State: S. Carolina

DESCRIPTIVE REPORT

Topographic Sheet No. 6070

LOCALITY

Cooper and Wando Rivers

Charleston

10.34

CHIEF OF PARTY

B. H. Rigg
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

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. C

REGISTER NO. 6070

State South Carolina

General locality Charleston, S. C.

Locality Cooper & Wando Rivers

Scale 1-10,000 Date of survey June 19, 1934

Vessel Party No. 12

Chief of party Lt. Benjamin H. Rigg

Surveyed by Augustus H. Rogers, Jr.

Inked by Augustus H. Rogers, Jr.

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated October 10, 1933

OUTLINE OF REPORT TO ACCOMPANY ALUMINUM CONTROL
SHEET NO. C

1. INSTRUCTIONS.
2. PURPOSE OF SURVEY.
3. LIMITS OF SHEET.
4. CONTROL.
5. SURVEYING METHODS USED.
6. DESCRIPTION OF TERRITORY.
7. NEW NAILS.
8. LANDMARKS.
9. STATIONS PERMANENTLY MARKED.
10. FIELD INSPECTION.
11. AIDS TO NAVIGATION.
INSTRUCTIONS

The survey was carried out under original instructions dated October 10, 1933, also Directors letters 22 LG 1990 (19), 26 AHW 293, and circular letter No. 30.

PURPOSE OF SURVEY

The purpose of this supplementary survey was to rod in additional shoreline as a check for photo-compilation, to cut in additional landmarks, to locate and describe additional U.S.E.D. stations, to locate additional topographic features such as docks and pipelines, and to check all ranges. Additional Aids to Navigation were also located.

LIMITS OF SHEET

This sheet covers the area from N. lat. 32° 49' to 32° 52.1' and W. long. 79° 53.1' to 79° 58' and includes sections of shoreline on the Cooper and Wando Rivers.

The Shipyard River which falls on this sheet was surveyed on a 1-5,000 scale on topo sheet, field letter "X".

CONTROL

Control was from triangulation stations listed below with their dates of execution:

South Radio Tower 1932
North Radio Tower 1932
Navy Yard Oil Tank 1933
Oak 1889
A. A. Tank 1933
Tuxbury Tank 1933
Shall 1928
Bluff 1928

Pile 1933
Minc 1928
Chandler 1928
Rath 1928
U.S.E.D. House 1933
" R.P. 2-C 1933
" R.P. 3-C 1933
" Planters 1933
SURVEYING METHODS USED

The usual U. S. Coast and Geodetic Survey methods were used. All hydrographic signals, landmarks, and aids to navigation were cut in as completely as possible from triangulation stations. In some cases it was impossible due to obstructions. In these cases, cuts were taken from positions located by a three point fix, checking with resections.

Drum Island Range -- A point was obtained on this range by setting up on the Southern R.R. loading dock and taking a rod reading on the range. Reading was carefully checked.

Drum Island channel range as listed on the present Local Light List is 119° 30'. As determined by topography it is 118° 30'. The distance between ranges as listed in the Light List is 453 yards; as scaled from the topo sheet, 466 yds. The Director was notified of these facts by letter on July 16, 1932.

Cooper River Lower Range -- In the same manner a point on the Cooper River Lower Range was determined. Value as recorded in the Light List was 00° 00'; as determined by topography was 00° 06'. The distance as listed in the Light List is 325 yds, and as scaled from the topo sheet is 322.4 yds.

Navy Yard Channel Range -- A point was obtained on this range by taking a rod reading to point on land that was on range. Reading was carefully checked. The comparison of the value of this range published in the Light List with the value obtained from aluminum topographic sheet is as follows:

<table>
<thead>
<tr>
<th>Light List</th>
<th>Topography</th>
</tr>
</thead>
<tbody>
<tr>
<td>138° from preceding.</td>
<td>137° 30' from preceding.</td>
</tr>
</tbody>
</table>
The distance as listed in the Light List is one mile (1760 yds.) and that scaled from topo sheet is 2266 yds.

The Cooper River Upper Range -- The point on this range was obtained by finding the point on channel range that was also on range with North Radio Tower and Navy Yard Oil Tank. This point was marked and the distance taped from the point to the Navy Yard Oil Tank.

The comparison of the value of this range as published in the Light List with the value obtained from the topographic sheet is as follows:

<table>
<thead>
<tr>
<th>Light List</th>
<th>Topography</th>
</tr>
</thead>
<tbody>
<tr>
<td>98° 30' from proceed</td>
<td>98° 41' from proceed</td>
</tr>
</tbody>
</table>

The distance as listed in the Light List in 240 yds. and as scaled from topo sheet is 222 yds.

The point on this range shown on the sheet is not in the range line that is drawn, but is on the true range line. The line shown was not erased and redrawn for fear of destroying the range points.

DESCRIPTION OF TERRITORY

The territory adjacent to the rivers covered by this sheet is mostly mud covered with low marsh grass. This grass is partially covered by storm or spring tides. The center and upper end of Daniel Island is good farming land. The east bank of the Wando River is also bordered by farming lands. The west bank of the Cooper River has numerous oil yards, lumber yards and ship yards.

NEW NAMES

There are none.
LANDMARKS

The landmarks listed below are also listed and described on form No. 567 and 521, which will accompany the report:

Located by Topography

Stack -- Tallest of 4
Flat Top Tank
Concrete Stack
Gulf Tank
Gray Tank
Tall Black Tank
Tall Red Brick Stack
Tall Slim Black Stack

Located by Triangulation

North Radio Tower
Tuxbury Tank

U.S.E.D. PERMANENTLY MARKED

A. U.S.E.D. Stations located by triangulation, Witherbee 1933:

U.S.E.D. OAK
" HOUSE
" R.P. 2-C
" R.P. 3-C

B. U.S.E.D. Stations located by topography & found to be permanently marked:

U.S.E.D. SEXTANT
" TOWER
" DACO
" R.P. 4-C
" POINT
" PIPE
" DANIELS CREEK

One Bench Mark, no number, was also located. The U. S. Engineers' Office was unable to give us this number. Descriptions of all these stations accompany this report on form No. 524.

No hydrographic signals were permanently marked.

FIELD INSPECTION

The requirements stated on page 30 in "Notes on Compilation of Planimetric Line Maps" have been complied with as noted in the
descriptive report accompanying sheet "K". Five and one tenth statute miles of shore line were ruled in and checked with the celluloid sheet.

AIDS TO NAVIGATION

Listed below are the Aids to Navigation with their D.M.'s and D.P.'s:

<table>
<thead>
<tr>
<th>Name</th>
<th>Lat.</th>
<th>D.M. (ft)</th>
<th>Long. (ft)</th>
<th>D.P. (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light No. 11</td>
<td>32° 51'</td>
<td>112.3</td>
<td>79° 56'</td>
<td>1293.7</td>
</tr>
<tr>
<td>Light No. 9</td>
<td>32° 50'</td>
<td>2190.0</td>
<td>79° 56'</td>
<td>255.5</td>
</tr>
<tr>
<td>Front Range</td>
<td></td>
<td>(1782.0)</td>
<td></td>
<td>(347.2)</td>
</tr>
<tr>
<td>Cooper River Ranges</td>
<td>32° 51'</td>
<td>66.3</td>
<td>79° 55'</td>
<td>1213.0</td>
</tr>
<tr>
<td>Rear Range</td>
<td></td>
<td>(1189.3)</td>
<td>79° 55'</td>
<td>(343.0)</td>
</tr>
<tr>
<td>Cooper River Lower</td>
<td>32° 51'</td>
<td>359.0</td>
<td></td>
<td>1217.2</td>
</tr>
<tr>
<td>Rear Range</td>
<td></td>
<td>(1815.0)</td>
<td>79° 55'</td>
<td>(548.0)</td>
</tr>
<tr>
<td>Cooper River Upper</td>
<td>32° 51'</td>
<td>33.3</td>
<td>79° 55'</td>
<td>1012.2</td>
</tr>
<tr>
<td>Light No. 7</td>
<td>32° 50'</td>
<td>461.3</td>
<td>79° 55'</td>
<td>(151.5)</td>
</tr>
<tr>
<td>Light No. 10</td>
<td>32° 49'</td>
<td>1576.0</td>
<td>79° 55'</td>
<td>1015.8</td>
</tr>
<tr>
<td>Light No. 5-A</td>
<td>32° 49'</td>
<td>265.3</td>
<td>79° 56'</td>
<td>252.8</td>
</tr>
<tr>
<td>Light No. 8</td>
<td>32° 49'</td>
<td>59.0</td>
<td>79° 56'</td>
<td>1019.2</td>
</tr>
</tbody>
</table>

Respectfully submitted by,
Augustus M. Rogers, Jr.

Forwarded by,
Benjamin H. Rice,
Assistant G.E. Engineer
The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted.

<table>
<thead>
<tr>
<th>Description</th>
<th>Lat</th>
<th>Long</th>
<th>Datum</th>
<th>Method of Determination</th>
<th>Charts Affected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stack tallest of four</td>
<td>32°50'</td>
<td>79°56'</td>
<td>1927</td>
<td>Plane Table</td>
<td>1239 &amp; 1470</td>
</tr>
<tr>
<td>Tuxbury Tank</td>
<td>32°50'</td>
<td>79°57'</td>
<td>1933</td>
<td>Schoppe</td>
<td></td>
</tr>
<tr>
<td>Flat Top Tank</td>
<td>32°50'</td>
<td>79°57'</td>
<td>1933</td>
<td>Witherbee</td>
<td></td>
</tr>
<tr>
<td>Concrete Stack</td>
<td>32°50'</td>
<td>79°56'</td>
<td>1933</td>
<td>Plane Table</td>
<td></td>
</tr>
<tr>
<td>Gulf Tank</td>
<td>32°49'</td>
<td>79°56'</td>
<td>1933</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gray Tank</td>
<td>32°49'</td>
<td>79°56'</td>
<td>1933</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tall Black Tank</td>
<td>32°49'</td>
<td>79°56'</td>
<td>1933</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Flat Tank</td>
<td>32°49'</td>
<td>79°56'</td>
<td>1933</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tall Red Brick Stack</td>
<td>32°49'</td>
<td>79°56'</td>
<td>1933</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tall Slim Black Stack</td>
<td>32°49'</td>
<td>79°57'</td>
<td>1933</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North Radio Tower</td>
<td>32°51'</td>
<td>79°57'</td>
<td>1933</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A list of objects carefully selected because of their value as landmarks as determined from seaward together with individual descriptions, must be furnished in a special report on this form, and a copy of such report must be attached by the Chief of Party to his descriptive report.

The selection, determination, and description of these points are an important factor in the value of the chart. Landmarks selected at appropriate intervals can be clearly charted. However, when none is outstanding, a group of two or three objects may by their interrelationship provide positive identification. A group so selected should be indicated.

The description of each object should be short, but such as will clearly identify it; for example, a standpipe, elevated tank, gas tank, church spire, tall stack, red chimney, radio mast, etc. Assign numerals to landmarks to indicate: (1) offshore, (2) ishore, (3) harbor. 1, 2, 3 would be a mark useful on all charts. Generally, flagstaffs and like objects are not sufficiently permanent to chart.