassigned to Wash. Compilation)	
METHOD OF COMPILATION (III): B-8 Stereoplotter	
MANUSCRIPT SCALE (III): 1:20,000	STEREOSCOPIC PLOTTING INSTRUMENT SCALE (III):
DATE RECEIVED IN WASHINGTON OFFICE (IV):	DATE REPORTED TO NAUTICAL CHART BRANCH (IV):
APPLIED TO CHART NO.	DATE: / DATE REGISTERED (IV):
GEOGRAPHIC DATUM (III): N.A. 1927	VERTICAL DATUM (III): MEAN SEA LEVEL EXCEPT AS FOLLOWS: *Elevations shown as (25) refer to mean high water* *Elevations shown as (5) refer to sounding datum i.e., mean low water or mean lower low water*
REFERENCE STATION (III):	
LAT.: / LONG.:	☐ ADJUSTED ☐ *UNADJUSTED*
PLANE COORDINATES (IV): Y = X =	STATE / ZONE

ROMAN NUMERALS INDICATE WHETHER THE ITEM IS TO BE ENTERED BY (II) FIELD PARTY, (III) PHOTOGRAMMETRIC OFFICE, OR (IV) WASHINGTON OFFICE.
WHEN ENTERING NAMES OF PERSONNEL ON THIS RECORD GIVE THE SURNAME AND INITIALS, NOT INITIALS ONLY.

USCOMM-DC 16276A-P61

FORM C&GS-181b
(12-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

FIELD INSPECTION BY (II): Dale M. Fuller W. M. Reynolds	DATE: Oct.-Nov. 1963
MEAN HIGH WATER LOCATION (III) (STATE DATE AND METHOD OF LOCATION):	
PROJECTION AND GRIDS RULED BY (IV): A. Roundtree	DATE 4-20-64
PROJECTION AND GRIDS CHECKED BY (IV): M. C. Williams	DATE 4-22-64
CONTROL PLOTTED BY (III): M. Webber	DATE 4-27-64
CONTROL CHECKED BY (III): J. Phillips	DATE 4-28-64
RADIAL PLOT OR STEREOSCOPIC CONTROL EXTENSION BY (III):	DATE
STEREOSCOPIC INSTRUMENT COMPILATION (III): R. A. Carter F. Wright	PLANIMETRY DATE 5-1-64
	~~CONTOURS~~ XXXXXX DATE
MANUSCRIPT DELINEATED BY (III): F. Wright, R. A. Carter, J. Phillips	DATE 5-6-64
SCRIBING BY (III):	DATE
PHOTOGRAMMETRIC OFFICE REVIEW BY (III): J. Battley	DATE Feb. 1965

REMARKS:

FORM C&GS-181c
(12-61)

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

DESCRIPTIVE REPORT - DATA RECORD

CAMERA (KIND OR SOURCE) (III):

Single lens - color film

PHOTOGRAPHS (III)

NUMBER	DATE	TIME	SCALE	STAGE OF TIDE
63 SC 7008 thru 7035	5 July 63		1:20,000	
63 SC 7047 thru 7053	5 July 63		1:20,000	
63 SC 7038 thru 7044	5 July 63		1:20,000	
63 WC 2214 - 2221	15 Oct 63		1:20,000	

TIDE (III)

	RATIO OF RANGES	MEAN RANGE	SPRING RANGE
REFERENCE STATION:			
SUBORDINATE STATION:			
SUBORDINATE STATION:			

WASHINGTON OFFICE REVIEW BY (IV): J. Battley		DATE: Feb. 1965
PROOF EDIT BY (IV):		DATE:
NUMBER OF TRIANGULATION STATIONS SEARCHED FOR (II): 8	RECOVERED: 7	IDENTIFIED: 7
NUMBER OF BM(S) SEARCHED FOR (II):	RECOVERED: 3	IDENTIFIED 1
NUMBER OF RECOVERABLE PHOTO STATIONS ESTABLISHED (III):		
NUMBER OF TEMPORARY PHOTO HYDRO STATIONS ESTABLISHED (III): 15		

REMARKS:

SUMMARY TO ACCOMPANY DESCRIPTIVE REPORT
T-12437, 12438, 12440 ~~and~~ 12441 and T12562
PROJECT 21068

This project consists of four 7½' x 7½' 1:20,000 scale manuscripts and one 4' x 3 3/4' 1:10,000 scale manuscript. All maps were compiled in the Washington Office. ~~This summary covers the four 1:20,000 scale manuscripts.~~

The project covers Hatteras Island on the Outer Banks of North Carolina from the Southern edge of Pea Island, south to Cape Hatteras. The manuscripts were compiled to provide shoreline and horizontal control data for inshore hydrography.

The area is covered by 1:20,000 scale color photography taken in July 1963 with the RC-8 camera.

Field inspection was accomplished in October-November 1963. Field operations encompassed the recovery of horizontal control, shoreline inspection and the location of landmarks, aids to mavigation and hydrographic signals.

Instructions were written on August 8, 1963. Compilation was reassigned to the Washington Office on April 4, 1964.

The project area was bridged on the Zeiss C-8 stereoplanigraph. The shoreline for Pamlico Sound on T-12440 was detailed using individually oriented models on the B-8 stereoplotter. All manuscripts were compiled on the B-8 stereoplotter with the color glass bridging plates.

During compilation the pre-set hydrographic signals were visible on the stereo models. As requested, (see enclosed Field correspondence) the field position for these sites were verified photogrammetrically.

Submitted by
Jeter P. Battley Jr.
J. P. Battley, Jr.
Cartographer

FIELD INSPECTION REPORT
MAPS T-12437 THROUGH T-12442
PROJECT PH-6309,21068

2. Areal Field Inspection.

These maps are located along the Outer Banks of the coast of North Carolina. The land area consists of a narrow stretch of sand which separates the Atlantic Ocean from Pamlico Sound. most of the land area has been acquired by the National Park Service and is now known as " Cape Hatteras National Seashore Recreational Area ". The areas outside the park consist of several small settlements, namely, Rodanthe, Waves, Salvo, Buxton and Frisco. These settlements, in general, are populated by commercial fishermen, oystermen and shrimpers. A good highway was constructed down the islands from Oregon Inlet to Ocracoke and opened to traffic in 1951. Access to the highway was via ferrys across Oregon and Hatteras Inlets. A bridge is now under construction across Oregon Inlet and will be officially opened to traffic on 20 November 1963. Since the completion of the highway, the area has become popular as a tourist attraction. The Cape Hatteras area is now dotted with several motels, restaurants and summer cottages. The National Park Service has also provided several sites for camping.

Field inspection is believed complete and was performed on the following 1:20,000 scale color photographs; 63S (C) 7010 through 63S (C) 7034, 63S (C) 7038 through 63S (C) 7044, 63S (C) 7046, 63S (C) 7048 through 63S (C) 7050, 63S (C) 7052 and 63S (C) 7053. The photography was of good quality and no difficulty was encountered in its interpretation in the field. There are several borderline cases in the inshore limits of marsh. These areas were inspected by walking into them and the limits have been generalized on the photographs. The tone changes in these areas were not distinguishable between the edges of the marsh and the beginning of areas covered by a heavy growth of dark grass. Generalization was necessary to comply with project instructions.

No items were deliberately left for field edit.

3. Horizontal Control.

Horizontal control was recovered and identified in accordance with project instructions. Only stations needed to control the bridge were searched for.

The instructions called for one of the lights marking the entrance to Avon Channel to be located by triangulation and identified. This was not complied with. The strip of photographs covering the channel had a large sun spot on most of the prints making positive identification impossible. Most of the aids are small structures which do not show clearly on the 1:20,000 scale photography. In lieu of this, all of the aids were located by theodolite cuts from identifiable points along the main island.

No supplemental control was established.

Item 3, Horizontal Control Cont'd.

One station, Cape Hatteras Coast Guard Lookout Tower 1962 was reported destroyed. This station is located in map T-12442.

4. Vertical Control.

Three tidal bench marks were recovered in map T-12440. They are Cape Hatteras Lighthouse bench marks 1, 3 and 4. One of the marks was identified.

5. Contours and Drainage.

Contours are inapplicable.

Drainage is runoff and is self evident from the photographs.

6. Woodland Cover.

Woodland cover has been classified on the photographs.

7. Shoreline and Alongshore Features.

The mean high water line along the Atlantic Ocean was located by measurement from identifiable photo. points. These distances have been indicated on the photographs.

The shoreline along Pamlico Sound was located by inspection and walking along the beach. It has been indicated by symbol on the photographs.

The low water line was not inspected. There are no bluffs or cliffs. Docks, wharves or piers are visible on the photographs. There are no submarine cables in the area.

The National Park Service has constructed a levee along the entire beach. The levee has been indicated on the photographs and is to be symbolized on the manuscripts.

Three wrecks were identified on the photographs. These wrecks are now out in the edge of the water and not on the beach.

8. Offshore Structures.

One cabin around Clam Shoal was located by theodolite cuts for plotting on the manuscript of map T-12440. Gull Island was not covered by the color photography. The HOUSE shown as a landmark on nautical chart 1232 was relocated by theodolite cuts from the main island. All of the island is marsh and it can be compiled from the panchromatic photography for project Ph-6219, 21061.

9. Landmarks and Aids.

Landmarks for nautical charts are adequately covered by Form 567.

Fixed aids to navigation have been listed on Form 567. See Item 3, PP 2.

10. Boundaries, Monuments and Lines.

All of the area is in Dare County and none of the small villages are incorporated.

Several corners of the National Park boundary have been located on the photographs and it is believed the compiler will have no difficulty placing the boundary on the manuscripts. Where the above boundary parallels the beach, it is 500 feet inshore from the mean high water line.

11. Other Control.

None was established.

12. Other Interior Features.

All roads have been classified in accordance with Photogrammetry Instructions No. 56.

All buildings have been indicated in accordance with Photogrammetry Instructions No. 54.

There are no bridges or cables over navigable waters.

Billy Mitchell Airport has been indicated on the Photographs.

13. Geographic Names.

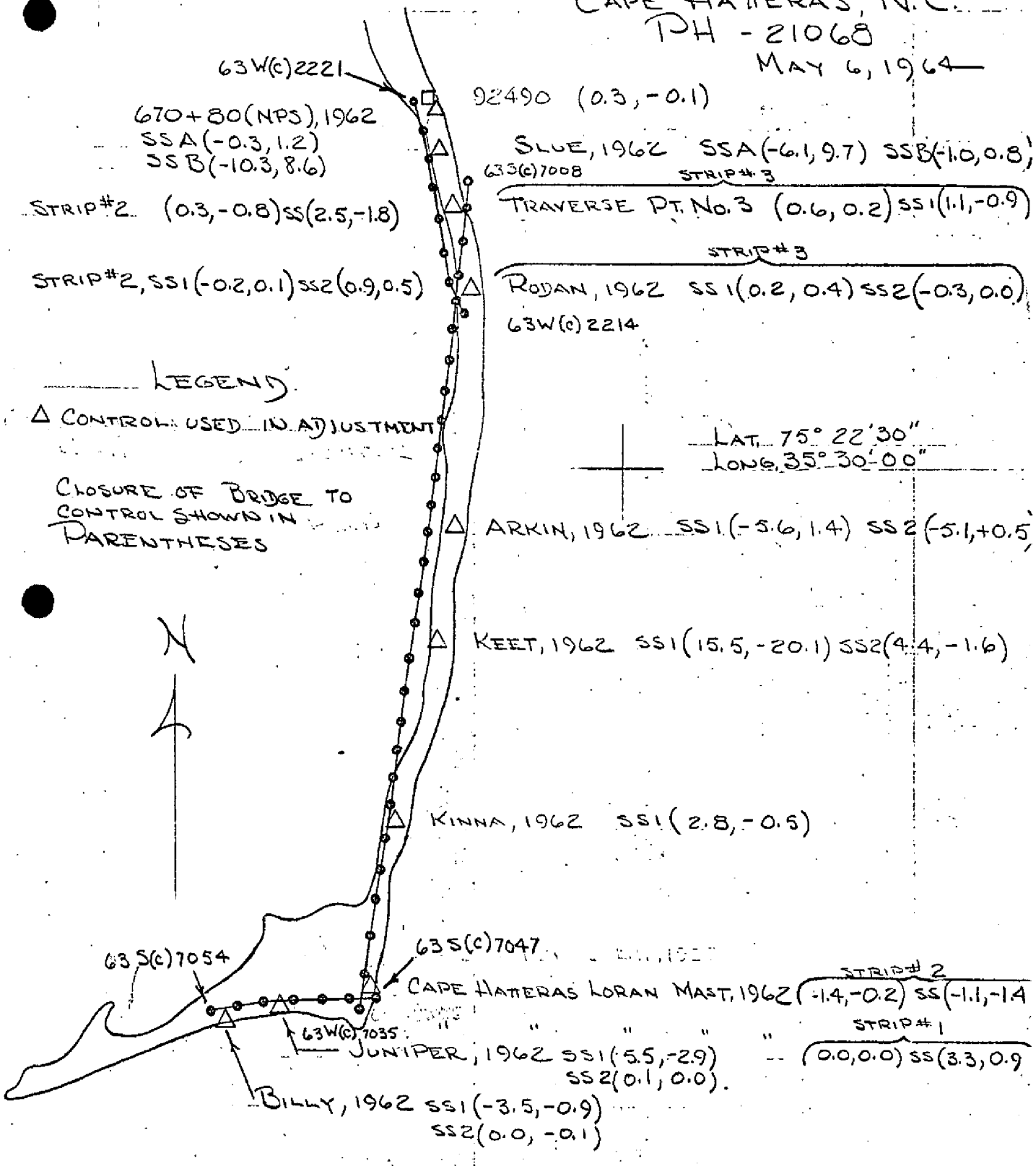
A field investigation of names was not required. No new names were found during the field inspection.

14. Special Reports and Supplemental Data.

1 blueprint, U.S. Naval Facility, Cape Hatteras, Buxton, N.C.
1 blueprint(2 sections)Cape Hatteras National Seashore.
2 tracings of areas outside National Park.
Letter of Transmittal submitted with this data.

William M. Reynolds
William M. Reynolds
Chief, Sub-unit Photo.
Party 6420

CAPE HATTERAS, N.C.
PH - 21068
MAY 6, 1964



AEROTRIANGULATION REPORT
Cape Hatteras, North Carolina
PH-21068

21. Area Covered

This report covers the area from Cape Hatteras, North Carolina to a point five miles south of Oregon Inlet, North Carolina and includes T-sheets 12437, 12438, 12440, 12442 and 12562.

22. Method

Three horizontal bridges were run, on the Zeiss C-8, stereoplanigraph, to provide pass points for graphic compilation of shoreline. Photography consisted 63-S (c)-7008 through 7035, 7047 through 7054 and 2214 through 2221. The three strips were adjusted by the IBM-650 method. Strip #1 was adjusted using three control stations, with three companion stations, as checks. Strip #2 was adjusted using six control stations with eight stations as checks. Strip #3 was adjusted using three stations and one tie point, with five stations used as checks. All pass points were drilled by PUG methods.

23. Adequacy of Control

Control positions were adequate for bridge adjustment. All control meets National Map Accuracy Standards except Keet, 1962, (SS#1) and Shue, 1962 (SSA). After an intensive investigation, no reason could be determined why Keet, 1962 (SS#1) could not be held and it was dropped from the bridge. Shue, 1962 (SSA) was identified on 1962 photography (PH-21068) and could not be positively identified on the 1963 photography since it was not a permanent object. It was also dropped from the bridge. Strip #3 was tied to Project 21049 (Oregon Inlet, North Carolina) by control and common pass points. All common points at strip junctions were averaged.

24. Supplemental Data

None

25. Photography

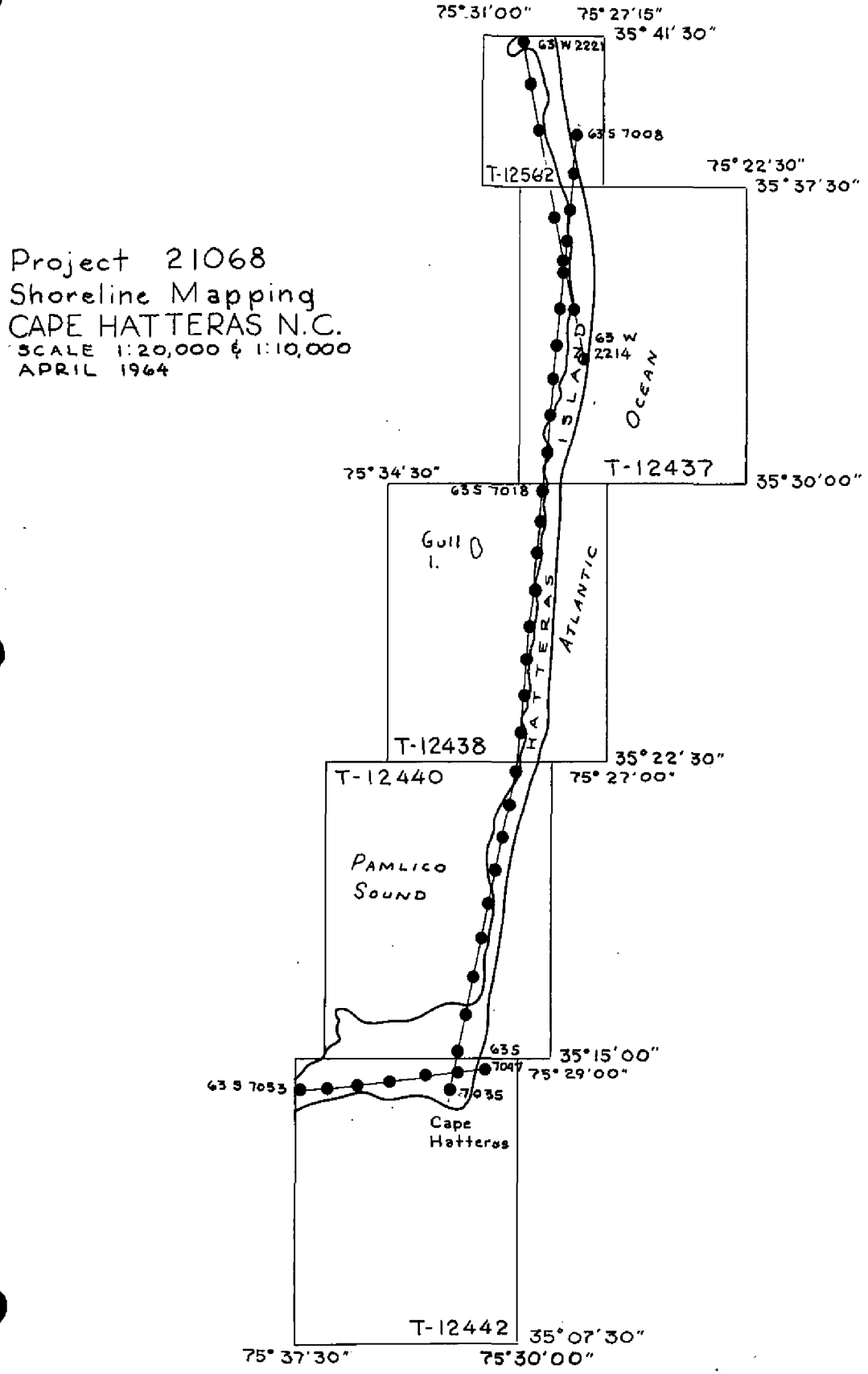
Photography was adequate as to coverage, overlap and definition.

Submitted by:

Robert B. Kelly

Approved by:

John D. Perrow, Jr.


Project 21068
Shoreline Mapping
CAPE HATTERAS N.C.
SCALE 1:20,000 & 1:10,000
APRIL 1964
75°31'00"
75°27'15"
35°41'30"
63 W 2221
63 S 7008
T-12562
75°22'30"
35°37'30"
63 W 2214
ISLAND
OCEAN
75°34'30"
T-12437
35°30'00"
63 S 7018
Gull I.
HATTERAS
ATLANTIC
T-12438
35°22'30"
T-12440
75°27'00"
PAMLICO SOUND
63 S
35°15'00"
7049
75°29'00"
63 S 7053
7035
Cape Hatteras
T-12442
35°07'30"
75°37'30"
75°30'00"

COMPILATION REPORT
T-12437, T-12438, T-12440
& T-12442 + T-12562
April 1964-November 1964
Shoreline Mapping

This report discusses the compilation ~~of four of five T-sheets~~ covering the Outer Banks of North Carolina from the southern edge of Pea Island, south to Cape Hatteras. (see Layout Sketch)

31. Delineation

The manuscripts were compiled on the B-8 stereoplotter utilizing 1963 color glass plates. Manuscript scale was 1:20,000. ~~T-12562, the remaining manuscript in this project was compiled at 1:10,000 scale and is discussed under a separate report.~~ The color plates were bridged and pass points drilled by the Aerotriangulation Section. The area was field inspected in Oct.-Nov. 1963. The MHWL location and inshore details were defined using this inspection. Field data was denoted on color prints.

32. Control

See item 23 of the Bridge Report. Control was adequate in identification, density and placement.

33. Supplemental Data

U.S.G.S. quadrangles covering the area were obtained from the Geographic Names Section indicating names approved for use and their correct placement.

34. Contours and Drainage

Inapplicable

35. Shoreline and Alongshore Details

The preliminary compilation for T-12440 and 12442 did not include the delineation of the shoreline bordering Pamlico Sound. Hydrography was confined to the ocean side of Hatteras Island and shoreline details were not needed for Pamlico Sound. When the Incomplete Manuscripts were returned from the hydrographic parties, the manuscripts were compiled to the extent of the photographic coverage. The color glass plates used on the B-8 stereoplotter afforded an excellent interpretation of the shoreline, sand dunes, marsh and related features of this island.

36. Offshore Details

No unusual problems were encountered.

37. Landmarks and Aids

The lights for Avon Channel on T-12440 were located by theodolite cuts. Positions and method of location have been submitted on Form 567's.

38. Control for Future Surveys

Fifteen hydrographic signal sites were traversed by the 1963 field party in this area. The towers built for these signals were visible on the photography. With the exception of station LEO, the positions supplied by the field and the photogrammetric position were in agreement. The 50 foot tower for LEO was identified. Holding to photogrammetric bridge points and station ARKIN 1962 nearby, the photogrammetric location fell exactly 300 feet north of the field traverse position. It is believed a 300 foot taping error occurred in the 1963 traverse.

The hydrographer expressed some doubt in the field position of hydro signal DOG. (Field memorandum, from C.O. Explorer dated Nov. 19, 1963.) The stereoplanigraph bridge adjustment was very strong on this project and verified the hydrographers position for this signal.

An attempt was made, as requested in the above mentioned memorandum, to locate hydro signals APE, BAT and COW. Without field identification these signal were too small to identify on the 1:20,000 color photography.

39. Junctions

Junctions were made with adjoining sheets. (see Layout Sketch for T-sheet arrangement.)

40. Horizontal and Vertical Accuracy

The manuscripts comply with the National Standards of Accuracy.

41.-45. None

46. Comparison with Existing Maps

A comparison was made with registered topographic surveys T-8712 N&S, T-8713 N&S, T-8714 N&S and T-8718. These surveys were compiled and field edited in 1948 at a scale of 1:10,000.

47. Comparison with Nautical Charts

A comparison was made with Chart 1232, scale 1:80,000, published in its 10th Edition Feb. 17, 1964, revised Nov. 1964

Submitted by:

Frank A Wright

Frank A. Wright

Approved by:

K. N. Maki

K. N. Maki
Chief, Compilation Section

~~PRELIMINARY~~ COMPILATION REPORT
T-12562
PROJECT 21068
SCALE 1:10,000
APRIL 1964

This report discusses the compilation of the northern of five T-sheets covering the Outer Banks of the coast of North Carolina. The project runs from the southern edge of Pea Island south to Cape Hatteras. (See sketch layout)

This manuscript is the only manuscript in this project at a scale of 1:10,000. The four remaining surveys, discussed in a separate report, are 1:20,000. The manuscript was compiled on the B-8 stereoplotter utilizing 1963 color glass plates. The color plates were bridged and drilled by the Aerotriangulation Section.

There was no field inspection for this sheet. The MHWL location and inshore details were defined in agreement with the field inspected MHWL on surveys T-12438, 12440 and T-12442 which fall to the south.

Offshore details such as shoal and shallow lines were not compiled at this time as hydrography is to be confined to the ocean side of the islands.

This manuscript junctions at the north with T-12147, Project 21049 (Ph-6207) dated August 1963. The MHWL on the ocean side did not agree with the shoreline as delineated on T-12147. The shoreline bordering Pamlico Sound was in good agreement and junctioned well. There was a levee running throughout this project approximately parallel to the ocean shore. This feature was not shown on the project junctioning to the north.

Refer to the ~~Preliminary~~ Descriptive Report for surveys T-12438, 12440, and 12442 for the Field Inspection Report, Bridging Report and Notes to Hydrographer covering this project.

Approved by: K. M. Maki
Chief, Compilation Section

Submitted by: R. A. Carter

48. Geographic Names List

T-12437

Atlantic Ocean
Aunt Phoebes Marsh
Blackmar Gut
Clarks Bay
Davids Point
Great Island
Midgett Cove
Midgett Island
No Ache
No Ache Bay
No Ache Island
North Drain
Pamlico Sound
Pauls Ditch
Rodanthe
Salvo
Uncle Jimmys Landing
Waves
Waves Landing

T-12438

Atlantic Ocean
Drain Islands
Gull Island Bay
Hatteras Island
Little Kinnakeet
Pamlico Sound
Phipps Cove
Terrapin Point
The Drain

T-12562

Atlantic Ocean
Beach Slue
Cat Island
Cedar Hammock
Goulds Lump
Hatteras Island
Hog Island
Ira Lump
Jack Shoal
Logerhead Hills
Liza Lumps
Pamlico Sound
Round Hammock Bay
Round Hammock Point
St. Clair Lump
Wreck Cr.

T-12440

Askins Creek
Atlantic Ocean
Avon
Back Landing
Bald Point
Big Island
Black Hammock
Brooks Creek
Brooks Point
Buxton
Buxton Landing
Buxton Woods
Cape Creek
Great Island
Hatteras Island
Jeanette Sedge
King Island
Kings Point
Long Point Creek
Mill Creek
Pamlico Sound
Peters Ditch
Spencer Creek

T-12442

Atlantic Ocean
Billy Mitchell Airport
Cape Hatteras
Cape Hatteras State Park
Cape Point
Frisco
Hatteras Bight
Hatteras Island
Pamlico Sound

Names approved
6-30-65
A. J. Wraught

49. Notes to Hydrographer

Refer to the Compilation Report, Item 38 for the disposition of hydrographic signals in the area of these manuscripts.

REVIEW REPORT T-12437, 12438, 12440 and 12442 & T-12562
SHORELINE MAPPING
MARCH 1965

61. General Statement

See summary in the preface to this Descriptive Report.

62. Comparison with Registered Topographic Surveys

A comparison was made with topographic surveys T-8711 N & S dated April 1946; T-8712 N & S dated April 1946, edited July 1948; T-8714 N & S dated 1946, edited July 1948 and T- 8718 dated April 1946. All the above surveys are 1:10,000 scale.

For details compiled, the new manuscripts supersede the prior surveys.

63. Comparison with Maps of Other Agencies

A comparison was made with 1:24,000 scale Geological Survey Quadrangles: Cape Hatteras, Buxton, Little Kinnakeet, Rodanthe and Pea Island, North Carolina.

64. Comparison with Contemporary Hydrographic Surveys

1963 Boat Sheet EX-20-2-63-C was compared as the smooth sheet had not been completed.

At Lat. 35°20' to 35°21' the shoreline and the first line of soundings are superimposed.

The field-identified MHWL was delineated from 1963 photography that was well controlled in horizontal position.

It is believed this discrepancy will be resolved on the smooth sheet.

65. Comparison with Nautical Charts

A comparison was made with Chart 1232, scale 1:80,000 published in its 10th Edition Feb. 17, 1964, revised Nov. 1964.

66. Adequacy of Results and Future Surveys

The maps comply in all respects with project instructions.

These maps comply with the National Standards of Accuracy.

Approved by:

Charles Thomas
Chief, Photogrammetric Branch
L.C.L.

L. F. Woodcock
Chief, Photogrammetry Division

Reviewed by:

Jitu P. Battley Jr.
J. P. Battley, Jr.

Chief, Nautical Chart Division