

5785

5785

Form 504	
U. S. COAST AND GEODETIC SURVEY	
DEPARTMENT OF COMMERCE	
DESCRIPTIVE REPORT	
Type of Survey <u>Air Photo (Topographic)</u>	
Field No. <u>T-5785</u>	Office No. <u>T-5785 (P.C.)</u>
LOCALITY	
State <u>Florida</u>	
General locality <u>West Coast, Florida</u>	
Locality <u>Clearwater Creek & Vicinity</u>	
Photographs taken <u>Dec. 3, 1939</u>	
<u>194</u> 939	
CHIEF OF PARTY	
<u>K.G. Crosby</u>	
LIBRARY & ARCHIVES	
DATE _____	

T5785

5 description cards (form 524)
filed under T-5785

Form 504 Rev. April 1935	
DEPARTMENT OF COMMERCE U. S. COAST AND GEODETIC SURVEY	
DESCRIPTIVE REPORT	
Topographic Hydrographic	Sheet No. T- 5785
U. S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES SEP 18 1940 Acc. No. _____	
State FLORIDA	
LOCALITY West Coast, Florida South of Perry, Florida CLEARWATER CREEK AND VICINITY	
Photographs taken Dec. 3, 1939 1940	
CHIEF OF PARTY Lieut. Kenneth G. Crosby	

DEPARTMENT OF COMMERCE
U.S. COAST AND GEODETIC SURVEY

REG. NO.

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.

T5785

Field No.

REGISTER NO. T- 5785

State Florida

General locality West Coast, Florida

Locality South of Perry, Florida

Photographs

Scale 1:20,000 Date of ~~survey~~ December 3 , 19 39

Party

Vessel Air Photographic Party No. 1

Chief of party Lieut. Kenneth G. Crosby

Field Inspected

Surveyed by George W. Lovesee

Inked by James H. S. Billmyer

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated April 3 , 19 40

Remarks:

T5785

SUPPLEMENTARY SURVEYS

	1940	Hours
	Date	
Control Surveys.....		
Planetable Surveys.....		
Total		0

FIELD INSPECTION

Preparation of Photographs.....	Tampa Office Personnel	Jan.	12
Field Work.....	G.W.L.	Feb. - March	80
Inking Notes.....			
Coast Pilot Notes.....			
Geographic Name Report.....	G.W.L.	March	40
Landmarks for Charts.....			
Description Cards.....			
Recovery Notes.....			
Total			132

MAIN RADIAL PLOT

Scale Plot.....	E.L.J.	May 25	2
Projection on Base Sheet.....			
Projection on Survey Sheet.....			
Control Plotted.....	K.G.C. - E.L.J.	June 7	
Control Checked.....	K.G.C. - E.L.J.	June 7	5
Control Trans. to Base Sheet.....	K.G.C. - E.L.J.	June 8	
Transfer Checked.....	K.G.C. - E.L.J.	June 8	
Control picked on Photographs.....	E.L.J.	May 14	10
Control checked on Photographs.....	K.G.C.	May 15	4
Hydro. & Topo. Stations picked.....	K.G.C. - E.L.J.	May 20-27	6
Radial points picked.....	K.G.C. - E.L.J.	May 27	11
Adjacent centers picked.....	K.G.C. - E.L.J.	May 23	3
Templates.....	J.A.G. - D.R.S. - JHSB	June 4	11
Radial Plot.....	K.G.C. - E.L.J.	June 10-11	6
Radial Points transferred.....	K.G.C.	June 12	2
Transfer checked.....	E.L.J. - R.H.Y.	June 12	5
I & T Stations scaled & checked.....	E.L.J.	June 14	2
Additional Radial points.....	R.H.Y.	June 14	3
	E.L.J.	June 13	3
Total			73

DETAILING

Rough Draft.....	J.H.S. Billmyer	July 10-Sept. 5	204
Smooth Draft.....			
Total			204

COMPILATION

Name Overlay.....	J.H.S. Billmyer	August 22	11
Descriptive Report.....			
Field Review.....	K.G.C.	Aug. 29 - Sep. 5	20
Total			31

Total Time spent on Sheets..... 440 hours.

T5785

SHEET NO. T- 5785

PHOTOGRAPHS

Number	Date	Time	Stage of Tide
3758	December 3, 1939	12:40 P.M.	-0.1
3759	"	12:42 P.M.	-0.1
3795	"	1:49 P.M.	-0.1
3796	"	1:50 P.M.	-0.1
3797	"	1:51 P.M.	-0.1

Tide from predicted tables for: Warrior River, (Reference Station, Tampa Bay)

Camera: U.S. Coast and Geodetic Survey Mine-Lens (focal length 8 $\frac{1}{2}$ inches.)
 Negatives on file at Washington Office.

SCALE

Mean scale of Photographs..... 1:20,000 \pm 1.002
 Scale of Survey Sheet..... 1:20,000

STATISTICS

Area (land).....	71.3	Square statute miles
Shoreline (more than 200 m. from opposite shore).....	5.2	Statute miles
Shoreline (Creeks).....	21.4	Statute miles
Roads, streets, trails, and railroads.....	130.1	Statute miles

REFERENCE STATION

Station: WARRIOR, 1933

Latitude: 29° 57' 54.023"
 (1663.4 m) *Adjusted*
 Longitude: 83° 38' 51.813"
 (1389.2 m)

Datum: N.A. 1927

X coordinate: 2,269,877.28'
 Y coordinate: 351,940.82'

DESCRIPTIVE REPORT

T5785

to accompany

SHEET NO. T- 5785

CONTROL

This sheet was compiled in accordance with "Instructions for Drafting Air Photographic Surveys, Project H.T. 242", dated April 3, 1940.

The general locality of the area covered by this survey sheet is Florida, West Coast, south of Perry, Florida.

The terrain along the shore is mostly marshy with sandy patches for about half a mile inland. Most of the higher ground back of the shore consists of large areas of pine and oak with grass and small swamps. There are innumerable small ponds and cypress ponds throughout the entire area.

All of the islets along the shore are marshy.

A large part of this sheet had to be detailed by using symbols as much of the vegetation was not uniform in density. Due to the numerous cypress ponds scattered throughout the heavily wooded areas, more difficulty was had on this sheet than on the average in delineating the many patches of swamp.

Florida State Highway No. 35 has been field inspected and shown on the field prints both as a first class and second class road. It is under construction and is paved southward from the town of Perry only as far as the vicinity of Huxfords Camp. On this map drawing this highway is detailed as a second class road, from a point approximately 700 meters south of Huxfords Camp to the shore as this road is still under construction but will be paved when completed. The new location is shown and the old road disregarded south of Latitude 29° 52' 15".

Approximate M.L.W. is shown by a dotted line, and the approximate limits of shoal areas are shown by a dashed line.

All roads should be shown as 0.6 m.m. wide, as none of the roads on this sheet are wider than 12 meters.

Fire breaks were omitted on this drawing.

These two triangulation stations fall within the tracing limits of the sheet.

<u>Name of Station</u>	<u>Year</u>	<u>Established by</u>
THELMA	1933	H.C. Warwick
WARRIOR	1933	H.C. Warwick

Two other stations fell on the sheet but outside of the tracing limits. These stations were used for control for the main plot in addition to the two listed above and are as follows:

<u>Name of Station</u>	<u>Year</u>	<u>Established by</u>
PINLAND	1933	H.C. Warwick
SPRING	1933	H.C. Warwick

Geodetic azimuths to the azimuth stations at stations PINLAND, THELMA, and WARRIOR were plotted and checked after running the radial plot. The positions of the three azimuth marks are in agreement with the geodetic azimuths.

No stations established by other organizations were used for control.

MAIN RADIAL PLOT

A continuous radial plot was run for the southeast half of Sheet T-5783, Sheets T-5784, T-5785, T-5786 and the northwest quarter of Sheet T-5787.

The triangulation was plotted on the survey sheets and transferred to the grid sheets by holding to each grid square. Since both the survey sheets and the grid sheets were the same type of celluloid and were prepared on the ruling machine in the Washington Office, there was no perceptible adjustment necessary in the transfer.

Celluloid templates were prepared in accordance with "Notes on Radial Plotting Nine-Lens Air Photographs", dated April 9, 1940. The recommendation of making an ink mark on the template to indicate the position of the point on the photograph proved to be a great aid in determining which of the photographs were tilted and should be laid last on the plot. Short sections of the mark lines were drawn on the templates in blue ink. These lines were not transferred to the survey sheet for orientation purposes since more radial points were located in each chamber on the main radial plot than were recommended. The templates were laid on the base grid sheets and securely taped to the plotting table.

The radial points were transferred from the plot by placing the survey sheet over the plot and transferring the points in each grid square. The points located by three or more intersecting radials were picked on the survey sheet and circled in blue (2.5 mm in diameter) on the back. Where poor intersections occurred or where only two cuts could be obtained, the radial lines were transferred to the survey sheet and inked in green on the back of the sheet for investigation with the photographs. Grid intersections were inked on the survey sheet with celluloid ink after the radial points had been transferred and checked.

Various colored inks were used on the photographs and the survey sheet to designate triangulation stations, topographic and hydrographic stations and radial points. The following key is furnished for future reference.

Photographs

Triangulation stations.....2.5 mm blue circle
 Hydro. & Topo. Stations.....2.5 mm green circle
 Radial points (Main plot).....2.5 mm red circle
 Radial points (additional).....3.5 mm red circle
 Photograph centers.....double red circle

Survey Sheet

Triangulation stations.....3.5 mm high black triangle
Hydro. & Topo. stations.....2.5 mm black circle
Radial points (Main plot).....2.5 mm blue circle on back of sheet
Radial points (additional).....3.5 mm blue circle on back of sheet
Radial points (questionable).....3.5 mm green circle on back of sheet.

The radial plot was controlled by 16 triangulation stations, four of which fell off the east limits of the sheets but were plotted on the base grid sheet to strengthen the plot. Eight of the 25 templates laid during this plot were fixed by three or more triangulation stations. These templates were laid first on the plot and since they were quite evenly spaced throughout the plot they formed excellent control for the remaining templates. On the second running of the plot a satisfactory agreement of radials was obtained. The centers and flight lines of adjacent templates were in good agreement. No difficulties were encountered in the laying of this plot, nor were any large or unusual adjustments necessary.

The hydrographic signals, topographic stations and radial points in the areas well controlled by sufficient photographs are believed to be located within 0.25 mm of their true position. Radial points encircled in green on the back of the sheet may be in error as much as 0.4 mm.

INTERPRETATION OF PHOTOGRAPHS

Although the photographs were clear, considerable stereoscopic inspection had to be made in order to accurately outline the many ponds and swamps on the sheet.

FIELD INSPECTION

The field inspection was made by Lieut. George W. Lovesee by truck and skiff during the months of February and March, 1940.

In several instances, due to misunderstanding, different abbreviations were noted on the field prints to indicate the same type of vegetation. The legend used by the field inspection party and that used by the draftsman have been consolidated and made a part of this report. The actual abbreviation used in each particular case has been indicated in parenthesis on the consolidated legend sheet.

As the field notes were sufficient for detailing the sheet, it is believed that the interpretation is accurate.

DETAILING

A small section of celluloid was rubbed with dry magnesium carbonate immediately prior to inking. This was employed throughout the entire drawing.

The scale of the photographs was good.

The detailing of this sheet has been done in accordance with the current instructions for the project.

In areas lacking field notes, the sheet has been detailed and the vegetation shown by comparing other areas of similar appearance by means of the stereoscope and from general experience gained during the detailing of other sheets of areas of similar vegetation.

JUNCTIONS

This sheet joins T-5784 on the west and T-5786 on the south. Both junctions agree exceptionally well.

COMPARISON WITH OTHER SURVEYS

Comparison was made with a bromide print of Topographic Sheet No. 1424-B made in 1875. The shoreline agrees very well in general, but as most of the shoreline is marshy, considerable changes are possible during 65 years.

Due to large scale differences, accurate comparisons with other maps and charts of this area were not practicable.

GEOGRAPHIC NAMES

The geographic names in this area were submitted to the Washington Office in March, 1940 by Lieut. George L. Anderson in a special report for geographic names for that section of this project field inspected under his supervision.

LANDMARKS

It is recommended that Huxfords Fire Tower (100' high) be charted for a landmark. This tower was located in the field as a topographic station.

Respectfully submitted,

James H. S. Billmyer
James H.S. Billmyer,
Draftsman.

Forwarded:

Kenneth G. Crosby
Lieut. Kenneth G. Crosby,
Chief of Party.

LEGEND USED ON FIELD INSPECTION AND ROUGH DRAFTING

SHEET NO. T- 5785

TREES

A - Ash
 Br - Brush
 Cit - Citrus
 Cy - Cypress
 Gum - Gum
 Oak - Oak
 Pal - Palmetto (Field Inspection)
 Palo - Palmetto (Rough Drafting)
 Pi - Pine
 Plm - Palm
 Mix - Mixed deciduous, pine & cypress

ROADS

Rd-1 - 1st Class paved
 Rd-2 - 2nd Class road
 Rd-1d - 1st Class dirt road (G.L.A.) & (G.W.L.)
 Rd-2d - 2nd Class dirt road (G.L.A.)
 Tr - Trail
 U.T. - Used Trail
 U.R.D. - Used Road (G.L.A.)

VEGETATION

C - Cultivated
 DT - Deciduous trees
 Fl - Flooded area
 Gr - Grass
 TGr - Tropical grass
 HW - Heavily wooded
 M - Marsh
 Mg - Mangrove
 Sw - Swamp
 Sc - Scattered

PONDS

P - Pond
 CyP - Cypress Pond
 GP - Grassy Pond
 IP - Intermittent Pond
 PiP - Pine Pond

STREAMS

Ca - Canal (width)
 Cr - Creek
 D - Ditch
 IS - Intermittent Stream
 PD - Probable drainage unsurveyed
 Str - Stream

MISC.

B1 - Bluff (height) (G.L.A. & G.W.L.)
 B1f - Bluff (Rough drafting)
 Bldg - Building
 Brg - Bridge
 Ch - Church
 CtH - Court House
 C.H. - Court House (G.L.A.)

Cv - Culvert
 FB - Fire Break (width)
 f - fence
 H - House
 Is - Island (Field Inspection)
 I - Island (Rough drafting)
 HWL - High Water Line
 LWL - Low Water Line
 L.L. - light line around marsh
 OP - Overpass
 PO - Post Office
 RR - Railroad (name)
 S - Sand
 Sch - School
 UP - Underpass
 W - Water
 Mud - Mud

FCS - Florida Geodetic Survey
 FMP - Florida Mapping Project
 USE - U.S. Engineers
 USBS - U.S. Biological Survey

LEGEND USED ON FIELD INSPECTION AND ROUGH DRAFTING

SHEET NO. 2-5785

TREES

A - Ash
Br - Brush
Cit - Citrus
Cy - Cypress
Gum - Gum
Oak - Oak
Pal - Palmetto (Field Inspection)
Palo - Palmetto (Rough Drafting)
Pi - Pine
Plm - Palm
Mix - Mixed deciduous, pine & cypress

ROADS

Rd-1 - 1st Class paved
Rd-2 - 2nd Class road
Rd-1d - 1st Class dirt road (G.L.A.) & (G.W.L.)
Rd-2d - 2nd Class dirt road (G.L.A.)
Tr - Trail
U.T. - Used Trail
U.R.D. - Used Road (G.L.A.)

VEGETATION

C - Cultivated
DT - Deciduous trees
Fl - Flooded area
Gr - Grass
TGr - Tropical grass
HW - Heavily wooded
M - Marsh
Mg - Mangrove
Sw - Swamp
Sct - Scattered

PONDS

P - Pond
Cyp - Cypress Pond
GP - Grassy Pond
IP - Intermittent Pond
PiP - Pine Pond

STREAMS

Cn - Canal (width)
Cr - Creek
D - Ditch
IS - Intermittent Stream
PIU - Probable drainage unsurveyed
Str - Stream

MISC.

B1 - Bluff (height) (G.L.A. & G.W.L.)
Blf - Bluff (Rough drafting)
Bldg - Building
Brg - Bridge
Ch - Church
CtH - Court House
C.H. - Court House (G.L.A.)

Cv - Culvert
FB - Fire Break (width)
f - fence
H - House
Is - Island (Field Inspection)
I - Island (Rough drafting)
HWL - High Water Line
LWL - Low Water Line
L.L. - light line around marsh
OP - Overpass
PO - Post Office
RR - Railroad (name)
S - Sand
Sch - School
UP - Underpass
U - Water
Mud - Mud

FGS - Florida Geodetic Survey
FMP - Florida Mapping Project
USE - U.S. Engineers
USBS - U.S. Biological Survey

REVIEW OF AIR PHOTO COMPILATION NO. T- 5785

Chief of Party: Kenneth G. Crosby

Compiled by: J.H.S. Billmeyer

Project: H.F. - 242

Instructions dated: April 5 19 40

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, c, d, e, g and i; 26; and 64)

Yes

2. Change in position, or non-existence of wharfs, lights, and topographic detail of particular importance to navigation which affect the chart, is discussed in the descriptive report. (Par. 26; and 66 g, n)

Yes

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. 66; and 66 d, e)

None

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)

None

5. Difference 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.

Yes

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. 12b; 44; and 65 c, h, i)

Yes

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

Yes, see also No. 17

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 rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)

Yes

see review

9. Recoverable objects have been located and described on Form 524 in accordance with circular 30, 1933, circular letter of March 3, 1933, and circular 31, 1934. (Par. 29, 30, and 57)

Yes

10. A list of landmarks was furnished on Form 567 and instructions in the Director's letter of July 16, 1934, Landmarks for Charts, compiled with. (Par. 16d, e; and 60)

Yes

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)

No bridges which affect navigation. All are small fixed span highway bridges over small streams.

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 the 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 66k)

Yes, see also report "GeographicNames" by G.L. Anderson submitted to Washington Office in March, 1940.

13. The geographic datum of the compilation is N.A. 1927 and the reference station is correctly noted.

Yes

14. Junctions with adjoining compilations have been examined and are in agreement. (Par. 66j)

Yes

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. Yes

2. The degrees and minutes of Latitude and Longitude are correctly marked.

Yes

T5785

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

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47)

16. No additional surveying is recommended at this time.

No additional topographic survey required.

17. Remarks:

The light line around marsh defines the outer limit of vegetation visible above mean high water. The mean high water line is shown only on fast land and is represented by a heavy solid line.

18. Examined and approved:

Kenneth G. Crosby
 Lieut. Kenneth G. Crosby,
 Chief of Party

19. Remarks after review in office:

Reviewed in office by:

Examined and approved:

Chief, Section of Field Records

Chief, Section of Field Work

Chief, Division of Charts

Chief, Division of Hydrography

DIVISION OF CHARTSSection of Field Records

REVIEW OF AIR PHOTOGRAPHIC SURVEY T-5785

April 1941

Contemporary Surveys

There are no contemporary hydrographic or graphic control surveys in the area covered by T-5785.

Previous Surveys

1424b (1:20,000) 1875

T-5785 supersedes this survey for charting purposes in the common area. Refer to page 4 for a detailed comparison.

Comparison with Chart 181 (printed 12/18/40)

T-5785 has not been applied to the chart at this date; refer to page 4 of the descriptive report regarding one landmark recommended by the field party. The form 567 submitted with the descriptive report for this landmark was forwarded to the Nautical Chart Section 4/15/41.

Topographic Stations

The stations located by the radial plot for control of hydrography are permanent and are to be shown as topographic stations.

Description on form 524 for those stations which are noted as described are filed under T-5785.

Field Inspection

Field notes for control and topographic stations are filed on form M-982 under Field Inspection sheet T-5785.

The field inspection notes on the field photographs are in general clear and complete. Certain isolated, inaccessible areas in the interior were not field inspected. The method of detailing these areas, which involve only vegetation classification, is discussed in the report.

Radial Plot

The radial plot is accepted as adequate without checking in this office. The plot is described in detail on pages 2 and 3 of the descriptive report.

Low Water and Shoal Line

The low water line on this survey was traced from photographs taken at mean low water. However, this line is subject to correction and addition by the hydrography. Because of the flat bottom in this area and the effect of wind conditions on the tides, the low water line, as seen on the photographs, may vary considerably from exact low water line as determined by soundings reduced to the low water plane from local tide observations.

Both the approximate low water line and the shoal lines as drawn from the photographs will remain on the celluloid drawing and will be transferred to the boat sheets for the use of the hydrographic party. The low water and shoal lines will not be shown on the published map T-5785 with the exception of certain oyster rocks which are labeled and indicated by dotted outline.

General

The descriptive report and compilation of map details are complete and the rough drawing is satisfactory for redrafting.

L. V. EVANS

Reviewed by: ~~H. D. Benson~~

Inspected by: B. G. Jones (4/4/47) and *for* 1943

Examined and Approved:

Robert W. Knox
Chief, Section of Field Records

F. S. Borden
Chief, Division of Charts.

K. T. Adams
Chief, Topography Section.

G. Hude
Chief, Division of
Coastal Surveys.

*Hydrographic stations located on celluloid manuscript but not shown
on published copies added to file copy in red 11-17-43*

T5785

T5785

Remarks.

Decisions

1	O.K. for this sheet; do not chart by name	298836
2		"
3		"
4		"
5		"
6	Submitted to USGB: OK to apply Jug Island pending their decision.	"
7		299835
8		"
9		"
10	Road Maps, Sheet No. 2 Fla. Transp. Map	
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		
22		
23		
24		
25		
26		
27		
M 234		

GEOGRAPHIC NAMES

Survey No. **T-5785****T-5785**

Name on Survey

	On Chart No.	On previous survey No.	On U. S. quadrangle Maps	From local information	On local Maps	P. O. Guide or Map	Rand McNally Atlas	U. S. Light List	
A,	B,	C,	D	E	F	G	H	K	
<u>Camp Ezell</u> ✓									1
<u>Adams Beach</u> ✓									2
<u>English Fish Creek</u> ✓									3
<u>Island Creek</u> ✓									4
<u>Clearwater Creek</u> ✓									5
<u>Jug Island</u> ✓									6
<u>Huxfords Camp</u> ✓									7
<u>Huxfords Side Camp</u> ✓									8
<u>Huxfords Fire Tower</u>									9
<u>State Highway No. 35</u>									10
Names underlined in red approved by L. Heck on 8/20/41									11
									12
									13
									14
									15
									16
									17
									18
									19
									20
									21
									22
									23
									24
									25
									26
									27