

5956

Diag'd. on Diag. Ch. No. 1204-2

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Topographic Air Photo.

Field No. CS-272-B Office No. T-5956

LOCALITY

State Maine

General locality Casco Bay

Locality Cape Elizabeth and Vicinity

1941-'42

CHIEF OF PARTY

C.D. Meaney

LIBRARY & ARCHIVES

DATE

June 8-1949

B-1870-1 (1)

5956

Applied to chart cor. (cor. proof) 325, 5/3/43 H.E.M. 5/5/43
Applied to drawing, chart 231 (before review) 5/15/43 J.W.
Applied to reconstruction of chart 315 (before review) 6/4/43 J.W.
Applied to chrt. 325 & chrt. 315 after review 6/8/49 Steg.

DATA RECORD

T- 5956

Quadrangle (II):

Casco Bay, Maine (USGS)

Field Office:

U.S.C. & G.S. SS Lydonia

Compilation Office:

Air Photo. Party No. 2
Baltimore, Md.

Instructions dated (II III):

Jan. 12, 1942

April 1, 1942

Completed survey received in office: 24 Mar. 1943

Project No. (II):

CS-272-B

Chief of Party:

C. D. Meaney

Chief of Party:

Fred. L. Peacock

Copy filed in Descriptive
~~Report No. T-~~ (VI)
Div. Photogram. Office Files

Reported to Nautical Chart Section:

Reviewed: 11/9/43 Applied to chart No. 231^{before revised} Date: 5/15/43
315¹ 6/4/43

Redrafting Completed: 31 Oct. 1944

Registered:

Published: Jan. 1946

Compilation Scale: 1:9645

Published Scale: 1:10000

Scale Factor (III): 1.0368

Geographic Datum (III): N.A. 1927 Datum Plane (III): ~~Mean Sea Level~~
M. H. M.Reference Station (III): Trundy, 1941, ~~r. 1942~~Lat.: 43° 35' 09.394" 289.9m[✓] Long.: 70° 12' 11.893" 266.8m[✓] Adjusted
~~Unadjusted~~

State Plane Coordinates (VI): Maine, West Zone

X = 490,292.49

Y = 274,308.58

Military Grid Zone (VI)

Not shown

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
6703	10/17/41	10:45a.m.	1:10,000	4.9' above M. L. W.
6704	10/17/41	10:46a.m.	1:10,000	4.9' above M. L. W.
6705	10/17/41	10:47a.m.	1:10,000	4.9' above M. L. W.
6699	10/17/41	10:36a.m.	1:10,000	4.9' above M. L. W.
6700	10/17/41	10:39a.m.	1:10,000	5.1' above M. L. W.
6701	10/17/41	10:41a.m.	1:10,000	5.0' above M. L. W.
6702	10/17/41	10:41a.m.	1:10,000	5.0' above M. L. W.
6669	10/17/41	10:06a.m.	1:10,000	6.1' above M. L. W.
6670	10/17/41	10:08a.m.	1:10,000	6.1' above M. L. W.
6671	10/17/41	10:08a.m.	1:10,000	6.1' above M. L. W.

Tide from (III): Portland, Maine with time correction to Richmond Island,
Maine

Mean Range: 8.9'

Spring Range: 10.1'

Camera: (Kind or source) U.S. Coast & Geodetic Survey nine lens camera,
(focal length 8 $\frac{1}{4}$ ") All negatives are on file in the Washington Office.

Field Inspection by: Lieut. Henry O. Fortin
Under supervision of Lieut. Comdr. C. D. Meaney;
Commanding officer of SS Lydonia
Field Edit by:

date: Fall, 1942

date:

None

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

October 17, 1941

Projection and Grids ruled by (III) C.H.R., Wash. Off. date: 10/9/42

" " " checked by: W.D.H., Wash. Office date: 10/9/42

Control plotted by: Louise C. Painter date: 10/42

Control checked by: Walter E. Schmidt date: 10/42

Radial Plot by: Walter E. Schmidt date: 10/42

Detailed by: Louise C. Painter (Shoreline & Interior) date: 10/28/42
(Rough Draft) 3/13/43

Reviewed in compilation office by: Michael G. Misulia date: 3/43

Elevations on Field Edit Sheet
checked by: _____

date:

STATISTICS (III)

Land Area (Sq. Statute Miles): $8\frac{1}{2}$

Shoreline (More than 200 meters to opposite shore): $13\frac{1}{2}$

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

Number of Recoverable Topographic Stations established: 7.

Number of Temporary Hydrographic Stations located by radial plot: 41 Temporary hydrographic stations have been transferred graphically to this map drawing from graphic control sheets of the party of Fred. L. Peacock of the year 1941.

Leveling (to control contours) - miles:
none

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:

26 Control:

See memorandum by KT Adams in the appendix.

The control plotted on this map drawing consists of twenty-two U. S. Coast and Geodetic Survey Triangulation Stations. The control has been indicated on this map drawing with the usual triangulation symbol.

The following list of control stations are within the detailed limits of this map drawing:

- Smug, 1941, r.1942
- Trundy, 1941, r.1942
- Cape Elizabeth E. Lighthouse, 1904, r.1923-28-33-42
- Cape Elizabeth W. Lighthouse, 1904, r.1942
- Cape Elizabeth C. G. Station E. Radio Tower, 1933, r.1942
- Cape Elizabeth C. G. Station W. Radio Tower, 1933, r.1942
- ~~Murray's Barn Cupola, 1923, r.1942~~ Destroyed 1941 removed from map. ms.
- + • Maxwell's Barn Cupola, 1923, r.1942
- + • Dr. Cumming's House S. Chimney, 1923, r.1942 ("Doc")
- + • Richmond Island ~~(U.S.E.)~~ 1923, r.1942
- destroyed Red Barn Cupola ~~#~~, 1923, r.1942 (see Desc. Report T-5955, p. 6, P 2)
- Johns Hill, 1850, r.1933, r.1942
- Jordan's Barn, East end, 1850, r.1942
- Cape Elizabeth, Magnetic, 1928

For general information the positions of Dr. Cumming's house S. Chimney, 1923, r.1942 from field computation Accession No. of Computation No. 81552 and Richmond Island Dr. Cumming's, house chimney, 1850, S.P. No. 46, are listed below in order to call attention to large differences in latitude and longitude with respect to the chimneys on the same house:

Dr. Cumming's House S. Chimney, 1923, r.1942

42° 32' 36.012" 1111.4m. (N.A.) 1092.2m. (N.A. 1927)
70° 14' 21.803" 489.5m. (N.A.) 488.5m. (N.A. 1927)

Richmond I., Dr. Cumming's house Chimney, 1850 (S.P.No. 46) (not indicated on map drawing.)

43° 32' 39.540" 1220.3m. (N.A.) 1201.1m. (N.A. 1927)
70° 14' 24.119" 541.5m. (N.A.) 540.5m. (N.A. 1927)

removed, station destroyed.

A dashed triangle indicates the station Red barn cupola, 1923, r.1942 on this map drawing. The cupola has been removed from the barn and should therefore be considered lost. Lieut. Henry O. Fortin lists this station on form 526 as "Break" Red barn cupola, 1923, r.1942.

The names of the triangulation stations as listed in S.P. No. 46, on forms 28B, 526 etc. in many instances disagreed. The names as indicated on this map drawing have been taken from ~~the best known sources.~~

Form 28B.

The following list of control stations fall without the detailed limits of this map drawing:

- Ram Island Ledge L.H., 1904, r.1941
- Portland Head, L.H., 1850, r.1933, r.1941
- Fort Williams N.E. Radio Tower, 1933, r.1941
- Fort Williams S.W. Radio Tower, 1933, r.1941

+ Plotted on the map manuscript, using new field computations to N.A. 1927 datum.

See also explanation in Descriptive Report T-5955

26 Control: (cont'd)

Woodbury's John, House, N. Chimney, 1852
Stone Chimney
Sand Knoll, 1850
Ram Island House, 1923, r.1942
Spurwink Church, 1850, r.1942

For a general discussion of the above control and its relation to the plot of this map drawing, see the following paragraph.

27 Radial Plot:

A combined radial plot was first laid for map drawings No. T-5954, 5955 and 5956 by the usual radial line celluloid template method. Horizontal discrepancies were obvious in the triangulation established in 1905 and 1923. There was insufficient control in the northwest section of the plot. These difficulties were discussed with the Washington Office by Commander Fred. L. Peacock, Chief of Air Photo Party No. 2. Permission was granted to defer map drawings No. T-5954 and 5955 until further notice.

Map drawing No. T-5956 had control, other than the 1905 and 1923 stations, which was considered sufficient to run an individual plot that would be within the standard of accuracy as established by the Washington office. No difficulties were encountered with this individual plot other than those usually expected when using nine lens photographs.

The control identification was adequate.

The number of photographs was adequate.

The closure and adjustment was negligible.

Stations established in 1905 and 1923 which are within or ~~without~~ ^{immediately adjacent to} the detailed limits of this map drawing were plotted and indicated with the usual triangulation symbol. These stations, however, were ignored when the plot was laid (refer to the Director's letter 11/4/42 and Comdr. Fred. L. Peacock's letter of 3/9/43). All other stations plotted on this map drawing either held 100% or tangent to their respective radial lines on the photographs except Spurwink Church (spire), 1850. This station did not hold in the plot as well as might be expected. The spire may have been reconstructed or perhaps the procedure of this office in changing the N. A. Datum position to the N.A. 1927 Datum position may be in error approximately one or two meters. However, all necessary precautions were taken when applying the incremental differences between the N. A. and N. A. 1927 datums. *A note within detailed area on 5953*

The triangulation was supplemented by the hydrographic stations established by the party of Comdr. Fred. L. Peacock in 1941. These stations held within one to two meters of their respective radial lines on the photographs.

The images of stations as pricked on the field photographs by the field inspection party and noted with the word "caution" were thoroughly investigated when the plot was laid. When these stations (all intersection stations)

* New positions for these stations were furnished by Div. of Geodesy. These positions were plotted on the manuscript and are shown on the published map. The new positions checked the compilation ~~was~~ within plottable limits.

27 Radial Plot: (cont'd)

were proved to be definitely lost by Photo. Compilation, their plotted position on the map drawing was deleted and a notation was made on the recovery cards (form 526) submitted to this office by Lieut. Henry O. Fortin. These cards will of course be submitted to the Washington Office at a later date. The station "Cape Elizabeth No. 158" has been discussed in another paragraph of this report.

The names of the stations Cape Elizabeth C. G. West Radio Tower, 1933, r.1942 and Cape Elizabeth C. G. East Radio Tower, 1933, r.1942 have been indicated on this map drawing as originally listed in the geographic positions (Form 28B). The field inspection party reports that these two stations never were radio towers. The west tower is the Coast Guard flag tower and the east tower is the Weather Bureau storm warning tower. This error has been noted on Form 526 by Lieut. Henry O. Fortin.

28 Detailing:

~~All purple, green and red ink is on the glossy side of this map drawing.~~

The shoreline and interior culture has been detailed on this map drawing in accordance with the Director's letters of January 12, and April 1st, 1942 pertaining to this project.

Classification of roads is referred to "Road Classification for maps of all scales", issued by The Engineers Production Plant, The Army War College, Washington, D. C. See review

A lightweight solid black acid ink line has been used to indicate the limits of rock ledge. *Removed, now shown by standard rock symbol in red.*

No tilt computations were found necessary.

The scales of the photographs and this map drawing were in good agreement. However, it was necessary to use the projector in detailing the shoreline of Richmond Island.

^{recovered} Positions of minor detail points, secondary control points, bench marks and hydrographic stations were determined by the usual radial line method. The shoreline was detailed directly from the field inspection photographs after refinement by this compiler.

The manner of detailing Great Pond, Latitude $43^{\circ} 34' 30''$ and Longitude $70^{\circ} 13'$ was recommended by Lieut. Henry O. Fortin who was present at this office when this map drawing was being compiled. *Has been changed during review, to water line at time of photographs with marsh extending to former shoreline*

Houses were radially located where appreciable elevation was present, otherwise the houses were detailed from surrounding minor detail points.

At Latitude $43^{\circ} 36' 05.5''$ and Longitude $70^{\circ} 13' 07.0''$ an elevated object (square) has been indicated on this map drawing. It is recommended that this object be investigated by the first field party to visit the immediate vicinity. A note to this effect has been shown on this map drawing.

28 Detailing: (cont'd)

Marsh areas have been indicated with the usual marsh symbol. Bluffs, roads, fences, drainage etc. have been indicated on this map drawing in accordance with the field inspection and instructions for rough draft. ~~Double line~~ Roads not labeled as to width, are to be considered 6 meters wide.

All public buildings have been indicated by the usual standard symbols or labeled.

Field inspection of drainage areas was not as thorough as might have been expected. An attempt was made by this compiler to determine the drainage areas by stereoscopic examination. *Drainage completed during review.*

The triangulation station Cape Elizabeth No. 158, 1941, ~~r. 1942~~ ^{*confidential, not shown.*} was transferred graphically from the graphic control sheet* of the party of Commander Fred. L. Peacock, year of 1941. This office did not have the geographic position of this station. It was listed as confidential. The position as transferred graphically would not hold within 0.3mm. with its relative radial lines on the photographs. The station was deleted from this map drawing. This station was not located radially because the image could not be properly identified on a sufficient number of photographs. It has been located on the map drawing by detailing its position from a photograph on which it fell in the center chamber and on which it could be pricked with confidence from the field identification data. It has been shown with a 2 $\frac{1}{2}$ mm black acid ink circle and a Form 524 is being submitted. Comparison of the scaled position with the adjusted geographic position by triangulation should be made. *← Comparison made, difference in position of only 0.5 meters.*

All questionable areas have been labeled.

29 Supplemental Data:

Tracings on celluloid from the ~~graphic control sheets~~ ^{*hydrographic survey*} of the party of Commander Fred. L. Peacock, of the year 1941, were used as supplementary data in the detailing of this map drawing. H-6677

No appreciable discrepancies were noted.

No other maps or plans of other organizations were used.

The purple ink line (offshore) indicated on this map drawing; was traced from the graphic control sheets. The line has been drawn on the glossy side of the celluloid. This line was in pencil on the ~~graphic control sheets~~ ^{*hydro survey*}. Its source is not known at this office.

30 Mean High Water Line:

The mean high water line (firm ground) is indicated by a heavy solid black acid ink line, the center of which should be taken as the true position.

A tide curve was drawn in order to approximate the tide for each photograph.

* T-6853 a&b (1941) 1:10,000

31 Low Water & Shoal Lines:

Approximate limits of shoal and foul areas have been indicated with a lightweight dashed line and labeled. ~~deleted~~

32 Details Offshore from High Water Line:

Rocksawash, that were obvious to this compiler and those identified by the field inspection party, were indicated on this map drawing with the usual standard symbols and their barings as to M. L. W. noted. ~~Recks awash shown in blue acid ink on the glossy side of this map drawing have been transferred from the graphic control sheets of the party of Commander Fred. L. Peacock, of the year 1941.~~ Important offshore detail has been labeled.

34 Landmarks & Aids to Navigation:

The five following stations were recommended by Lieut. Henry O. Fortin as Landmarks for Charts:

S. Chimney, Dr. Cumming's House (triangulation station) *uncertain which chimney -*
Cape Elizabeth W. Lighthouse (triangulation Station)
Cape Elizabeth E. Lighthouse (triangulation Station)
Tower, stone (recoverable hydrographic)
Cape Elizabeth R. C. (recoverable hydrographic)

Positions have been submitted on form No. 567. *See chart letters 335-1943 (575-1943)*

35 Hydrographic Control:

~~Seven~~ ⁸ recoverable topographic stations have been located on this map drawing and indicated with a 2mm black acid ink circle. They were located radially except for Cape Elizabeth Magnetic Station*. This station was located by detailing from surrounding minor detail points. ~~Forty~~ ³⁸ ~~one~~ temporary hydrographic stations, indicated by a 1mm black acid ink circle were transferred graphically to this map drawing from the graphic control sheets of the party of Commander Fred. L. Peacock, of the year 1941. The description or names of both classes of hydrographic stations* have been noted on the overlay sheet for this map drawing.

Triangulation 1928 unadjusted

The recoverable stations are as follows:

- Cape Elizabeth G.G. Station Sept*
- * Tower, stone, ~~1942~~ (located in 1941 by plane table) *also a hydro. sta*
 - * Cape Elizabeth Magnetic Station, 1928, r. 1942 a Δ sta, *so shown*
 - * Cape Elizabeth R. C., ~~1942~~ Oct. 1941 *conf*
 - * Wireless Telegraph Pole, East (new), ~~1942~~ Oct. 1941
 - * Wireless Telegraph Pole, West (new), ~~1942~~ Oct. 1941
 - * U. S. Tidal B. M. No. 1, ~~1942~~ Oct. 1941
 - * Cape Elizabeth No. 158, 1941, r. 1942 *Confidential, not shown*

* Station was not located by Air Photo Compilation.

Positions and descriptions of the recoverable stations have been submitted on Form No. 524. *Filed under sheet T-5956*

37 Junctions:

Map drawing T-5958; North Side, junction in agreement except those areas outlined in red ink and labeled on T-5956. It is recommended that T-5958 be corrected accordingly. *Corrected on T-5958 by reviewer*
+ Graphic Control 6853 a. b. 1941

37 Junctions: (cont'd)

Map drawing T-5957, N.W. corner, junction in agreement.

Map drawing T-5955, West Side, no junction possible at this date February 20, 1943. *OK*

39 Recommendation for Future Survey:

This map drawing is believed to be complete in all details of importance for charting and no additional surveys are required.

The probable error of radial points and well-defined objects along the shoreline is not greater than 0.5mm. The error of inland radial points and details of importance is not greater than 1.0mm.

44 Comparison with Existing Topographic Quadrangles:

Casco Bay, Maine, Quadrangle U. S. G. S. edition of 1916, reprinted December 16, 1941; scale 1:62,500.

The electric railroad running from Pond Cove at approximate Latitude $43^{\circ} 35' 48''$; Longitude $70^{\circ} 13' 48''$, to approximate Latitude $43^{\circ} 36' 36''$; Longitude $70^{\circ} 14' 24''$, as indicated on the quadrangle, no longer exists.

Drainage as shown on the quadrangle could not be identified on the office photographs and was not indicated on this map drawing.

Due to scale difference, between the map drawing and the above mentioned quadrangle, other planimetric details could not be satisfactorily compared.

45 Comparison with Nautical Charts:

Chart No. 315 published July, 1941; scale 1:40,000.

The drainage from Little Pond to Great Pond shown on Chart No. 315 has not been indicated on this map drawing because the area between the two ponds is heavily wooded and stereoscopic observation would not reveal this drainage.

*determined
and inked
during review
aided by comparison
of previous surveys*

Two ponds on this chart at approximate Latitude $43^{\circ} 36' 15''$ and Longitude $70^{\circ} 13' 53''$; and Latitude $43^{\circ} 36' 29''$; Longitude $70^{\circ} 13' 53''$, have not been indicated on this map drawing. Photographs do not reveal these ponds.

Respectfully submitted,
March 19, 1943

Louise C. Painter
Louise C. Painter *ms.*
Engineering Draftsman

Compilation and Descriptive
Report Reviewed by:

Michael G. Misulia
Michael G. Misulia
Jr. Topographic Engineer

Compilation and Descriptive
Report Supervised by:

Walter E. Schmidt
Walter E. Schmidt
Asst. Photogrammetric Eng.

Approved & Forwarded:
March 22, 1943

Fred. L. Peacock
Fred. L. Peacock, Chief
Air Photographic Party No. 2

LIST OF GEOGRAPHIC NAMES

Listed below are the undisputed geographic names that pertain to the detail limits of this map drawing unless otherwise indicated:

- ✓ Atlantic Ocean ✓
- ✓ Boat Cove ✓
- ✓ Breakwater ✓
- ✓ Broad Cove (at Richmond I., also at Cape Elizabeth) ✓
- ✓ Broad Cove Rock (unindicated) —
- ✓ Cape Elizabeth ✓
- ✓ Cape Elizabeth (district) ✓
- ✓ Cape Elizabeth C. G. Station ✓
- ✓ Cape Elizabeth School ✓
- ✓ Chimney Rock ✓
- ✓ Clam Cove ✓
- ✓ Crescent Beach ✓
- ✓ Crescent Beach (village) ✓
- ✓ Crowell Rock ✓
- ✓ Dyer Cove ✓
- ✓ Dyer Point ✓
- ✓ East Point ✓
- ✓ Fort Point ✓
- ✓ Great Pond ✓
- ✓ Hallicom Cove ✓
- ✓ High Head ✓
- ✓ John Cove ✓
- ✓ Jordan Reef (unindicated) —
- ✓ Little Pond ✓
- ✓ Maxwell Cove ✓
- ✓ Mc Kenney Point ✓
- ✓ Middle Rock (unindicated) —
- ✓ Mitchell Rock (unindicated) —
- ✓ Parrot Point ✓
- ✓ Pine Tree Ledge (unindicated) —
- ✓ Pond Cove ✓
- ✓ Pond Cove (village) ✓
- ✓ Pond Cove Brook ✓
- ✓ Pulpit Rock (unindicated) —
- ✓ Richmond Island ✓
- ✓ Richmond Island Harbor ✓
- ✓ Richards Pond ✓
- ✓ Seal Cove ✓
- ✓ Ship Cove ✓
- ✓ Spring Cove ✓
- ✓ Stevens Rock (unindicated) —
- ✓ Taylor Reef (unindicated) —
- ✓ The Sisters ✓
- ✓ Trundy Point ✓
- ✓ Watt's Ledge ✓
- ✓ Watt's Point ✓
- ✓ Western Head ✓
- ✓ Whale Back ✓
- ✓ Willard Rock (unindicated) —
- ✓ Willow Brook ✓
- ✓ Zeb Cove ✓

— Casco Bay ✓

All names approved
as checked or
corrected.

GEOGRAPHIC NAMES
✓
7/3/45

LIST OF GEOGRAPHIC NAMES

Listed below are the disputed geographic names that pertain to the detail limits of this map drawing unless otherwise indicated:

Adam Head		Adams Head ✓
Alewives Brook ✓	<u>Alewife Brook</u> ✓	Alewife Brook
Hunts Point ✓	= S. side Brook Cove	Maxwells Point (location also disputed)
Maxwell Pt ✓	= N. side Staples Cove	
Johns Cove ✓		Little Cove
Johns Hill ✓		Blue Hill - Shore Acres
Jordan Point ✓		Jordan's Point
Mussel Cove ✓		Muscle Cove
Old Anthony		Vapor Rock (unindicated)
Peeble Point ✓		<u>Peabbles Point</u> ✓
Seal Rocks ✓		The Seal Rocks
Staple Cove ✓	<u>Hannaford Cove</u> ✓	Staples Cove - Hannaford
Staple Point ✓	<u>Staples Point</u> ✓	Spar Cove Point
Stevens Rock ✓	(Sunken rock 6 ft sounding)	Steven Rock
Trundy Reef ✓		Trundy's Reef - Trundy Breakers

Names underlined in red approved
by L. Heck on 7/3/49

* Recent B.G.N. decisions
on names underlined
in black

* Shown in red on cloth
back print.

K.T.A. 5/26/49

Above changes based
on recent U.S.B.G.N.
decisions. 5-26-49
L. Heck

Division of Photogrammetry
Review Report of
Map Manuscript T-5956

Subject numbers not used in this report have been adequately covered in other parts of the descriptive report.

26 Control

Two triangulation stations, "Cape Elizabeth No. 158, 1941 and "Trundy Point No. 159, 1941" and a traverse station "B Foote, 1941" have not been shown because their positions are confidential.

27 Radial Plot

See Page 5 of the Descriptive Report. The strength of the radial plot was investigated by cutting in detail points picked at random. Most of the points were very accurately located and in no instance were they out of position more than 0.5 mm. No weak areas were found. (See memorandum from K.T. Adams at back of this report.)

28 Detailing

The field inspection was inadequate in the classification of roads and streams. The field inspection party used the classification of the Army War College but the compiler added the classification used on regular planimetric maps.

During the review the drainage was completed with the aid of a stereoscope. There is no check on the classification. These and other changes made during the review have been done in red acid ink. The change in the shoreline of Great Pond was made after an examination of the photos under a stereoscope.

The heights of rocks above MLW was taken from the hydrographic survey and the heights of rocks above MHW as shown on the name overlay was obtained by the field inspection party. See comparison with H-6677 (1941) in this review for discussion of shore and reef lines.

34 Landmarks and Aids to Navigation

Form 567 for the five landmarks named in the report is not included in the report. However a copy of this form is on file in the chart section. Chart letter 335 (43). Chart Letter 575(43) corrects one of the positions of a landmark listed in Chart letter 335(43).

42 Comparison with Previous Surveys

T-312	1:10,000	1850
T-312a	1:10,000	1913
T-414	1:10,000	1852
T-414a	1:10,000	1913
X T-6853a+b	1:10,000 (Graphic Control Sheet)	1941 (No detailing within the limits of this map.)

The survey made in 1913 used the earlier survey as a base and made some corrections and additions to inland features. These changes are indicated in red on the original survey. A comparison between the present survey(T-5956) shows good agreement, in the location of detail except for recent construction. The shoreline and inland detail agree within 2.5 mm in most instances. The old surveys are contoured at a 20 foot interval. This was an aid in indicating the existence of streams and helped completing the drainage during review.

Common features on all previous surveys are superseded by the map manuscript in common area.

43 Comparison with Contemporary Hydrographic Surveys

H-6677 1:10,000 1941 (Additional work in 1942 & 43)

The hydrographic survey with a generalized shoreline taken from T-5956 prior to review, has been reviewed and applied to the nautical charts. The difference between the shoreline on H-6677 and T-5956 does not amount to more than 0.5 mm. On any future application of the shoreline to charts or quadrangles, the shoreline as shown on T-5956 should be used.

Since the photographs in this area were taken when the tide was 5 feet above MLW, the low water features as shown on the hydrographic survey are accepted and have been transferred to the map manuscript. There are seven places where there are slight discrepancies in the outline of rock reefs. At these points, the photographs indicate that the reefs extend from the shore further than the hydrographic survey indicates. On the map manuscript, the limits of these reefs are shown in red, acid ink and the limits as shown on the hydrographic sheet are in black, acid ink and are labelled "dis" in black.

H-4303 1:20,000 1923

in agreement
6-13-49

The detail should be considered superseded by the present survey except for the small reef at Lat. 43° 33.2', Long 70° 14.8'.

44 Comparison with Quadrangles

USE Casco Bay Quadrangle 1:62,500 1940

Detail investigated was found to differ as much as 200 meters (ground distance).

45 Comparison with Nautical Charts

Chart No. 231	1:20,000	1943
" " 315	1:40,000	1943

The hydrographic detail of the 1941 survey and the detail of the map manuscript have not been applied. A recommended landmark, "S. Chimney, Dr. Cumming's House", a triangulation station is not on the chart.

Chart No. 325

1:20,000

1943

The map manuscript has been applied to the chart. The changes made during review are shown in red, acid ink on the map manuscript. During the application of detail to the chart, the marsh area along Alewives Brook and a pond and marsh area near Pond Cove were overlooked. The recommended land mark, "Stone Tower", has been shown.

Reviewed by:

Under the direction of:

Jack Rihn *et*
Jack Rihn 11-9-43

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

Approved by:

B. G. Jones, Jr., Sr.
Tech. Asst. to Chief,
Division of Photogrammetry

H. Edmonston
Chief, Nautical Chart Branch
Division of Charts

K. T. Adams
Chief, Div. of Photogrammetry

Wm. Scaife
Chief, Div. of Coastal Surveys

Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, Nautical Chart Branch

DATE: March 22, 1945

FROM : B. G. Jones

SUBJECT: Location of Radio Direction Finder Station - Cape Elizabeth, Maine

Different geographic positions for this station are given on Chart Letter 335-1943 and Chart Letter 835-1944. Both positions were determined by photogrammetric plots. The position on Chart Letter 335-1943 is from T-5956; the position on Chart Letter 835-1944 was determined in this office from the same photographs.

The difference is due to ^{identification} misinterpretation. The position on Chart Letter 835-1944 has been verified by comparison with a plan of the station furnished by the Coast Guard, ^{which} and at present is filed in the Photogrammetric Section.

The point located on T-5956 is the Coast Guard Station and not the Radio Direction Finder Station. T-5956 is being corrected.

B. G. Jones

Name changed on T-5956 & 524 card.

R.D.F. Station added to 5956 & new 524 card made

NM Dery
9 April 1945

Office Memorandum • UNITED STATES GOVERNMENT

TO : Chief, Nautical Chart Branch

DATE: March 22, 1945

FROM : B. G. Jones

SUBJECT: Location of Radio Direction Finder Station - Cape Elizabeth, Maine

Different geographic positions for this station are given on Chart Letter 335-1943 and Chart Letter 835-1944. Both positions were determined by photogrammetric plots. The position on Chart Letter 335-1943 is from T-5956; the position on Chart Letter 835-1944 was determined in this office from the same photographs.

The difference is due to misinterpretation^{identification}. The position on Chart Letter 835-1944 has been verified by comparison with a plan of the station furnished by the Coast Guard, ^{which} and at present is filed in the Photogrammetric Section.

The point located on T-5956 is the Coast Guard Station and not the Radio Direction Finder Station. T-5956 is being corrected.

B. G. Jones

Benny

Correct name on form 524 ✓
card and on sheet. *BGG*
Put this in the descriptive report.

Project CS-272B
Memorandum

Dated 31 May 1949

In 1942 the Officer-in-charge of the Baltimore Photogrammetric Office reported encountering difficulty with the control in the vicinity of Cape Elizabeth, Maine, when running the radial plot for planimetric maps T-5954, T-5955, and T-5956.

This memorandum, to be inserted in the Descriptive Reports of the above maps, is prepared at this late date partly from memory but mostly from correspondence filed in the Division of Geodesy.

X The Baltimore Photogrammetric Office was instructed to defer further work on the three above mentioned maps pending investigation of the control. In addition to triangulation stations of various dates, the control in the vicinity consisted of a number of stations located in 1905 and another group in 1923. The principal difficulty encountered at the Baltimore Photogrammetric Office was in holding to both these groups of stations simultaneously; that is, it appeared possible to lay a correct plot using only the 1905 stations and ignoring the 1923 stations or it appeared possible to lay a plot holding to the 1923 stations and ignoring the 1905 stations.

An investigation in the Division of Geodesy disclosed an unaccountable error of about 40 feet in the position of JORDANS ISLAND 2. The adjustment of the 1905 triangulation disclosed this probable error, which seemed to be in the field observations. It was further disclosed that the 1923 positions were computed from the line JORDANS ISLAND 2 - CAPE ELIZABETH EAST LIGHTHOUSE. The 1923 positions were therefore all erroneous.

In 1941 Lt. P. L. Bernstein had determined a new position for OLD ORCHARD STANDPIPE, 1923. An examination of the 1923 observations disclosed another possible means of computing them. An inverse computation was made between stations OLD ORCHARD STANDPIPE and CAPE ELIZABETH EAST LIGHTHOUSE, and from that line the 1923 work was recomputed. There was still no check on the new positions of the 1923 stations and everything depended on the accuracy of location of the two above stations and the correctness of the inverse computation.

The newly computed positions for the 1923 triangulation were furnished to the Baltimore Photogrammetric Office on 5 April 1943, with instructions to make another attempt to lay the radial plot in this vicinity, and if this seemed to clear up the difficulty to proceed with the radial plot and the compilation of the three planimetric maps in question.

This did clear up the difficulty. It enabled the Baltimore Photogrammetric Office to hold to both the 1905 and 1923 triangulation stations.

Subsequently in the summer of 1943 Lt. P. L. Bernstein made additional observations in this area to tie the 1923 work into other triangulation in the vicinity so that it could be computed in a conventional manner and adjusted. This subsequent field work proved that the interim tentative computations were nearly correct — at least, within the limits of graphic plotting.

K.T. Adams

K. T. Adams
Chief, Division of Photogrammetry