

# 5354

U. S. COAST & GEODETIC SURVEY  
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App. No. \_\_\_\_\_

Form 504  
Ed. June, 1928

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY  
R. S. Patton, Director

State: Texas

## DESCRIPTIVE REPORT

*Photo*  
*Topographic* } Sheet No. 5354  
*Hydrographic*

### LOCALITY

Matagorda Bay

~~Trespalacios Bay to Mud Island Reef~~

VICINITY OF TRESPALACIOS BAY

1934

### CHIEF OF PARTY

T. M. Price Jr., Ensign

U. S. GOVERNMENT PRINTING OFFICE: 1923

# 5354

applied to chart 1284 - Jan. 12, 1937 J. L.

DEPARTMENT OF COMMERCE  
U. S. COAST AND GEODETIC SURVEY

PHOTO  
TOPOGRAPHIC TITLE SHEET

REG. NO. 5354

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. 4

REGISTER NO. 5354

State Texas

General locality Matagorda Bay

Locality VICINITY OF TRESPALACIOS BAY  
~~Trespalcios Bay to Mud I. Reef~~

Scale 1:20,000 Date of Photographs: December 19, 1933  
Survey Compilation: June-July, 1934

Vessel Army Air Corps Camera: Fairchild T-3A, 31-76

Compilation Party # 20, Corpus Christi, Texas.

Chief of party T. M. Price, Jr.

Surveyed by See data sheet in the descriptive report.

Inked by W. H. Burwell

Heights in feet above to ground to tops of trees

Contour, Approximate contour, Form line interval feet

Instructions dated November 7, 1933

Remarks: Compilation of aerial photographs J23-28, K1-26, L1-15

Sheet reduced to scale and printed by photo-lithographic process.

-NOTES ON COMPILATION-

SHEET NO. 4 (REG. NO. 5354)

PHOTOS: J 23-28; K 1-26; L 1-15.

DATE OF PHOTOGRAPHS: December 19, 1933

TIME: J flight; 9:48-10:02 A.M.

K " 10:18-10:24 "

L " 10:47-11:18 "

BY

SCALE FACTOR (0.960) (sgd) (J-K flights) (L flight) C. H. Rulfs; Dan Allen DATE 4/30/34; 5/4/34

PROJECTION (sgd) T. M. Price Jr. 5/11/34

PROJECTION CHECKED (sgd) W. H. Burwell 5/11/34

CONTROL PLOTTED (sgd) C. H. Rulfs 5/14/34

CONTROL CHECKED (sgd) W. M. Crook 5/15/34

SMOOTH RADIAL PLOT (sgd) W. H. Burwell 5/16/34

DETAIL INKED (sgd) W. H. Burwell 7/18/34

AREA OF DETAIL INKED 97 sq. statute miles

LENGTH OF SHORE LINE OVER 200m. 52.0 Statute miles.

LENGTH OF SHORE LINE UNDER 200m. 29.2 Statute miles.

GENERAL LOCATION MATAGORDA BAY.

LOCATION ~~TRESPALACIOS BAY TO MUD I. REEF~~ VICINITY OF TRESPALACIOS BAY

DATUM STATION COLLEGE 1934 Latitude 28°-43'-30.800" (+948.2) Meters  
Longitude 96°-10'-40.248" (-1092.3) ✓  
(position from field computations)



COMPILER'S REPORT  
for  
PHOTO TOPOGRAPHIC SHEET FIELD NO. 4 (REG. NO. 5354)

1. GENERAL INFORMATION

This sheet was compiled from photographs taken by the U. S. Army Air corps, using Fairchild T-3A camera # 31-76. The photographs used are # 23-28 "J" flight; # 1-26 "K" flight; and # 1-15 "L" flight. The flights for the photographs were made December 19, 1933. "J" flight, 9:48 - 10:02 A. M.; "K" flight, 10:18 - 10:24 A.M., and "L" flight 10:47 - 11:18 A.M.

The tide in Matagorda and Trespacios Bays is small and the only difference in its stage that would affect interpretation of the aerial photographs <sup>(except for tide)</sup> would be caused by strong continued winds. The height of the water at the time the pictures were taken however, is considered normal.

2. CONTROL

(a) Sources

Triangulation by Lieut. E. O. Heaton and Ensign T. M. Price Jr. 1934.

Theodolite three point fix by the Field Inspection Party. (Station NESS Latitude 28°-39'-35.179" ; Longitude 96°-08'-56.144")

Triangulation by Lieut. F. L. Gallen 1931.

Triangulation of 1906 <sup>was observed in 1934</sup> adjusted to triangulation of 1934.

This control is on the 1927 N. A. datum. <sup>for 1934 triangulation</sup>  
The field parties' geographic positions were used. The difference between the unadjusted and the final adjusted positions would be unplotable at the scale of this compilation.

(b) Errors

No errors in control found by radial line plot.

(c) Remarks

The U. S. Engineer's stations used on this sheet were located by observations by Lieut. E. O. Heaton and Ensign T. M. Price Jr. 1934. ~~All 1906 and 1931 triangulation adjusted to 1934 positions.~~

The hydrographic stations (shown by black circles) were located on the ground and directly on the photographs by the field inspection party, and their position is established by the radial plot only, except the recoverable topographic station NESS which was located by theodolite three point fix.

3. COMPILATION

(a) Method

The regular radial line method of plotting from five lens photographs was followed in the compilation of this sheet. There was no departure from the standard practice.

### 3. COMPILATION (Cont'd)

#### (b) Adjustment of Plot

As mentioned in "Notes on Compilation" under notes of unusual features, a pronounced condition of tilt was encountered in practically the entire "K" flight. However, the majority of intersections <sup>were</sup> held good. To improve the general appearance of the sheet, it was <sup>expedient</sup> to trace to the photographing limit, <sup>even though</sup> it was over half way out on the wings. This was done with photos # 1-15 "K" flight. In the majority of these photos the detail was clear and distinct to the extremities of the wings, and no difficulty was experienced in the interpretation. From photos # 8-18 "K" flight, much tilt was encountered, most of the photos being tilted one or two degrees and photo # 17 was tilted at least three degrees. The over-lap in all photos is approximately 60%.

#### (c) General Description of Topography and Interpretation.

In addition to the General Report of Matagorda Bay and vicinity by the Field Inspection Party (filed with Descriptive Report Register No. 5351) the following notes are submitted to act as a guide in the interpretation of this sheet, since the compiler also assisted in the field inspection of this area.

Trespalacios Bay: West coast, from Palacios to Trespalacios Creek. This shore line is characterized by narrow stretches of sandy beach, alternating with small points of marsh, which do not extend far inland. Inland, the culture consists, for the most part, of cultivated fields (rice, cotton, and vegetables) and pasture land.

The town of Palacios is served by a branch line of the Southern Pacific Railroad and a spur track running to Camp Hulen. There is a through concrete highway (Bay City-Port Lavaca Highway) running through the town. The streets, for the most part, are shell or graded dirt but are indicated for their importance, rather than their nature.

There are a number of small piers at Palacios, also boat ways and fish and oyster houses, along the water front. West of the Pleasure Pier and extending into Trespalacios Bay are four shell causeways surrounded by marsh and ending in a sand and shell bank, on which are several fish and oyster houses, docks and boat ways. It was not thought practicable to try to show in these crowded areas symbols for the small amount of marsh and sand present.

East coast, from Trespalacios Creek to Oliver Point: This shore consists mostly of bluffs, two to ten feet high with a narrow beach, alternating with marshy areas surrounding small bayous extending inland. Inland, the culture consists of cotton, rice fields and pasture lands. Many fields are not actively cultivated, and there is an extensive system of drainage and irrigating canals, ditches, laterals and dikes. The latter are about two feet high and four feet wide and on the photographs, bear a close resemblance to contour lines.

### 3. COMPILATION (Cont'd)

#### (c) General Description of Topography and Interpretation. (Cont'd)

Collegeport: This is a small town that has apparently shifted its position in a southeasterly direction. In its former location there are abandoned and grass covered streets, and there is an abandoned rail road (road bed only) to the present site. A narrow eight foot concrete paved road runs to El Maton. There are no wharves or piers at Collegeport.

Matagorda Bay: East coast, Oliver Point to Palacios Point: This shore consists of eroding bluffs (6 to 10 feet) with a narrow sandy beach, except at the entrance to Oyster Lake; there, it is marsh, as is the entire shore surrounding the lake. From the lake entrance southwest is a bluff four to eight feet high, gradually flattening into a wide sandy beach at the shore. The trees and brush shown in this locality are not more than 15 feet high and forms a dense thicket of mesquite, huisache, scrub oak and a few salt cedars. The general tree symbol was used throughout the sheet to denote these varieties of growth. From there to Palacios Point the shore becomes a bluff again, and at the Point there is a sandy beach and numerous shell reefs.

North shore, east of Palacios Point: The shore line in this vicinity is characterized by a sand beach in the southwestern part, and marshes in the central and northern portions. Several shell reefs extend into the bay, and shoal areas are found near the shore. Dense growths of trees and brush six to twelve feet high are found close to and paralleling the beaches. Extending inland, are numerous bayous, lakes and ponds surrounded by marshes. Further inland occurs irrigated rice fields and fields of abandoned cultivation, traversed by dirt roads, ditches and canals.

#### (d) Bridges

There is a fixed highway bridge over the Trespalacios Creek on the Palacios-Collegeport road which has a horizontal clearance of 100 feet and a vertical clearance of 65 feet. Other bridges consist of several wooden fixed structures which are over non-navigable streams or ditches. Bridge data from field party's measurements.

#### (e) Information From Other sources

The only source of information was that furnished by the photographs and the notes written in the photographs by the field inspection party. A plot of the town of Palacios was obtained from the Chamber of Commerce there, and used for the naming of streets, buildings, etc. Information regarding condition of pier at Lat. 28° 41.8' Long. 96° 12.6' from hydrographic party of E.O.H., 1934-5, and that Mud I. Reef is awash at M.H.W. was also obtained from hydrographic party.

#### (f) Conflicting Names

① Mud I. Reef and Mud I. Lake are recommended.

Mud I. Reef shown on chart # 1284

Mad I. Reef, Mad I. Lake shown on chart # 1117

Mad Reef as shown on the 1928 U.S.E. Intracoastal Waterway Survey Section 8. Sheet # 2.

Mad I. Point, Mad I. Bayou as shown on the 1928 U.S.E. Intracoastal Waterway Survey, Section 8. Sheet # 8.

3. COMPILATION (Cont'd)

(f) Conflicting Names (Cont'd)

Mud Reef as shown on the 1928 U.S.E. Intracoastal Waterway Survey, Section 8-9 Index sheet # 3.

As indicated there is a conflict between the use of "Mud" and "Mad" for the naming of features in the locality: Lat. 28°-38' Long. 96°-06'. There was no local knowledge that should be obtained on the matter.

②

Trespalacios

~~As above~~ shown on U. S. C. & G. S. charts and Pilot Books.

Tres Palacios

~~As above~~ shown on U.S. Department of Interior State Map and U.S. Navy Aviation chart.

The former is recommended as the spelling having the most common usage.

③

In regard to the use of Trespalacios Creek (chart 1117) or Trespalacios River (Coast Pilot Book) the former refers to the upper stream and the latter to that position near its mouth. Both are correct and there is no exact dividing line in its usage.

(g) List of New Names

(1) Pierce Property.

(2) V. LeTulle Property.

(3) Grassy Point (4) B. Y. P. U. Point

The above new names were given to represent localities hitherto not named in charts. Local inhabitants were the source of these names and they have general acceptance in the locality.

(h) Shoals

The shoal areas along the shores and elsewhere on this sheet were determined from the photographs, by a line of distinct and definite difference in coloration, and though shown with a dotted line, is not to be taken as a low water line. The recent instructions regarding the representation of low water, shoal areas, edge of channels, etc, were received after this line had been drawn.

4. COMPARISON WITH OTHER SURVEYS

This sheet is joined by Sheet field No. 5 (Register No. 5355) on the north west, and Sheet field No. 8 (Register No. 5358) on the south east. The junction with adjoining sheets is satisfactory.

Surveys of this area were made by the Coast and Geodetic Survey about 1880 (Chart # 1284) revised to September 6, 1934, and the Intracoastal Waterway Survey, U.S.E. 1927-28 (Sheet # 3 Section 8-a). No detail comparison was made to the U.S.E. Intracoastal Survey.



4. COMPARISON WITH OTHER SURVEYS (Cont'd)

A detailed comparison of shore line with that of Chart # 1284 is as follows:

Points of the shoreline having the following position on chart # 1284 were selected for comparison, and the distance and direction to the corresponding point of shoreline on this air photo sheet is indicated showing the change from old to new:

Position of point on chart # 1284		Distance and Direction to same point on this Sheet (Meters)
Longitude	Latitude	
96°-12'-35"	28°-42'-32"	145.0 S.
96°-11'-56"	28°-42'-51"	285.0 S.
96°-11'-21"	28°-43'-20"	100.0 N.
96°-11'-00"	28°-42'-17"	90.0 S.
96°-11'-32"	28°-41'-48"	190.0 S.
96°-14'-22"	28°-38'-32"	270.0 W.
96°-13'-00"	28°-37'-34"	140.0 N.
96°-13'-00"	28°-36'-31"	170.0 N.
96°-14'-16"	28°-35'-52"	200.0 N.E.

#### 4. COMPARISON WITH OTHER SURVEYS (Cont'd)

A general comparison with chart # 1284 shows:

- (1) A general accumulation on the east shore of Trespalacios Bay.
- (2) A varying recession on the west shore of Trespalacios Bay.
- (3) Changes in the reefs and islands N.E. of Oliver point.
- (4) Extension of the reef at Oliver Pt, *but no islands above M.H.W. west of the point.*
- (5) No wharves at Collegeport or at locality called Portsmouth on chart # 1284.
- (6) Recession to the N.E. at Palacios Point and extension of *spit to N.E.* reefs.
- (7) A general accumulation on the north shore of Matagorda Bay.
- (8) Extensive road changes.
- ~~(9) *mentioned under (s)* Wharves at Collegeport and Portsmouth are no longer in existence.~~
- (10) Southern Pacific Railroad now has line into Palacios from Blessing with a spur track to Camp Hulen.
- (11) There are now wharves at Palacios.
- (12) Portsmouth: This name appears on chart # 1284 and on U.S.E. Waterway Survey section 8-9 Index Sheet # 3 representing a former settlement about 1 mile north of Palacios Point. It is recommended that this name be removed, for although there is one house here there is no pier and the name does not have local useage now.

#### 5. LANDMARKS

The following landmarks, hitherto not shown, are recommended for charting. There are no landmarks to delete from existing charts. The following have been submitted on form 567:

- (a) TANK (Elevated) Triangulation Station, Palacios Municipal Tank 1931.
- (b) CUPOLA, Triangulation station, Palacios High School Cupola 1931.
- (c) HOUSE, Chimney.

#### 6. RECOVERABLE OBJECTS

The following recoverable objects are among the points selected by the field inspection party for hydrographic stations, and their positions were determined by the radial plot of this sheet, with the exception of "NESS" which is a topographic station and which was located with fourth order accuracy by theodolite three point fix. The field inspection party has submitted descriptions of recoverable objects on Form 524 for those objects. The hydrographic party has not at this time assigned names to these objects.

6. RECOVERABLE OBJECTS (Cont'd)

Object	Latitude	Longitude
Ness	28°-39'--+1083.0 m.	96°-08'--+1524.6m.
N. Gable, small ho.	28°-37'--+ 16.6 m.	96°-12'--+1270.9m.
Pavilion Dome	28°-41'--+1517.9 m.	96°-12'--+1453.2m.
Chimney, House	28°-35'--+1690.8 m.	96°-13'--+1585.4m.
Peak of Roof	28°-43'--+ 85.4 m.	96°-10'--+1593.8m.
Finial of silo	28°-42'--+1182.0 m.	96°-10'--+ 886.5m.

7. RECOMMENDATIONS FOR FURTHER SURVEYS

The compilation of this sheet is believed to have the probable error of 5 meters in well defined detail of importance for charting, and of 8 meters for other data. It is understood that the width of roads, canals, etc. may be slightly expanded in order that the detail may be kept clear, and to keep it from photographing as a solid line in the photo-lithographic process. The size of small buildings may also be slightly exaggerated.

} See report  
on review  
of sheet  
for accuracy

To the best of my knowledge this sheet is complete in all detail of importance for charting purposes, within the accuracy stated above, and no additional surveys are required.

Submitted by (sgd)

W. H. Burwell  
W. H. Burwell

DEPARTMENT OF COMMERCE  
U.S. COAST AND GEODETIC SURVEY

## LANDMARKS FOR CHARTS

Corpus Christi, Texas

December 1, 1934

DIRECTOR, U.S. COAST AND GEODETIC SURVEY:

The following determined objects are prominent, can be readily distinguished from seaward from the description given below, and should be charted:

Sheet Fld. No. 4

Register No 5354

T. M. Price Jr.

*Chief of Party.*

[illegible]

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) inshore, (3) harbor, 1, 2, 3 would be a mark useful on all charts. Generally, flagstaves and like objects are not sufficiently permanent to chart.

Survey No. T-5354

Date. June 3, 1935

## GEOGRAPHIC NAMES

Chart No. 1117 and 1284

TEXAS

Diagram No.

Approved by the Division of Geographic Names, Department of Interior. ✱

Referred to the Division of Geographic Names, Department of Interior. R

Under investigation. Q

[illegible]

Review of Air Photo Compilation T 5354

Scale 1:20,000

Comparison with Contemporary Topographic Surveys

There are no contemporary topographic surveys in this area.

Comparison with Graphic Control Surveys

There are no graphic control surveys in this area.

Comparison with Previous Topographic Surveys

(a) T 737 (1856), scale 1:20,000

T 737 covers the area around Trespalacios Bay and Trespalacios River.

The island at the mouth of Cassius Creek has become part of the mainland.

The shoreline has receded generally from 10 to 25 meters. At lat.  $28^{\circ} 44.5'$ , long.  $96^{\circ} 11.5'$  the erosion is about 100 meters.

The bluff symbol on T 737 is considerably larger than on this survey.

Pilkington Bayou is called Hanson's Bayou on T 737. Pilkington Bayou is the accepted name.

With the exception of the bluff indications, T 5354 is adequate to supersede T 737 in all respects.

(b) T 600 (1857), scale 1:20,000

T 600 covers the area from T 5361 to the eastern end of this survey.

East of long.  $96^{\circ} 10'$  a recession of about 75 meters has taken place in the shoreline.

A sand spit has built out at Palacios Pt. The shoreline has receded from 20 to 75 meters along the area from Palacios Point to Oliver Pt. and has built out about 40 meters just south of topographic signal Chimney of House (d).

T 5354 is adequate to supersede T 600 in all respects.



H-5866

Comparison with H 5813<sup>A</sup> (1935), scale 1:20,000

There is no conflict between this survey and H 5813 or H-5866. *Two wrecks and a pile at Palacios and a pipe and a group of piles at Colaput were added to T-5354 from H-5813. The H.W.L. at Abasco Point was revised to agree with H-5866.*

The landmarks for this area are listed in Chart letters Nos. 282 (1935) and 590 (1935), and are shown on this survey.

There are no landmarks on the present charts to be deleted.

#### Aids to Navigation

Notice to Mariners No. 27 (1935) notes that a fixed red light has been established on a pile at a point 4,100 yards on 41° from Halfmoon Reef Lighthouse. This light is not shown on T 5813 as no accurate position for it is available.

#### Remarks

The projection was found to be correct.

The limit of accuracy stated in this report is believed to be too high. A better estimate of this accuracy would be 0.3 to 0.5 mm. for intersected points and 0.3 to 0.8 mm. for other detail.

The descriptions for recoverable stations on Form 524 are filed under T 5354.

*H. L. Hawkins*  
H. L. HAWKINS  
Aug. 26, 1935.

#### Comparison with Chart 1284

*For corrections to the chart as a result of this survey see the discussion on pages 7 and 8 of the descriptive report and the comparison with previous surveys in this Review.*

*Frank G. Estline*

REVIEW OF AIR PHOTO COMPILATION NO. 5354

Chief of Party: T. M. Price Jr.

Compiled by: see page 2  
of descriptive report

Project: Party # 20  
Corpus Christi, Texas

Instructions dated: Nov. 7, 1933

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)
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)  
No blue prints etc. transmitted.
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 table surveys. Final hydrographic sheet not completed but comparison made to date of submitting this sheet.*
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 66 c,h,i)  
No large or unusual adjustments.
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 rocks~~, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41)  
Shoal areas indicated only, by means of a dotted outline. No low water line obtained.
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)
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)
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)  
Clearances given for bridges over navigable streams only.
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. C. S. Quadrangles~~ is given in the descriptive report, together with reasons for recommendations made. (Par. 64, and 66k)
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. 66j)
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.

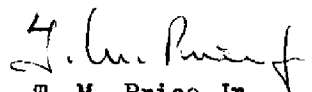
3. All station points are exactly marked by fine black dots.
4. Closely spaced lines are drawn sharp and clear for printing.
5. Topographic symbols for similar features are of uniform weight.
6. All drawing has been retouched where partially rubbed off.
7. Buildings are drawn with clear straight lines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

(Par. 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 48)

16. No additional surveying is recommended at this time.

17. Remarks:


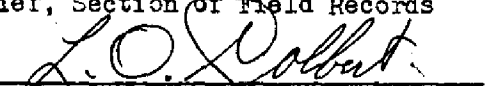
18. Examined and approved;



  
T. M. Price Jr.  
Chief of Party

19. Remarks after review in office:

Reviewed in office by:

Examined and approved:

  
Chief, Section of Field Records  
  
Chief, Division of Charts

  
Chief, Section of Field Work  
  
Chief, Division of Hydrography  
and Topography.