| Form 504<br>Rev. Dec. 1933     | • |
|--------------------------------|---|
| DEPARTMENT OF COMMERCE         |   |
| U.S. COAST AND GEODETIC SURVEY |   |
| R. S. PATTON, DIRECTOR         |   |

## DESCRIPTIVE REPORT

Topographic Sheet No. **T=5677** 

MARYLAND

LOCALITY

CHESAPERKE BAY

ROMNEY CREEK

and vicinity

1938

CHIEF OF PARTY

L. W. Swanson

U. S. GOVERNMENT PRINTING OFFICE: 1984

applied & Chr. 572 - apt 1940 - Ox 2.4.

,

.

-

Calles Control and a control

## TOPOGRAPHIC TITLE SHEET

The Topographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

...

Field No. 1-5677

REGISTER NO. T.5 C. T.

| State    | MARYLAND  |
|----------|---|
| General  | locality CHEASPRAKE BAY                                     |
| Locality | POWNEY CESTS  |
| Scale    | 1:10 000 Date of Strawy Apr. 30 & Hay 1 , 1937              |
| ₩¥¥¥1.   | AIR PHOTOGRAPHIC SURVEY PARTY NO. 2                         |
| Chief of | party L. W. Swanson E.L. Jones, W.C. Russell, D.A. Jones    |
| Surveyed | by Compilation beasing he heddes, we communicate beasing by |
| Inked by | DaAadenea   |
| Heights  | in feet above to ground to tops of trees                    |
| Contour  | , Approximate contour, Form line interval .** feet          |
| Instruct | tions dated May 13, 1938                                    |
| Remarks  |   |
|          |   |

Date of Survey

T-5677 is of the date of the photographs, April - May 1937, with the exception of certain details within the Aberdeen Proving Ground, which are shown only on the confidential copies of T-5677, and which were corrected to 1939. Note her note of bottom of Page 3 for date of

## STATISTICS

## AIR PHOTOGRAPHIC SURVEY SHEET NO. T-5677 STATE OF MARYLAND CHESAPEAKE BAY, ROMNEY CREEK

| AIR PHOTOGRAPHS Dete Time   |
|---|
| 1257-597 1 4-30-37 2319-2:2010 0 100000000  |
| 1269-7/20 2070 2028-2129 And 1,000 M. 1275 1.   |
|   |
| SCALE FACTOR J.C.Partington 1 : 9650  |
| PROJECTION Ruling Machine Washington Office   |
| PROJECTION CHECKED  |
| CONTROL PLOTTED BYW.C.Russell Mar. 23, 1938   |
| CONTROL CHECKED BYJ.C. Partington Mar. 23, 1938   |
| RADIAL LINE PLOT J.C. Partington, L.W. Swanson,<br>E.L. Jones and W.C. Russell Mar. 23, 1938  |
| RADIAL POINTS FRICKED BYB.L.Jones ANDITIONAL POINTS BY -D.A.Jones   |
| SHORE LINE INKED BY D.A.Jones DETAIL INKED BY D.A.Jones   |
| AREA (land) 22.4 square statute miles   |
| AREA (shoals) 0.0 " " "   |
| SHORELINE (more than 200 meters from opposite shore) 12.8 statute mi.   |
| SHORELINE (oreeks) 25.0 "   |
| ROADS, STREETS, TRAILS & RAILROADS 27.5   |
| DATUM North American 1927   |
| REFERENCE STATION  Latitude 39 24' 36.783" 1134.4 m.  Longitude 76 08 15.173 363.0 "wardjusted"  **Margland lystem Cond.**  **Weighted Longitude 76 08 15.175 575 435 Ft.  **Topical Line 1.043 694 Ft. y = 575 435 Ft. |
| PRELIMINARY REVIEW L.W. Wanson  |

hast Supplemental Survey was in 1939 (date that additions or corrections were reed from Ordinance Dept.)

Tide was approx 0.8ft above M.L.W. at Time of photos. (Mean Range=1.2ft. approx) (Above tide data from tables)

(above notes by T.M.P. (above notes by T.M.P. Jan. 1840)

note The following traverse stations of the army Ovolinance Duft were converted \_ por guid to geographic soutions by the fild party and wed to control the shots plat on T.5677. There stations are of a confidential nature and have been removed from T 5677, The portions are in a confidential file in the Division \_ of geoding 857 GTZ 1939 G-4048: abby Pt Bomb Roof 2/8/40 AA Sta no 5 AA Sta ny 9600 yd Bomb Rwof. Center Hard Surface 

## DESCRIPTIVE REPORT to accompany AIR PHOTOGRAPHIC SURVEY SHEET NO. T-5677 State of Maryland CHESPEAKE BAY, ROMNEY CREEK

## GENERAL INFORMATION.

The field inspection of the shore line was made during November, 1937 by the Air Photographic Survey Party of Baltimore, Maryland. The field inspection of the land areas was made during April and May, 1938 by Air Photographic Survey Party No. 2 of Baltimore, Maryaland.

The photographs were taken by the U.S. Coast and Geodetic Survey Nine Lens Aerial Camera by the U.S. Army Air Corps on April 30 and May 1, 1937.

CONTROL

The control for this survey sonsisted of triangulation stations established by the U.S. Army Engineers, 1937 and recomputed by J.C. Partington, U.S. Coast and Geodetic Survey, 1937. Ordinance Dept. triangulation at ations a factor are afford on this survey. See Afford page

RADIAL PLOT

The radial plot for this sheet was made in conjunction with the radial plots of sheets T-5674, T-5675, T-5676 and T-5678. The five sheets were plotted by the template method. Dummy sheets with control plotted on them were laid down on a large table. The sheets were matched and secured together with scotch tape. The templates were then laid over the dummy sheets and were held by the control and the centers of adjacent pictures. The templates were secured together by scotch tape.

Radials to the centers of adjacent photographs were shown on the templates and were used to supplement the control. The celluloid templates were corrected for the paper distortion of the photographic prints. This distortion in many cases was extremely large and was due to the poor quality of the printing paper and to the drying process during printing.

Radial points were pricked, in general, about every two inches along the shore line and on the inshore areas about four radial points to every square mile were pricked. These radial points formed the basis of the control. Many additional radial points were plotted during the process of detailing particularly in areas in which there were differences of elevation and where the photographs were off scale.

After the templates were adjusted to the control and good intersections were obtained, the map drawings were placed over the templates and joined together in the same manner as the dummy sheets. They were matched up so that the control on the dummy sheets and the map drawings coincided.

The radial line intersections were then pricked on the map drawings. All the intersections of three lines or over were circled in blue on the back of the drawings. All two line intersections or intersections which were a little doubtful were circled on the back in green. Additional points radial plotted during detailing were circled by smaller blue circles.

The above method of radial plotting proved to be very satisfactory. Very good intersections were obtained. By joining sheets together additional control for the photographs on individual sheets was obtained and lines of flights were carried thru with good junctions. It is believed by this office that the template method is superior to the regular method of running radial plots with nine lens photographs because it is faster, paper distortion can be eliminated, better junctions are possible; and less control is necessary.

All the control falling on the five sheets that was available and could be located on the photographs was used.

The following difficultied were encountered.

(a) Paper Distortion.

Extremely large distartions were taken on by the photographic prints during the drying process. The prints were in general large on one edge and small on the opposite edge. To correct for this a celluloid template was prepared from a standard template and revolved about the principal point until the best adjustment of the corners of the photographs was obtained. The corrections were then drawn on the photograph.

(b) Tilt

The tilt occurring on the photographs used in making the radial plot was too small to cause any relatively great displacement of the plumb point from the principle point. It did, however, cause large differences of scale near the border of a few of the photographs.

(c) Relief

There are but few interest differences in relief on this sheet. Most of the differences occur in the north west limits of the sheet. The highest elevation as taken from the U.S. Geological Survey quadrangle maps in approximately 40 feet.

## FIELD INSPECTION

The area covered by this sheet was field inspected prior to the receipt of instruction for field inspection and detailing of Cheaspeake Bay Sheets, May 13, 1938. However the field inspection was complete enough to allow the compiler to detail according to those instructions. Additional radial points shown by small blue circles were established during the detailing in areas where the photographs were off scale and / or where were differences in relief. Adjustments of several meters per hundred were not uncommon in these areas.

In general all the detail shown on the sheet is in accordance with instruction regarding detailing of Cheaspeake Bay Sheets of May 13, 1938. Marsh areas were shown in accordance with Field Memorandum No.1, 1938.

During the detailing the pricked positions of triangulation stations "R"-2, U.S.E. and "Q"-2, U.S.E. were questioned. As a result the radial control below Romney Creek was adjusted holding station "R"-2, U.S.E. and disregarding "Q"-2 U.S.E. The shoreline below Romney Creek was plotted holding to the adjusted radial control and disregarding "Q"-2, U.S.E. The plotted position of of "Q"-2 U.S.E. on the map Drawing relative to the shoreline as then plotted was according to the field inspection, that is, the triangulation station fell back 5 meters from the shoreline. The pricked positions of "Q"-2, U.S.E. on photographs 1258, 1259 and 1268 are questioned.

A copy of the boundary line survey of the U.S. Reservation at the Aberdeen Proving Grounds was abtained from the War Department of the boundary line was plotted to the scale of the sheet on an overlay. By field inspection it was known that several of the Reservations bounds fell along fence lines and roads. Adjusting the overlay so that the correct bounds fell along the fence lines, it roads, and thru known points as detailed on the map drawing a very closecapproximation of the Reservation was found and detailed on the sheet.

Except for the control and and the U.S. Reservation Line all information shown on this sheet was taken from the field inspection and from the photographs.

Additional information within the Aberdeen Proving Ground was furnished by the ordinance Dept. 1939, and has been added upon review.

COMPARISONS WITH PREVIOUS SURVEYS

A comparison between this Air Photograph Survey Sheet and a bromide enlargement of Plane Table Survey T-2377, 1900 was made.

In general there was good agreement in the shorelines of the two surveys. Most of the discrepancies were in the marshy areas where there was probably a difference in the interpretation of the high water line.

Date of Survey Show hire delails on 7 5677

are of the date of the photographs, afer 30 1937

enteres details another to date of 1939.

Apparen.

The Air Photographic Survey Sheet shows the creeks and streams in much more detail and much further inland than the plane table sheet. This is probably due to the greater amount of detail that shows on the photographs and that the plane table survey was done on a scale of 1/20 000. The roads and other detail on the inland areas of the sheets are in good agreement.

A few of the larger discrepancies are listed below:

Between Latitudes39 22.6' and 39 23.5' along the Cheaspeake Bay side of Taylors Island and at Latitude 39 24.4' just south of Stonmy Point there is evidence of considerable erosion. Little Romney Creek at Latitude 39 24' has cut thru to Cheaspeake Bay filling in the old creek bed at that point.

Locust Point, a sand spit, at Latitude 39 22.9 has extended approximately 100 meters compared to its length shown on the 1900 Plane Table Survey.

## COMPARISON WITH RECENT HYDROGRAPHIC SURVEY

Sounding Lines run using for control signals located by radial plotting on this sheet show no jumps or offsets for the entire length of the sheet indicating no inaccuracys in the radial location of the signals. Also, the sounding lines run at high water along or next to the shore line show perfect agreement with the shore line as detailed on this sheet.

COMPARISON WITH CHART NO. 1226

Corrected to Fed 24, 1938

Little Romney Creek should be shown as cut thru to Cheaspeake Bay at Latitude 39 24.0'.

Several of the roads shown on the chart have been changed and many of the roads especially within the limits of the U.S. Army Reservation At Aberdeen. Many of the roads shown on the chart in this area are no longer in existance having been abandoned and grown up entirely to brush.

## JUNCTIONS

This sheet forms a junction with T-5676 on the North, With T-5675 on the East and with T-5678 on the West.

## GEOGRAPHIC NAMES.

Geographic Names shown on this sheet are listed on form M234 herewith.

## LANDMARKS

Landmarks falling on this sheet are not recommended for charting because of their Military Inportance. in connection with Aberdeen Proving Grounds. Let remark of back.

## RECOMMENDATION FOR FUTURE SURVEYS

This sheet is believed to be complete in all detail of importance for charting and no additional surveys are required.

The probable error is not greater than 5 meters for all radial points and well defined objects along the shoreline and in the areas well controled. The error of the other detail of importance on the sheet is probably not greater than 10 meters.

Respectfully Submitted,

L.W. Swanson,

Jr. H. & G.E., Chief of Party.

Form 567 Rev. March 1935

## U. S. COAST AND GEODETIC SURVEY DEPARTMENT OF COMMERCE

# LANDMARKS FOR CHARTS

TO BE CHARTED \ STRIKE OUT ONE

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.

| And the second s |          |              |           |                    |         |          |                         |        | 0      | hie    | Chief of Party.    |
|--|----------|--------------|-----------|--------------------|---------|----------|-------------------------|--------|--------|--------|--------------------|
| GENERAL  |          |              | POSITION  |                    |         |          | T I                     | ART    | HART   | CHART  |                    |
| NAME AND DESCRIPTION   | LATITUDE | D. M. METERS | LONGITUDE | D. P. METERS       | DATUM   | LOCATION | LOCATION                | ARBORÇ | NSHORE | FFSHOR | CHARTS<br>AFFECTED |
|  |          |              |           |                    |         |          |                         |        |        |        |                    |
| Landmarks falling on field survey Sheet T-5677 are not recommended for   | ield sur | vey Shee     | t 1-5677  | are not            | recomm  | ended fo | r charting              | 99     |        |        |                    |
| because of their Military importance   | ary impo | rtance 1     | n commec  | in commection with | h Aberd | en Prov  | Aberdeen Proving Ground | ā      |        |        |                    |
|  |          |              |           |                    |         |          |                         |        |        | ļ      |                    |
| the state was  |          | 4            |           |                    |         |          |                         |        |        |        |                    |
|  |          |              |           |                    |         |          |                         |        |        |        |                    |
|  |          |              |           |                    |         |          |                         |        |        |        |                    |
|  |          |              |           |                    |         |          |                         |        |        |        |                    |
| ·  |          |              |           |                    |         |          |                         |        |        |        |                    |
| -  |          |              |           | ,                  |         |          |                         |        |        |        |                    |
|  |          |              |           |                    |         |          | ı                       |        |        |        |                    |
|  |          |              |           |                    |         |          |                         |        |        |        |                    |
|  |          |              |           |                    |         |          |                         |        |        |        |                    |
|  |          |              |           |                    |         |          |                         |        |        |        |                    |

This form shall be prepared in accordance with 1934 Fred Memorandum, "LANDMARKS FOR CHARTS, considered for the charts of the area and not by individual field survey sheets. Information under each column her U. S. GOVERNMENT PRINTING OFFICE Information under each column heading should be given.. The data should be

Remarks

Decisions

|       |   | Det             | 1310113 |
|-------|---|-----------------|---------|
| 1     |   | 394761          | USCB    |
| 2     |   | Hr.             |         |
| 3     |   | 393761          |         |
| 4     | ,   | ır              |         |
| 5     | One word  | 39 <b>376</b> 1 | -       |
| - 6   | ·   | 393762          |         |
| 7     |   | . #             |         |
| 8     |   | 394762          |         |
| 9     |   | 39376 <b>1</b>  | USGB    |
| 10    |   | t?              |         |
| 11    | on T 5678   | 393 <b>76</b> 2 |         |
| 12    |   | 394761          |         |
| 13    |   | 393761          |         |
| 14    |   | 394761          |         |
| 15    | ·   |                 | •       |
| 16    |   |                 |         |
| 17    |   |                 |         |
| 18    | ,   |                 |         |
| 19    | ·   |                 |         |
| 20    |   |                 |         |
| 21    |   |                 |         |
| 22    | Local information from:   |                 |         |
| 23    | Mr. Norman Reynolds, Havre de Grace<br>Mr. Herbert Reynolds, Havre de Grace |                 |         |
| 24    | (not related)   |                 |         |
| 25    |   |                 |         |
| 26    |   |                 |         |
| 27    |   |                 |         |
| M 234 |   |                 |         |

|     | GEOGRAPHIC NAMES             |                                       | /        | E LITA   | ies Play | , <b>18</b>  | /.           | . / .       | Max \       | ALIIO /           | š /      |
|-----|------------------------------|---------------------------------------|----------|----------|----------|--------------|--------------|-------------|-------------|-------------------|----------|
|     | Survey No. <sub>T-5677</sub> | /                                     | Cher V   | O AO OC  | 2. Mag   | or see rist  | Or loca Mode | O. Guide of | Prox Wergin | Pig (             |          |
| . , | Name on Survey               | A,                                    | Β,       | ,40 / OF | D        | E E          | or F         | ,° / (      | gor H       | ی.<br>            |          |
|     | STONY POINT                  | ~                                     | 10       | <b>3</b> | ~        |              |              |             |             |                   | 1        |
|     | DELPH CREEK                  | <u> </u>                              | <u></u>  | <u> </u> | -        | <del> </del> | <b></b>      | <u> </u>    | <u> </u>    | <u> </u>          | 2        |
|     | TAYLOR ISLAND                | V                                     | · w      |          | ~        | <u> </u>     | <u> </u>     |             |             | <b></b>           | 3        |
| 1   | LITTLE ROUNEY CREEK          | <u> </u>                              | V        |          | <u></u>  | <u> </u>     |              |             |             | -                 | 4        |
| 4   | ELM TRRE POINT               | /                                     | V_       |          | -        | <u> </u>     |              |             | -           |                   | 5        |
| 1   | BACK CREEK                   | • • • • • • • • • • • • • • • • • • • | <u></u>  | ,        |          |              |              |             | -           | <u> </u> .<br>  . | 6        |
| ~   | BRIDGE CREEK                 |                                       | V        | <u> </u> | <i></i>  |              | <u> </u>     | .<br>  ,    |             |                   | 7_       |
|     | LONG BRIDGE CREEK            | · ·                                   | V        |          | <u></u>  |              | <u> </u>     |             |             |                   | 8        |
|     | ROMNEY CREEK                 | <u></u>                               | <u> </u> |          | v        | -            | -            |             |             | -                 | 9        |
| /   | LOCUST POINT                 | · •                                   | <u>٢</u> |          | ·/       | <u> </u>     |              |             |             |                   | 10       |
| _   | HONES TELAND                 | ~                                     | <b>1</b> |          | V        | <u></u>      |              |             |             |                   | 11       |
|     | OLD WOMANS GUT               | · -                                   |          |          | - 4/     |              | <i>ا</i>     |             |             |                   | 12       |
|     | TAYLOR ISLAND POINT          | <b>-</b>                              | V        |          |          |              |              |             |             |                   | 13       |
|     | Michaelsville                |                                       |          |          |          |              |              |             |             |                   | 14       |
|     | Chesapeake Bay               |                                       |          |          |          | <u> </u>     |              |             | <u></u>     |                   | 15       |
|     |                              |                                       |          | .mes ur  | crimod i | red ap;      | roven        |             |             |                   | 16       |
|     |                              |                                       | by       |          |          | on 8/3/      | 1            |             |             |                   | 17       |
|     |                              |                                       |          |          |          |              | <u></u>      |             |             |                   | 18       |
| }   |                              |                                       |          |          |          |              |              |             |             |                   | 19       |
| }   |                              |                                       |          |          |          |              |              | <u></u>     |             |                   | 20       |
| ,   |                              |                                       |          | -        |          |              |              |             |             |                   | 21       |
|     | _                            |                                       |          |          | ,        |              |              |             |             |                   | 23       |
|     |                              |                                       |          |          |          | •            |              |             |             |                   | 24       |
|     |                              |                                       |          |          |          |              |              |             |             |                   | 25       |
|     |                              |                                       |          |          | _        |              |              |             |             |                   | 26       |
|     |                              |                                       |          |          |          |              |              | -           |             |                   | 27       |
| .   |                              |                                       |          |          |          |              |              |             |             |                   | M 234 /R |

## PLANE COORDINATE GRID SYSTEM

Positions of grid intersections used for fitting the grid to this compilation were computed by Division of Geodesy and the computation forms are included in this report.

| Positions plotted by                                     | H, D, REED, JR.          |
|--|--------------------------|
| Positions checked by                                     |                          |
| Grid inked on machine b                                  | ру                       |
| Intersections inked by                                   | <u> </u>                 |
| Points used for plotting grid:                           |                          |
| x=1,040,000 FT<br>Y=585,000 FT                           | x 1,030,000<br>y 570,000 |
| x (,040,000<br>y 555,000                                 | <u>x</u>                 |
| x 1,020,000  | <u>x</u>                 |
| x (1020,000<br>y 555,000                                 | <u>x</u>                 |
| Triangulation stations used for of 4-1,043,694-9°517,435 | checking grid:           |
| 1. "O" (U.S.E.), 1937 (Ref. Sta.                         |                          |
| 2.   | 6                        |
| 3  | 7                        |
| 4.   | 8.                       |

|                       |                         | Plane coordinates                       | on Lamber                           | t projection                | X = 2,220,000 |
|-----------------------|-------------------------|---|-------------------------------------|-----------------------------|---------------|
|                       |                         | State Md                                | 13.42                               | $\lambda = 76^{\circ}$      | y = 585,000   |
|                       |                         | rabular difference                      | e of K for I                        | υι ψ <u>=</u>               |               |
| R (for mi             | n. of ø )               |   | ⊥y' ( for mir                       | n. of ø )                   |               |
| _Cor. for se          | c. of $\phi_{}$         |   | Cor. for se                         | c. of φ                     | +             |
| _R                    | <u> </u>                | 25,785,052                              |                                     |                             | 584,061 4     |
|                       |                         |   | ∭y"_(=2R s                          | $\ln^2 \frac{\theta}{2}$ )  | + 939         |
| $_{-}	heta$ ( for mir | n. of <b>λ</b> .)       | 0 ' "                                   | y                                   | 2.                          | 585,000       |
| Cor. for se           |                         | _                                       | T J                                 |                             |               |
| _θ                    | ,c. or /s               | + 0 29 19.8861                          | ₽                                   |                             | 0 , 11        |
| -θ''                  | For machine computation | "                                       | # 2                                 | For machine computation     |               |
|                       |                         |   | log θ''                             |                             | ,0000363987   |
| log θ''               | <u> </u>                |   | colog 2                             |                             | 9.69897000    |
| _S for .θ             | }                       |   | S for $\frac{\theta}{2}$            | ]                           |               |
| log sin €             | sin <i>\theta</i>       | .0085320650                             | log sin ∉                           | $\sin \frac{\theta}{2}$     |               |
| log R                 |                         |   |                                     | R sin $\frac{\theta}{2}$    |               |
| log x'                |                         |   | $\log \sin^2 \frac{\theta}{\theta}$ | $R \sin^2 \frac{\theta}{2}$ |               |
|                       | D sin A                 |   | 11 -                                | 711 3111 2-                 |               |
| _x'                   | R sin θ                 | 2000,000.00                             | log R                               |                             | 0.20102000    |
| <u> </u>              | <u> </u>                | 2-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0 | 71                                  |                             | 0.30103000_   |
| х                     |                         | 1,020,000                               | log y <u>"</u>                      | <u>·</u>                    |               |
|                       | <u> </u>                | 7,7 = 2,7 7,00                          | <u> </u>                            | (                           | <u> </u>      |

 $x = 2,000,000.00 + R \sin \theta$ 

 $y = y' + 2R \sin^2 \frac{\theta}{2}$ 

y'= the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y', and  $\theta$  are given in special tables

| 7               |                         | Plane coordinates  | on Lamber                      | t projection             | 1,040,000                              |
|-----------------|-------------------------|--|--------------------------------|--------------------------|--|
|                 |                         | State 7  | <u>ud.</u> ;                   |                          | $\chi = \frac{2,240,000}{9 = 585,000}$ |
|                 |                         | $ \frac{\phi = 39^{\circ} 26'}{\text{Tabular differenc}} $ |                                |                          | 09 01.10                               |
| R ( for mir     | n. of ø )               |  | y' ( for mir                   | n. of ø )                |  |
| Cor. for se     | c. of <i>φ</i>          | -  | Cor. for se                    | c. of <i>ø</i>           | +                                      |
| R               | <u> </u>                | 25,785,231   | y'                             | :_2 θ \ ``               | 583,882.3                              |
| heta ( for min  | . of λ )                | 0 1 11   | _y''_(=2R s                    | in- <del>2</del> )       | 584999                                 |
| Cor. for se     | •                       |  | ,                              |                          | /                                      |
| θ               | <b></b>                 | + 0 31 598700  | <u>θ</u><br>2                  |                          | 0 ' "                                  |
| θ''             | For machine computation | 71   | ļ                              | For machine computation  |  |
|                 |                         | <del> </del>   | log θ' <u>'</u>                |                          | .0000433172                            |
| og <i>θ''</i>   |                         |  | colog 2                        | <del>-</del>             | 9.69897000_                            |
| S for ,θ        |                         |  | S for $\frac{\theta}{2}$       |                          |  |
| og sin <i>0</i> | sin <i>0</i>            | ,009 3076581   | $\log \sin \frac{\theta}{2}$   | sin $\frac{\theta}{2}$   |  |
| og R            |                         |  |                                | R sin $\frac{\theta}{2}$ |  |
| og x'           |                         |  | $\log \sin^2 \frac{\theta}{2}$ | _R sin² <del>₫</del>     |  |
| x'              | R sin $	heta_{-}$       | 800,000.00   | log R                          |                          |  |
| •               |                         | _2,000,0000000   | log 2                          | <u> </u>                 | 0.30103000_                            |
| x               |                         | 2,240,000  | log y''                        | ·                        |  |
| <u></u>         |                         | 1,040,000  |                                |                          |  |

 $x = 2,000,000.00 + R \sin \theta$ 

 $y = y' + 2R \sin^2 \frac{\theta}{2}$ 

y' = the value of y on the central meridian for the latitude of the station

 $S = log \ of \ ratio \ for \ reducing \ arc \ expressed \ in \ seconds \ to \ sine$  (see log tables)

R, y', and  $\theta$  are given in special tables

|                                 | 1                       | Plane coordinates      | on Lamber                                 | t projection               | 1,040,000               |
|---------------------------------|-------------------------|------------------------|---|----------------------------|-------------------------|
|                                 |                         | rialle coordinates     | OII Laitibei                              | t projection               | X= <del>2,240,000</del> |
|                                 |                         | State Ma               | <u> </u>                                  | Station                    | y = 555,000             |
| <u>.</u>                        |                         | $\phi = 39^{\circ} 2i$ | 15.15                                     | $\lambda = 76^{\circ}$     | 09 0"4.66               |
|                                 |                         | Tabular difference     |   |                            |                         |
|                                 |                         |                        |   | , , , ,                    |                         |
| -R (for mir                     | n. of ø )               |                        | y' ( for mir                              | n. of ø )                  |                         |
| _Cor. for se                    | c. of <i>ø</i>          |                        | Cor. for se                               | c. of <i>ø</i>             | +                       |
| _R                              |                         | 25,815,230             | 1 y <u>'</u>                              |                            | <i>553,883. 3</i>       |
|                                 |                         |                        | y <u>"_</u> (=2R s                        | $\sin^2\frac{\theta}{2}$ ) | + 1116                  |
| $_{	extcolored}	heta$ ( for min | . of λ)                 | 0 1 11                 | y   | -                          | 554999                  |
| Cor. for se                     |                         | _                      |   |                            |                         |
| _θ                              |                         | +0 31 57.6356          | $\frac{\theta}{2}$                        |                            | 0 ' "                   |
| $\theta_{i}$                    | For machine computation | "                      |   | For machine computation    |                         |
|                                 |                         |                        | log θ' <u>'</u>                           |                            | ,0000,432167            |
| -log θ''                        |                         |                        | colog 2                                   |                            | 9.69897000              |
| _S for .θ                       |                         |                        | S for 8                                   |                            | _                       |
| log sin $	heta$                 |                         | .009 2968259           | log sin $\frac{\theta}{2}$                | sin <u>#</u>               | ·                       |
| _log R                          |                         |                        |   | _R sin <del>2</del>        |                         |
| _log x'                         |                         |                        | $\frac{1}{2}\log \sin^2 \frac{\theta}{3}$ | <br>_R sin² <del>g</del>   |                         |
| _x'                             | R sin $\theta$          |                        | log R                                     | 2                          |                         |
|                                 | , Jiii 0                | -2,000,000.00          | 11 .                                      |                            | 0.30103000_             |
| X                               |                         | 2 240 000              | log y''                                   |                            |                         |
|                                 |                         | 1,040,000              |   |                            |                         |

 $x = 2,000,000.00 + R \sin \theta$ 

 $y = y' + 2R \sin^2 \frac{\theta}{2}$ 

y'= the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y', and  $\theta$  are given in special tables

|                                       | Plane coordinates          | on Lambert projection                                      | 1,030,000                             |
|---------------------------------------|----------------------------|--|---------------------------------------|
|                                       |                            |  | X= 2,230,000                          |
|                                       | State M                    | d. Station _   | 3 = 570,000                           |
|                                       | $\phi = 39^{\circ} 23$     | $44.31 \lambda = 76$                                       | 11 10.25                              |
|                                       | ·                          | e of R for 1" of $\phi =$                                  |                                       |
|                                       | Tabulai dillerence         | e or it for 1 or ψ =                                       |                                       |
| _R ( for min. of ø )                  |                            | y' ( for min. of ø )                                       |                                       |
| _Cor. for sec. of $\phi$              |                            | _Cor. for sec. of $\phi$                                   | +                                     |
| _R                                    | 25,800,138                 | <sub>v</sub> ,   | 568,975 -2                            |
|                                       |                            | $y''_{-}(=2R \sin^2 \frac{\theta}{2})$                     | + 1025                                |
| $_{-}	heta$ ( for min. of $\lambda$ ) | 0 ' "                      | y  | 570,000                               |
| Cor. for sec. of $\lambda$            |                            |  | , , , , , , , , , , , , , , , , , , , |
| _θ                                    | + 0 30 38.8111             | <u>θ</u>   | 0 , "                                 |
| θ" For machine computation            | "                          | For machine computation                                    |                                       |
|                                       |                            | log θ"   | .0000397367                           |
| _log θ''                              |                            | colog 2  | 9.69897000                            |
| _S for .θ                             |                            | S for $\frac{\theta}{2}$                                   |                                       |
| log sin $\theta$ sin $\theta$         | .0089146897                | $\log \sin \frac{\theta}{2} - \sin \frac{\theta}{2}$       |                                       |
| log R                                 |                            | $\mathbb{R} \sin \frac{\theta}{2}$                         |                                       |
| _log x'                               |                            | $\log \sin^2 \frac{\theta}{2}$ R $\sin^2 \frac{\theta}{2}$ |                                       |
| x'R sin θ_                            | 800,000,00                 | log R  | ,                                     |
|                                       | 2 <del>,000,000.0</del> 0_ | log 2  | 0.30103000                            |
| _x                                    | 2,230,000                  | log y''  |                                       |
|                                       | 1,630,000                  |  |                                       |

 $x = 2,000,000.00 + R \sin \theta$ 

 $y = y' + 2R \sin^2 \frac{\theta}{2}$ 

y'= the value of y on the central meridian for the latitude of the station

S = log of ratio for reducing arc expressed in seconds to sine (see log tables)

R, y', and  $\theta$  are given in special tables

|                            |                     | Plane c | coordinates                  | on Lambert                     | projection                     | 2 =        | 2,220,0 |       |
|----------------------------|---------------------|---------|------------------------------|--------------------------------|--------------------------------|------------|---------|-------|
|                            |                     |         | ate Ma                       |                                | Station $\lambda = 76^{\circ}$ | 길 =        | 555, a  |       |
|                            |                     | ·       | <u>= 39° 21</u>              |                                |                                | 13 19.     | 26      |       |
|                            |                     | Tabu    | lar difference               | of R for 1"                    | of $\phi =$                    |            |         |       |
| R ( for min. of            | ø )                 |         |                              | y' ( for mir                   | n. of ø )                      |            |         |       |
| Cor. for sec. of           |                     |         |                              | Cor. for sec                   | c. of <i>ø</i>                 | +          |         |       |
| _R                         |                     | 25,815  | ,051                         | y <u>'</u>                     |                                | <u>5</u> 5 | 54,062  | 3     |
|                            |                     |         |                              | _y''_(=2R s                    | $\ln^2 \frac{\theta}{2})$      | +          | 937     | 5     |
| $_{-}\theta$ ( for min. of | λ)                  | 0       | · "                          | y                              |                                | 55         | 5,000   |       |
| Cor. for sec. of           |                     | <u></u> |                              |                                |                                |            | ,       |       |
| $\theta$                   |                     | + 0 29  | 17.8400                      | $\frac{\theta}{2}$             |                                |            | 0 " "   |       |
| ' For                      | machine<br>putation |         | 11                           |                                | For machine computation        |            |         |       |
|                            |                     |         |                              | $\log  	heta''$                |                                | . 0 0      | 0036314 | /3    |
| -log θ''                   |                     |         |                              | colog 2                        |                                |            | 0.69897 |       |
| _S for .θ                  |                     | ·       |                              | S for $\frac{\theta}{2}$       |                                |            |         |       |
| log sin $\theta$           | sin 🕰 .             | ,00852  | 21456                        | $\log \sin \frac{\theta}{2}$   | _sin 😤                         |            |         |       |
| log R                      |                     |         |                              |                                | _R sin <del>β</del>            |            |         | ,<br> |
| _log x'                    |                     |         |                              | $\log \sin^2 \frac{\theta}{2}$ | $R \sin^2 \frac{\theta}{2}$    |            |         |       |
| _X′                        | R sin <i>⊕</i> _    |         | ,000.00                      | _log R                         |                                |            |         |       |
|                            |                     |         | ) <del>, 0 0 0 0 0</del> 0 0 | log 2                          |                                | 0          | .30103  | 000   |
| _x                         |                     | 2,22    | <del>0,000</del> -           | log y''                        | ·                              |            |         |       |
|                            |                     |         | 0,000                        |                                |                                |            |         |       |

 $x = 2,000,000.00 + R \sin \theta$ 

 $y = y' + 2R \sin^2 \frac{\theta}{2}$ 

y' = the value of y on the central meridian for the latitude of the station

 $S = log \ of \ ratio \ for \ reducing \ arc \ expressed \ in \ seconds \ to \ sine$  (see  $log \ tables$ )

R, y', and  $\theta$  are given in special tables

## REVIEW OF AIR PHOTO COMPILATION NO.

Chief of Party: L.W. Swanson

Compiled by Pon A. Vones

Project: H.T.215

Instructions dated: May 13, 1938

- 1. The charts of this area have been examined and topographic information necessary to bring the charts up to date is shown on this compilation. (Par. 16a, b,₹,₹,e,g and ♣; 26; and 64)
- -2. Change in position, or non-existence of wharfs, lights, and other topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g, n)
  - 3. Ground surveys by plane table, sextant, or theodolite have been used to supplement the photographic plot where necessary to obtain complete information, and all such surveys are discussed in the descriptive report. (Par. 65; and 66 d.e)
  - 4. Blue-prints and maps from other sources which were transmitted by the field party contain sufficient control for their application to the charts. (Par. 28)
  - 5. Differences between this compilation and contemporary plane table and hydrographic surveys have been examined and rectified in the field before forwarding the compilations to the office and are discussed in the descriptive report.

No contemporary plane tuble Survey

No compensor made with hydrographic Survey as
it was not available to this party at this time.

6. The control and adjustment of the photo plot are discussed in the descriptive report. Unusual or large adjustments are discussed in detail and limits of the area affected are stated. (Par. 128; 44; and 66 6.7.1)

7. High water line on marshy and mangrove coast is clear and adequate for chart compilation. (Par. 16a, 43, and 44)

NOTE: Strike out paragraphs, words or phrases not applicable and modify those requiring it. Paragraph numbers refer to those in the Topographic Manual. Refer also to the pamphlet "Notes on the Compilation of Planimetric Line Maps from Five Lens Air Photographs."

- 8. The representation of low water lines, reefs, coral reefs and reeks, and legends pertaining to them is satisfactory. (Par. 66, 37, 38, 59, 40, 41)
- 9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1934, and circular 31, 1934. (Par. 29, 30, and 57)
- 10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, complied with. (Par. 16d, e; and 60)

  Land marks fatting on this are not recommended for charting because of their military importance in connection with Aberdeen Proving bround;
- 11. All bridges shown on the compilation are accompanied by a note stating whether fixed or draw, clearance, and width of draw if a draw bridge. Additional information of importance to navigation is given in the descriptive report. (Par. 16c)
- 12. Geographic names are shown on the overlay tracing. The accepted local usage of new names has been determined and they are listed in the report, together with a general statement as to source of information and a specific statement when advisable. Complete discussion of place names differing from the charts and from the U. S. G. S. Quadrangles is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and not)
- 13. The geographic datum of the compilation is N.A. 1927 and the reference station is correctly noted.
- 14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66)
- 15. The drafting is satisfactory and particular attention has been given the following:
  - 1. Standard symbols authorized by the Board of Surveys and Maps have been used throughout except as noted in the report.
  - 2. The degrees and minutes of Latitude and Longitude are correctly marked.

- 3. All station points are exactly marked by fine black dots.
- 4. Closely spaced lines are drawn sharp and clear for printing.
- 5. Topographic symbols for similar features are of uniform weight.
- 6. All drawing has been retouched where partially rubbed off.
- 7. Buildings are drawn with clear straight lines and square corners where such is the case on the ground.

(Par. 34, 35, 36, 37, 38, 49, 40, 41, 41, 41, 42, 44, 46, 48)

No additional surveying is recommended at this time.

17. Remarks:

18. Examined and approved;

hief of Party

## DIVISION OF CHARTS

## Section of Field Records

## REVIEW OF AIR PHOTOGRAPHIC SURVEY T-5677

There were no graphic control surveys in this area.

## Previous Topographic Surveys.

T-190 (1845) 1:20,000. T-212 (1845) 1:20,000. T-2377 (1899) 1:20,000. T-2388 (1899) 1:20,000.

Because of the difference in scale and the length of time since the previous surveys only a general comparison was made.

T-5677 is complete and adequate to supersede the sections of the above surveys which it covers except for contours.

## Contemporary Hydrographic Surveys.

H-6366 (1938) 1:10,000.

T-5677 and H-6366 have been compared during this review and are in agreement.

## Chart 1226 (April 5, 1939) and Chart 572 (Compilation in progress)

T-5677 was applied to Chart 572 prior to completion of this review. Confidential details within the Aberdeen Proving Ground have since been removed from T-5677.

## Confidential Information.

T-5677 is partly within the Aberdeen Proving Ground. Confidential copies of T-5677 have been furnished the Commanding Officer, Aberdeen Proving Ground and a confidential plate is filed in the vault for possible future printing. Confidential information has been painted off of the negatives in accordance with instructions from the Commanding Officer, Aberdeen Proving Ground and a new non-confidential plate made for printing the file copy and copies for sale to the public.

The instructions regarding the removal of confidential details consisted of notes made on a copy of T-5677.

This copy has been destroyed. The original celluloid drawing and all confidential prints of T-5677 have been destroyed.

Instructions regarding removal of confidential information from T-5677 have been reported to the Nautical Chart Section, September 10, 1940.

Reviewed in the office by - T. M. Price, January 1940.

Inspected by - B. G. Jones, September 17, 1940.

Examined and approved:

T. B. Reed,

Chief, Section of Field Records.

Chief, Division of Charts.

Field Work.

Chief, Division of H. & T.