

10990

Original

10990

10990

Form 504	
U. S. DEPARTMENT OF COMMERCE	
COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Type of Survey	PLANIMETRIC
Field No.	Office No. T-10990
LOCALITY	
State	ALABAMA
General locality	MOBILE BAY
Locality	BON SECOUR BAY (CYPRESS PT.)
1957-1961	
CHIEF OF PARTY	
Joseph K. Wilson, Chief of Field Party	
William R. Kachel, Tampa District Office	
LIBRARY & ARCHIVES	
DATE	

USCOMM-DC 5087

DESCRIPTIVE REPORT - DATA RECORD

T - 10990

Project No. (II): **PH-5704**

Quadrangle Name (IV):

Field Office (II): **Fairhope Ala.**

Chief of Party: **Joseph K. Wilson**

Photogrammetric Office (III): **Tampa, Fla.**

Officer-in-Charge: **William R. Kachel**

Instructions dated (II) (III): **II 23 June 1958 (Field)**

Copy filed in Division of
Photogrammetry (IV)

10 Feb. 1959 (Field Suppl.1)

III 7 Apr. 1959 (Office)

9 Sept. 1959 (Stereo Bridging)

17 Aug. 1959 (Office Suppl.1.)

6 Oct. 1959 (Office Suppl.1.)

17 Aug. 1959 (Field Suppl.2.)

10 Nov. 1959 (Field and Office Suppl.3)

Location of Aids to Navigation dated 7 Oct. 1959

Method of Compilation (III): **Graphic**

Manuscript Scale (III): **1:10,000**

Stereoscopic Plotting Instrument Scale (III): **Inapplicable**

Scale Factor (III): **None**

Date received in Washington Office (IV):

APRIL 15, 1961

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): **N. A. 1927**

Vertical Datum (III): **MHW**

~~Mean Low Water~~ 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): **BENTON 1935**

Lat.: **30°21'01.398" (43.0 m)**

Long.: **87°47'04.446" (118.7 m)**

Adjusted
~~Uncorrected~~

Plane Coordinates (IV):

State:

Zone:

Y=

X=

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.

DESCRIPTIVE REPORT - DATA RECORD

Field Inspection by (II): **W. M. Reynolds**
Matthew A. Stewart

Date: **Jan. 1960**

Planetable contouring by (II): **Inapplicable**

Date:

Completion Surveys by (II): *W. M. Reynolds*

Date: *July 1961*

Mean High Water Location (III) (State date and method of location): **Air Photo Compilation**
Date of Photography: 20 Nov. 1957

Projection and Grids ruled by (IV): **J. Frazier (W.O.)**

Date: **Feb. 1960**

Projection and Grids checked by (IV): **P. J. Dempsey (W.O.)**

Date: **Feb. 1960**

Control plotted by (III): **V. P. Cackowski**

Date: **Apr. 1960**

Control checked by (III): **M. V. Carver**

Date: **Apr. 1960**

Radial Plot of ~~Stereoscopic~~
~~contouring~~ by (III): **R. R. Wagner**

Date: **Aug. 1960**

Planimetry
Stereoscopic Instrument compilation (III): **Inapplicable**
Contours

Date:

Date:

Manuscript delineated by (III): **W. W. Dawsey**

Date: **Aug. 1960**

Photogrammetric Office Review by (III): **W. H. Shearouse**

Date: **Sept. 1960**

Elevations on Manuscript
checked by (II) (III): **Inapplicable**

Date:

DESCRIPTIVE REPORT - DATA RECORD

U.S. DEPARTMENT OF COMMERCE
COAST AND GEODETIC SURVEY

3 #

Camera (kind or source) (III): **U.S.C. & G.S. 9-lens**

Number	Date	Time	Scale	Stage of Tide
57040	11/20/57	11:57	1:10,000	- 0.1
57041	"	11:58	"	"
57042	"	11:59	"	"
57054	"	12:08	"	Inapplicable
57053	"	12:09	"	"

Tide (III)
Predicted

Reference Station: **MOBILE, MOBILE RIVER**
Subordinate Station: **BON SECOUR, BON SECOUR RIVER**
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range
Diurnal		1.6

Washington Office Review by (IV): *Leo F. Beugnot, Atlantic Marine Center* Date: *Feb. 1968*

Final Drafting by (IV): { *Scribed L.L. Graves*
Stickup C.C. Harris Date: *Dec. 1961*
Mar. 1962

Drafting verified for reproduction by (IV): Date:

Proof Edit by (IV): Date:

Land Area (Sq. Statute Miles) (III): **14**

Shoreline (More than 200 meters to opposite shore) (III): **4**

~~Shoreline (Less than 200 meters to opposite shore) (III):~~

Control Leveling - Miles (II): **Inapplicable**

Number of Triangulation Stations searched for (II): **3** Recovered: **1** Identified: **1**

Number of BMs searched for (II): **None** Recovered: Identified:

Number of Recoverable Photo Stations established (III): **2**

Number of Temporary Photo Hydro Stations established (III): **None**

Remarks:

T-10990

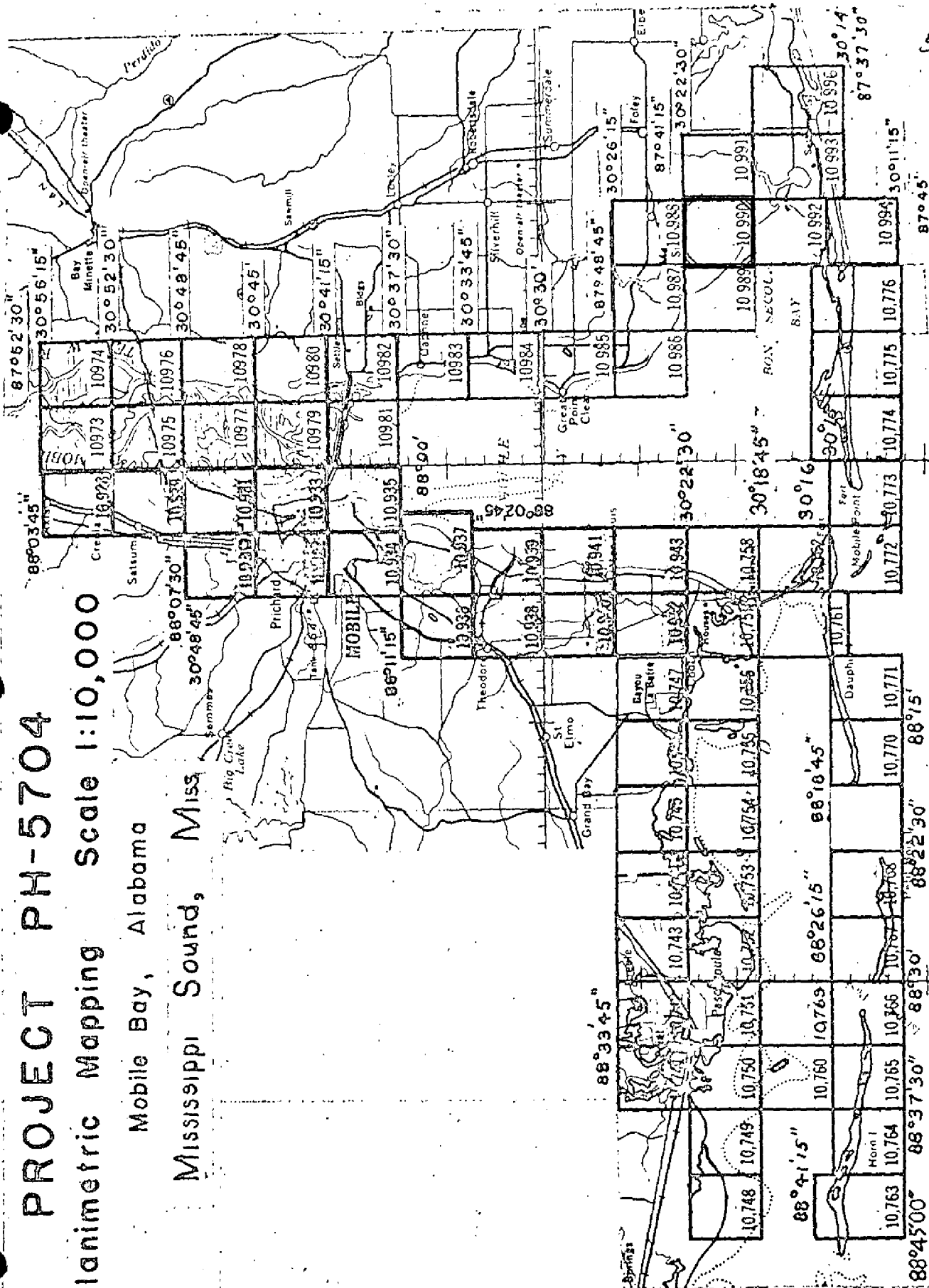
COMPILATION RECORD

COMPLETION DATE

REMARKS

COMPILED	August 1960	
FIELD EDIT	July 1961	
FINAL REVIEW	February 1968	

Mississippi Sound, Miss.



SUMMARY TO ACCOMPANY
DESCRIPTIVE REPORT T-10990

Planimetric Survey T-10990 is one of seventy-four similar surveys in Project PH-5704. It covers a part of the north shore of Bon Secour Bay in the vicinity of Cypress Point.

Field work preceding compilation consisted of recovery and identification of horizontal control, shoreline and field inspection, Investigation of Geographic Names and Report on Boundaries.

Compilation was at 1:10,000 scale by graphic methods using the 9-lens photography of November 1957. Cronaflex copies of the manuscript along with ozalids prints and specially prepared photographs were furnished for preparation of the boat sheet, location of photo-hydro signals and field edit use.

The manuscript was a vinylite sheet 3 minutes 45 seconds in latitude by 3 minutes 45 seconds in longitude, which was scribed and reproduced on cronaflex. One cronaflex positive and one cronar negative are provided for record and registry.

FIELD INSPECTION REPORT
 Maps T-10988, T-10989, T-10990
 PROJECT PH-5704

2. Areal Field Inspection.

These maps are located in Southwest Alabama, in Baldwin County, along the east side of Mobile Bay. The land area is low and has large areas consisting of marsh and swamp. The higher ground is devoted to farming, with cattle and soy beans being the chief crops.

The area is served with a system of good federal, state and county highways.

Field inspection is believed complete and was performed on the following nine-lens photographs; 57038 through 57042, 57053 through 57056 and 57076 through 57078.

In some areas the photography was of poor quality. The images were not distinct and tones were not consistent. The difference in tones was especially noticeable in some swamp to tree areas. The inconsistent areas were closely inspected in the field and the correct limits have been indicated on the photographs.

3. Horizontal Control.

All control established by this bureau and Alabama Geodetic Survey was searched for and where recovered was identified to aid in control of the plot.

The following Alabama Geodetic Survey stations were searched for:

T-10988

98	242	693
99	243	694
103	544	707
104	545	708
105	546	SMI-G
106	547	SMI-H
107	548	

T-10989

550
551

T-10990

365

The stations were established as third-order by traverse.

The following stations were reported lost:

T-10988

98	106	544	693
99	107	545	694
104	242	547	SMI-G
105	243	548	SMI-H
			FOLEY 1934

T-10989

550
551
WEEKS 1935

T-10990

365
CYPRESS 1935

Station 544 Alabama Geodetic Survey was reported lost but was identified. The reference measurements were made and the butt of a concrete post was found in the described location. This was identified as the station. RM 2 was identified in lieu of station FOLEY 1934.

4. Vertical Control.

The recovery or establishing of vertical control was not required for this planimetric project. There are no Tidal BM'S in these maps.

5. Contours and Drainage.

Contours are inapplicable.

Drainage not self-evident from the photographs has been indicated.

6. Woodland Cover.

Woodland cover was inspected and is adequately covered by the photographs. See Item 2, PP4.

7. Shoreline and Alongshore Features.

The mean high water line and apparent shoreline was inspected by skiff and walking along the beaches. It has been indicated by symbol on the photographs.

Low water line investigation was not required.

There is little or no foreshore.

There are no bluffs or cliffs.

All docks, wharves, piers and other features have been indicated on the photographs.

Shore ends of submarine cables have been indicated on the photographs.

Shoreline inspection has been indicated on the following nine-lens photographs; 57038 through 57042, 57055 through 57057 and 57078.

8. Offshore Features.

The only offshore features are the aids to navigation.

9. Landmarks and Aids.

Form 567 covering both of these features was submitted to Washington on 6 November 1959.

10. Boundaries, Monuments and Lines.

The entire area is in Baldwin County. A copy of the legal description for Baldwin County was submitted in a special report covering Parts 1 and 2 of Project PH-5704.

There are no incorporated towns within these maps.

11. Other Control.

Recoverable Topographic Station FIRE 1959 was established in map T-10989. Stations GOOD 1959 and HELP 1959 were established in map T-10990.

12. Other Interior Features.

Buildings and roads have been classified, on the photographs, in accordance with Photogrammetric Instructions number 54 and 56.

There were no requests for bridge measurements within these sheets.

There are no airports or landing fields.

13. Geographic Names.

A systematic investigation of names was not required. No discrepancies were encountered during field inspection.

14. Special Reports and Supplemental Data.

Special Report Boundaries, Project PH-5704, Alabama-Mississippi. This report was submitted to Washington on 2 March 1959. Letter of Transmittal #18, 19.

Submitted,

William M. Reynolds
William M. Reynolds
Acting Chief, Photo. Party 720

MAP T. 10990

PROJECT NO. *Ph-5704*

SCALE OF MAP 1:10,000

SCALE FACTOR.

[illegible]

UNIT = 3048006 PETER
COMPUTED BY:

511

DATE:

2 Feb-1960

CHECKED BY:

RRW

DATE: 10

COMM-DC-57843

10

11

PHOTOGRAMMETRIC PLOT REPORT NO.3

21. AREA COVERED

This plot covers the area bordering the south east part of Mobile Bay and Bon Secour Bay (manuscripts T-10985 through T-10992) and along the Gulf of Mexico from Pine Beach east to Romar Beach (manuscripts T-10993, T-10994 and T-10996).

The sketch on page 3 shows the arrangement of manuscripts, the identified control, index of control, photograph centers and the adjoining manuscripts.

22. METHOD

Radial Plot:

Map Manuscripts: The projections were mylar or vinylite and are 3'45" in latitude and longitude; with the two exceptions of T-10993 and T-10996, which are 4'45" in latitude.

The plot was run on the joined manuscripts.

Photographs: The nine-lens cronapaque photographs taken on 20 November 1957 at a scale 1:10,000 were used to run the plot.

Templets: Vinylite templets were made from nine-lens photographs using master templet 53605 (1956-1957) for correction of transforming errors and distortion.

Closure and adjustment to control: The plot was run from the north to the southeast with conventional methods being used.

All control was held.

Triangulation station POINT CLEAR, GRAND HOTEL WATER TANK 1960 (T-10985) was received after completion of the plot. The triangulation position coincided with the radial plot position.

23. ADEQUACY OF CONTROL

The control was adequate and the identification was good. SEYMOUR 2, 1960 was used in lieu of SEYMOUR 1935. See accompanying letter 3 June 1960 from Chief, Photogrammetry Division.

24. SUPPLEMENTAL DATA

None.

25. PHOTOGRAPHY

The cronapaque nine-lens photographs gave adequate coverage and the quality was good.

None of the photographs were sufficiently tilted to justify special measures.

26. GENERAL

Dates of completion of the photogrammetric plot by maps are as follows:

T-10985	25 May
T-10986	26 May
T-10987	27 May
T-10988	26 July
T-10989	27 July
T-10990	9 August
T-10991	8 August
T-10992	10 August
T-10993	12 August
T-10994	5 August
T-10996	11 August

Respectfully submitted,

Robert R. Wagner
Robert R. Wagner
Cartographer (photo)

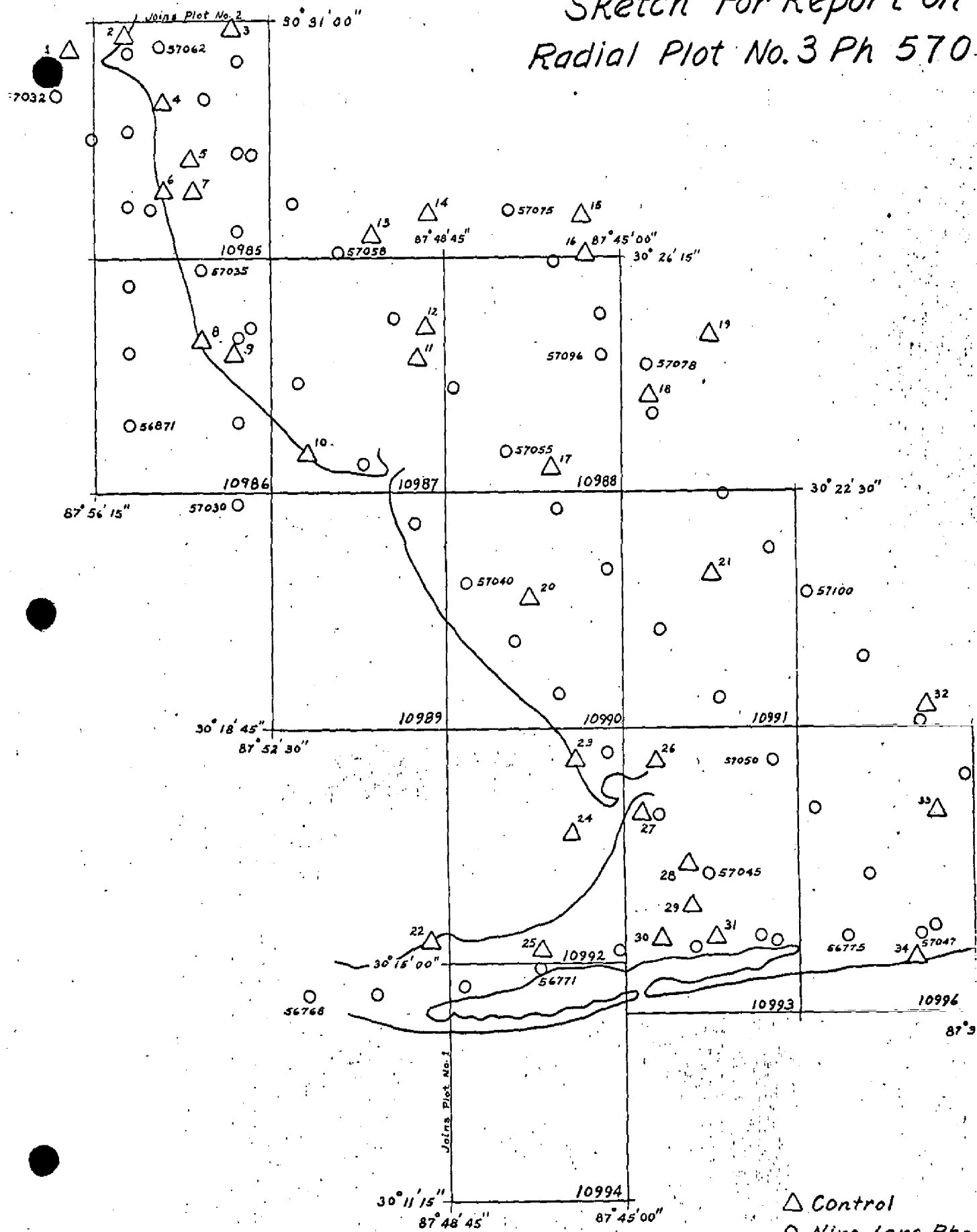
Approved and Forwarded:

Arthur L. Wardwell
Arthur L. Wardwell
Chief of Party

Q 57024

13 =

Sketch For Report On
Radial Plot No.3 Ph 570.



△ Control
○ Nine Lens Pho.

14

CONTROL STATIONS

1. GREAT POINT CLEAR BEACON, 1935
2. SUB. STATION 37 (ALA. GEOD. SUR.)
3. " " 278 (ALA. GEOD. SUR.)
4. " " 64 (ALA. GEOD. SUR.)
5. " " SMILEY AZIMUTH MARK, 1930
6. " " 83 (ALA. GEOD. SUR.)
7. " " 82 (ALA. GEOD. SUR.)
8. " " MILLET R.M. 1, 1935
9. " " 703 (ALA. GEOD. SUR.)
10. " " MACE, 1934
11. " " YUPON, 1935
12. " " 216 (ALA. GEOD. SUR.)
13. " " 311 (ALA. GEOD. SUR.)
14. " " 310 (ALA. GEOD. SUR.)
15. " " 707 (ALA. GEOD. SUR.) 1941
16. " " 103 (ALA. GEOD. SUR.) 1941
17. " " 546 (ALA. GEOD. SUR.) 1938
18. " " 544 (ALA. GEOD. SUR.) 1938
19. " " POLEY, R.M. 2, 1934
20. " " BENTON, 1935
21. " " KAISER, 1959
22. " " BANK, 1918-1940
23. " " SKUNK 2, 1953
24. INTRACOASTAL WATERWAY, PENSACOLA - MOBILE LIGHT 152, 1959
25. SUB. STATION SEYMOUR 2, 1959
26. " " MITT, 1934
27. 359 (ALA. GEOD. SUR.) 1936
28. PENSACOLA - MOBILE BEACON NO. 91, 1934
29. SUB. STATION BOW, 1934
30. " " SYLVIA, 1934
31. " " 469 (ALA. GEOD. SUR.) 1939
32. " " CLEAR, 1934
33. " " HIGDON, 1934
34. " " MOON R.M. 2, 1934

57104

56777

100

h

COMPILATION REPORT T-10990PHOTOGRAMMETRIC PLOT REPORT

Submitted with T-10994.

31. DELINEATION

The graphic method was used. The photographs were of fairly good scale and clarity. The field inspection was adequate, excepting as discussed in Item 34.

32. CONTROL

See Photogrammetric Plot Report.

33. SUPPLEMENTAL DATA

None.

34. CONTOURS AND DRAINAGE

Contours are inapplicable.

The drainage was delineated by the field inspector but when some of the inspection, particularly in swamps, was disproved by details on other photographs, all the drainage was doubted. Only the drainage identified by thorough stereoscopic examination has been shown on the manuscript. Please refer to the letter dated 10 October 1960 on DRAINAGE - PH-5704 to Chief, Photogrammetry Division from Tampa District Officer for more information about this.

35. SHORELINE AND ALONGSHORE DETAILS

The shoreline and alongshore details were delineated according to the field inspection which was adequate. No low-water or shoal lines were shown.

36. OFFSHORE DETAILS

None.

15 A

Tampa District Office
P. O. Box 190 Tampa 1 Florida

10 October 1960

To: Chief, Photogrammetry Division
Coast and Geodetic Survey
Washington, D. C.

Subject: Drainage - PH-5704 MOBILE BAY

The greater portion of the drainage in subject project consists of narrow fingers of swamp (500-1500 Ft. wide) with a perennial stream meandering through the swamp. The field inspector has complied with project instructions by delineating this drainage on the field photographs. Due to the density of the swamp trees, it is impossible to see the stream beds except for occasional short stretches.

We have carefully examined all the streams under the stereoscope on various office photographs. Comparison with the U. S. Geological Survey quadrangles indicates their drainage delineation to be more accurate than our field party's delineation. (Reference copy of memorandum to Wilson attached). One sample area has been returned to the field party and our conclusions were verified for that one particular stream.

We do not believe the streams warrant the expense of the field party traversing them for accurate location, neither do we believe that they should be mapped unless their position is fairly accurate. It appears that this drainage has been delineated on the field photographs without an adequate check with U.S.G.S. quadrangles and/or actual field investigation even though considerable time was probably spent on this phase of the field work. Considerable time has also been spent studying these discrepancies in the office.

It is suggested that the field parties be informed of a definite policy on how much time should be spent on accurately locating drainage, omitting it entirely, or using P.D.U.

On this project, since the narrow fingers of swamp indicate the drainage pattern fairly well, and the streams can be identified only in short stretches, we are omitting them as a whole.

Survey T-10938 is being scribed and will be forwarded in approximately four (4) weeks. The foregoing discrepancies will be noted on various field photographs for your attention.

It is thought that bringing this matter to your attention might eliminate similar difficulties in future projects.

(signed) William R. Kachel
LCMR, C&GS
Tampa District Officer

WAR/o

37. LANDMARKS AND AIDS

None.

38. CONTROL FOR FUTURE SURVEYS

Two Topographic stations were established. They are listed under Item 49 and forms 524 are being submitted.

39. JUNCTIONS

Satisfactory junctions have been made with the following:

T-10989 to the west, T-10988 to the north, T-10991 to the east, and T-10992 to the south.

40. HORIZONTAL AND VERTICAL ACCURACY

No statement.

46. COMPARISON WITH EXISTING MAPS

Comparison has been made with the WEEKS BAY ALA., Army Map Service quadrangle, scale 1:50,000 copied from USGS quadrangle dated 1943 and the USC&GS Air Photo Compilation T-5528, scale 1:20,000 from photographs flown in July 1934. The comparison was favorable except for the changes due to the passing of time.

47. COMPARISON WITH NAUTICAL CHARTS

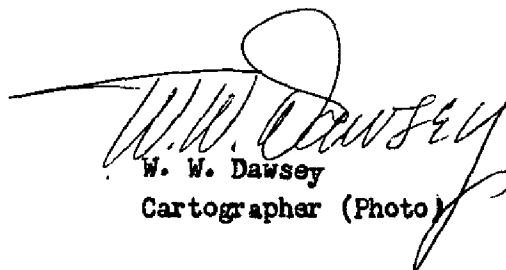
Comparison has been made with Nautical Chart No. 1266, scale 1:80,000 edition of 16 Nov. 1959. The maps listed under Item 46 were probably in part the source of the topography for this chart and the same differences exist.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.


W. W. Dawsey
Cartographer (Photo)

Approved and Forwarded:

William R. Kachel
William R. Kachel
Chief of Party

48. GEOGRAPHIC NAME LIST

Geographic names were taken from Nautical Chart 1266 and Army Map Service, WEEKS BAY, ALA. quadrangle. These sources are in agreement.

ALABAMA

BALDWIN COUNTY
BON SECOUR BAY

CYPRESS POINT

NOLTIE CREEK

SKUNK BAYOU

WEEKS CREEK

*Names approved
12-10-65*

A. J. Wraight

49. NOTES FOR THE HYDROGRAPHER

Two Topographic stations were established. They are:

GOOD 1959

HELP 1959

19 13.

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PHOTOGRAMMETRIC OFFICE REVIEW
OF ADVANCE COMPILATION MANUSCRIPT
T-10990

1. Projection and grids WHS 2. Title WHS 3. Manuscript numbers WHS 4. Manuscript size WHS

4a Classification label Unclassified

CONTROL STATIONS

5. Horizontal control stations of third-order or higher accuracy WHS 6. Recoverable horizontal stations of less than third-order accuracy (topographic stations) WHS 7. Photo hydro stations XX 8. Bench marks XX 9. Plotting of sextant fixes XX 10. Photogrammetric plot report MMS 11. Detail points WHS

ALONGSHORE AREAS

(Nautical Chart Data)

12. Shoreline WHS 13. Low-water line XX 14. Rocks, shoals, etc. XX 15. Bridges XX 16. Aids to navigation XX 17. Landmarks XX 18. Other alongshore physical features WHS 19. Other along-shore cultural features WHS

PHYSICAL FEATURES

20. Water features WHS 21. Natural ground cover WHS 22. Planetable contours XX 23. Stereoscopic instrument contours XX 24. Contours in general XX 25. Spot elevations XX 26. Other physical features WHS

CULTURAL FEATURES

27. Roads WHS 28. Buildings WHS 29. Railroads XX 30. Other cultural features WHS

BOUNDARIES

31. Boundary lines XX 32. Public land lines XX

MISCELLANEOUS

33. Geographic names WHS 34. Junctions WHS 35. Legibility of the manuscript WHS 36. Discrepancy overlay XX 37. Descriptive Report WHS 38. Field inspection photographs WHS 39. Forms WHS 40. William H. Shearouse M.M. Slavney

W.H. Shearouse

Reviewer

Supervisor, Review Section or Unit

M.M. Slavney

41. Remarks (see attached sheet)

FIELD COMPLETION ADDITIONS AND CORRECTIONS TO THE MANUSCRIPT

42. Additions and corrections furnished by the field completion survey have been applied to the manuscript. The manuscript is now complete except as noted under item 43.

Compiler

Supervisor

43. Remarks: Field edit of alongshore details in July 1961 revealed no changes

20 14

FIELD EDIT REPORT
MAPS T-10990, T-10991, T-10992
PROJECT Ph-5704

51. METHODS

Field edit was confined to checking the delineation of the shoreline and the area immediately adjacent thereto.

The shoreline was traversed by skiff running close to shore and by walking along the beach. Several measurements were taken from identifiable points to verify the accuracy of the manuscripts.

All additions or corrections have been noted on a field sheet for each manuscript. These field edit notes have been made with a violet pencil. No photographs were used for the edit of these three sheets.

52. ADEQUACY OF COMPILATION

From visual inspection and occasional measurements, the compilation appears good.

53. MAP ACCURACY

Horizontal accuracy checks of the manuscripts were not required.

54. RECOMMENDATIONS

None are offered.

55. EXAMINATION OF PROOF COPY

Mr. Harold M. Graham, Registered Engineer, Route 2, Box 120, Fairhope, Alabama and Mr. Claude W. Arnold, Registered Engineer, Fairhope, Alabama agreed to examine proof copies of any maps located in Baldwin County. Both men are longtime residents and familiar with the area covered by these manuscripts.

The name "Seymour Bluff" in map T-10992 applies to the low bluff along Bon Secour Bay and not to the settlement. This was verified by Mr. Willie Galloway. Mr. Galloway is a retired rural mail carrier and lives at the end of the road where the name is placed on the map. The name of the community

21 15.

was "Casque" many years ago, but this name became obsolete when the post office by the same name was discontinued. The present name is "Shell Bank Community." This name ~~is~~ is not recommended for mapping since its limits are general and cover an area of several miles along the highway to Fort Morgan. No other discrepancies in names were noted.

Submitted,
William M. Reynolds.

William M. Reynolds

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REVIEW REPORT T-10990
PLANIMETRIC
February 28, 1968

61. GENERAL STATEMENT:

See Summary accompanying the Descriptive Report.

62. COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS:

Comparison was made with a copy of 1:20,000 scale Air Photo Compilation T-5528, compiled from photography of July 1934. The shoreline of the two surveys are in good agreement. Interior changes consist mainly of new roads and additional cultivation.

Survey T-10990 supersedes the prior survey for nautical chart construction purposes.

63. COMPARISON WITH MAPS OF OTHER AGENCIES:

Comparison was made with USGS WEEKS BAY, ALA., 1:62,500 scale, 15 minute quadrangle, edition of 1943, reprinted in 1950. The surveys are in good agreement with the exception of some changes in the road system that serves the area.

64. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS:

Comparison was made with a copy of boat sheet H-8634, ECFP-10-4-61, and H-8635, ECFP-10-5-61. The MHWL of the three surveys are in agreement. Three submerged logs shown on H-8634 are not visible on the photographs of the area. Their positives are as follows:

Latitude	30° 19' 10"	Longitude	87° 47' 19"
Latitude	30° 19' 03"	Longitude	87° 47' 06"
Latitude	30° 18' 56"	Longitude	87° 46' 48"

65. COMPARISON WITH NAUTICAL CHARTS:

A visual comparison was made with Chart 1266, 1:80,000 scale, 21st edition, September 25, 1967. No discrepancies were noted.

66. ADEQUACY OF RESULTS AND FUTURE SURVEYS:

This survey complies with instructions and meets the National Standards of Map Accuracy.

There is no comparison print to accompany this survey. All differences have been noted in Items 62 thru 64.

Reviewed by:

Leo F. Beugnot
Leo F. Beugnot

Approved by:

For Alt. Stark
J. Bull, RADM, USESSA
Director, Atlantic Marine Ctr.

Approved by:

Charles H. Hanner
Chief, Photogrammetry Section ^{ADA}

R. H. Hantover
Chief, Photogrammetri Div.

John D. Boyer
Chief, Nautical Chart Div.
Marine