

8389

Diag'd. on Diag. Ch. No. 77-5

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic

Field No. Ph-52 (49) Office No. T-8389

LOCALITY

State Virginia

General locality Caroline County

Locality Vicinity of Corbin, Va.

(A.P. Hill Military Reservation)

194 9

CHIEF OF PARTY

E.R. McCarthy

LIBRARY & ARCHIVES

DATE _____

8-1870-1 (11)

*Aluminum Sheet filed in
Cabinet. Vault.*

DATA RECORD

T - 8389

Project No. (II): Ph-52(49) Quadrangle Name (IV):

Field Office (II): Washington, N. C.

Chief of Party: E. R. McCarthy

Photogrammetric Office (III):

Officer-in-Charge:

Instructions dated (II) (III): June 2, 1949

Copy filed in Division of
Photogrammetry (IV)

Method of Compilation (III): Plane Table

Manuscript Scale (III): 1:2400

Stereoscopic Plotting Instrument Scale (III):

Scale Factor (III):

Date received in Washington Office (IV):

Date reported to Nautical Chart Branch (IV):

Applied to Chart No.

Date:

Date registered (IV):

Nov. 15, 1949 (vault)
Aug. 26, 1951 (review sect. Photog.)

Publication Scale (IV):

Publication date (IV):

Geographic Datum (III): N.A. 1927

Vertical Datum (III): Mean Sea Level

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): INTERSECTION, 1949

Lat.: 38° 12' 00.640"

Long.: 77° 22' 50.581"

Adjusted
Unadjusted

Plane Coordinates (IV):

State: Virginia

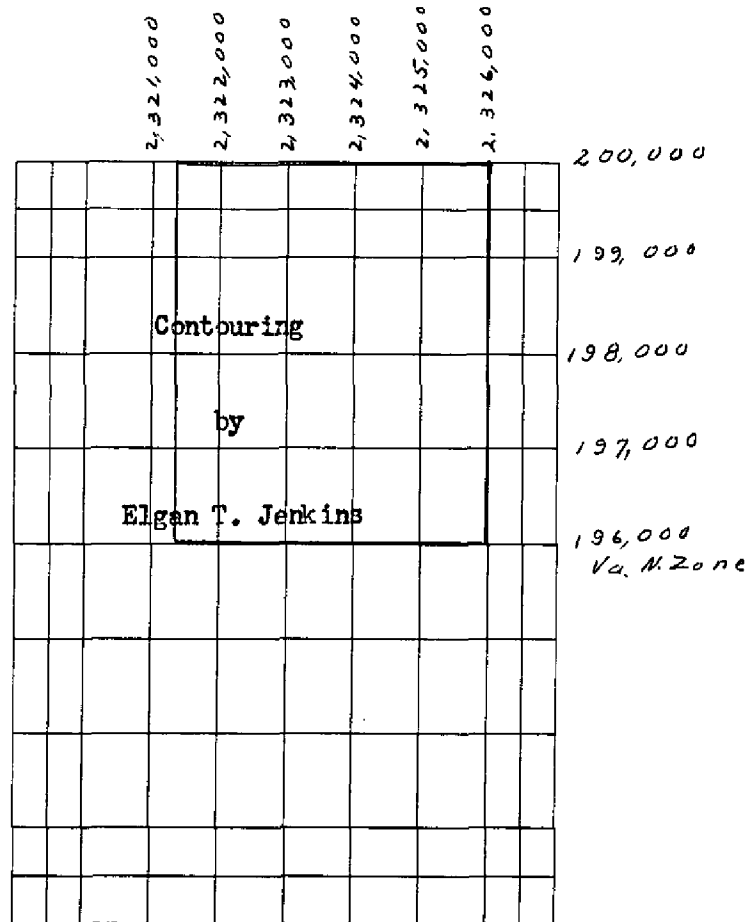
Zone:

Y= 196,242.75

X= 2, 321,649.99

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.



Areas contoured by various personnel
(Show name within area)
(II) (III)

DATA RECORD

Field Inspection by (II): **Elgan T. Jenkins**Date: **24 August 1949**

Planetable contouring by (II):

Date: **15-24 August 1949**Completion Surveys by (II): **Elgan T. Jenkins**Date: **15 24 August 1949**

Mean High Water Location (III) (State date and method of location):

~~Projection~~ and Grids ruled by (IV):Date: **T L J 8-9-49**

Projection and Grids checked by (IV):

Date:

Control plotted by (III):

Date:

Control checked by (III):

Date:

Radial Plot or Stereoscopic
Control extension by (III):

Date:

Stereoscopic Instrument compilation (III):

Planimetry

Date:

Contours

Date:

Manuscript delineated by (III):

Date:

Photogrammetric Office Review by (III):

Date:

Elevations on ~~Manuscript~~ Planetable Sheet
checked by (II) (III): **Elgan T. Jenkins**Date: **9-11 August 1949**

Camera (kind or source) (III):

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
16 D PU-4M 705-IV 59760				
CEGS 49-0-63120637	May 4, 1949			

Not used for compilation purposes.
Numbers listed as record of coverage only.

Tide (III)

Reference Station:
Subordinate Station:
Subordinate Station:

Ratio of Ranges	Mean Range	Spring Range

Washington Office Review by (IV):

Date:

Final Drafting by (IV):

Date:

Drafting verified for reproduction by (IV):

Date:

Proof Edit by (IV):

Date:

Land Area (Sq. Statute Miles) (III): 0.3

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

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

Control Leveling - Miles (II): 3.6

Number of Triangulation Stations searched for (II): 1

Recovered: 1 (fm 526) Identified: 0

Number of BMs searched for (II): 6

Recovered: 6 (fm 685A) Identified: 0

Number of Recoverable Photo Stations established (III): 0

Number of Temporary Photo Hydro Stations established (III): 0

Remarks:

Permanent Triangulation Stations Established 3 (fm 525)
 Semipermanent Triangulation Stations Established 11 (fm 524)
 Permanent Bench Marks Established 10 (fm 638)
 Semipermanent Bench Marks Established 11

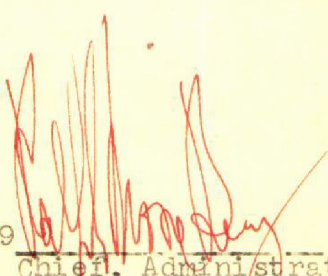
Summary

Planetable sheet T-8389 is a 1:2,400 topographic map of approximately 300 acres, mapped by the Division of Photogrammetry for the Division of Geomagnetism and Seismology for the purpose of planning a new magnetic observatory.

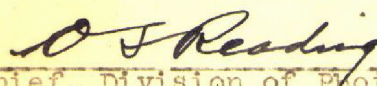
Records pertaining to this survey have been approved by the Division of Photogrammetry and are filed as follows:

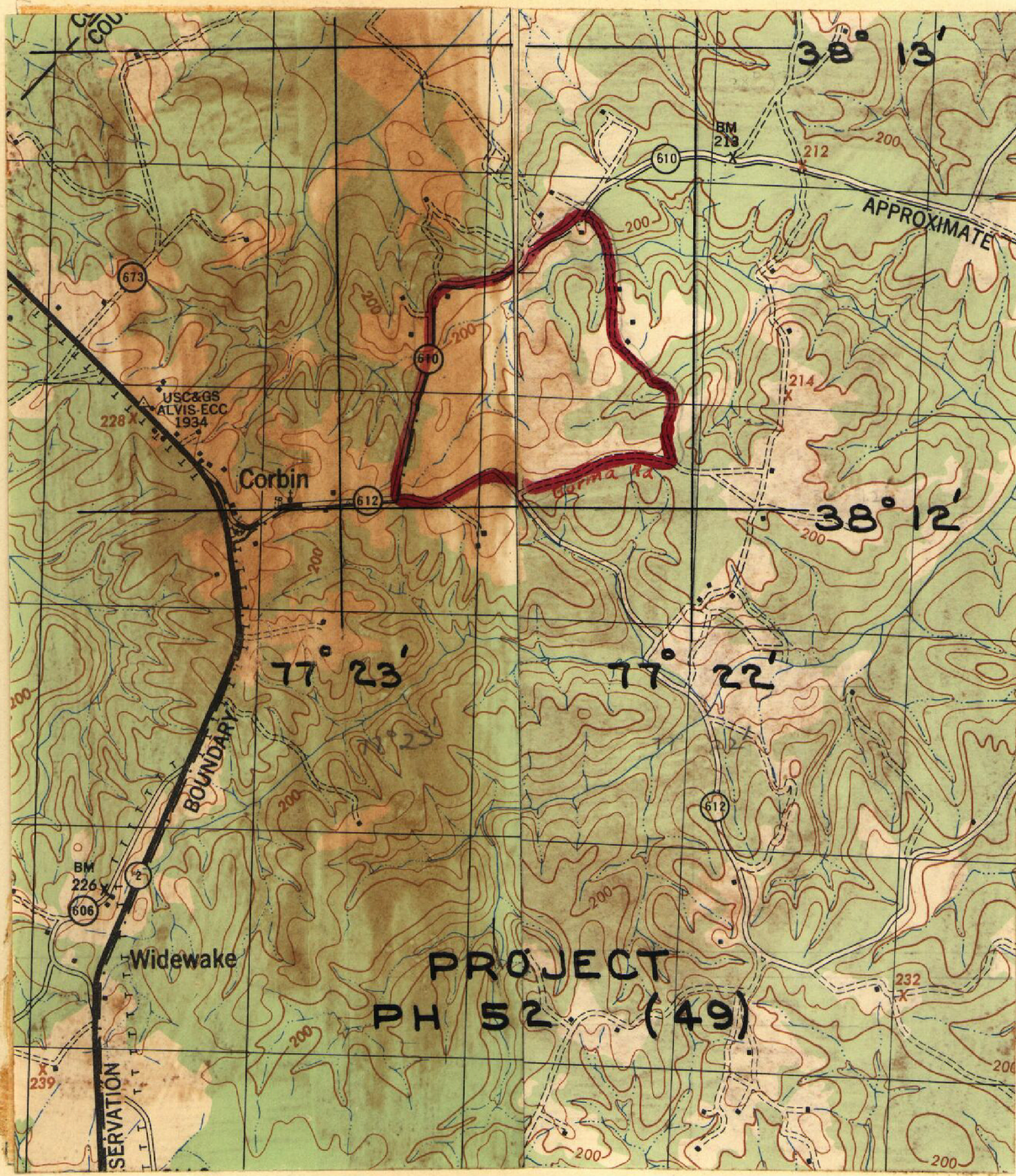
1. Filed in the USC. and G.S. Archives
 - a. Planetable Sheet T-8389
 - b. Descriptive Report T-8389
2. Filed in Library
 - a. Traverse Data { 643/SH G-8183 (3v)
643/GS G-8184 (2v)
643/GS2 G-8185 (1c)
 - b. Precise level data
643 L-13023 (1v)
HB
3. Filed in the Division of Photogrammetry
 - a. The Project Instructions (copy attached hereto)
 - b. Descriptions of Recoverable Topographic Stations. (1 form 524)

Oct. 20, 1949


Chief, Administrative
Planning Section

Approved Oct. 22, 1949


Chief, Division of Photogrammetry



PROJ. Ph.-52 (49)

VA 610 RD-5





5-4-49-0-634

C 165

FIELD INSPECTION REPORT
SHEET T-8389 (1949)
PROJECT PH-52(49)

E. R. McCarthy, Chief of Party

The field work of this sheet was accomplished in accordance with the Director's Instructions, Project Ph-52(49) dated 2 June, 1949, and other instructions as noted herein. The field work was accomplished by:

<u>Name and Title</u>	<u>Phase</u>	<u>Date</u>
M. A. Stewart	Vertical Control	July 7
E. T. Jenkins	Horizontal Control	
	Contours	to
	Field Inspection	August 26, 1949.

This report is written in accordance with Chapter 7, Paragraph 724 of the preliminary edition of the Topographic Manual dated June, 1949.

2. AREAL FIELD INSPECTION

The area encompassed by this sheet, (approximately 300 acres) is a part of the A. P. Hill Military Reservation and is uninhabited. The area is composed entirely of land, approximately one-fifth of which is woodland.

The project is bounded on the north and west by Va. Route #610, on the south by Va. Route #612, and Burma Road, and on the east by an abandoned military road. The only buildings in the area are a water tank with pump house and a few abandoned sheds.

3. HORIZONTAL CONTROL

All control shown on the topographic sheet was established by the field party using standard traverse methods for third order work. The traverse began and closed with triangulation station "ALVIS, 1934".

Directions were taken with a Wild T-2 theodolite on special traverse gear consisted of two Wild lighted targets mounted on tripods that were interchangeable with the T-2 tripod.

A third order azimuth of Polaris was made using the Wild T-2 theodolite. The error of this observation was 1 second.

Distances were measured with a standard 50 meter invar tape utilizing roads as chaining bases where possible and 2" x 4" stakes where necessary. Due to the nature of the terrain many broken lengths had to be used, some of these no longer than 10 meters.

The error of closure of this adjusted traverse was 1 part in 44,000.

4. VERTICAL CONTROL

Vertical control was provided by third order levels beginning and closing on BM M-227 with a check on N-227 (1941). The error of closure was negligible.

(a) All bench marks were established by the USC&GS. Bench Marks as follows:

Previously established-permanent marks.

M-227 (1941)

N-227 (1941)

Currently established - permanent marks.

INTERSECTION (1949)

R M-1 INTERSECTION (1949)

R M-2 INTERSECTION (1949)

HILL (1949)

R M-1 HILL (1949)

R M 2 HILL (1949)

HILL AZ. MK (1949)

TWIN OAK (1949)

R M 1 TWIN OAK (1949)

R M 2 TWIN OAK (1949)

Currently established temporary marks.

T MON #1 to T MON #11 incl.

(b) Supplemental elevations were established by standard plane table methods, using vertical angles and a stadia rod where necessary.

5. CONTOURS AND DRAINAGE

Contouring was done on a special topographic sheet (scale 1:2400) furnished by the Washington office. Standard planetable methods were employed for contouring and stream location. Contour interval is 5 feet.

6. WOODLAND COVER

Woodland coverage and limits were delineated on the 1/10,000 photographs of the Department of Agriculture taken in 1944.

7. to 11. Not applicable

12. OTHER INTERIOR FEATURES

All roads were classified in accordance with Paragraph 5441 of the preliminary edition of the Topographic Manual, dated June, 1949.

13. GEOGRAPHIC NAMES

Not applicable.

14. SPECIAL REPORTS AND SUPPLEMENTAL DATA

Reports will be submitted at a later date concerning:

1. The results of a field test made of a Wild tilting level.
2. The method and results of the special gear used for the traverse of Ph-52(49).

15. WATER SUPPLY

The need of an ample water supply was brought to this party's attention. The following information in regards to a water tank and pump house was furnished by Colonel Kilian of the A. P. Hill Military Reservation.

CORBIN WATER POINT

Pump.

Depth - 225 feet.
Size of casing - 6" Sealed with cement.
Make of pump - Pomona, 4" discharge line.
Type of pump-- 5 H.P. electrically driven.
Capacity - 40 gallons per minute.

Tank Capacity:

4 - 2000 gallon tanks.
Elevation above ground - 25 feet (Est.)

There are four small springs in this area that can furnish a large amount of water at all seasons.

16. MILITARY AUTHORITIES

The Commanding Officer of the A. P. Hill Military Reservation, Colonel Kilian, was contacted prior to and upon the completion of the project. He and his staff were very cooperative and offered assistance in any way possible to aid in the completion of the project.

Submitted:
2 September 1949

Elgan T. Jenkins
Elgan T. Jenkins *by J.K.W.*
Cartographer

Approved
16 ~~8~~ September 1949

E. R. McCarthy
E. R. McCarthy
Chief of Party

A brief review of T-8389 was made prior to clearing the project files. The road on the west & north sides of the contoured area was changed to "Va. Route 610" to conform with a field note on the part of a photograph bound with this report.

The Descriptive Report with its inclusions serves also as the project "Completion Report." A brief summary is filed in the Bureau Archives under the project number in order that the continuity of Completion Reports may remain unbroken.

Lana T. Stevens
21 August, 1951

Approved by:

Chief Review Section
Div. of Photogrammetry

Chief, Div. of Photogrammetry

Chief, Nautical Charts Branch
Div. of Charts

Chief, Div. of Coastal Surveys

Station	X coordinate	± 2 F	B	Y coordinate	± 2 F	B
	77° 22' 50.581"			38° 12' 00.640"		
Intersection	2,321,649.99	325.0	175.0	196,242.75	121.4	378.6
Hill	2,324,062.4	031.2	468.8	199,982.4	491.2	8.8
Hill Azimuth	2,322,185.9	093.0	407.0	197,522.7	261.4	238.6
T Mon. 1	2,323,083.11	041.6	458.5	196,330.50	165.3	334.8
T Mon. 2	2,322,158.5	079.3	420.7	198,401.8	200.9	299.1
T Mon. 3	2,322,307.8	153.9	346.1	198,988.4	494.2	5.8
T Mon. 4	2,323,104.2	062.1	447.9	199,143.0	071.5	428.5
T Mon. 5	2,323,481.3	240.7	259.3	199,206.0	103.0	397.0
T Mon. 6	2,324,372.4	186.2	313.8	199,864.4	432.0	67.8
T Mon. 7	2,324,572.9	286.5	213.5	199,089.7	044.9	455.1
T Mon. 8	2,325,157.9	079.0	421.0	198,210.2	105.1	394.9
T Mon. 9	2,325,559.3	279.7	220.3	197,475.7	237.9	262.1
T Mon. 10	2,324,197.2	98.6	401.4	196,684.7	342.4	157.6
T Mon. 11	2,322,956.9	478.5	21.6	196,590.4	295.2	204.8
Twin Oak	2,325,382.7	191.4	308.6	196,783.7	391.9	108.1
TT 8	2,322,284.2	142.1	357.9	197,346.5	173.3	326.7
TT 9	2,324,523.1	261.6	238.4	199,629.2	314.6	185.4
TT 10	2,324,524.3	262.2	237.8	199,387.5	193.8	306.2
TT 11	2,324,856.3	428.2	71.8	198,419.2	209.6	290.4
TT 12	2,325,031.5	015.8	484.2	197,993.5	496.8	3.2
TT 13	2,325,109.7	054.9	445.1	197,774.6	387.3	112.7
TT 14	2,325,414.7	207.4	292.6	197,641.8	320.9	179.1
TT 15	2,325,407.9	204.0	296.0	197,438.4	219.2	280.8
TT 16	2,325,285.0	142.5	357.5	197,222.7	111.4	388.6
TT 17	2,325,382.4	191.2	308.8	196,982.8	491.4	8.6
TT 18	2,324,722.1	361.1	138.9	196,818.8	409.4	90.6
TT 19	2,324,198.3	99.2	400.8	196,659.4	329.7	170.3

Named stations are permanently marked points. \triangle

T. Mon(uments) are temporarily marked points. \odot (form 524)

TT stations are wooden stakes

(All control stations on the map manuscript have the symbol \triangle)

Chief, Nautical Chart Branch

21 Oct. 1949

Chief, Administrative Planning Section

Filing of T-8389

It is requested that you please file planetable sheet and descriptive report T-8389 in the vault.

This survey is a 1:2,400 scale topographic map including approximately 300 acres of the A. P. Hill, Virginia, Military Reservation.

The Division of Photogrammetry mapped the area at the request of the Division of Geomagnetism and Seismology for the purpose of planning a new magnetic observatory.

Photographic prints of the map have been furnished to the Division of Geomagnetism and Seismology, and this Division has no further use for these records.

The planetable sheet and descriptive report will be routed to you within the next few days.

Ralph Moore Berry
Chief, Administrative Planning Section
Div. of Photogrammetry

73 KTA

1.7 73-aal

19 August 1949

To: Mr. Elgan T. Jenkins
U. S. Coast and Geodetic Survey
General Delivery
Fredericksburg, Virginia

Through: Comdr. E. R. McCarthy, Chief of Party

Subject: Traverse - Project Ph-52(49)

Computation of your traverse for control of contouring of part of the A. P. Hill Military Reservation indicates the following characteristics:

Closure: 1 part in 44,000
Angle Adjustment: 1.5" per station
Azimuth Observation: Probable error - 1"

You and the members of your party are commended for the excellent results of this work.

(Signed) J. H. Hawley

Acting Director

2 June 1949

To: Comdr. Edward R. McCarthy
U. S. Coast and Geodetic Survey
P. O. Box 1
Washington, North Carolina

Subject: Instructions, Project Ph-52(49)

1. Location.--Project Ph-52(49) is located approximately 10 miles southeast of Fredericksburg, Virginia, on the A. P. Hill Military Reservation at the junction of Routes Nos. 610 and 612 just east of the town of Corbin.
2. Purpose.--This project consists of the preparation of a topographic map of approximately 300 acres at the scale of 1:2,400 (1 inch = 200 ft.) with a contour interval of 5 feet. This map is for the use of the Division of Geomagnetism and Seismology in planning and locating a new magnetic observatory and associated buildings.
3. Aerial Photography.--The project area is covered with 1:20,000 scale single-lens photographs of the Department of Agriculture taken in 1944, and the eastern part only is covered with 1:7000 scale single-lens photographs taken by this Bureau in 1949. This photography is inadequate for stereoscopic mapping or for use as base sheets for plane table contouring, but will serve for the delineation of woodland limits and field work planning.
4. Horizontal Control.--Horizontal control shall be provided by a traverse, which shall be run in a closed loop entirely around the project area from triangulation station ALVIS, ecc., 1934, which is northwest of Corbin. This traverse shall be measured with third-order accuracy, using a Wild T-2 theodolite and associated traverse gear which will be furnished to you from the Washington Office. Each direction shall be observed with two direct and two reverse sightings with initial reading of approximately zero degrees. The circle shall not be moved between the direct and reverse sightings for a station. Distances shall be measured in feet and in meters, and re-taped if the two measurements on any one line do not agree within one part in 5000. An observation of Polaris shall be made for azimuth closure at the extreme northeast corner

Comdr. Edward R. McCarthy

2 June 1949

of the project. The closed loop around the project shall be completed first, and the observations (including the azimuth observation) immediately forwarded to the Washington Office for computation.

5. While the computations on the loop are being made in the Washington Office, a single-line connection in accordance with the above specifications shall be run from the southwest corner of the loop along Route No. 612 to Corbin, thence northerly along Route No. 2 to station ALVIS, ecc., 1934. This connection shall be in azimuth as well as position, using the azimuth mark if recoverable and making an observation on Polaris if the azimuth mark is not recovered. All turning points on the traverse shall be semipermanently marked with iron pipes and described on Form 524. These marks will be used during the construction of the observatory which may require several years. Three permanent monuments shall be placed, one each near the southwest, southeast, and northeast corner of the project and described on Form 525.

6. The loop traverse will be computed in the Washington Office on a preliminary datum and the stations plotted on a planetable sheet which will be forwarded to you for use in planetable mapping.

7. Vertical Control.—Vertical control shall consist of third-order levels which shall be run between the nearest recoverable bench marks on each side of the project. Descriptions and elevations of bench marks in the area will be furnished to you. Sufficient temporary bench marks shall be left so that one bench mark is visible from each point on your traverse loop. Permanent bench marks shall be established at the town of Corbin and at the southwest and northeast corners of the project. These latter may be on the traverse monuments mentioned in paragraph 5. The permanent bench marks shall be described on Form 525.

8. Contouring.—Contouring at a 5-foot interval shall be by planetable on a metal-mounted sheet which will be provided by the Washington Office. Traverse stations will be plotted in the Washington Office. Photographs may be used for assistance in inspection and verification, but shall not be used as base sheets for contouring. All instrument work and contouring shall be done directly on the metal-mounted sheet. Accuracy of contours shall be approximately ± 2 feet, except in the relatively flat area in the western part of the project between Route 610 and the stream that runs northeasterly just west of the

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2 June 1949

center line of the area, where a somewhat-higher accuracy is desired. Spot heights shall be indicated wherever it is felt that the contours do not adequately portray the terrain characteristics.

9. Details.-Drainage lines, woodland, and permanent buildings shall be indicated as well as the highways and roads along the boundaries of the project. Interior roads shall be mapped only if they have been graded or are in fairly permanent locations. Fence lines and other landmark features shall also be shown. The sheet need not be inked unless this is considered necessary for clarification of details. Woodland limits need not be surveyed in the field if they are adequately classified on the aerial photographs.

10. Return of Data and Equipment.-Upon conclusion of field work the planetable sheet and associated notes shall be transmitted to the Washington Office. The special traverse equipment shall also be returned.

11. Descriptive Reports.-The work on this project will be done on one sheet numbered T-8309. A report shall be transmitted in a descriptive report folder containing all applicable information usually required in descriptive reports, and a statement as to the general methods used in the preparation of the map. The report shall also state your conclusions regarding the Wild traverse gear as an aid to progress and accuracy in traverse work.

12. Reports.-Progress sketches and map production cost accounts will not be required for this project. A separate allotment will be made for this project which will necessitate reporting of expenditures in your monthly accounts. Notes shall be made regarding the progress in your preliminary monthly report.

13. Military Authorities.-The Commanding Officer of the A. P. Hill Military Reservation shall be contacted at his headquarters near Bowling Green, Virginia, prior to starting field work. The purpose of the surveys shall be explained and any regulations that apply to this work shall be fully complied with.

14. Receipt of these instructions is to be acknowledged.

Director

2 June 1949

To: Comdr. Edward R. McCarthy
U. S. Coast and Geodetic Survey
P. O. Box 1
Washington, North Carolina

Subject: Instructions, Project Ph-52(49)

1. Location.—Project Ph-52(49) is located approximately 10 miles southeast of Fredericksburg, Virginia, on the A. P. Hill Military Reservation at the junction of Routes Nos. 610 and 612 just east of the town of Corbin.
2. Purpose.—This project consists of the preparation of a topographic map of approximately 300 acres at the scale of 1:2,400 (1 inch = 200 ft.) with a contour interval of 5 feet. This map is for the use of the Division of Geomagnetism and Seismology in planning and locating a new magnetic observatory and associated buildings.
3. Aerial Photography.—The project area is covered with 1:20,000 scale single-lens photographs of the Department of Agriculture taken in 1944, and the eastern part only is covered with 1:7000 scale single-lens photographs taken by this Bureau in 1949. This photography is inadequate for stereoscopic mapping or for use as base sheets for plane table contouring, but will serve for the delineation of woodland limits and field work planning.
4. Horizontal Control.—Horizontal control shall be provided by a traverse, which shall be run in a closed loop entirely around the project area from triangulation station ALVIS, sec., 1934, which is northwest of Corbin. This traverse shall be measured with third-order accuracy, using a Wild T-2 theodolite and associated traverse gear which will be furnished to you from the Washington Office. Each direction shall be observed with two direct and two reverse pointings with initial reading of approximately zero degrees. The circle shall not be moved between the direct and reverse pointings for a station. Distances shall be measured in feet and in meters, and re-taped if the two measurements on any one line do not agree within one part in 5000. An observation of Polaris shall be made for azimuth closure at the extreme northeast corner

Comdr. Edward F. McCarthy

2 June 1949

of the project. The closed loop around the project shall be completed first, and the observations (including the azimuth observation) immediately forwarded to the Washington Office for computation.

5. While the computations on the loop are being made in the Washington Office, a single-line connection in accordance with the above specifications shall be run from the southwest corner of the loop along Route No. 612 to Corbin, thence northerly along Route No. 2 to station ALVIS, ecc., 1934. This connection shall be in azimuth as well as position, using the azimuth mark if recoverable and making an observation on Polaris if the azimuth mark is not recovered. All turning points on the traverse shall be semipermanently marked with iron pipes and described on Form 524. These marks will be used during the construction of the observatory which may require several years. Three permanent monuments shall be placed, one each near the southwest, southeast, and northeast corner of the project and described on Form 525.

6. The loop traverse will be computed in the Washington Office on a preliminary datum and the stations plotted on a planetable sheet which will be forwarded to you for use in planetable mapping.

7. Vertical Control.-Vertical control shall consist of third-order levels which shall be run between the nearest recoverable bench marks on each side of the project. Descriptions and elevations of bench marks in the area will be furnished to you. Sufficient temporary bench marks shall be left so that one bench mark is visible from each point on your traverse loop. Permanent bench marks shall be established at the town of Corbin and at the southwest and northeast corners of the project. These latter may be on the traverse monuments mentioned in paragraph 5. The permanent bench marks shall be described on Form 525.

8. Contouring.-Contouring at a 5-foot interval shall be by planetable on a metal-mounted sheet which will be provided by the Washington Office. Traverse stations will be plotted in the Washington Office. Photographs may be used for assistance in inspection and verification, but shall not be used as base sheets for contouring. All instrument work and contouring shall be done directly on the metal-mounted sheet. Accuracy of contours shall be approximately ± 2 feet, except in the relatively flat area in the western part of the project between Route 610 and the stream that runs northeasterly just west of the

Comdr. Edward R. McCarthy

2 June 1949

center line of the area, where a somewhat-higher accuracy is desired. Spot heights shall be indicated wherever it is felt that the contours do not adequately portray the terrain characteristics.

9. Details.-Drainage lines, woodland, and permanent buildings shall be indicated as well as the highways and roads along the boundaries of the project. Interior roads shall be mapped only if they have been graded or are in fairly permanent locations. Fence lines and other landmark features shall also be shown. The sheet need not be inked unless this is considered necessary for clarification of details. Woodland limits need not be surveyed in the field if they are adequately classified on the aerial photographs.

10. Return of Data and Equipment.-Upon conclusion of field work the planetable sheet and associated notes shall be transmitted to the Washington Office. The special traverse equipment shall also be returned.

11. Descriptive Reports.-The work on this project will be done on one sheet numbered T-8389. A report shall be transmitted in a descriptive report folder containing all applicable information usually required in descriptive reports, and a statement as to the general methods used in the preparation of the map. The report shall also state your conclusions regarding the Wild traverse gear as an aid to progress and accuracy in traverse work.

12. Reports.-Progress sketches and map production cost accounts will not be required for this project. A separate allotment will be made for this project which will necessitate reporting of expenditures in your monthly accounts. Notes shall be made regarding the progress in your preliminary monthly report.

13. Military Authorities.-The Commanding Officer of the A. F. Hill Military Reservation shall be contacted at his headquarters near Bowling Green, Virginia, prior to starting field work. The purpose of the surveys shall be explained and any regulations that apply to this work shall be fully complied with.

14. Receipt of these instructions is to be acknowledged.

Director