

5962

U. S. COAST & GEODETIC SURVEY
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Rev. Dec. 1933
DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY
R. S. PATTON, DIRECTOR

DESCRIPTIVE REPORT

Topographic } Sheet No. 18 **5962**
Hydrographic }

State North Carolina

LOCALITY
NEUSE RIVER

Pierce Creek to Lower Duck Creek

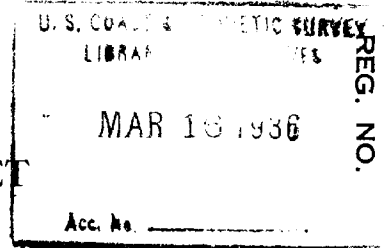
1935

CHIEF OF PARTY
John A. Bond

5962

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

HYDROGRAPHIC TITLE SHEET



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

Field No. 18 **5962**
5162

REGISTER NO.

State North Carolina

General locality NEUSE RIVER

Locality Pierce Creek to Lower Duck Creek

Scale 1:20,000 Date of survey Sept.-Dec., 1935

Vessel MIKAWA

Chief of Party John A. Bond

Surveyed by F. R. Gossett - C. F. Chenworth

Protracted by George W. Lovesee

Soundings penciled by George W. Lovesee

Soundings in ~~fathoms~~ feet

Plane of reference M.L.W.

Subdivision of wire dragged areas by _____

Inked by F. C. McKenney + J. G. Ladd

Verified by J. G. Ladd

Instructions dated August 31, 1934

Remarks: _____

DESCRIPTIVE REPORT

To Accompany Hydrographic Sheet No. 18

NEUSE RIVER, Pierce Creek to Lower Duck Creek.

DATE OF INSTRUCTIONS - August 31, 1934

Project - HT-197

LIMITS

The sheet, surveyed on a scale of 1:20,000 covers the main body of the Neuse River from Pierce Creek to Lower Duck Creek. The adjoining inshore area from Pierce Creek to Pierson Point was surveyed on Sheet 20. The inshore area in the vicinity of Adams Creek is covered on Sheet 19; the entrances to Clubfoot Creek and Hancock Creek and Beard Creek are covered on Sheet 21; the entrance to Slocum Creek is covered on Sheet 22. Sheet 18 is joined on the west by Sheet 23. All adjoining sheets were surveyed this season by the party of the MIKAWA.

SURVEY METHODS

Standard Coast Survey methods of hand lead soundings and sextant fixes were used throughout. Leadline was Samson Mahogany tiller rope graduated in feet and fathoms, used with an 8 pound lead. The leadline held its length remarkably well and no leadline corrections are necessary throughout any of the work.

Lieutenant (j.g.) F. R. Gossett was in charge of the work through "c" day; the remainder of the sheet was completed by Ensign C. F. Chenworth. The main body of the river was surveyed, for the most part, with the 30 foot Coast Survey launch No. 75, a small amount of work being done by the 40 foot twin-screw hired launch LONA. The inshore area was surveyed using a 24 foot skiff equipped with sounding chair and plotting table and powered by a Johnson 9 H.P. outboard motor.

DISCREPANCIES

No discrepancies are known to exist. Errors in the sounding records, principally in recording of angles and fixes, have been adjusted during the smooth plotting and noted in colored pencil in the sounding records.

Two cross lines on the western end of the sheet show a disagreement of about 1 foot with the normal system of lines. A large part of this discrepancy is tracable to disregarded fractions in the reducers.

See Rev.
Part 4 for
add'l remarks.

DANGERS

No dangers are known to exist which would obstruct navigation in the main body of the river other than shoals extending off the various points, all of which are clearly defined by the depth curve.

COMPARISON WITH PREVIOUS SURVEYS

In comparison with soundings shown on chart 538 general river depths appear unchanged. A detailed examination was made in the vicinity of the shoal soundings charted $1\frac{1}{2}$ miles south of Oriental. In the vicinity of the 12 foot spot charted in Lat. $34^{\circ} 59.8'$, Long. $76^{\circ} 42.1'$ the shoalest depth obtained was 13 feet. In the area $\frac{1}{3}$ mile east of this several detached spots of 14, 15 and 16 feet were found which agreed substantially with the charted soundings. The 15 foot spot charted in Lat. $34^{\circ} 59.2'$, Long. $76^{\circ} 42.4'$ was verified, due east of which in Long. $76^{\circ} 42'$ a similar spot was found. These shoal spots are hard bottom, probably oyster lumps. ✓
15' dgs found 170m. to NW. Name.
✓
Referred to as oyster beds in D.R. of H-4150(1920)

The 6 foot curve off Cherry Point has extended about 300 meters offshore from its charted position, the 12 foot curve in this area remaining substantially the same. Depth curves off other points remain practically unchanged. ✓ ✓

SHORELINE ON SMOOTH SHEET

Shoreline on the north side of the river east of the meridian $76^{\circ} 44'$, and on the south side of the river east of triangulation station Adams was obtained from air-photo compilations. West of these points all shoreline was obtained from standard topographic surveys on aluminum mounted sheets executed this season by the party of the MIKAWA. ✓

Shoreline was accurately transferred to the smooth sheet, also topographic signals, from the 1:10,000 air-photo and topographic sheets by preparing tracings on the original scale and projecting them to the desired scale on the smooth sheet by the new-type projector in the office of Lieutenant Grenall.

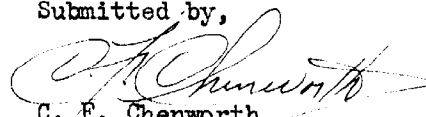
NON-FLOATING AIDS TO NAVIGATION

A list of non-floating aids to navigation covering the entire season's project has been submitted under separate cover. ✓

LANDMARKS FOR CHARTS

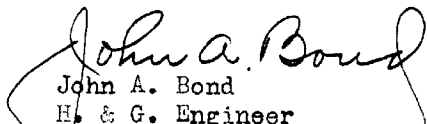
"Landmarks for Charts" will be made the subject of a separate report to be submitted for the entire project. ✓

Submitted by,



C. F. Chenworth
Aid, C. & G. S.

Approved by:

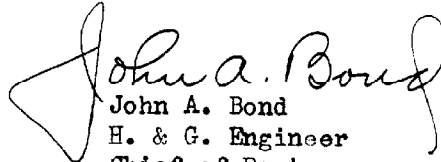


John A. Bond
H. & G. Engineer
Chief of Party

LIST OF STATISTICS - SHEET 18

Date	Day	Letter	Volume	Statute Miles	Soundings	Positions
Sept.	25	a	1	46.0	1106	191
	26	b	1 & 2	39.8	944	171
	27	c	2 & 3	44.5	1138	197
Oct.	3	d	3	41.3	1097	173
	4	e	3 & 4	49.1	1263	198
	10	f	4 & 5	36.6	957	182
	11	g	5	35.3	808	152
	15	h	5 & 6	20.2	612	122
	18	j	6	39.5	954	166
	21	k	6 & 7	43.7	1046	185
	22	l	7	12.8	413	86
	23	m	7	3.8	131	23
	30	n	7 & 8	14.2	482	88
Nov.	5	p	8	13.7	447	84
	11	q	8 & 9	25.6	728	146
	13	r	9	4.5	153	31
	19	s	9	23.4	652	129
Dec.	2	t	9	2.2	56	12
	3	u	9 & 10	19.2	481	111
	4	v	10	4.2	102	18
	10	w	10	25.7	607	125
	18	x	10	18.5	479	89
				<u>563.8</u>	<u>14656</u>	<u>2679</u>

Smooth Sheet No. 18 was plotted under the immediate supervision of the Chief of Party. The sheet and accompanying records have been inspected and are approved.


John A. Bond
H. & G. Engineer
Chief of Party

HYDROGRAPHIC SURVEY NO. 5962

Smooth Sheet 1

Boat Sheet 1

Sounding Records 10 Vols. _____

Descriptive Report yes

Title Sheet yes

List of Signals yes

Landmarks for Charts (Form 567) yes

Statistics yes

Approved by Chief of Party yes

Recoverable Station Cards (Form 524) No

Special Chart for Lighthouse Service No
(Circular Nov. 30, 1933)

Remarks _____

Field Records Section (Charts).

HYDROGRAPHIC SHEET NO. **5962**

The following statistics will be submitted with the cartographer's report on the sheet:

Number of positions on sheet	2679
Number of positions checked	about 270
Number of positions revised
Number of soundings recorded	14656
Number of soundings revised	about 30
Number of signals erroneously plotted or transferred	none

Date: May 23, 1936

Verification by

Review by

Ver. Cor. by

John G. Reed

F. C. Mckenny

Harold W. Murray

..

Time:	27 hrs	} 67 1/2
"	40 1/2 "	
Time:	20 "	
	2 ..	

on N 124

H5962

Remarks

Decisions

	Remarks	Decisions
1		
2		
3		
4	There are two streams named "Mill Cr." one on each side of the main Pt. they are both on chart 538, and both on old tapes sheets.	
5	T 1051 & T 1052. Bond (H 5962) uses only the W side, or upper one.	
6	Recommend "Mill Creek" apply only	
7	to the creek on <u>WEST</u> side above	
8	Point, and the name on <u>EAST</u>	
9	side this point to be deleted from chart 538.	
10	<i>OKH</i>	
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21	the "S" has been removed in chart 538 by some previous name reviews.	
22		
23		
24		
25		
26		
27		

GEOGRAPHIC NAMES
Survey No. **H5962**

Name on Survey	On Chart No. 538 On previous survey No. T 2803 of 1866 On U. S. Coast and Geodetic Survey Maps Index From local information H 974 On local Maps P. O. Guide or Map Rand McNally Atlas U. S. Light List JS 500									
	A	B	C	D	E	F	G	H	K	
<u>Lower Duck Creek</u>	*	✓								1
<u>Slocum Creek</u>	*	✓	✓							2
<u>Beard Creek</u>	*	✓								3
<u>Mill Creek</u> ⊕	*	✓								4
<u>Hancock Creek</u>	*	✓	✓							5
<u>Wilkinson Pt.</u>	*	✓								6
<u>Cherry Pt.</u>	*		✓							7
<u>Pierson Pt.</u>	*	✓								8
<u>Clubfoot Creek</u>	*	✓	✓							9
<u>Janeiro</u>	*	✓	✓				✓			10
<u>Dawson Creek</u>	*	✓								11
<u>Long Creek</u>	*	✓								12
<u>Smith Creek</u>	*	✓	✓							13
<u>Adams Creek</u>	*									14
<u>Oriental</u>	*	✓	✓				✓			15
<u>Whittaker Cr</u>	*									16
<u>Cedar Pt.</u>	*									17
<u>Pierce Creek</u>	*									18
<u>Great I.</u>	*	✓								19
<u>Whittaker Pt</u>	*									20
<u>Green Creek</u>	*									21
<u>Garbacon Shoal</u>	*							✓		22
<u>Neuse River</u>	*						✓	✓	✓	23
										24
										25
										26
										27

Names underlined in red approved
on 4/16/36
by [Signature]

MEMORANDUM

IMMEDIATE ATTENTION

SURVEY
DESCRIPTIVE REPORT
~~PHOTO STATE OF~~

No. H **5962**
~~No. H~~

received *Mar. 16, 1936*
registered *Mar 31, 1936*
verified
reviewed
approved

This is forwarded in order that your attention may be directed to the matters as indicated below. Please initial in column 3 as an acknowledgement that your attention has been thus directed. The complete original records are available if desired. If you cannot give this your immediate attention, please initial, note, and forward to the next section marked, calling for the records at your convenience.

ROUTE		Initial	Attention called to
20			
22			
24			
25			
26			
30			
40			
62			
63			
82			
83			
88			
90			

RETURN TO

82	
----	--

W. B. Steen April 1 - '36

RAC.

TIDE NOTE FOR HYDROGRAPHIC SHEET

Division of Hydrography and Topography:

✓ Division of Charts: Attention: Mr. E. P. Ellis

Tide Reducers are approved in
10 volumes of sounding records for

HYDROGRAPHIC SHEET 5962

Locality Pierce Creek to Lower Duck Creek, Neuse River, N.C.

Chief of Party: John A. Bond in 1935
Plane of reference is mean low water reading
2.5 ft. on tide staff at *Oriental, N. C.*
5.6 ft. below B.M. 1 (1935)

There is practically no periodic tide in this area and the plane
of reference was taken 1/2 foot below mean water level.

Condition of records satisfactory except as noted below:



Chief, Division of Tides and Currents.

H-5962 (1935)

Verification Report.

1. The records are neat and legible and conform to the requirements of the Hydrographic manual, with the following exceptions, -

a. ~~no topographic feature is shown for the offshore ^{topo.} signal "Tab" at Lat. $34^{\circ}57.95'$ Long. $76^{\circ}48.1'$. The feature is not shown on the topo survey or on the boat sheet.~~

Duck blind noted on B.S. ^{10001.}

b. There is no graphic control or plane-table survey for the area east of Oriental Pt. Long. ~~Lat~~ $76^{\circ}42.8'$. (The shore line ^{in this area} originating with the air-photo compilation). However the signals ~~is~~ in this area (shown in red) appear to be identical with those shown on the inshore survey (H-5911) which were found to be signals spotted on the photographs. If this is the origin of the signals, which it unquestionably is, they should have been shown in green and not red.

2. The topographic signals, except those mentioned in par 1. b. originate with sheets which to date have not been registered, the field numbers of which are; EE, FF, GG, HH, JJ, KK, and MM, and are now in the office, are available, and have been compared. Sheet nos. are given in review. ~~xxxm.~~
3. The air-photo compilation surveys used for the shoreline east of Long 76°42.8' are T-5565 and T-5566, and have been compared.
4. There is no contemporary survey on the east. The junction on the west with H-5998 (1935-'6) has not been made since it has not been verified or inset. The same situation applies to the junction with H-5997 (1935-6) on the south west (inshore).
- The junctions with H-5905 (1935) on the south-east (inshore), H-5963 (1935) on the south and north west (inshore) and with H-5911 (1935) on the north east (inshore) have been applied and are satisfactory.

~~... but they were not~~
border line is to whether "a" & "b" day would
be 1 or $1\frac{1}{2}$ foot and "x" day would ~~be~~
~~be~~ $\frac{1}{2}$ or 1 foot reduction. In other
word a difference of about 2 tenths of a foot
on the tide staff readings ~~with~~ would have
reduced "a" and "b" reduce and increased "x"
day which would have eliminated the
discrepancy in the reduced soundings

John G. Ladd

May 1936

Substitute page for missing page [#]3

H-5962 (1935)

Discussed in Rev. ~~sum.~~
/P4

The two cross lines on the western end of the survey have been left in pencil pending a further decision, since the soundings therein are uniformly about 1 foot deeper than the normal lines. These two cross-lines were run on "X" day about 2 months later than the "a" & "b" day lines they cross. Since there is no regular periodic tide in this area the only apparent cause for any so called tide is wind and current. A recheck of the reductions was made in the tidal office and found to be O.K. However "X" day has a constant reduction of $\frac{1}{2}$ foot and "a" and "b" day a reduction of $1\frac{1}{2}$ foot which other found to be correct were found to be on the

Section of Field Records

REVIEW OF HYDROGRAPHIC SURVEY NO. 5962 (1935) FIELD NO. 18

Pierce Creek to Lower Duck Creek, Neuse River, N. C.

Surveyed in 1935

Instructions dated August 31, 1934

Hand Lead Soundings.

3 Point fixes on shore signals.

Chief of Party - John A. Bond.

Surveyed by - F. R. Gossett and C. F. Chenworth.

Protracted by - G. W. Lovesee.

Soundings plotted by - G. W. Lovesee.

Verified and inked by - John G. Ladd and C. F. McKinney.

1. Condition of Records.

The records are neat and legible and conform to the requirements of the Hydrographic Manual, except as follows:

- a. No duplicate of the chart sent to the Lighthouse Bureau for use in locating aids to navigation was received in this office.
- b. The location of the tide gage was not shown on the boat sheet, smooth sheet nor on the contemporary topographic sheet. The Tidal Note attached to the Descriptive Report states that the gage is located in the vicinity of latitude $35^{\circ}00.3'$, longitude $76^{\circ}42.8'$.
- c. Topographic signals spotted on photographs of aerial surveys (see par. 3b of this review) are shown on the smooth sheet in red. It is desirable to use a distinctive color to designate signals located from aerial photographs. The accepted office practice is to show them in green. The red circle should be reserved for signals located by standard plane table methods.

The Descriptive Report is clear and comprehensive and satisfactorily covers all items of importance.

2. Compliance with Instructions for the Project.

The plan, character and extent of the survey satisfy the instructions for the project except that the 16 foot sounding (charted in latitude $35^{\circ}00.7'$, longitude $76^{\circ}40.2'$) discussed in paragraph 7(a) of this review should have been investigated.

3. Shoreline and Signals.

The shoreline and signals are from air photo compilations: T-5565 (1934), and T-5566 (1934) and plane table surveys: T-6466 (1935) T-6467 (1935), T-6468 (1935), T-6469 (1935), T-6470 (1935), T-6471 (1935), and T-6473 (1935).

4. Sounding Line Crossings.

Agreement of cross lines is satisfactory except cross lines 26 to 38X and 39 to 49X in the western portion of the sheet which vary 1 foot deeper than the main system of lines run on a & b day. A portion of this difference is due to "rounding off" of tide reducers. If the actual reducers were used, a difference of 0.6 feet would result; and if a change of 0.1 feet was made in the reducer of any day's work, the result would bring the other work into good agreement. Soundings on X day falling offshore of the 12 foot curve were inked. Those falling inshore of the curve were omitted thereby preventing unusual irregularities in the depth curves.

5. Depth Curves.

Within the limits of the survey, the usual depth curves may be satisfactorily drawn including portions of the low water curve.

6. Junction with Surveys.

- a. The junctions with H-5963 (1935), H-5905 (1935) and H-5911 (1935) are satisfactory.
- b. The junctions on the west with H-5998 (1935-36) and on the southwest with H-5997 (1935-36) will be considered in the reviews of those surveys.
- c. There are no contemporary surveys to the eastward of the present survey. However, a satisfactory junction is made with H-4150 (1920) which covers this area.

7. Comparison with Prior Surveys.

- a. H-956 (1867-68), H-963 (1868) and H-974 (1868).

These 1:20,000 scale surveys cover the entire area of the present survey. Soundings are generally in good agreement, although a few areas in the main channel of Neuse River have shoaled 1 to 2 feet. A few spots close inshore have deepened 1 to 2 feet.

The 16 foot sounding (charted) originating with H-974 (1868) in latitude $35^{\circ}00.7'$, longitude $76^{\circ}40.2'$, falls in depths of 25 feet on the present survey and between sounding lines spaced approximately 250 m. apart. The 16 is a single sounding on line and is accompanied in the records by a bottom characteristic of "hard." The 16 also falls very close to a line of 27 foot soundings on H-4150 (1920), but was not developed on that survey nor on the present survey. In view of the numerous oyster lumps found to the westward (see Descriptive Report, page 2, par. 1) the 16 may also be an oyster lump and has been carried forward.

The 9 foot sounding (charted) originating with H-956 (1867-68) in latitude $34^{\circ}57.4'$, longitude $76^{\circ}52.2'$ falls in depths of about 11 feet on the present survey. The 9 is one of two soundings obtained on line. Comparison of other soundings on this line to the SW of the 9's indicate a deepening of 1 to 2 feet. In view of the soft character of the bottom and the changes noted, the 9 should be disregarded in future chartings.

b. H-3535 (1913).

This 1:20,000 scale survey contains a number of detached inshore developments most of which fall within the limits of the present survey.

Soundings are generally in good agreement except that a number of spots have deepened 1 to 3 feet in some cases and shoaled 1 to 4 feet in others. In view of the changes noted and the closer development on the present survey, the present survey should, within its limits, supersede the 1913 survey for charting purposes.

c. H-4145 (1920) and H-4146 (1920).

These surveys are on a scale of 1:10,000 and 1:5,000 and cover the mouth of Adams and Green Creeks, respectively. But a few soundings fall within the limits of the present survey and these are in good agreement. However, since the 1920 surveys contain no important information not adequately covered by the present survey, they should, within the area covered, be superseded by the present survey for charting purposes.

d. H-4150 (1920).

This 1:20,000 scale survey covers the area eastward of approximate longitude $76^{\circ}44'$. Depths are generally in good agreement although a number of areas vary 1 to 2 feet shoaler on the present survey. In latitude $35^{\circ}00.1'$, longitude $76^{\circ}41.7'$, the present survey shows a marked deepening of as much as 6 feet.

In the vicinities of latitude $34^{\circ}59.7'$, longitude $76^{\circ}41.8'$ and latitude $34^{\circ}59.2'$, longitude $76^{\circ}42.4'$, the 1920 survey shows a number of small oyster beds with least depths of 12 to 18 feet. All but two of the more important of these were confirmed on the present survey by similar depths or depths not differing by more than 1 or 2 feet. In view of the general good agreement existing between the two surveys, the more important of the shoaler depths obtained on the 1920 survey have been carried forward.

8. Comparison with Chart 538 (New Print dated Feb. 15, 1936).

a. Hydrography.

The hydrography shown on the chart originates with surveys discussed in previous paragraphs and needs no further consideration in this review.

b. Aids to Navigation.

- (1) Buoy "1A" (latitude $35^{\circ}00.7'$, longitude $76^{\circ}39.7'$), the day beacon (latitude $34^{\circ}59.9'$, longitude $76^{\circ}39.7'$), the lighted beacon (latitude $34^{\circ}57.6'$, longitude $76^{\circ}48.0'$) and buoy S"2" (latitude $34^{\circ}56.6'$, longitude $76^{\circ}50.9'$) were located in practically the same position as charted and satisfactorily mark the features intended.
- (2) The Bell buoy (latitude $34^{\circ}59.0'$, longitude $76^{\circ}41.4'$), buoy S"1" (latitude $34^{\circ}56.1'$, longitude $76^{\circ}45.2'$) and buoy S"3" (latitude $34^{\circ}56.9'$, longitude $76^{\circ}48.5'$) were located on the present survey in positions varying approximately 100 m. from the charted position. The charted bell buoy originates with Lighthouse Notice to Mariners No. 46 (1934). The authority for buoys S"1" and S"3" was not ascertained but they have been charted since the first Edition of Chart 538 in Feb. 1915. The positions as shown on the present survey satisfactorily mark the features intended.
- (3) The lighted beacon (latitude $34^{\circ}59.9'$, longitude $76^{\circ}52.0'$) was located on the present survey approximately 220 m. SE of its charted position. The charted position originates with Lighthouse Notice to Mariners No. 31 (1924) and is located by the intersection of three bearings to other known objects. The position on the chart is evidently placed in relation to the charted hydrography originating with H-956 (1867-68) which hydrography was not sufficiently extensive to determine the best water in this area. The position as shown on the present survey satisfactorily marks the best channel into the creek (shown on H-5963).
- (4) The lighted beacon (latitude $34^{\circ}57.1'$, longitude $76^{\circ}53.4'$) was located on the present survey approximately 160 m. SSE of its charted position. This beacon will be discussed in relation to the hydrography on H-5997 (1935-36) in the review of that sheet.
- (5) The lighted beacon in latitude $34^{\circ}55.3'$, longitude $76^{\circ}45.6'$, and two others in latitude $35^{\circ}01.2'$, longitude $76^{\circ}41.9'$, which fall just outside the limits of the present survey have been discussed in the reviews of H-5963 (1935) and H-5911 (1935) respectively.

9. Field Plotting.

Field protracting and plotting were accurate and conform to the requirements of the Hydrographic Manual.

10. Additional Field Work Recommended.

For Future Consideration.

Aside from several soundings carried forward from previous surveys, this survey is complete and no additional field work is required. However, when work is resumed in this locality a wire drag examination of the oyster lumps in the vicinity of latitude 35°59.5', longitude 76°42.0' (See par. 7d of this review) and the 16 in latitude 35°00.7', longitude 76°40.2' (see par. 7a of this review) is desirable. The oyster lumps are characterized by sharp slopes and there is no evidence of any drift soundings or "feeling around" for least depths having been made on the present survey.

11. Superseding Previous Surveys.

Within the area covered, the present survey with the indicated additions from previous surveys, supersedes the following surveys for charting purposes:

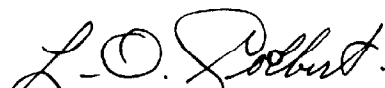
H-956	(1867-68)	in part
H-963	(1868)	" "
H-974	(1868)	" "
H-3535	(1913)	" "
H-4145	(1920)	" "
H-4146	(1920)	" "
H-4150	(1920)	" "

12. Reviewed by - Harold W. Murray, May 27, 1936.

Inspected by - A. L. Shalowitz.

Examined and approved:


C. K. Green,
Chief, Section of Field Records.


L. O. Pollock,
Chief, Division of Charts.


Fred. L. Peacock,
Chief, Section of Field Work.


G. W. Wade,
Chief, Division of H. & T.

Applied to chart 833 Sept. 21, 1936 H.C.
Applied to chart No 832. Jan. 21, 1937. R.L.J.
Applied to Chart Comp. 538. June 18, 1937. H.C.