

8641

Diag. Cht. No. 1201

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic Photogrammetric  
(Multiplex)

Field No. \_\_\_\_\_ Office No. T-8641

LOCALITY

State Maine

General locality Washington County

Locality Columbia Falls, Centerville,  
Jonesboro Station

1948

CHIEF OF PARTY

D.E. Sturmer & R.A. Gilmore, Chiefs of Party  
T.B. Reed, Balto. Photo. Office

LIBRARY & ARCHIVES

DATE \_\_\_\_\_

B-1870-1 (1)

8641

## DATA RECORD

T- 8641

Quadrangle (II):  
Columbia Falls, 7½ minute

Project No. (II): CS-272F

Field Office: Millbridge, Me.

Chief of Party: Dale E. Sturmer 1945  
Ross A. Gilmore 1946

Compilation Office: Baltimore, Md. Chief of Party: Lt. Comdr. Thos. B. Read

Instructions dated (II III): 19 June 1945  
18 Sept. 1946

Div. of Photogrammetry  
Office Files  
Copy filed in Descriptive  
Report No. T- (VI)

Completed survey received in office: 2-24-<sup>49</sup>~~50~~

Reported to Nautical Chart Section: 3-1-49

Reviewed: 1-4-50

Applied to chart No.

Date:

Redrafting Completed:

Registered: 2-2-50

Published:

Compilation Scale: 1:10,000 (Multiplex Published Scale: 1:24,000  
Plotting scale 1:8500)

Scale Factor (III): 1.00

Geographic Datum (III): N.A. 1927

Datum Plane (III): Mean Sea Level

Reference Station (III): MITTEN MOUNT, 1850

Lat.: 44° 43' 19.857"

Long.: 67° 40' 07.633"

Adjusted  
~~Unadjusted~~

State Plane Coordinates (VI): Maine East

X =

Y =

Military Grid Zone (VI)

PHOTOGRAPHS (III)

<u>Number</u>	<u>Date</u>	<u>Time</u>	<u>Scale</u>	<u>Stage of Tide</u>
44-C-1093 to 1101	5-19-44	1030	1:20,000	-
44-C-1154 to 1162	5-19-44	1130	1:20,000	5.8' above MLW
44-C-1726 to 1734	6-5-44	1015	1:20,000	--

24545 to 24548

Tide from (III): Addison point, Pleasant River

Mean Range: 11.8'

Spring Range: 13.4

Camera: (Kind or source) U.S.C. & G.S. "C" 6" Metrogon Lens

Field Inspection by:

I. I. Saperstein & Boynton Locke, Jr.,  
H.G. Murphy, and Party of Dale E. Sturmer

Field Edit by: G. E. Varnadoe

date: Seasons of  
1945 & 1946

date: July 1948

Date of Mean High-Water Line Location (III): 6-19-46

Projection and Grids ruled by (III) T.L.J.

date: 6-10-47

" " " checked by: T.L.J.

date: 6-10-47

Control plotted by: A.K. Heywood

date: 11-18-47

Control checked by: D.M. Brant

date: 1-7-48

Radial Plot by: None; bridged with multiplex

date:

Detailed by: H.P. Eichert & A.K. Heywood (Multiplex)  
B. A. Dew (Drafting)

date: Oct. & Nov. 1947

Reviewed in compilation office by: H.P. Eichert

date: March, 1948

Elevations on Field Edit Sheet

checked by: C. Theurer

date: 1-4-50, 2

STATISTICS (III)

Land Area (Sq. Statute Miles): 54.3

Shoreline (More than 200 meters to opposite shore): none

Shoreline (Less than 200 meters to opposite shore): 4 statute miles

Number of Recoverable Topographic Stations established: 11

Number of Temporary Hydrographic Stations located by <sup>multiplex</sup> ~~radial~~  
plot: 5

Leveling (to control contours) - miles: 83.5

Roman numerals indicate whether the item is to be entered  
by, (II) Field Party, (III) Compilation Party, or, (VI) the  
Washington Office.

When entering names of personnel on this record give the  
surname and initials (not initials only).

Remarks:

MAP T. 86 41 PROJECT NO. 272 F SCALE OF MAP 1:10,000 SCALE FACTOR

[illegible]

1 FT. = .3048006 METER  
COMPUTED BY:.....

DATE:

**CHECKED BY:**

DATE:

**M-2388-12**

5

FIELD INSPECTION REPORT

TO ACCOMPANY

QUADRANGLE NO. 8641

Project CS-272-F

JULY 1946

**1 - DESCRIPTION OF AREA:**

Photogrammetric Field Inspection was started in 1945 and completed in May, June and July, 1946, in accordance with Instructions dated 9 May 1946. The work consisted of recovery and identification of existing vertical control, establishing additional temporary vertical control by trigonometric method, shoreline inspection, and interior inspection.

Quadrangle 8641 is a 7½ minute quadrangle lying within Washington County in Eastern Maine. It is bounded on the north by N. Lat. 44°-45'-00", on the south by N. Lat. 44°-37'-30" and by W. Long. 67°-37'-30" on the east and W. Long. 67°-45'-00" on the west. The area covered is about 53 square statute miles. However, this report deals only with that part of the quadrangle field inspected in 1946. This is about 27 square miles lying in the eastern part. Reference is hereby made to the report submitted by Lieut. Sturmer for that part worked in 1945. Filed in Div. of Photg., General Files

The principal cultural features are U. S. Highway No. 1 running east and west and the Maine Central Railroad running northeast and southwest. These are both in the southern half of the quadrangle. Two villages lie within the area, namely, Centerville and Jonesboro Station. Both are very small settlements.

The vegetation consists of pine, spruce, fir, hackmatack, maple, oak, birch, and alder. There are numerous marshy areas along the drainage and several peat bogs, the largest of which is being worked commercially. There are several areas of blueberry bushes (known locally as blueberry barrens) which are discussed in detail in the Field Inspection report for quadrangle No. 8642 under item No. 19, side heading BLUEBERRY BARRENS. Filed in Div. of Photg., General Files

There is only a small amount of shoreline in the quadrangle, that being along the Pleasant River. For the most part this shoreline is grassy with mud bottom.

**2 - COMPLETENESS OF FIELD INSPECTION:**

All important features such as buildings, roads, railroads, bridges, and vegetation were identified or classified in accordance with instructions for the Project.

### 3 - INTERPRETATION OF THE PHOTOGRAPHS:

Photographic tone varies from the dense smooth black ponds and streams to the near white of plowed ground. Softwood areas generally have a heavy dark somewhat grainy appearance with the exception of hackmatack a coniferous tree which has a very light green leaf giving very nearly the same appearance as birch or alder and other hardwoods. Mixed coniferous and deciduous trees (WM) present a more rough or pebbly texture than mixed hackmatack and other conifers (WS).

Peat bogs have a powdery gray tone with the edges well defined while blueberry barrens usually have the smooth gray tone mottled with lighter gray, and the edges of the area are generally ragged.

Marshy areas follow the irregular course of most streams and the tone is irregular white to a gray darker than that of peat bogs, depending on the relative amounts of dead marsh grass and alders or birch trees.

Ledge outcrops have a light tone criss-crossed by very angular darker lines giving the whole a hard, angular appearance.

### 4 - HORIZONTAL CONTROL:

Reference is hereby made to the 1945 Season's Report submitted by Lieut. Dale E. Sturmer in which this subject is discussed.

No additional horizontal control was recovered or established.

### 5 - VERTICAL CONTROL:

Trigonometric leveling in this quadrangle was begun in the 1945 Season and completed in July, 1946.

The line from bench mark ME 251 1917, was run from this bench mark to a central point on the line. Leveling was then started from bench mark U.S.G.S. W-79 and run to this central point. A closure of 1.7 feet was obtained and this was adjusted from the bench marks to the central point.

Two closely spaced required elevation points on Photograph 44 C 1732 were unidentifiable in the field, and following instructions of Lt. Comdr. Ross A. Gilmore, one well defined point in close proximity to them was determined. There was little apparent difference in elevation in this general area.

All vertical control stations of the Coast & Geodetic Survey and the U. S. Geological Survey were searched for and those stations recovered were identified on the photographs. This does not include station Z93 which was recovered and identified in 1945.

(3)

Level points were identified, picked and circled on the front of the photographs. The points were then circled, numbered and the elevations noted on the back of the photographs. The code letters CF prefix all spot elevations.

Elevations underscored by a solid line indicate the loop was closed on a previously determined elevation point or on a standard bench mark.

No closures exceed the maximum allowable. The average error of closure was less than one foot. A few short hand level lines were run where thickly wooded areas were found. These hand level lines were closed back on the trigonometric level lines. The average error of closure being less than five tenths of a foot. Level lines with a closure exceeding one foot were adjusted. The elevation of five spot elevation points, Nos. CF 74 to CF 78 inclusive was determined by John R. Smith's party. These spot elevation points were originally numbered 1 to 5 inclusive in the field. The numbers were changed to avoid conflict with other spot elevation points in this quadrangle and are shown accordingly in the record book and on Photo. 44 C 1726.

83.6 linear miles of 4th order levels were run. 78 temporary elevation points were established. The following 1/20,000 single lens photographs were used:

44 C 1095, 1096, 1097, 1154, 1155, 1156, 1157, 1158, 1160,  
1729, 1731, 1733.

6 - CONTOURS AND DRAINAGE:

Inapplicable.

7 - MEAN HIGH-WATER LINE:

The Mean High Water Line was delineated on photograph 44 C 1162 within 0.5mm of true position.

The shoreline was inspected by walking along the shore and delineated on the photograph.

8 - LOW-WATER LINE:

The Low Water Line was delineated on photograph No. 44 C 1162 as the time of inspection was at or near low water.

9 - WHARVES AND SHORELINE STRUCTURES:

None



(4)

10 - DETAILS OFFSHORE FROM HIGH-WATER LINE:

Inapplicable.

11 - LANDMARKS AND AIDS TO NAVIGATION:

None

12 - HYDROGRAPHIC CONTROL:

Hydrographic signals were pricked on photograph 44 C 1162 for use of the hydrographer.

Descriptions of hydrographic signals have been recorded in field sketch book Vol. 2.

The cupola of the Columbia Falls Town Hall was identified on 1:8,500 scale ratio photograph No. 44 C 1161 as a recoverable topographic station. It was described on Form 524, Description of Recoverable Topographic Station. It is the only topographic station established within the area of the quadrangle.

13 - LANDING FIELDS AND AERONAUTICAL AIDS:

None

14 - ROAD CLASSIFICATION:

Roads, in that area inspected this season, were classified in accordance with "General Instructions - Classification and Compilation of Roads", dated 30 June 1945. See JP 28, Compilation Report.

15 - BRIDGES:

None over navigable water. Others were identified as a part of Interior Inspection.

16 - BUILDINGS AND STRUCTURES:

Buildings and structures were identified by encircling them with small red ink circles. Public buildings and isolated mills, plants, etc., were labelled. "D" and "B" designate dwelling and barn respectively. Only those buildings encircled should be shown on the compilation. However, this applies only to those settlements along well-traveled

(5)

roads and does not apply to isolated fishing and hunting cabins which are quite often situated on seldom used trails far from the road and were not visited. Sportsmen using the maps would no doubt consider these buildings important and it is suggested that the compiler carefully examine all trails and especially search the banks of streams for such buildings and show them on the compilation.

17 - BOUNDARY MONUMENTS AND LINES:

This will be the subject of special report to be submitted by Harold A. Duffy, Prin. Photo. Aid. Filed in Div. of Phygy, General Files

18 - GEOGRAPHIC NAMES: *8/14 ✓*

Same as 17.

19 - SYMBOLS:

The legend of symbols used in shoreline inspection may be found on the back of 1:8,500 scale enlargement No. 44 C 1161.

Note: Work was done as follows:

On items 1, 2, 3, 14, 15, and 16 by Boynton Locke, Jr.,  
Topo. Engr.;  
on item 5 by Herschel G. Murphy, Engr. Aid;  
on items 7, 8, 9, 11, and 12 by Irving I. Saperstein,  
Engr. Drafts.

Respectfully Submitted:

*Boynton Locke, Jr.*  
Boynton Locke, Jr., Topo. Engr.

*Herschel G. Murphy*  
Herschel G. Murphy, Engr. Aid

*Irving I. Saperstein*  
Irving I. Saperstein, Engr. Drafts.

Approved and Forwarded:

*Ross A. Gilmore*  
Ross A. Gilmore, Chief of Party

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## COMPILATION REPORT

26. CONTROL

Horizontal Control: Refer to "Compilation Report" for Project CS-272-F for a detailed report on horizontal control. Filed in Div. of Phtgy, General Files

There is only one control point, sub. sta. MITTEN MOUNT. 1850, on this manuscript used for horizontal control. As discussed in the "Compilation Report", the area was controlled by pass points obtained by bridging with multiplex. See Review Report.

Vertical Control: Refer to "Compilation Report" for Project CS-272-F for a detailed discussion of vertical control.

27. RADIAL PLOT

None. Horizontal control extended with multiplex.

28. DETAILING

Detailing was accomplished in accordance with project instructions dated September 18, 1946 and supplementary instructions issued by the Chief, Division of Photogrammetry. Filed in Div. Phtgy, Office Files

All topography and culture were plotted with the multiplex plotting instruments. The shoreline was delineated from the field photographs as described in paragraph 30.

All roads have been reclassified to conform with instructions No. 17 dated September 15, 1947.

A strip, approximately one-half minute wide, along the eastern limit of the quadrangle, has not been delineated. The diapositives covering the area (1041 thru 1049) were of such poor quality that they could not be used. It has been recommended that the area be completed from a future reflight.  
See Addendum to Descriptive Report #1) and Review Report, JP 28

29. SUPPLEMENTAL DATA

None.

30. MEAN HIGH WATER LINE

The only tidal waters on the quadrangle are along the Pleasant River in the southwest portion. This is a stretch of about four miles. When delineating with the multiplex it was observed that the low-water line, for the most part, and sometimes the mean high water line appeared very sharp. These were therefore delineated. The compiler used this together with the photo-hydro points in defining the mean high-water line from the field inspection photographs. The mean high-water line as shown on the field inspection photographs appears to be correct.

31. LOW WATER AND SHOAL LINES

The low-water line as indicated on the field inspection photographs has been shown on the manuscript with a dotted line.

There are no shoal lines.

32. DETAILS OFFSHORE FROM THE HIGH-WATER LINE

None.

33. WHARVES AND SHORELINE STRUCTURES

None.

34. LANDMARKS AND AIDS TO NAVIGATION

None.

35. HYDROGRAPHIC CONTROL

The positions on the map of all photo-hydro points are believed to be accurate within the required limits. All photo-hydro points were plotted with the multiplex.

Three photo-hydro points have been omitted - 4101, 4103, and 4104. It was felt that these points could not be located within the prescribed limits of error.

A list of descriptions of photo-hydro stations located on the manuscript is attached to this report.

36. LANDING FIELDS AND AERONAUTICAL AIDS

None.

37. GEOGRAPHIC NAMES <sup>✓</sup> Approved list filed in Geog. Names Section.

The geographic names appearing on this map are based on information furnished in the report of Harold A. Duffy. Names were furnished on U.S.C.&G.S. Chart No. 305 and a copy of U.S.G.S. Columbia Falls, 15 minute quadrangle. A list of these names has been prepared and accompanies this report.

38. JUNCTIONS

Junction has been made only to the south with T-8645.

To the north and west, satisfactory junction could not be made with the U.S.G.S. Wesley (Edition of 1943) and Cherryfield (Edition of 1904) quadrangles (scale 1:62,500). See Review Report, PP 48

Junction to the east with T-8642 will be made at a later date.

Junction made during review.

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### 39. BOUNDARIES

See special report on boundaries for Project CS-272-F, dated July 1946 by Harold A. Duffy.

The point on the town line between Columbia Falls and Centerville labeled on the field inspection photograph "Local information, point on line junction of creek" was held. If this point at the creek is not held, the line would be straight from a point about one mile north to two monuments south of this point. This point may be in error.

The offset into Columbia Falls township, southwest of Centerville Post Office, is approximate and will have to be checked by the field edit party. All boundaries were checked by Field Editor.

No information has been furnished regarding the boundary between Columbia Falls and Columbia. A note has been put on the discrepancy overlay as it may be possible to locate this line during the field edit.

See Field Edit & Review Reports.

### 40. MILITARY GRID

The military grid, as required in the project instructions, does not appear on the manuscript. The grid had been requested by the compilation office at the time projections were ordered but was not furnished.

Not necessary.

### 44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES

Comparison was made with the Columbia Falls quadrangle, U.S.G.S., edition of 1921, scale 1:62,500. Planimetry appeared to be in good agreement, although the location of all details is not identical. Several discrepancies have been noted on the overlay for investigation during the field edit.

### 45. COMPARISON WITH NAUTICAL CHARTS


Only a small portion, in the vicinity of Columbia Falls, and the Pleasant River has previously been charted. This appears on Chart No. 305 dated March 1931 (4th edition, U.S.C. & G.S.). From visual examination it appears that there is considerable difference in the shoreline.

~~After completion of the field edit and hydrographic surveys, it is believed that this latest compilation should supersede the previously charted information.~~

Respectfully submitted  
22 March 1948



Photogrammetrist  
Descriptive Report and  
Reviewer

  
Supervisor



Engineering Aid  
Compilation

Approved and forwarded



Officer in Charge  
Baltimore Photogrammetric  
Office

Supplemental Control for T-8641  
Columbia Falls, Maine  
Project 272 F

The horizontal accuracy of this map was very questionable because of the limited amount of the photographic coverage for the area. Triangulation station Mitten Mount 1850, the only station falling within the limits of the quadrangle, was in dense woods on Milton Mountain. Centerville Peaked, a U.S.G.S. station lying on another hill to the north of this quadrangle, and Addison White Church Belfry to the south were the nearest stations to this quadrangle. Multiplex bridging indicated a 1.7 mm. discrepancy between Mitten Mount and Centerville Peaked, at the 1:8500 scale of the bridging manuscript. To alleviate this deficiency two strips of 9-lens photographs were flown in the spring of 1949 extending to the west of this map to reach Epping East Base, Epping West Base and Epping White Church Belfry and covering the entire quadrangle. Photographs numbered 24545 to 24549 covered the western half and 24550 to 24554 covered the eastern half.

In August 1949, S. V Griffith, Chief, Review Section, Division of Photogrammetry, visited the field party operating in project PH-11, to the east of project CS-272 F, and established three control stations which provided adequate horizontal control for a radial plot of the 1949 9-lens photographs.

A fire lookout tower had been built in 1948 on top of Milton Mountain, within a few feet of Mitten Mount 1850. The fire tower was located by angle and distance from Mitten Mount and its reference stations. A study of the photographs indicated two places at the western edge of T-8641 from which it might be possible to see the triangulation stations Mitten Mount Fire Tower, Addison White Church Belfry and Epping White Church Belfry. (See sketch, Page 24.) Point No. 1, later marked with a standard topographic disk marked "Cocs 1949" was occupied and a three-point fix obtained for the station and a direction was observed to Pt. No. 2, later marked with a standard topographic disk stamped "GRANT 1949", which was flagged. Then Pt. No. 2 was occupied and directions observed to Pt. No. 1 and to Mitten Mount and Epping White Church Belfry. Computing positions for these stations, the Division of Geodesy determined they were of third order accuracy and has recorded them in their geodetic records as triangulation stations Cocs 1949, Grant 1949 and Mitten Mount Fire Tower 1949.

Substitute stations were selected for stations Cocs and Grant and angles and distances to them were measured which were eventually used in a radial plot of the 9-lens photographs.

References: "Addendum to Descriptive Report Survey No. T-8641, Project CS-272 F", Page 22.

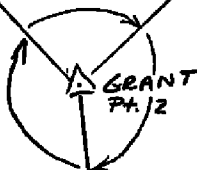
S. V Griffith

EPPING  
CHURCH  
BELFRY

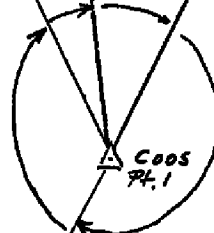
MITTEN  
MOUNT  
FIRE TOWER

4 MI.

4 1/2 MI.



2 1/2 MI.



7 MI.

1 1/2 MI.

ADDISON  
CHURCH  
BELFRY



146  
COAST OF MAINE

COLUMBIA FALLS QUADRANGLE

PROJECT CS-272-F

SURVEY No. T-8641

DESCRIPTIONS OF PHOTO-HYDRO STATIONS TO BE USED AS HYDROGRAPHIC  
SIGNAL SITES.

Described by: Field Inspection Party

Reviewed by:

Henry P. Eichen  
Photogrammetrist

No. of Station	Description	Photo. No.
4102	25' bushy spruce tree on point of land; about 1 m. west of MHWL; largest and most prominent in vicinity. 4' above MHW.	1161
<u>4105</u>	Cupola on town hall located in the village of Columbia Falls on the west side of Pleasant River and north of U. S. Highway No. 1. In cupola there is a clock and on top is a weather vane. Town hall is painted white and has windows with green shutters. 70' above MHW.	1161
4106	10' spruce tree on south side of bank. There are two 20' spruce trees on each side of signal tree; a birch tree is directly behind; 10' from MHWL. 3' above MHW.	1162
4107	20' bushy spruce tree on south side of bank. There are many small spruces back of signal tree; most prominent spruce in vicinity; about 15' from MHWL. 3' above MHW.	1162
4108	15' bushy spruce tree on edge of bank. There are many 20' birch trees back of spruce; there is a dead 20' spruce about 3 meters north of signal tree; 10' from MHWL. 2' above MHW.	1162
4109	20' double spruce on point of land. There are many small spruces back of signal tree and a 20' birch directly behind; about 7 m from MHWL; .3' above MHW.	

# GEOGRAPHIC NAMES

- Big Heath ✓
- ~~Brook River~~
- Carr Hill ✓
- Centerville (2) (town\* and village) ✓
- Central District ✓
- Chandler River ✓
- Columbia Falls (2) (town and village) ✓
- Jim Wood Ridge ✓
- Jonesboro (town) ✓
- Jonesboro Sta. ✓
- Kaylor Brook ✓
- Libby Brook ✓
- Little River ✓
- Machias Road U.S. No. 1 ✓
- Maine Central ✓

\* town is used in New England sense of township or district.

- Marst Brook (U.S.B.C.N. decision) ✓
- Marst Heath ✓
- Milton Mtn. ✓
- Oak Hill ✓
- Patten Hill ✓
- Pecky Brook ✓
- Pleasant River ✓
- Sewall Ridge (U.S.B.C.N. decision) ✓
- Sherb Brook ✓
- Staple Ridge ✓
- Sugar Hill ✓
- Tenney Brook (U.S.B.C.N. decision) ✓

## Additional Names:

- Indian River ✓
- Samade Brook ✓
- Addison (town) ✓
- State No. 187 ✓
- Washington County ✓
- Central Grange ✓
- ~~Columbia (town)~~
- T 19 MD (town) ✓
- Dry Brook
- Alder Brook

Names preceded by • are approved. 4/13/48. L. Heck

ADDENDUM TO DESCRIPTIVE REPORT (1)

SURVEY T-8641

PROJECT CS-272-F

Reflight photographs 48-C-36 to 48-C-49 were used in the stereoplanigraph at the Washington Office to contour a flight on the eastern edge of this survey.

The location of existing vertical control was such that it was necessary to bridge vertical control into several models. Thus the stereoplanigraph was used rather than the multiplex.

All stereoplanigraph contours have been edited in the compilation office. Shapes have been changed to make the contours conform to the shape of the terrain. A satisfactory junction could not be made east of photo 44-C-1727. Model 44-C-1727 and 1728 was reoriented to check this junction, but only small changes could be made to the multiplex contours. There are several contours along the east edge of T-8641 N/2 that are doubtful and are shown dashed. The above mentioned contours will have to be checked by the field edit party. See Review Report, #28

The town line in the vicinity corner (T 19 MD - Columbia Falls) could not be completed in the compilation office due to lack of field information. See Review Report, #18

Respectfully submitted  
21 February 1949

*Harley W. Truer*  
Cartographer

Approved and forwarded  
23 February 1949

*Thos B. Rind*  
Officer in Charge  
Baltimore Photogrammetric Office

*This statement is incorrect. The stereoplanigraph contours confirmed to the terrain but were in more detail than the multiplex contouring for the remainder of the map and were generalized somewhat so as to have the same general character as the rest of the map. 1399*

FIELD EDIT REPORT

TO ACCOMPANY

QUADRANGLE T-8641

JULY 1948

46 - METHODS

Field edit of this quadrangle was accomplished during the period 11 May to 8 July 1948, in accordance with field edit instructions dated 24 August 1945 and supplement 1 dated 4 February 1946.

All roads were traversed by truck or jeep and all trails that would not support a jeep were walked out as well as many areas where no trails were to be found.

Some corrections, additions and deletions were made on the field edit sheet and some additions and corrections were made on the photographs, with a reference to the photograph on the field edit sheet.

A legend as to the meaning of each color ink and symbol used will be found at the bottom of the field edit sheet.

The answers to questions asked on the discrepancy print, that required only an affirmative or negative answer, were made directly on this print.

47 - ADEQUACY OF THE COMPILATION

The compilation of this quadrangle is adequate with the following exceptions.

(1) Considerable changes were necessary in the woodland classification. The field inspection was accomplished in accordance with instructions that carried an SC (scattered trees) classification. The compiler reclassified most of these areas as B. There is evidence that both the field inspector and compiler failed to consider the fact that the deciduous trees were bare of foliage at the time of photography. Most areas classified as B or SC on the manuscript have been changed to T.

In some instances blueberry barrens were classified by the field inspector and / or the compiler as B probably because at the time of photography some of the barrens supported a growth of scattered brush and sweet fern. However, these barrens are covered with cut hay (meadow grass) every other year, in the fall, and burned clean in the spring. They should be classified as C.

(2) Houses, with barns attached, which are peculiar to this area, have in many instances been shown as two buildings. That portion of the building between the dwelling and the barn is in most cases considerably narrower.

(3) Some trails, altho discernible on the photographs, and considered important in areas where few roads exist, were not shown on the manuscript.

#### 48 - ACCURACY TESTS

A vertical accuracy test was run in the western part of the quadrangle. Standard plane-table methods were employed and the test was done directly on the field edit sheet.

A horizontal accuracy test was run in the vicinity of triangulation station "Mitten Mount 1850" A signal tower erected near the triangulation station was located. Observations were made on the tower from the north and south ends of a base line. A traverse was run between the north and south ends locating seven picture points. Observations on the Sun for azimuth were made from each end of the base line. *A tabulation of the horizontal accuracy test is attached in the back of this report. given on the next page*

#### 17 - BOUNDARY MONUMENTS AND LINES

All town line monuments and markers were verified or located with the exception of one corner, in the northwestern part of the quadrangle, between the towns of Columbia Falls and T 19 MD 18. A thorough search was made for this corner with the help of a local landowner who assisted in locating the next corner south. According to information obtained the land on both sides of this line has a common owner and consequently neither the corner marker nor the blazed tree line was ever maintained. Reference is made to a special report on boundaries dated July 1946.

*George E. Varnadoe*  
George E. Varnadoe  
Topographic Engineer.

The area tested was selected because of some difficulty in joining multiplex strips in this part of the project.

Due to the sparsity of triangulation in the area and the need for the long expensive traverse required for testing by standard methods, special methods were authorized in a letter from the Chief, Division of Photogrammetry in June, 1948. The test was made as ~~follows~~ *stated under item 48 of the field edit report.*

Tabulation  
of  
Horizontal Accuracy Test

Project CS 272-F Quad T-8641 n/2, test applied by C. H.  
Scale of manuscript 1:20,000 publication scale 1:24,000.  
Allowable horizontal displacement at manuscript scale .63 mm.  
Method of testing Traverse - for additional information on this test traverse refer to side heading 48 of the field edit report.

Description of Point	Trans. Mer. - Maine, East		Displacement in M M, <del>mm</del>	Remarks
	X - Ft.	Y - Ft.		
Tp1 - East Gable, Ho. Pp1	711,490 466	323,960 946	.42 mm N. E.	Poor point <sup>?</sup> <i>Poorly defined</i>
Tp2 - Centerline of Pp2 Rd. & Dr.	711,650 638	323,140 159	.34 mm S. E.	Good point <i>well defined</i>
Tp3 - Centerline of Pp3 Rd. & Tr. West	712,215 179	321,760 770	.57 mm S. E.	Good point <i>well defined</i>
Tp4 - Centerline of Pp4 T-Rd Inter	713,325 313	318,945 970	.42 mm S. E.	Fair point <i>well defined</i>
Tp5 - Centerline of Pp5 Rd & Field line East	713,780 732	317,545 561	.77 mm S. E.	Poor point <sup>?</sup> <i>Poorly defined</i>
Tp6 - Centerline of Pp6 Rd & Tr West	713,850 807	316,080 086	.65 mm S. E.	Good point <i>well defined</i>
Tp7 - Centerline of Pp7 Y - Inter	714,140 084	315,520 582	1.26 mm S. E.	Poor point <i>Poorly defined</i>

Remarks:

In the tabulation, the scaled position from the map manuscript is referred to as Tp (test point), and the coordinate position from the traverse computations is referred to as pp.

Test points 5 and 7 are less well defined. Test point 5 is in the centerline of the road opposite a field line. Since the field line was not compiled on the manuscript, the location of this point was found by scaling from a photograph. Test point 7 is in the centerline of a Y-Road intersecting at about 30 degrees and can not be located definitely. However, it should be noted that either of these two less well defined points will plot closely along the centerline of the road inasmuch as the displacement is along the NW - SE ~~axis~~ of the road. There were very few well defined points in the area of this test.

The field traverse data and the office computations have been filed in the Division of Photogrammetry.

*Charles Hanavich*  
Charles Hanavich  
Washington office  
1948

This horizontal accuracy testing does not qualify as a true horizontal accuracy test because it does not begin and close on horizontal control of 3rd order accuracy or better. It does however tend to indicate that the map is sufficiently accurate to qualify as meeting national map accuracy without further testing recommended. The multiplex closures on the control in the area of this map also indicate the map will meet accuracy requirements.

~~See Review Report D-48~~

*S. V. Griffith*  
S. V. Griffith  
Chief, Review Section  
1948

*additional*  
*an further horizontal accuracy test was*  
*made in 1949 as described on the next page*  
*mg*



SURVEY NO. T-8641, PROJECT CS-272(F)

The junction of this manuscript with U.S.G.S. quadrangles to the north and west was found to be in poor agreement. Since control in the northwestern area of the survey was lacking and also since excessive adjustment was necessary in the multiplex bridging between flights, the accuracy of compilation was somewhat questionable. See compilation report, Project 272-F, dated 1 December 1947. *(filed in Division of Photogrammetry)*

A test traverse was run by the field edit party <sup>in 1948</sup> in the vicinity of ~~Mitten~~ <sup>Milton</sup> Mountain, the results of which tend to indicate that the map is sufficiently accurate to qualify as meeting national map accuracy.

To further check the accuracy of compilation, a reflight of the area of this survey was made <sup>in 1948</sup> taking nine lens photographs, scale 1:20,000, for use in running a radial plot. *to test the horizontal accuracy of the multiplex compilation.*

In addition to the control previously identified, the field party in 1949 identified on the nine lens photographs MITTEN MOUNTAIN FIRE TOWER, 1949. Also identified on the photographs were horizontal test points, Nos. 1. and 2, the positions of which were furnished this office. *These test points are sub-stations for A stations Grant & Coos, 1949*

The photographs were prepared for radial plotting and templates were made of all photographs using the master template furnished by the Washington Office to correct for printing errors and paper distortion.

The plot was laid starting with the template for photograph No. 24546. The remaining templates were laid successively according to the strength of fix that could be obtained from the control falling on each.

All control stations were held either on or tangent <sup>except</sup> for sub stations EPPING EAST BASE, 1859, and CENTERVILLE PEAKED, 1928 (USGS). The radially plotted position of the sub pt. for EPPING EAST BASE, 1859, falls 0.5 mm west. It is believed that the identification of the sub point is in error. The radial position of sub pt. CENTERVILLE PEAKED, 1928 (USGS) was approximately .3 mm north.

The amount and distribution of control was adequate for a satisfactory radial plot except in the northwestern part of the survey. A sketch showing distribution of control and photograph centers, and a list of control stations are attached to this report.

The radial plot positions of all photo points were transferred to the multiplex work sheets. This was accomplished by scaling their positions from the 1:20,000 plot with beam fixtures, then converting the values to 1:8500 scale.

Three strips were reset with the multiplex as follows:

46-C-1155 to 46-C-1164 was set from SUB. PT. LOOK and tied to points established by the nine lens radial plot. Horizontal Test Points Nos. 1 and 2,

established by the field edit party were also held in this strip. The strip farthest to the east, 46-C-1728 to 46-C-1733, was set next starting from planimetry at the south which was accepted as correct. SUB. PT. MITTEN MT. and radial plot points to the north and west were held in this strip. It was then attempted to set the middle strip, 46-C-1093, <sup>to 46-C-1103</sup> running from SUB. PT. ADD at the south. This did not hold to the adjoining strips previously set and it was necessary to adjust all three strips to strike a satisfactory mean. The solution which was finally accepted confirmed the planimetry as originally plotted to be within accepted mapping accuracy with the exception of the following:

The planimetry in the vicinity of a Rd. 4 running north from Central District where it meets a Rd. 4 bearing southwest and a Rd. 7 bearing northeast, and a trail at the northwest corner of the manuscript were changed. The maximum error did not exceed 1.0 mm *[on the manuscript, (scale 1:8500)]?*  
*This is not known. Err.*

*Henry P. Richert*

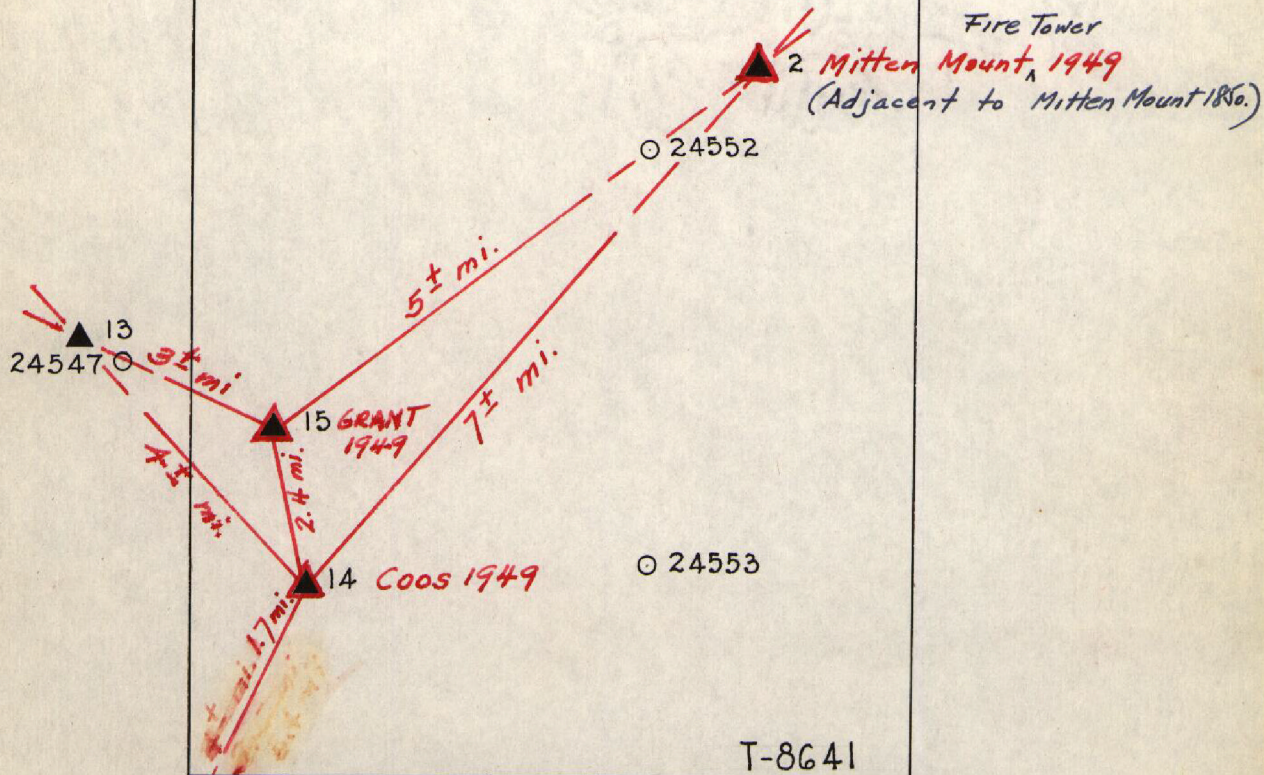
Henry P. Richert  
Cartographer (Photo.)

*November 1949*

Approved and forwarded  
30 November 1949

*Thos. B. Reed*

Thos. B. Reed  
Officer in Charge  
Baltimore Photogrammetric Office

1  $\Delta$  2455124548  $\circ$ 

Red lines indicate triangulation  
obtained in 1949 to control  
radial plot.  $\blacktriangle$  = stations established.

## LAYOUT SKETCH

T-8641 Project 272-(F)

 $\circ$  - Office Photograph $\blacktriangle$  - Triangulation Sta. (Ident. & Held) $\Delta$  - Triangulation Sta. (Not Held)



NO.	STATION	IDENTIFICATION
1.	CENTERVILLE PEAKED, 1928 (USGS)	Sub.Pt.
2.	MITTEN MOUNTAIN FIRE TOWER, 1949	Direct
3.	ADD, 1934	Sub. Pt.
4.	T.P. 3	Direct
5.	T.P. 2	Direct
6.	BATSONS HOUSE W. CHY., 1862	Direct
7.	CON, 1913	Sub. Pt.
8.	WASS, 1862	Sub. Pt.
9.	ADDISON WHITE CH. BELFRY, 1934	Direct
10.	LILY, 1934	Sub. Pt.
11.	MILL RIVER CHURCH, 1934	Direct
12.	EPPING EAST BASE, 1859	Sub. Pt.
13.	EPPING WHITE CH. BELFRY, 1934	Direct
14.	TRAVERSE POINT, NO. 1. (COOS)	Direct
15.	TRAVERSE POINT, NO. 2. (GRANT)	Direct

Review Report T-8641  
Topographic Map  
January 4, 1950

26. Control.--Three triangulation stations were added to the map manuscript:

Mitten Mount Fire Tower, 1949  
Grant, 1949  
Coos, 1949

These stations were established in connection with the horizontal accuracy test in this area. See Addendum to Descriptive Report (2).

Four USC&GS and four USGS bench marks are shown on the map manuscript.

Note

28. Detailing.--The boundary between T 19 MD and Columbia Falls, north of the recovered corner, is shown in its approximate position. No field information is obtainable for this line, see paragraph 17 of the Field Edit Report. The bearings and distances of the line as shown on the map manuscript were taken from the County Highway Map.

The discrepancies mentioned in the Addendum to the Descriptive Report (1) between the multiplex and stereo-planigraph contours, were adjusted during review with a stereoscope. The area in which the junction was made is very flat and the contours are within the required accuracy as shown on the map manuscript.

Several trails in the northern section of this quadrangle were added during review.

44. Comparison with Existing Surveys:

a) USGS Columbia Falls Quad 1:62,500 1921 repr. 1944  
USE " " " " 1942

Differences in horizontal position were noted between the Quads and the map manuscript in the area NW. of Columbia Falls. See paragraph 48 of this report.

b) T 1506 1:10,000 1882

This map supersedes this survey for nautical charting purposes.

47. Adequacy of the Compilation.--This map, T-8641, is a complete topographic map and has been compared and reconciled with all hydrographic and topographic surveys of record in this Bureau and is, therefore, the most complete and accurate topographic map of record in the area covered.

48. Accuracy Tests.--A vertical accuracy test was run from Columbia Falls, N. along the western limits of this project, to Central District. The contours along this junction do not agree with those shown on the USGS Cherryfield Quadrangle, 1:62,500, 1904. Some difficulty was encountered tabulating the results of this test where it runs along the project limits. The contours are not complete and the shape of the terrain is not apparent for interpolation. In these instances the map value has been given an even figure, one-half contour interval above or below the nearest contour. Of the 132 test points, 93% are within one-half the contour interval.

There were two horizontal accuracy tests run on this quadrangle. There is a noticeable difference in horizontal position in the NW. section of this map and the USGS Quadrangle. A test was run by the Field Edit Party along a road near the triangulation station "Mitten Mount, 1850". This test proved the accuracy of detail in that vicinity. See "Report on Horizontal Accuracy Test, T-8641", a part of the Descriptive Report. This test did not apply to the area along the project limits where the differences with the USGS Quadrangles are the greatest. A test radial plot was laid, with nine-lens photographs taken in 1949, across the questionable area. See "Addendum to the Descriptive Report (2)" for results of this plot.

This map complies with the National Standards of Map Accuracy.

49. Overlays.--An overlay was prepared showing the border information, road classifications and route numbers, triangulation stations, bench marks and spot elevations that are to be shown by the draftsman.

Reviewed by:

Charles Theurer  
C. Theurer 1-4-50

APPROVED BY:

A. V. Griffith  
Chief, Review Section L.H.M.  
Division of Photogrammetry

H. Edmonston  
Chief, Nautical Chart Branch  
Division of Charts

J. S. Reading  
Chief, Div. of Photogrammetry

K. G. Cusby  
Chief, Div. of Coastal Surveys

History of Hydrographic Information

T-8641

Columbia Falls, Maine Quadrangle

Hydrography was applied to the manuscript in accordance with Division of Photogrammetry requisition of January 5, 1950 and general specifications of May 18, 1949.

The depths within the limits of this quadrangle are less than the depth curve interval of twenty feet. The soundings are in feet at mean low water, and originate with hydrographic survey H-1644 (1885) 1:10,000.

Hydrography compiled by R. E. Elkins and checked by R. H. Carstens.

*R. E. Elkins*

R. E. Elkins, 1/16/49  
Nautical Chart Branch

*Soundings are not shown on the registered copy.*