8502

Diag'd. on diag. ch. No. 1219

Form 504

U. S. COAST AND GEODETIC SURVEY

DEPARTMENT OF COMMERCE

DESCRIPTIVE REPORT

Type of Survey Air Photo. Compilation

Field No. _____ Office No. T-8502

Hertz & Hert Accy Tests

LOCALITY

State Delaware

General locality Delaware Atlantic Coast

Locality Rehoboth Beach

1943

CHIEF OF PARTY
Lieut. Comdr. F. D. Gallen
Lieut. Comdr. K. G. Crosby

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DATE Feb 6, 1948

B-1870-1 (1)

8502

Form T-1

DATA RECORD

T- 8502

Quadrangle (II): REHOBOTH Project No. (II): CS 302 B

Field Office: Chief of Party: F. L. Gallen

Compilation Office: Tampa, Fla. Chief of Party: K. G. Crosby

Instructions dated (II III): 3/18/43 Copy filed in ~~Descriptive~~ Report No. T- ____ (VI) Div. of Photogram. Office Files

Completed survey received in office: 21 Sept. 1943

Reported to Nautical Chart Section:

Reviewed: 31 Dec. 1943 Applied to chart No. 379 Date: 5 Apr. 1945

Redrafting Completed: 2 Apr. 1944

Registered: 27 Jan 1948 Published: 1944

Compilation Scale: 1:20,000 Published Scale: 1:25000

Scale Factor (III): 1.00

Geographic Datum (III): N.A. 1927 Datum Plane (III): M.S.L. 1929

Reference Station (III): THOMPSON, 1909

Lat.: 38°41'24".275 (748.5m) Long.: 75°05'37".327 (902.1m) Adjusted / Unadjusted

State Plane Coordinates (VI):
Delaware State Grid

X = Y =

State grid coordinates not computed.
1/4/44 Jm.D.H.

Military Grid Zone (VI)
Zone "A"

PHOTOGRAPHS (III)

Number	Date	Time	Scale	Stage of Tide
13330	4/4/43	12:58	1:20,000	0.4 Ft. below M.L.W
13331	"	1:00	"	0.4 " " "
13332	"	1:02	"	0.4 " " "

No record in Tampa office of time and date of photographs.

Tide from (III): - Ref. Sta. SANDY HOOK Corrected to REHOBETH

Mean Range: - 4.0 Feet **Spring Range:** - 4.8 Feet

Camera: (Kind or source) USC&GS nine lens

Field Inspection by: M. C. Jenkins **date:**

Field Edit by: Wendell Bevel **date:** Nov. 1943

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

Projection and Grids ruled by (III) J.C.O'N. & B.R.C. **date:** June 4, 1943

" " " **checked by:** " " **date:** " "

Control plotted by: Washington Office **date:** -

Control checked by: Washington Office **date:** -

Radial Plot by: Washington Office **date:** -

Detailed by: A. E. Abbitt, Jr. Engr. Draftsman **date:** July-Aug. 1943

Reviewed in compilation office by: J.A.Giles, Asst.Photo.Engr. **date:** September 1943
J.H.S.Billmyer, Asst.Photo.Engr.

Elevations on Field Edit Sheet checked by: Wendell Bevel **date:** Nov. 1943

STATISTICS (III)

Land Area (Sq. Statute Miles): 9.2

Shoreline (More than 200 meters to opposite shore): 23.8 statute miles

Shoreline (Less than 200 meters to opposite shore): 45.8 " "

Number of Recoverable Topographic Stations established: --

Number of Temporary Hydrographic Stations located by radial plot: 2

Leveling (to control contours) - miles:

Roman numberals 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:

General Procedure in the Production of Topographic Quadrangles for the War Department

This quadrangle, together with similar adjoining maps produced under Project C.S.302, was prepared by the Coast and Geodetic Survey for the War Department under "General Specifications for War Department Mapping Program" issued about December 1941, in which is incorporated the "Standard of Accuracy for a National Map Production Program" issued by the Bureau of the Budget under date of June 10, 1941.

The general procedure in the production of this and the adjoining quadrangles was:

FIELD SURVEYS

Aerial photography with the Coast and Geodetic Survey nine-lens camera, with airplane and flight crew furnished by the U. S. Coast Guard. The photographs were taken to the scale of 1:20,000. 1943

Ground inspection of the photographs for identification of control points, and classification and clarification of planimetric details on the photographs.

Contouring by planetable directly on the photographs. Supplementary vertical control was established by means of an extensive subordinate level net, furnishing unmarked elevations at road intersections, driveways, and numerous other points identifiable on the photographs.

COMPILATION OF MANUSCRIPT

Compilation on the map manuscripts by radial plot methods (celluloid hand templets) of all planimetry and contours. These manuscripts were drawn on the scale of 1:20,000 on celluloid sheets on which polyconic projections had been ruled with the Projection Ruling Machine in the Washington Office. Compilation was accomplished in the Baltimore Tampa Photogrammetric Office.

FIELD EDIT

Comparison of a copy of the manuscript with the ground. This included inspection for completeness and accuracy as well as the location by planetable methods of additional details, checking of nautical and aeronautical aids to navigation, etc.

Accuracy Tests - Application of systematic horizontal and vertical accuracy tests to check the maps for conformity with the specifications. These tests consisted of comparison of the map position and elevation of selected random points with the true position and elevation as independently determined by standard survey methods.

PROCESSING IN THE WASHINGTON OFFICE

Review - Examination of the manuscript for accuracy and completeness of compilation and compliance with specifications, correcting where necessary; addition of military and state grids and other special features; and verification of the general adequacy of the manuscript as a basis for the production of a finished map.

Drafting and Reproduction - Preparation of smooth color separation drawings on 1:20,000 scale on metal-mounted "blueline" copies of the manuscript. From these drawings, negatives and printing plates were prepared for reproduction of the finished map on the scale of 1:31,680 or 1:25,000.

FIELD INSPECTION REPORT
QUADRANGLE T-8502
Project SS-302B
F. L. Gallen, Chief of Party

1. Description of Area:

The area covered by this quadrangle lies wholly in Sussex County, Del. It consists of farmland, swamp and woodland, with elevations up to 30 feet above sea level. There is usually drainage in the timbered areas. The farm land is well developed with most available land under cultivation. The farm land on this quad lies west and northwest of the town of Rehoboth. Highways and roads in this section are in good condition. Only a very few small roads, generally in the swampy sections, are impassable in wet weather. Delaware State Highway No. 14 leading northwest to Lewes and State highway No. ~~50~~ 14 leading south down the ocean front are the main all weather highways on this quad. The Lewes-Rehoboth Canal is open to small boat navigation. This canal and all natural drainage on this quad is subject to tidal effects. The timberland consists of pine mixed with deciduous trees with a heavy undergrowth of brush. In the swamp areas the pine does not grow, making it easy, generally, to distinguish the swamp line. Railroad connections for freight only, with Lewes and points inland, are available at the town of Rehoboth. Rehoboth is mainly a summer resort and is the only town of importance in this quad.

14 on MSS, quad and State Road map.

2. Completeness of Field Inspection:

The field inspection is thought to be complete. All public buildings have been shown and labeled. Only the buildings circled are to be shown on the map drawings. All buildings circled and not labeled are to be classed as dwellings. Trails which were not clear on the photographs are shown with a dashed red line. The marsh areas have been designated and enclosed with a dashed blue line. There are two main highways, which have been labeled. It is believed that all necessary notes and information are shown on the field photos that should be shown on the map drawing. Classification of bridges and culverts, which have been designated on the photos or any other small items erroneously omitted will be noted by the field edit party.

3. Interpretation of the photographs:

See report for T-8498

4. Horizontal Control:

See report for T-8498

QUADRANGLE T-8502 - cont.

5. Vertical Control: (3 BM's)

A first order USGS bench mark, located on the bridge across the canal in Rehoboth was recovered (reset) and pricked on photo No. 13331 in May 1943. A third order B.M., B.M. No. 1, 1943 was set by this party in May 1943. This mark is located about 3 miles n.w. of Rehoboth along the R.R.

BM 20 (USGS) - Penn RR (Del. Div) Holland Glade crossing.

6. Contours and Drainage:

See report for T-8498

7-13. The items under these headings in the field inspection report do not apply to this area.

14. Road Classification.

See report for T-8498

15. Bridges and Culverts:

See report for T-8498

16. Buildings and Structures:

See report for T-8498

17. Boundary Monuments and Lines:

See report for T-8498

18. Geographic Names:

See report for T-8498

19. Junctions:

Junctions with T-8499 on the north, T-8501 on the west, and T-8504 on the south have been made and are in agreement.

20. Photo. used:

Photographs Nos. 13331 and 13329 were used in surveying this quadrangle.

Approved and Forwarded

F.L. Gallen

F.L. Gallen, Chief of Party

Submitted by:

Marvin C. Jenkins

Marvin C. Jenkins
Sr. Eng. Aid

CONTROL PROJECT 5028
QUADRANGLE T-8502

STATION	CLASS	FH OFO NO.	DATE	INITIAL
HORIZONTAL CONTROL:——				
Rehoboth, 1932	R-M	13332	5/5/43	L.G.C.
Rehoboth Beach, Standpipe, 1927	R-M	13332	5/5/43	L.G.C.
Rehoboth Episcopal Church Spire, 1896	R-M	13332	5/5/43	L.G.C.
Ella Dodd's House Chimney, 1909	R-M	13330	5/14/43	L.G.C.
Thompson, 1909	R-M	13330	5/6/43	L.G.C.
Indian River Life saving station, 1909	R-M	13330	5/5/43	L.G.C.
Rehoboth W.T.(USCA)1943	R-M	13332	5/5/43	L.G.C.
East Chimney (USED)	R-M	13330	5/14/43	L.G.C.
Chy. East end House (Topo)	R-M	13332	5/10/43	L.G.C.
Rehoboth Pavilion Flagstaff, 1940, M.D.	L-A	——	4/20/43	G.R.F.
Douglas House Flagstaff M.D., 1940	L-A	——	4/20/43	G.R.F.
Atlantic (USED)	L-M	——	5/5/43	L.G.C.
Rehoboth Methodist Church, 1882, M.D.	D-M	——	5/10/43	L.G.C.
Bright House, 1882	D-M	——	5/5/43	L.G.C.
Piney (USED)	D-M	——	5/14/43	L.G.C.
Bluff (USED)	D-M	——	5/14/43	L.G.C.
Blinds (USED)	D-M	——	5/14/43	L.G.C.
White Oak (USED)	D-M	——	5/14/43	L.G.C.
Salt (USED)	D-M	——	5/14/43	L.G.C.
Indian River C.G. Flagpole, 1934	D-M	——	5/7/43	L.G.C.
VERTICAL CONTROL:——				
Rehoboth Tidal #1	R-M	13332	5/1/43	L.W.H.
Rehoboth Tidal #2	R-M	13332	5/1/43	L.W.H.
Rehoboth Tidal #3	D-M	——	5/1/43	L.W.H.
Rehoboth, "Reset 1941"	R-M	13331	5/31/43	J.N.H.

A new B. M. Was set by this party. (BM 1).
A number of stations were found destroyed and lost. They are enclosed with the Rec.

Lieut. Comdr. F. L. Callan
Chief of Party

Joe H. Renningsen, Prin. Photo. Aid.
In charge sub-party

ROAD CLASSIFICATION FOR MAPS OF ALL SCALES

CLASS	LABEL	STRUCTURE	LOADING
1	Dependable hard-surface heavy duty road.	Concrete, asphaltic concrete bituminus Macadam, H-15 type structures.	Will bear heaviest loads with little maintenance.
2	Secondary, hard-surface all-weather road.	Surface-treated, oiled gravel, waterbound Macadam, structures generally lighter than H-15 but sturdy.	Will bear fairly heavy military loads in all weather if maintained.
3	Loose-surface graded, dry-weather road.	Gravel or stone surface, stable material, selected sand-clay, etc. Drained and graded.	Will bear light military loads in good weather.
4	Unimproved road.	Graded and drained earth, with very light structure.	Generally unsuitable for military loads.
4U	Truck road	Woods roads, farm roads, etc. over which a standard gage vehicle can be driven.	
5	Trail	(Horse trails, foot trails, etc.)	

Roads with more than two (2) lanes are indicated by note along road, e. g. 3 LANE. Change in lanes shown by tick at point of change. Main roads have two lanes unless otherwise marked.

Private roads are designated by the letter P after the road classification.

WOODS CONCEALMENT CLASSIFICATION

Class A: Trees over 10' high and thick enough to hide troops.
Class B: Brush thick enough to hide troops but dense enough to impede progress.
Class C: Scattered brush thick enough to hide troops but not thick enough to impede progress.

BRIDGE AND TUNNEL CLASSIFICATION

Level Symbol	One Lane	Unlimited
Capacity	5 m.p.h.	
A	50 tons	25 tons
B	35 tons	18 tons
C	18 tons	13 tons
D	10 tons	7 tons
E	6 tons	4 tons
F	Light vehicles only	

Second Symbol

Vertical Clearance
- A - over 14 feet
- B - over 13 feet
- C - over 12 feet
- D - over 11 feet, etc.

Third Symbol

Horizontal Clearance
- A - over 18 feet
- B - over 17 feet
- C - over 16 feet
- D - over 15 feet, etc.

Fourth Symbol - Year of Classification.

FIELD INSPECTION
PROJECT CS-285

BUILDINGS

b	= Barn
Bldg	= Building
Bo Ho	= Boat House
Ch	= Church (give name)
Ct Ho	= Court House (give name)
P.O	= Post Office (give name)
Sch	= School (give name)
Hos	= Hospital (give name)
RR Sta	= Railroad Station
Sto	= Country store or gas station
P Sta	= Power Station

BOUNDARIES

BDY	= Boundary
F B	= Fire Break
HDG	= Hedge
Park	= Park
Cem	= Cemetery
Co	= County

LANDMARKS

FT	= Fire Tower (give name)
TT	= Transmission Tower
RT	= Radio Tower or mast
Air Bn	= Airway Beacon
Bn	= Non-lighted aid to navigation
Lt	= Lighted aid to navigation
Tk	= Low tank
Tk elev	= Tank elevated on structure
Stk	= Stack

GENERAL

X	= delete; except where it pertains to elevations. Use only the abbrevs. listed on this page. Do not make up abbreviations.

SHORE LINE

HWL	= Mean high water; fast land
LWL	= Low waterline
LL	= Marsh shore line
M	= Marsh
MW	= Marsh grass in water
Dk	= Dock
Pier	= Pier
Se W	= Sea Wall
Bkhd	= Bulkhead
Jet	= Jetty
Dol	= Dolphin
Pile	= Pile
S	= Sand
Mud	= Mud
Rk	= Rock or rocky
Sty	= Stony
Conc	= Concrete
Wo	= Wood
Blf	= Bluff
Dune	= Dune

STREAMS AND PONDS

D	= Largest ditches only
DK	= Small ditch (delete)
IS	= Intermittent stream
PD	= Probable drainage
Cr	= Creek
Ca	= Canal
Cv	= Culvert
Lev	= Levee
Dam	= Dam
P	= Pond
IP	= Intermittent pond

VEGETATION

Gr	= Grass
Sw	= Swamp
Cy Sw	= Cypress Swamp

WOODS AND BRUSH

TYPE	
D	Deciduous
E	Evergreen
Cy	Cypress

DENSITY

S	Trees 10 feet or more in height, and thick enough then in foliage to conceal troops and vehicles.
T	Brush and undergrowth thick enough to impede foot troops and conceal troops lying down.
X	Scattered trees not thick enough to conceal troops.
W	Scattered brush not thick enough to conceal troops.

MINOR FEATURES

HG	Higher ground - usually appears in light tone on photograph; either wooded or cultivated area; may be some trees or brush. (usually not symbolized on photographs
LG	Low areas - generally appears dark on photograph; become swampy during rainy season; often covered with dense growth of brush.
SW	Swamp - ground covered with water or boggy most of the time; lower in elevation than LG; wooded and/or brush.
M	Salt marshes

NOTE: The above areas are not outlined but sufficient notes are made on each photograph so that the variation in tones can be correctly interpreted in the office.

COMPILATION REPORT
TO ACCOMPANY
SHEET NO. T-8502

26. CONTROL

The triangulation control on this sheet was sufficient for an accurate plot and all stations could be held.

27. RADIAL PLOT

The main radial plot was run by the Washington office and a report was prepared and submitted to the compilation office. This report is as follows:

This plot covers the entire area of project CS 302 B. The plot was made in the Washington Office in order to study difficulties recently encountered in making main radial plots with unmounted photographs in the photogrammetric offices.

The plot covers quadrangles T-8497 through T-8504.

The map manuscripts are to be detailed in the Tampa Photogrammetric Office.

Photographs

Photographs Nos. 13326 through 13339, and 13342 through 13363 were used. These photographs were printed on cellulose coated paper. The differential paper distortion varies from 0 to 2.2 millimeters.

The transforming printer was overhauled, calibrated and adjusted in June 1943. The final adjustments had not been completed when the above office prints were made resulting in junction errors somewhat larger than are to be expected in the future.

Horizontal Control

The horizontal control for this radial plot was adequate. The control used is as follows:

T-8497
- Marvel F.I.P.
- Milton, Black Water Tank
- Milton, Church Spire
- Slaughter

T-8498
- Broadkill
- Del.Breakwater Rear Range Light
- Center of De Uries Monument
- Lewes, Episcopal Church Spire
- Lewes, Methodist Church Spire
- Lewes, Presbyterian Church Spire
- Lewes, Standpipe

T-8499
- Harbor of Refuge No.End
- North Range E.
- South Range E
- Harbor of Refuge Light
- Rear East Range /House
- Del.Breakwater West End
- Del.Breakwater F.R. Light House(Old Tower)
- Del.Breakwater Light House East End
- Fish Tank

T-8500
Haberson
Colony F.I.P.

T-8501
Mustard F.I.P.

T-8502
Rehoboth Beach Water Tank
Ella Dodd's House
Thompson F.I.P.
Indian River Life Sav. Sta.
Massey F.I.P.

T-8503
White Chimney Higgins House
White F.I.P.
Oak Orchard
Spears Bath House So. Gable
Iron F.I.P.
Pine F.I.P.
Champlin F.I.P.
Fire Tower
Frankford Water Tank

T-8504
So. Gable White House
Indian
Cotton Patch F.I.P.
Auditorium
Bethel Church Spire
Millers Creek

A. Rehoboth Bch WT 1943
B. Rehoboth, 1932
C. Rehoboth Standpipe 1927
} Positions very close together

E Chimney (USE)
Rehoboth Episcopal Ch Sp. 1836

Geological Survey Control

A number of U. S. Geological Survey traverse stations were identified on the photographs. However, these stations could not be held consistently together with the triangulation. The differences between the traverse and radial plot positions were from 0 to 2.0 millimeters. It was decided not to use the traverse as horizontal control for the plot. The Geological traverse in this area was established prior to 1919. Most of the stations were unmarked and the datum adjustment to N.A. 1927 datum as furnished this office was noted as approximate. These stations were established for control of planetable work for 1:62,500 scale mapping. The methods used are not known, but it seems probable that the methods of establishing side points, the closure on basic control, and the methods of adjustment were not such as to permit its use for the present 1:20,000 scale mapping.

Projections

Manuscript, projections and base grids were made on the ruling machine. The Delaware state grid is shown on the manuscrips projections.

Templets and Paper Distortion

The templets for the radial plot were made with paper distortion corrections applied by making use of the master templet as previously described, but explained again in this report.

1. A sheet of templet acetate is placed upon the master, its center pricked and circled, and the 16 points are indicated by radial lines two inches long at the corners and sides and eight inches in length along the wing junctions ruled to the edge of the acetate with a colored ink.

2. The acetate templet is next placed in approximately its correct

orientation upon the paper photograph from which the directions are to be traced or drawn. The directions are corrected as they are traced from the photograph. This is done by holding the center of the acetate templet on the principal point and rotating it around that point. For example, the colored line for a corner mark may be held in position and directions along the center of that particular chamber traced. Then progressing around the photograph, the templet is rotated into position on the next wing junction line and directions in that area are drawn. If there is an appreciable difference between the corner mark and the next wing junction line, the difference is divided between the two marks and directions in that area traced. The work then progresses around the photograph to the starting point. The collimating notches in the centers of the sides are also used in this process. The line obtained from the metal templet for these notches should be made to bisect their corresponding notches when tracing radials in its section.

On laying this radial plot, which was over a period of three days, some of the templets were relaid on the master templet to check for any templet distortion. Little or no distortion was noted.

The correction for paper distortion is essential for making accurate plots from paper prints. The method described was used first on this plot. It appears to be adequate though additional use in the photogrammetric office may well indicate further refinements.

Wing Junctions Corrections

In laying the plot a number of wild cuts to otherwise well established points or to ground control were found to be due to wing junction errors evidenced by double images. It was not practicable to determine in what direction to shift the cuts to correct for this error. Therefore, cuts coming near bad wing junctions were eliminated.

Further adjustments of the transforming printer have been made since these photographs were printed and the wing junction errors should be smaller in the future. In cases where a relatively few cuts are affected by such errors the cuts in question should be eliminated. Where there are numerous such cases that fact should be called to the attention of the Washington Office.

Field Identification of Control

The field identification of the horizontal control was on a whole very good. The control station "Conical Roof Flagpole" would not hold the geographic positions. A check with the original description revealed that "flagpole summer house" had been spotted on the field photographs instead of "Conical Roof Flagpole". Office identification of "Conical Roof Flagpole"

held the geographic position. There were several instances where water tanks or stacks had been pricked direct (the top) which were hard to transfer to other photographs because they could not be seen clearly and no ground measurements to identifiable points had been made.

Main Radial Plot

The azimuth lines were laid out with the azimuth liner and verified with the stereoscope. The triangulation stations were transferred to the photographs from the field identification photographs with the aid of the stereoscope. Some of the hydrographic and topographic stations were picked on the photographs along with other prominent points to give a good distribution of secondary control.

The templets were made as stated above. The templets were laid in the usual manner, those with the strongest fixes first, etc. After plotting the horizontal control to the base sheets, instead of the usual triangle, a circle of approximately 2.5 millimeters in diameter was used. It is much easier to orient a templet to the control, after the control station has been obliterated by 4 or 5 previous templets, by bisecting the circle at the control stations.

From the time the templets were made until the final plot lay down was made an occasional templet would be checked with the master templet for unusual acetate distortion. This, however, proved to be negligible for the radial plot.

We either held or were tangent to all the Coast and Geodetic Survey control identified on the photographs.

Methods of Detailing

To plot additional detail points that may be needed it is suggested to hold the center and orient the photograph to points already radial plotted in the vicinity of that area for which additional detail points are needed. This is necessary to eliminate any paper distortion or junction errors that may be present.

Accuracy

This main radial plot has been accepted as within the horizontal accuracy requirements.

28. DETAILING

The photographs used in detailing this sheet were very clear and of good scale. Field inspection was sufficient and the compiler did not experience any difficulty in detailing from the information given.

All roads were not classified by the field inspector, so the compiler classified the remaining roads by using her own judgment.

All shore line was outlined on the field photographs by the field party and seemed to be correct with the exception of the upper reaches of small streams which were not always accurately delineated.

Satisfactory junctions were made with the adjoining quadrangles.

29. SUPPLEMENTAL DATA

No graphic control surveys by this Bureau or maps and plans by other organizations were used to supplement the photographs.

34. LANDMARKS AND AIDS TO NAVIGATION

One navigational aid, Rehoboth Canal East Jetty Light, falls on the sheet. The correct geographic position of this light, as scaled from the compilation, is shown on attached form 567.

35. HYDROGRAPHIC CONTROL

One topographic station "Mid" (Chimney, East End House), which is suitable for the control of hydrographic surveys is shown on the compilation. As the present position does not quite agree with the previous compilation, T-5661, the new position, which is probably correct, is shown on Form 524.

36. LANDING FIELDS AND AERONAUTICAL AIDS

A small part of Rehoboth Airport, (C.A.P.), falls on the western boundary of the sheet. This airport was taken directly from the photographs as no supplemental data was available.

44. COMPARISON WITH EXISTING TOPOGRAPHIC QUADRANGLES

In comparing the sheet with U.S.C.& G.S. T-5661, compiled in 1933 from air photographs, all features on the sheet have been corrected and brought up to date. All shoreline is in reasonably close agreement with the exception of the shoreline on the ocean from Rehoboth Beach southward which disagrees, in some instances, as much as fifty meters.

A comparison was also made with the USGS Rehoboth Quadrangle (Edition of 1928). No discrepancies of any importance were noted that would cause any doubt as to the accuracy of the present compilation. A close comparison could not be

made due to the difference between scales.

45. COLPARISON WITH NAUTICAL CHARTS

An accurate comparison with USC&GS Chart 1219, published February 1931 on a scale of 1:80,000, could not be made due to the large scale differences.

Respectfully submitted,

Alpha E. Abbitt

Alpha E. Abbitt,
Junior Engineering Draftsman

Forwarded by:

Kenneth G. Crosby

Kenneth G. Crosby,
Chief of Party.

Form 567
(Rev. April 1942)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

List of Permanent (Non-floating) Aids to Navigation
Sheet T-8502

LANDMARKS FOR CHARTS

TO BE CHARTED } STRIKE OUT ONE
~~TO BE DELETED~~

Tampa, Florida Sept. 17, 1943

I recommend that the following objects which have (have not) been inspected from seaward to determine their value as landmarks, be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing.

Kenneth G. Crosby
Chief of Party.

GENERAL LOCALITY: Rehoboth Beach, Dela.

NAME AND DESCRIPTION	POSITION: LATITUDE ° ′	LATITUDE D. M. METERS	LONGITUDE ° ′	LONGITUDE D. P. METERS	DATUM	METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
Rehoboth Canal East Jetty Light T.850 2 m.a. 3-31-53	38 41	460	75 05	1298	N.A. 1927	Air Photo	1943		x		1219 411

Original copy to Nautical Charts Div. 1/1/44 Wm D.P.

Chart letter 864

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field survey sheets. Information under each column heading should be given.

U. S. GOVERNMENT PRINTING OFFICE 16—27869-*

FIELD EDIT REPORT TO ACCOMPANY
QUADRANGLE T-8502
PROJECT CS 302 B
Ray L. Schoppe, Comdr., Chief of Party

1. Description of the Area. Refer to Field Inspection Report.

2. Completeness of Field Inspection. Refer to Field Inspection Report.

3. Interpretation of the Photographs. Photographs were not used by the field edit party, except in checking level elevations.

4. Horizontal Control. Refer to Field Inspection Report.

5. Vertical Control. Form 685 for one bench mark not recovered during field inspection is submitted.

6. Contours and Drainage. Along the Atlantic seacoast numerous closed 20-foot contours are shown. These contours show unstable sand dunes which shift horizontally and vertically in a relatively short period of time. It has been previous practice not to show these dunes by contours, but to spot elevations on the more permanent and prominent dunes. This party recommends the latter practice to be used and the elevations to be shown selected at the discretion of the compilation office.

Drainage features were checked for discrepancies and found to be complete and accurate as shown.

7. Mean High-Water Line. Mean high-water line was not checked; however, the field edit party was on the alert for discrepancies, and none were found.

8. Low-Water Line. Refer to compilation report.

9. Wharves and Shoreline Structures. There are no new wharves or shoreline structures within the limits of this quadrangle.

10. Details Offshore from the High-Water Line. Other than fish weirs, there are no offshore details within the limits of this quadrangle.

11. Landmarks and Aids to Navigation. The Rehoboth Canal East Jetty Light has been submitted on form 567 by the Compilation
8502 Office for Charting. Three landmarks, two new, have been submitted by the field edit party on form 567 for charting.

12. Hydrographic Control. Refer to Compilation Report, item 35.

13. Landing Fields and Aeronautical Aids. The extreme east end of the Rehoboth Airport falls within the limits of this quadrangle. Its boundary, as defined by the Compilation Office, is complete and accurate.

There are no aeronautical aids within the limits of this quadrangle.

14. Road Classification. All roads have been classified and shown in accordance with instructions from the Army War College, dated January 12, 1942.

15. Bridges. Bridge classifications were made in accordance with instructions from the War Department dated July 23, 1942, and have been shown in key on the sheet by C. C. Fryer, Junior Topographic Engineer.

16. Buildings and Structures. All farm buildings except dwellings and chicken houses have been classified as barns (b). This includes all substantial sheds, large garages, and so forth. Because of the large number of chicken houses, they were classified (ckh), and as they are for the most part temporary structures, many were marked for deletion. In congested areas and towns, dwellings were not classified. Public buildings were classified according to standard topographic practice.

17. Boundary Monuments and Lines. Refer to Field Inspection report. The boundaries of political subdivisions of Sussex County have been added by the field edit party.

18. Geographic Names. Refer to Field Inspection report. All geographic names have been inked on the smooth sheet from the geographic name sheet overlay.

46. Methods. This quadrangle was field edited on the compilation. Discrepancies not covered by suitable symbols were noted on the compilation by a sentence and an arrow to the point in question.

8502

All symbols used during field edit are standard topographic symbols, except that a green "X" was used for deletions and a tick mark was used to show the limits of deletions and points of change in road classifications. The following color scheme was used:

Deletions	Green
Additions, classifications, names, bench marks, level elevations . .	Black
Water culture	Blue
Political Boundaries	Violet

47. Adequacy of the Compilation. The compilation was found to be complete and adequate, with few additions necessary, except for known deficiencies, such as additions, classification of roads, woods, and bridges, and public buildings.

48. Accuracy Tests. A separate report of the horizontal accuracy test for this compilation has been submitted.

For the vertical accuracy test, refer to the Field Inspection report, item 6.

Submitted by:

Wendell Bever

Wendell Bever
Junior Topographic Engineer
November 22, 1943

Approved:

Ray L. Schoppe
Chief of Party

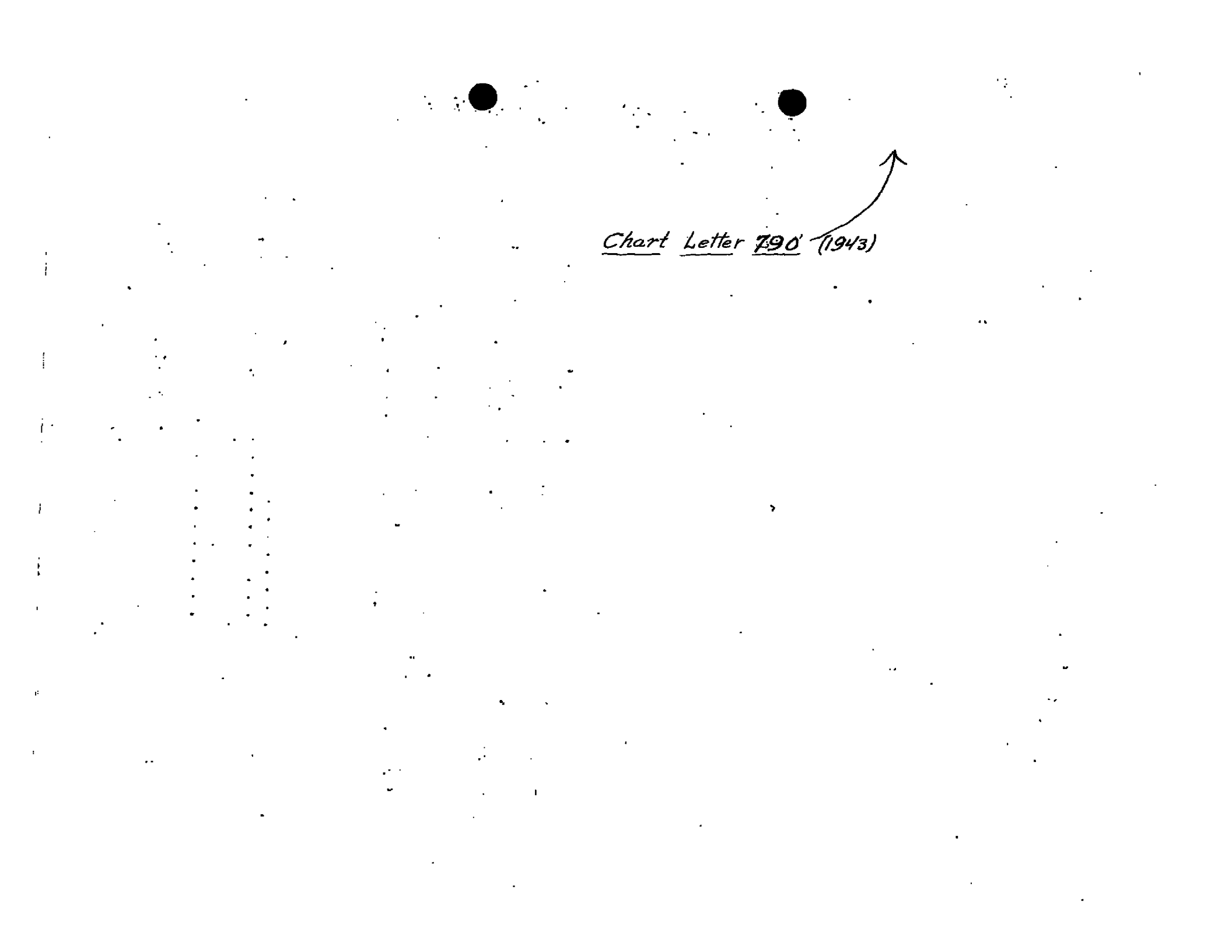
Chart Letter 790 (1943)

Form 567
(Rev. April 1942)

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

TO BE CHARTED } STRIKE OUT ONE
~~TO BE DELETED~~

Georgetown, Delaware — November 17, 1943

I recommend that the following objects which ~~have~~ (have not) been inspected from seaward to determine their value as landmarks, be charted on (~~deleted from~~) the charts indicated.

The positions given have been checked after listing.

Ray L. Schoppe
Chief of Party.

GENERAL LOCALITY: Rehoboth Beach, Del.

NAME AND DESCRIPTION	POSITION LATITUDE ° ′	LATITUDE D. M. METERS	LONGITUDE ° ′	LONGITUDE D. P. METERS	DATUM	METHOD OF LOCATION	DATE OF LOCATION	HARBOR CHART	INSHORE CHART	OFFSHORE CHART	CHARTS AFFECTED
*Standpipe △ Rehoboth Beach standpipe, 1927	38 43	10 appr. 10.42	75 04	1386 appr. 1380.52	N.A. 1927	Triang.	1927			x	1219
Tower, concrete	38 40	1262	75 04	436	N.A. 1927	Plane-table	1943			x	1219
Tower, concrete	38 40	1513	75 04	467	N.A. 1927	Plane-table	1943			x	1219

Position from p. 73 Del. G.P.'s by Wm. D. Harris

*G. P. of this station not available to this office.

do not chart or map
see letter dated 12/1/43
filed with chart letter L-790 (1943)

Scaled by W.B.
Checked: L.W.S.
Copychecked: L.W.S.

Original on file Nautical Charts Div. 1/1/44 Wm. D.H.

This form shall be prepared in accordance with 1934 Field Memorandum, "LANDMARKS FOR CHARTS." Positions of charted landmarks and nonfloating aids to navigation, if redetermined, shall be reported on this form. The data should be considered for the charts of the area and not by individual field sur[illegible] sheets. Information under each colum[illegible]ading should be given.

U. S. GOVERNMENT PRINTING OFFICE 16—27869-1

Written by LTS 1/48 from notes on "Review, Editing, and Drafting" check list.

REVIEW REPORT
Quadrangle T-8502
REHOBOTH BEACH, DELAWARE
1944

Subjects not used in this review report are adequately covered in other parts of the Descriptive Report, or are inapplicable

43. COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

H-4942 1/20000 1929 was the last survey made.

44. COMPARISON WITH TOPOGRAPHIC SURVEYS

T-226 1/20000 1845

The shoreline has apparently moved landward, especially in the northern half of T-8502. Rehoboth Bay has increased in area, pushing the shoreline back on all sides. Inland detail has changed greatly since T-226 was made.

T-1503 1/20000 1882

The shoreline is in very good agreement. The drainage agrees very well. Many roads and houses have been added and removed since 1882, but in general inland detail agrees very well. The most notable difference is that the position of the railroad is shown about 100 meters farther to the northwest on T-8502.

T-5661 1/20000 1933

The shoreline is in good agreement except from Rehoboth south, where T-8502 moves the H.W.L. as much as 40 meters seaward. Only minor differences (less that 0.6 mm) occur in the inland detail. (See discussion of "Comparison with Nautical Chart 1219)

U.S.G.S. REHOBOTH 15' 1/62500

T-8502 established the H.W.L. from 50 to 80 meters farther seaward. Gordons ~~Lake~~ Pond, now drained, ~~and~~ is a mud flat.

T-8502 supersedes these maps in their common areas.

45. COMPARISON WITH NAUTICAL CHARTS

1219 1/80000

Six groins have been built on Rehoboth Beach which are not shown on chart 1219. The three wooden jetties which are shown on the chart cannot be seen on the photographs. Gordons Pond has been drained and is now a mud flat.

T-8502 has not been applied to the charts as of the date of this review.

47. ACCURACY TESTS

A horizontal accuracy test was run on this quadrangle. Only one point was found in error as much as 0.5mm. It was a 30° road intersection which was located in detailing. (0.8mm error)

A vertical accuracy test was run on photograph B336 on which the contours were in very close agreement with those established by the field party. The 20-ft contour crosses neither the 15-ft nor 25-ft contour of the test run.

Reviewed by

William D Harris
Wm. D. Harris
31 Dec. 1948

B.G. Jones 1/48
Technical Assistant to the
Chief, Div. of Photogrammetry

K.T. Adams
Chief, Div of Photogrammetry

Under the direction of

Ralph Moore Berry
Ralph Moore Berry
Douglas A. Lewton

Chief, Nautical Chart Branch
Division of Charts

C.H. Green
Chief, Div. of Coastal Surveys

The horizontal accuracy test covering T-8501-8502-8498 was searched for, but not found. Therefore no check could be made to ascertain whether the 0.8mm road-intersection error mentioned above was corrected during review.

Hydrographic Survey H-7035, 1/10000 was made in 1945, but did not include the area of T-8502, except, perhaps, for a very small area at the northern border of the map-area.

L.T.S.
27 Jan, 1948

T-8502

No. 1

	Remarks	Decisions
1		USGB
2		
3		Railway Guide
4		
5		
6		Road Maps
7		
8		
9		386750
10		"
11		"
12		"
13		"
14		"
15		"
16		"
17		"
18		"
19		"
20		"
21		"
22		"
23		"
24		"
25		"
26		"
27		"

M 234

GEOGRAPHIC NAMES

Survey No. T-8502

REHOBOTH quadrangle.

1 Name on Survey	A, On Chart No.	B, On previous survey No.	C, On U. S. quadrangle Maps	D From local information	E On local Maps	F P. O. Guide or Map	G Rand McNally Atlas	H U. S. Light List	K	
Delaware				✓						1
Sussex County				✓						2
Pennsylvania R.R. (Delmarva Division)				✓						3
District 10		(Lewes and Rehoboth)				✓				4
District 8		(Indian River)			✓					5
State Highway No. 14						✓				6
State Highway No. 50	Desc. Report states this is along outer coast, but all available road maps call this No. 14.									7
										8
Stockley Gut	✓									9
Cedar Island	✓									10
Melson Island ✓	(not Nelson I.)									11
Bush Island ✓										12
Station Cove	✓									13
Townsend Island	✓									14
Bacon Island	✓									15
Bacon Island Creek	✓									16
Ready Island	✓									17
Indian River Inlet Coast Guard Sta.			✓							18
Big Nose Island			✓							19
Rehoboth Beach Coast Guard Station			✓							20
Rehoboth Marsh			✓							21
Dewey Beach			✓							22
Head of the Bay Cove			✓							23
Dodd Marsh			✓							24
Stockley Creek			✓							25
Thompson Island			✓							26
Massey Ditch										27

M 234

T-8502

No. 2

	Remarks	Decisions
1		386750
2		"
3		"
4		"
5		386751
6		"
7		" USGB
8		" "
9		"
10		"
11		"
12		"
13		"
14		"
15		"
16		"
17		"
18		"
19		"
20		"
21		"
22		"
23		"
24		387751
25		"
26		"
27		"

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GEOGRAPHIC NAMES

Survey No. T-8502

2 Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Lynch Thicket	✓									1
Raccoon Cove	✓									2
Raccoon Point	✓									3
State Lands ✓	(along outer beach)									4
Rehoboth Bay	✓									5
Bluff Point	✓									6
Roman T Pond	✓									7
Long Neck	✓									8
Long Neck Road										9
Massey Landing	✓									10
The Pullover	✓									11
Nats Cove	✓									12
Nats Marsh	✓									13
Lingo Landing	✓									14
Lee Joseph Creek	✓									15
Piney Island	✓									16
White Oak Point	✓									17
Warrington Neck	✓									18
White Oak Creek	✓									19
Johnson Neck	✓									20
Johnson Branch	✓									21
Bald Eagle Point	✓									22
Bald Eagle Creek	✓									23
Lewes and Rehoboth Road	✓									24
Rehoboth Airport (C.A.P.)		✓								25
Jones Branch	✓	(not Creek)								26
Wolf Neck	✓									27
	✓									

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T-8502

No. 3

	Remarks	Decisions
1		387751
2		" USGB
3		387750 "
4		" "
5		"
6		"
7		"
8		"
9		"
10		"
11	Very recent USGB decision, based on incorporated name of town (adopted in 1938)	" USGB
12		"
13		"
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M 234

GEOGRAPHIC NAMES

Survey No. T-8502

3 Name on Survey	On Chart No. A,	On previous survey No. B,	On U. S. quadrangle Maps C,	From local information D	On local Maps E	P. O. Guide or Map F	Rand McNally Atlas G	U. S. Light List H	K	
Wolf Glade	✓									1
Lewes and Rehoboth Canal		✓								2
Holland Glade		✓								3
~~Gordon Pond~~		dup	11							4
Rehoboth Flats		✓								5
Holland Neck		✓								6
Dupont Basin		✓								7
Gordon Cove		✓								8
Lake Gerar		✓								9
Rehoboth Bridge		✓								10
Rehoboth Beach	(town)	✓								11
Rehoboth State Bird and Game Refuge			✓							12
Silver Lake		✓								13
										14
										15
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										24
										25
										26
										27

Names underlined in red approved by L. Heck on 11-8/44

M 234

RECORDS

Between January, 1942 and July, 1944, this Bureau completed 323 quadrangles. These maps have been published, or are in the process of being published on scales of 1:31,680 or 1:25,000. This series of quadrangles includes a land area of approximately 15,000 square miles. Incident to this work, a considerable volume of survey records and data has accumulated which will be filed for future reference. This material is filed as follows:

Registered and Filed in the Vault.

Cloth-mounted copy of the published quadrangle.

Black and white cloth-mounted copy of the published quadrangle at 1:20,000 scale. This copy is filed to preserve original survey detail shown on the manuscript at 1:20,000 scale which may not have been shown on the published sheet. For woodland, refer to the published quadrangle for the finally adopted outlines.

Descriptive Report.

Filed in the Photogrammetric Division.

Field inspection photographs.

Contoured photographs (on which planetable contouring work was performed.)

Field edit sheet.

Descriptions of recoverable topographic stations (Form 524), filed in Review Section.

Supplementary traverse and level records.

Field notes, computations, lists of positions, and tabulations of results of horizontal and vertical accuracy tests.

Reproduction proof.

Correction sheet (copy of quadrangle showing in red changes to be made when next printed.)

Check lists of work performed on each sheet in the Washington Office during review, drafting, edit, and reproduction.

Copies of specifications and all instructions to field parties and field offices.

Filed in Reproduction Branch.

Glass negatives of the color separation drawings.

Filed in the Library.

Special report on office work by B. G. Jones, 1944.

Season's report on field work by Commander F. L. Gallen, 1944.

Season's report on field work by Commander R. L. Schoppe, 1944.

Delivered to the Army Map Service in accordance with the contract.

Film negatives and film positives of the color separation drawings.

All color separation drawings.

A correction sheet consisting of a copy of the first edition of the quadrangle with notes in red indicating changes desirable at the next printing.

DIVISION OF CHARTS

SURVEYS BRANCH

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-

QUADRANGLE

This quadrangle manuscript has been examined for completeness, accuracy, and conformity with the specifications. It is adequate for smooth drafting, reproduction and publication. Revisions found to be necessary in this office are discussed on the next page.

Horizontal and Vertical Accuracy

Previous Surveys

This manuscript has been compared with the following previous topographic surveys of this Bureau and other agencies. This map is satisfactory to supersede the previous surveys over the common area.

Comparison with Nautical Charts Nos.

The manuscript has not been applied to the charts at the date of this review. The following comments are pertinent to the compilation and correction of nautical charts:

The following revisions of the map manuscript were found to be necessary and were accomplished as a part of this review:

Reviewed_____ By_____

under direction of D. H. Benson

Inspected by B. G. Jones

Examined and approved:

_____ _____

Chief, Surveys Branch Chief, Div. of Charts

_____ E. T. Green

Chief, Topography Section Chief, Div. of Coastal Surveys