

U. S. COAST & GEODETIC SURVEY LIBRARY AND ARCHIVES

WAR 2 1935

Acc.	Ne.	
11441		

U. S. COAST.& GEODETIC SURVEY LIDRARY AND ARCHIVES

SEP 20 1935

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. 5369

Ekjelecejsajskieek

LOCALITY

Arensas Bay

Aransas Pass to Nine Mile Point.

1934

CHIEF OF PARTY

Ensign T. M. Price, Jr.

applied to dwg of chart 1286, Dec. 1935 - S.B.M.
applied to Cht 1285 - may 1940 - PBC.
applied to Chart 523 . Mes. 1945. K.R.D.

PHOTO 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. 19

REGISTER NO. 5369

State Texas
General locality Aransas Bay
Locality Aransas Pass to Nine Mile Point.
Photographs: "S" flight, Mar. 19, 193 Scale 1: 20,000 Date of success. "H" flight, Mar. 10, 1934 Compilation: October-December, 1934.
Vessel Army Air Corps Camera: Five Lens, Type T-3A. No. 31-76
Chief of partyT. M. Price. Jr.
Surveyed by See data sheet in descriptive report.
Inked by W. H. Burwell
Heights in feet aboveto ground to tops of trees
Contour, Approximate contour, Form line intervalfeet
Instructions dated
Remarks: Compilation of aerial photographs Nos. S-1 to S-21. incl. and H-10 to H-31, incl. Sheet reduced to scale and printed by photo-lithographic process.

4 F 0

RY

-NOTES ON COMPILATION-

SHEET NO. 19 (REG. NO. 5369)

PHOTOS: Five lens nos. S-1 to 8-21, incl. and H-10 to H-31, incl.

DATE OF PHOTOGRAPHS: S flight, Mar. 19, 1934 TIME: 2:59 - 3:09 P.M. H flight, Mar. 10, 1934 10:29 -10:47 A.M.

Λ

	Daw allers		
SCALE FACTOR (0.970)	(sgd) Dan Allen More	4. July	28, 1934
PROJECTION	(sgd) T.M.Price, dr.	August	1, 1934
PROJECTION CHECKED	(sgd) W.H.Burwell	August	2, 1934
CONTROL PLOTTED	(sgd) W. Mack Crook	August	3, 1934
CONTROL CHECKED	(sgd) J.L. Smith	August	4, 1934
TOPOGRAPHY TRANSFERRED (Shoal water line from be	(sgd) W.H.Burwell oat sheets)	September	20, 1934
TOPOGRAPHY CHECKED	(sgd) R.J.Moore	October	1, 1934
SMOOTH RADIAL LINE PLOT	(sgd) W.H.Burwell	September	1, 1934
DETAIL INKED	(sgd) W.H. Hurwell	December	5, 1934

AREA OF DETAIL INKED

61 sq. statute miles

LENGTH OF SHORE LINE OVER 200 m. .87 statute miles

LENGTH OF SHORE LINE UNDER 200 m. 29 statute miles

GENERAL LOCATION ARANSAS BAY

LOCATION ARANSAS PASS TO NINE MILE POINT

DATUM STATION SKIFF, 1934 Latitude 27° 55' 58.803" (\$\frac{1}{1}810.0\$) Longitude 97° 02' 35.510" (\$\phi\$ 970.8) (Position from field computations)

COMPILER'S REPORT

for

PHOTO TOPOGRAPHIC SHEET , FIELD NO. 19, REG. NO. 5369

1. GENERAL INFORMATION

This sheet was compiled from photographs taken by the U. S. Army Air Corps using Fairchild T-3A camera No. 31-76. The photographs used are Nos. 1-21, inclusive. "S" flight, (from Fulton to Aransas Pass) and Nos. 10-31, inclusive, "H"flight, (for St. Joseph Island.) The "S" flight was made Mar. 19, 1934, 2:59-3:09 P. M., and the "H" flight, on Mar. 10, 1934, 10:29-10:47 A. M.

The tide in Aransas and Redfish Bays has a small predictable variation, and the only difference in its stage that would affect interpretation of the aerial photographs would be caused by strong continued winds, except for the low sand and mud flats as on Harbor Island where special study of tide heights is necessary. The height of the water at the time the photographs were taken, however, is slightly below M.H.W. as indicated by the photographs and field inspection. The tide tables show the tide on the Gulf Coast to have been half high when the H flight was made. The field inspection verified this.

2. CONTROL

(a) Sources

GTZ (G2173) 877 Triangulation by F. L. G. 1931 Triangulation by E. O. H. 1934 ~ 1911 Triangulation adjusted to 1927 datum. Three 3 pt. fix stations (Saint, Joseph, Isle) are shown but were not used for photographic control. Located by E. O. H. 1934 with third order accuracy.

(b) Errors

There were two errors in control, namely, faulty location of "Club" on the photographs, and incorrect instrument location of Windmill "T". The former was rectified by a short traverse and azimuth tie to a definite point, and the latter, by reobservations. (These stations appear on joining sheet but were used to control this) (c) Remarks (sheet also.

The hydrographic stations (shown by circled points) were located on the ground and directly on the photographs by the field inspection party, and their positions are established by the radial plot only.

The control is on the 1927 N. A. Datum. The field parties unadjusted geographic positions were used for the 1934 triangulation but the difference between there and the final adjusted positions would not be plottable on the scale of this sheet.

3. COMPILATION

(a) Method

The usual radial line method of plotting from five lens photo-

graphs was used in the compilation of this sheet. There was no departure from standard practice.

(b) Adjustment of plot

Due to the aformentioned errors in control, lack of definite points that could be selected for the radial plot where the S and H flights overlap, and errors in mounting or creep in the mounting, considerable difficulty was encountered before finally arriving at a reliable plot. Photographs #14 & 15 H flight and #16 S flight were tilted over 3° and a number of others tilted somewhat. Considerable time was spent and every effort made to make as good a plot as possible for this sheet and it is believed that although not perfect perhaps, it is as reliable as could be made within a reasonable length of time.

(1) Trimming and Wounting

Final intersections obtained were good, except where detail was indistinct, adjacent flights joined well and no large adjustments were necessary.

(c) General Description of Topography and Interpretation

There is a Field Inspection Report forwarded with this sheet that generally covers the territory shown on this sheet, and Field Inspection Report filed with sheet Reg. No. 5365 which includes Harbor Island. Since the compiler did not make a detailed inspection of the entire area, there is little that can be stated that is not evident in the sheet. However, where the short line and topography was difficult to interpret, it was investigated by the compiler, and the special features will be noted. In regard to symbolization, the only feature which occurs generally over the sheet that is note worthy is that sand and mud flats, above M. H. W. have been left open, i.e. without a symbol, and labeled, except where they were predominately sand. These areas are occasionally covered with water, but are usually hard and dry and without, or with little, vegatation. Symbols affecting particular areas are described under the following groupings.

(1) Live-oak Peninsula

This stretch of land extends N. E. from Corpus Christi Bay to Copano Bay, bordered in the N. W. by Port and Copano Bays, and on the S. E. by Aransas and Redfish Bays. Only the S. E. portion, between Aransas Pass and Fulton, appears on this sheet. The shore throughout is characterized by a sandy beach fringed occasionally with patches of marsh, interspersed with sand flats and sand and mud flats. The shore line was not usually difficult to delineate, but often the limits of shoal areas were, and where a change of tide would affect the bareness of extensive flats. Such cases were covered by sufficient field notes for interperation. The heavy growth of trees and brush inland along the entire length of the peninsula consists, for the most part, of live-oak, mesquite and all that type of growth that comes under the general term of chaparral. The growth, although thick seldoms exceeds a height of

25 feet. Numerous small ponds, clearings and grassy areas are scattered throughout, and there are innumerable paths and trails.

At Aransas Pass, there are a number of piers, some with buildings upon them, extending into the canal but too small to be clearly shown on this scale. These occur between the bridge and the bend in the canal, northward. There is a standard guage single track railroad on the causeway to Port Aransas, starting at the "Y" indicated in Aransas Pass at the extension of the West end of the causeway. This track was emitted on the causeway for its entire length for clerity of printing. The causeway is actually a combined railroad and toll road. A pipe line of 3-loin-pipes on pilling bents runs parallel to causeway, about 5 meters from the South side. Another line of 2 pipes parallels the causeway on the North side, a transmission line and telephone line also follows the causeway.

(2) St. Joseph Island

A barren and practically uninhabited stretch of land between Aransas Bay and the Gulf of Mexico from Aransas Pass to Cedar Bayou. The shore line on the Gulf side, though definitely absenced by surf, can be followed very reliably, by a slight difference in coloration of the photographs, except between Lat. 270-53.51 to 270-54.51 where there are washes, and storms cause frequent bhanges and occassional breaks. On the bay side the shoreline is clearly defined by white sandy beaches, or fringes of marsh. In the vicinity of the above mentioned break the bay extends inland in the form of numerous shallow arms and bayous, spreading out over sand flats and forming numerous bodies of intermittent water. This area was carefully examined and it was found impossible to identify any exact and permanent position of a shore line. The condition of a demolished stone dike in this vicinity indicates clearly how subject this area is to change, during storms.

The nature of the culture and topographical features is clearly indicated by the use of the conventional symbols and numerous notes. It was considered of sufficient importance to indicate the line of demarcation between the areas covered by the storm high tides and the areas always dry. A fine solid line was used to indicate areas of definitely higher land, and permanently above extreme high water, in contrast to low areas, washes and areas occasionally flooded. The standard weight solid line was used for the mean high water line. Reference is made to this, report for chart 5368 in which this method was used and described. The same condition of extensive low flats sometimes covered with water exists on sheet Reg. No. 5397 and described in the report for that sheet but there (sheet #5397) the boundaries instead of being shown with hight solid line were shown with rows of closely spaced sanding. The two symbols represent the same line and condition in nature and the change in treatment was given because it is believed that the use of sanding rows represented the condition more clearly. From Port Aransas to Cedar Bayou, the Island is owned by the San José Cattle Co., and there is a ranch house and farm buildings near Blind Pass, with a small pier extending into the Bay. A ridge of sand dunes extends along the Gulf side of the island, averaging 20 feet in height, but flattening out towards Port Aransas. Toward the north, light growths of grass occur on them; they become bare toward the south.

(3) Harbor Island

This island shown as mostly marsh on the older charts above M. H. W. now appears as an extensive shoal area of sand and mud flats covered with extremely shellow water and scattered growths of marsh grass awash at M. H. W. On the North and East it is bounded by a line of small islands, composed of shell, sand and marsh. These islands extend in a chain to Live-oak Peninsula thus dividing Redfish and Aransas Brys. Harbor Island on the South is bounded by the Spoil banks on the north side of the Corpus Christi channel. However on the West side, now that the flats are shown below xx the mean high water the exact boundary may be disputable and could either be considered the low water line of the East channel bank of Corpus Christi Bayou and Morris and Cummings cut. For discussion of low water lines and shoal area boundaries see following paragraph (d) Shoals. The topographic detail in the vicinity of Port Aransas is covered by the 1:10,000 Plane Table Sheet Fld. Letter "U" by the party of E. O. H.

(d) Shoals

On each side of the canal between the towns of Aransas Pass and Port Aransas, from the junction with plane table sheet "U" to a point near Lat. 270-525' Long. 970-055', a dotted line is shown which closely approximates the low water line, for although determined from the photographs, its position was checked at the junction with Plane table Sheet "U" and found to agree with the low water line on that sheet. Elsewhere that the dotted line is shown (mostly on the West side of Harbor Island) it represents a more approximate position of the low water line, because after observing this area at low water it was found that for these wide flats there was no particular shading on the photographs that could be followed in the exact position of the low water line. It was decided that at least an approximation would be valuable and therefore a definite shading some what higher than low water that could be followed was used for this line. The low water is approximately midway between this dotted line and the dash line (along Morris and Cummings Cut and Corpus Christi Bayou). The dash line along the above cut and bayou represents the g ft. line (M.L.W) the shading on the photographs for this being selected from its ν relation to this depth determined by the hydrographic party of E. O. H. 1934. Elsewhere the dash line represents only the boundary of shallow water as indicated by shadings on the photographs alone. See Note 3 at end of report.

(e) Bridges

Only two bridges over navigable streams appear on this sheet. One is over the canal formity the harbor slip at Aransas Pass, the other, on the causeway between Aransas Pass and Port Aransas. The former is a double, wooden, fixed bridge on piling bents. The clear span between bents is 12.5 ft. and the vertical clearance is 5.0ft. The R.R. track crosses on the south span and cars on the north one. Pipe lines cross here with the same clearance. Telephone and transmission lines have greater clearances than the bridges.

The second bridge is a bascule, hand operated, with a horizontal clearance of 24.0 ft. and a vertical clearance of 2.5 ft. with draw closed at M. L. W. Both bridges are owned by the Harbor Island Transportation Co. At Morris and Cummings Cut (the location of the bascule draw) the pipe lines are submerged. The transmission and telephone lines cross this cut, at the same place as the causeway, with a horizontal clearance of 350.0 ft. and a vertical clearance of 61.5 ft. at M. L. W. The clearances of the fixed bridge was measured by the field inspection party. The clearance of bridge and overhead wire crossings at Morris and Cummings Cut was furnished by the U. S. E. D., Galveston office.

(f) Information from other sources

All information was obtained from the photographs, and notes written by the field inspection party, except as follows: (1) shoal water, and channel boundaries along Corpus Christi Bayou and Morris and Cummings Cut from the boat sheets of the party of E. O. H. (2) The data for the bascule bridge and overhead wire crossings was furnished by the U. S. Engineers Office, Galveston, Texas. (3) Various new names the sources of which are described below.(4) Location of several piers vicinity of Fulton as described in note #2 at end of report.

(g) Conflicting Names

(1) Murray Shoal

As above on U. S. C. & G. S. chert 1285
As Murrays Shoal, on War Dept. Map, sec. 9. index sheet No. 4
intracoastal water way. San Antonio Bay to Corpus Christi.
Murray shoal is recommended as being the more proper usage.

(2) Lydia Ann Island

As Lydia Ann Is: on U. S. C. & G. S. chart 1285, and above mentioned War Dept. Map. Two islands are shown on these charts here.

As Lydia Ann I., on U. S. G. S. quadrangle for Aransas Pass, Tex.

Lydia Ann Island is recommended since there is only one island here at the present time.

(3) Southern Pacific Railroad

S. A. and A. P. R. R. on C. & G. S. charts and U. S. G.S. quadrangle.

It is recommended that this be changed to Southern Pacific Railroad as it is now owned and operated by the Southern Pacific System.

(4) Corpus Christi Channel, instead of Turtle Cove. Full descussion to be found in descriptive report for sheet No. 5368

(5) Live-pak

Liveoak used to hame peninsula on charts 1285 and 1117

Live Oak used to name the ridge on this peninsula by U. S. G. S. quadrangle Aransas Passand by a county property map of this area.

Live-oak given as the proper spelling by dictionary(Funk & Wagnalls, Standard desk) for the name of the tree from which the locality name is taken, and this spelling is recommended.

(Live Oak according to Webster; nowever one word is preferred for charting purposes)

(6) Estes Siding and Estes School are recommended as shown by the above U. S. G. S. quadrangle sheet. Chart 1117 shows a village symbol here with the name Estes. There are however only a few scattered farm houses.

(h) List of New Names

(Note: Hames from local people further checked by hydrgraphic party and found in agreement as shown below)

(1) Taylor, Talley and Frondoleg Islands

These names are recommended for certain islands as indicated in a chain of small islands, the first two separating Redfish and Aransas Bays, and the last, and island, the S. E. point of which forms Ninemile Point. The names were taken from a property map of Aransas County, prepared by Fred M. Percival of Rockport, Texas, who is regarded as an authority on local names.

(2) Live-oak Ridge

This name appears on the U. S. G. S., Aransas Pass Quadrangle sheet, as Live Oak Ridge and designates the pronounced ridge that extends along the center of Live-oak peninsula between Aransas Pass and Rockport. The greatest height is 30 ft. found about 1 mile West of Aransas Pass. The major portion of the crest is between 20 and 25 ft. The spelling was changed when applied to this compilation as explained above.

(3) Estes Siding and Estes School

Names taken from the U. S. G. S. Aransas Pass Quadrangle Sheet, representing a railroad siding and school, neither of which have commercial importance.

(4) Quarantine Shore

Name taken from the U. S. G. S. Aransas Pass Quadrangle Sheet. The name applies to the chain of narrow islands extending S. E. and S. from Corpus Christi Bayou, and forming the N. E. shore line of Harbor island. A number of years ago(previous to the survey made by the U. S. G. S. here which was in 1923) the quarantine station that had been in this locality was removed and has not since been replaced, so that the future usage of this name is likely to be small, but it does have some present local usage.

(5) Big Bayou

A hitherto unnamed pass (the first one north of Corpus Christi Bayou) from a local authority in Rockport and having usage among boatmen of this region.

(6) Allyns Bight

A hitherto unnamed cove on the East side of Aransas Bay, about 2 mi. N. E. of Mud Island. Same authority as for (5).

(6a) Little Bay & small bedy of water between Ninemile Pt. and the main land. Same authority as for (5)

San José Cattle Co. Ranch.

The property included in this ranch is believed to take in all of St. Joseph Island with the exception of the extreme S. W. portion. The ranch headquarters are near Blind Pass. The name was obtained from the owners by the field inspection party, when on St. Joseph Island.

Junction with Adjoining Sheets

This sheet is joined by Sheet Reg. No. 5397 (Field No. 23) on the North East; Plane Table Sheet "U" (1:10,000) on the South East; Sheet Reg. No. 5368 (Field no. 18) on the South East; Sheet Reg. No. 5367 (Field No. 17) on the South West; Sheet Reg. No. 5370 (Field No. 20) on the West; Sheet Reg. No. 5395 (Field No. 21) on the North West. The junctions with adjoining sheets are satisfactory.

4. COMPARISON WITH OTHER SURVEYS

Surveys of this area were made by the Coast & Geodetic Survey about 1880 (Chart No. 1285); the Geological Survey, in 1923 (Aransas Pass quadrangle; and the Intracoastal Waterway Survey, U. S. Engineers, in 1927-28 . No shore line comparison was made with the U. S. G. S. and the U. S. E. surveys.

A scaled comparison of the shore lines of Redfish Bay, Aransas Bay and the Gulf shore was made with Chart 1285, on the parallels listed below, and the differences tabulated. These figures indicate a building up of the land areas, particularly in the southern part of St. Joseph Island, on the bay side. A notable exception to this, however, is the change in the surface nature of Harbor Island, as discussed under that heading. There is apparently very little change on the Gulf shore, except at the former breaks on St. Joseph Island near Lat. 270 - 54'.

(a) General Comparisons to Chart # 1285

- (1) Canals have now been built for small vessels on the east side of the town of Aransas Pass.
- (2) The spoil menks on each side of Morris and Cummings Cut near Lat. 270-52' are not now above M. H. W., and there are several other changes in the islands along Corpus Christi Bayou and Morris and Cummings Cut.
 - (3) The greater part of Harbor Island is now below M. H. W.

- (4) Lydia Ann is one island now. (5) There are several piers now: There are several piers now in the vicinity of Fulton.
- (6) The harbor and dock layout at Rockport should be changed to agree with this compilation. Likewise those at the town of Aransas Pass.
- (7) St. Josseph Island has changed between Lat. 270-54.51 102 and 270-52.7

(8) There is now a pier near Blind Pass.

- (9) There is now no pier at Lat. 270-54.6' Long. 970-03.7'
- (10) No islands could be identified from the photographs at Lat. 270-59-4' Long. 970-03.5' and at Lat. 270-59.8' Long. 978 -03.81. There is very shallow water here however and the

hydrography may disclose something that bares.

(11) Land marks positions agreed fairly well. However, all the lighted beacons plotted slightly off and should be consected to the latest position determined by triangulation. No day become are shown on this compilation so no comparison to them can be made. See Paragraph "Landmarks".

(12) There are numerous changesgin roads all of which should

be corrected as shown on this compilation.

(b) Detail Comparison to Chart 1285

(1)		Latitude		Longitude	Change old to new (Meters)*	Remarks
	0n	27-54-00	Near	97-08-00	+ 178. 0	Redfish Bay
	on	27-56-00	Near	97-07-00	+ 92. 0	West side
	On	27-58-00	Near	97-05-00	+ 182.0	
	On	27-58-00	Near	97-05-00	- 35.0	East Side
	\mathbf{On}	27-56-00	Near	97-05-00	60.0	· v
	On	27-54-00	Near	97-06-00	+ 101.0	į
	On	27-56-00	Near	97-04-00	+ 65.0	Aransas Bay
	$\mathbf{0n}$	27-58-00	Near	97-04-00	 15.0 	West Side
	0n	28-00-00	Near	97-03-30	 70.0 	
	0n	28-02-00	Near	97-01-30	• 77.0	
	On	27-04-00	Near	97-02-00	No change	•
	0n	28-00-00	Near	96-59-00	- 143.0	East Side
	0n	27-57-00	Near	96-59-30	No change	2
	On	27-56-00	Near	97-02-30	No change	
	0n	27-55-00	Near	97-01-00	+ 101.0	• • •
	0n	27-54-18	Near	97-02 30v	+1809.0 -	(Extensive
				•	-	sand flats
)formerly shown
				•		as shoals
	On	27-55-00	Near	97-00-00	- 30.00	Gulf
	0n	27-58-00	Near	96-57-00	No change	

* * = Accumulation; - = Recession. Measurements made along the parallels and not necessarily normalito the shoreline.

(5), LANDMARKS

The following objects appearing on this sheet are recommended a landmarks:

DESCRIPT ION	LAT IT UDE	LONGITUDE
✓ TANK (ELEVATED) (27°-54.51	970- 09.01
✓ DOME (△ Rockport courthouse dome 1931)	28°-01.5	970-03.21
/ CUPOLA (Δ Fulton Mansion, 1911)	280-03.41	970-02.11

The first mentioned landmark is the new municipal water tank,

It is of aluminum color and about 120 ft. in height and prominent in all directions.

The second is the dome of the Court House at Rockport, approximately 45 ft. high, and is of most value for Aransas Bay navigation.

The third is the cupola of the Fulton Mansion, and is approximately 25 ft. high. It is of the most value for North Aransas Bay.

(a) Beacons

The following permanent aids to navigation in the form of lighted beacons appear on this sheet:

	Beacon and Type	Latitude	Longitude
1	NINEMILE POINT (F. W.)	280-01-41	970-01.21
1	ROCKPORT BREAKWATER (F. R.)	28° - 01.2°	970-02.91
J	CORPUS CHRISTI CHANNEL NO.1	(F.W.) 27°-50.31	970-04.91

The above landmarks have been submitted on Form 567. All were treated by triangulation. Several landmarks appear in the area covered by the 1:10,000 Plane-table sheet Field Letter "U". The trianguation station symbols have been shown on this sheet in the above area, but no landmarks were listed since there will be recommended with the above mentioned planetable sheet.

There are several day beacons in the area covered by this sheet which were not located by triangulation and could not be seen on the photographs. Their position will be determined by the hydrographic party by sextant and will not be plotted on this compilation.

6. RECOVERABLE OBJECTS

The following objects are among the points selected by the field inspection party for hydrographic and topographic stations, and their positions were determined by the radial plot of this sheet. The field inspection party has submitted descriptions of these recoverable objects on Form 524.

Weather Bureau Mast (d) 280-01.2	
Peak (Peak of roof) (d) 28°-02.8 Abe (chimney) (d) 28°-02.6 Chimney (d) 28°-00.7 S.E. Corner House (d) 27°-59.3 Map (chimney) (d) 27°-57.8 Lone (Tree) (d) 27°-56.3 S.E. Corner House (d) 27°-56.3	3' 97°-02.1' 97°-02.6' 7' 97°-03.3' L' 97°-05.1' 6' 97°-05.6' 3' 97°-06.0'

In the town of Aransas Pass, there is no stendard Weather Bureau mast but a 35 ft. pole is used by the local people to display signals. This is a temporary arrangement, and the object is of no prominence since it is among a number of telephone poles. Therefore it was not selected as a recoverable H. & T. station and is not shown on this sheet in any way. It is located on the centerof the top of the levee(which is on the west side of the Aransas Pass harbor slip), 70 ft. N.E. of the center line of the combined railroad and road.

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 widths of roads, etc. may be slightly expanded in order that the detail may be kept clear, and from photographing as a solid line in the photo-lithographic process. The area and detail in the vicinity of Port Aransas is covered by the Plane Table Sheet "U", therefore, no further surveys of the reigon covered by sheet 5369 are recommended.

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

Submitted by (sgd) W. W. Durwell

W. H. Burwell

NOTE #1

The following "nonrecoverable" hydrographic stations selected partly by the hydrographic party and partly by the field inspection party were located direct on the photographs and the position obtained by radial plot only. These stations were used by the hudrographic party but are not described on form 524. The hydrographic name is given on the compilation sheet but lack of room there made it sum more advisiable to describe the stations here:

- Last- The S.E. corner of last boat house on the west shore of the Aransas Pass harbor slip going south.
- Dry- The west gable of the black boat house which is the only one on the E. side of the Aransas Pass harbor slip south of the bridge.
- Boat- The N.E. corner of a brown boat house. This is the first boat house on the west shore of the Aransas Pass harbor slip S. of bridge.
- Use- The center of the E. side of the U. S. E. dock which is the first dock south of the bridge on the west shore.
- End- East end of Harbor Island causeway bridge across Aransas Pass harbor slip.

Fish- The stack of the San Patricio Canning Co. fish house.

Shrimp- S. E. corner of first shrimp house north of bridge on west shore of Aransas Pass harbor slip.

Bath- N. E. corner of Aransas Pass municipal bath house, which is the northemost house on the west side of the slip north of the bridge.

Note #2

There are several new piers and several ruined piers, at Fulton along the shore on Long. 97-02 between Lat. 28-03 and.28-04, which did not show on the photographs. These were located by locating the shore end of the pier on the photograph from adjacent detail, then getting the azimuth of the pier by setting the instrument up at the shore end and turning the angle from a triangulation station as initial. The length was determined by pacing, except for the ruined piers which lengths were estimated. The piers were then plotted on the sheet graphically using the inshore end as determined by photo plot as origin.

Note #3

The dash line from Lat. 27°-52.8' Long. 77°-06' to Lat. 27°52' Long. 97°-06.7' was found to approximate the low water line as determined by hy drography, because of a difference in the sounding reductions for this area difference in the sounding reductions for this area from that north of the cause way. The dash lines on this sheet join to dotted lines on sheets on this sheet join to dotted lines on sheets. Reg. 10.5368 and 5368. They represent the same line of shoot water, but the change in line of shoot water, but the change in representation was made to accord with later instructions for symbolization.

DEPARTMENT OF COMMERCE

U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

	r	,	· . -		Co	rpus Chr	isti, T	esxes	
						D	ocember	10,	, 193
Director, U.S. Coast and Geoi	DETIC	Surv	EY:		_				•
The following determined description given below, and slinest Field Ho. 19	objectiould	ets a be cl	re promin harted:	ent, c	an be				eaward from tl
Reg. No. 5369						To He	Prico,	ir,	Chief of Party.
	_			POSIT	'ION			<u> </u>	
PEGGELETION		·						METHOD	CHARTS
TANK (ELEVATED)		LATI	TUDE		LONG	IYUDE	DATUM	METHOD OF DETER- MINATION	AFFECTED
- DANK / PT PT 60 (PD)	•		D.M. METERS	•		D.P. METERS		Ø må em me	
(A Arensas Pess Hew Muni	27	54	\$947.8 -899.1	97	08	+1581.1	N.A.19	Triangu- 27 lation	
cipal Tank, 1931)								-	
DOIE, (A Rockport Court-	p		• 989 _• 8			→ 267.5		Trieng	
nouse Dome, 1931)	28	01	- 857.1	97	03	-1371.5	1927	lation	1285
		•							
CUPOLA, (A Fulton	,		• 803.9			+ 127.5		Triengu	
Iension, 1911)	28	03	-1043-0	97	02	-1511.0	1927	lation	1285
			!						
Inspected from Are	mses	Ba	ر ب						
, <u> </u>			ļ			ļ	 		
			1	I					
,								_	
		· ·	-		<u> </u>	ì	-		
						Check	d by V	L. R.	-
,							·	<u> </u>	
· · · · · · · · · · · · · · · · · · ·	· <u>-</u> -			-		 	 	 	
			· ·	<u> </u>				<u> </u>	
			·:]	j j	
						29		-	· .

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 indentification. 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, flagstaffs and like objects are not sufficiently permanent to chart. permanent to chart. C.S. GOVERNMENT PRINTING OFFICE: 1934 25379

DEPARTMENT OF COMMERCE

U.S. COAST AND GEODETIC SURVEY

LANDMARKS FOR CHARTS

Corpus Christi, Texas

RECTOR, U.S. COAST AND GEO.	DETIC	Sur	VEY:						,
The following determined scription given below, and sheet Field No. 19	obje	ets a	re promin	ent, c	an b	e readily d	istinguisl	ned from se	award from
						T. M.	Price.	Jr.	
					_				Chief of Pa
				POSIT	ION				
Reg. No. 5369 DESCRIPTION INFMILE POINT BN F. W.) OCKPORT BREAKUATER BU (F. R.) ORPUS CHRISTI CHANNEL ECON \$1 (F. U.)	LATITUDE		LONGITUDE		-	METHOD OF DETER- MINATION	CHARTS AFFECTE		
		ı	D.M. METERS	۰	1	D.P. METERS	DATUM	IIIIIIIII	,
	28	01	+806.2 -1040.7	97	01	+356.5 -1272.5	7A.1927	Triangu- lation	1285
OCKPORT BREAKUATER BY	28	01	+356.6 -1490.3	_97	02		1927	Friengh- lation	1285
ORPUS CHRISTI CHANNEL	27	50	+620.2 -1226.7	97	04	•1446.9 • 194.9		Triangu- lation	1285 1286
(1) and (2) (3) locat			muary 19						
						heoked l	y v. 1	. R.	
						heaked b	y V. I	· R.	
						heaked b	y V. I	• R•	
						heaked b	y V. I	• R•	
						heoloed h	y V. I	• R•	
			muary 19			healted b	y V. I	· R.	

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.

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 indentification. 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, flagstaffs and like objects are not sufficiently permanent to chart.

U.S. GOVERNMENT PRINTING OFFICE 1924 23379

FIELD INSPECTION REPORT

for

ARANSAS, COPANO, AND ST. CHARLES BAYS

This report covers the territory adjoining aransas, Copano, and St. Charles Bays. The following notes are submitted to act as a guide in the compilation of the sheets for this area including St. Joseph Island and that land that falls in the middle half of the wing prints, about four miles inland from the coast line. These are compiled by notes and sketches made by the field party andthrough a knowledge of this locality obtained by the field inspector in locating control on the aerial photographs, and establishing supplementary control points.

GENERAL DESCRIPTION OF TOPOGRAPHY

It is thought best to divide the field inspection report into several parts, each relating to that specific territory covered by a Photo-Topographic sheet. This is done in order that each draftsman may more easily obtain that which has reference to his particular compilation. In most instances the draftsman assisted in the field inspection of the area covered by their compilation.

1. ST. JOSEPH ISLAND

This stretch of land separating Aransas Bay and the Gulf of Mexico runs northeast in latitude 27°-51; longitude 97°-03' to latitude 28°-07'; longitude 96°-51'. On the Gulf side the high water line is apparent on the photographs by a very slight difference in coloring of the sand beach. This mean high water line is just outside the last strip of white sand. There is a small strip of sand about 5 to 10 meters wide that is intermittently wet between the mean high water line and said strip of white sand. The mean high water line on the Gulf side is the last uniform line of the beach showing a difference in coloring of the sand.

The high water line on the bay side is determined by the white shell beach or marsh grass line. This line is readily determined from the photographs andwith the aid of the notes shown on the field photographs. There should be little difficulty in interpretation. Showel waters are abundant on the bay side and can be interpretated from the photographs in contrast to the bay proper. Sand beach on the Gulf side varies in width, but is about 150 meters wide. Sand dunes varying in hierarch, but averaging about 20 feet in heighth, extend on the Gulf side of the island throughout with the exception of the southwestern fourth of the island, where there are mone. The sand dunes are usually covered with light growths of beach grass and can be recognized on the photographs. The center andbay side of this island are covered with marsh, grass, sand flats, and bodies of interitteent water. Each type ofculture is evident on the photographs. In the southwest quarter of the island, sand and intermittent water with very little grass are to be found. Shore line determination is this southwest quarter is difficult to determine,

GENERAL DESCRIPTION OFTOPOGRAPHY (CONT'D)

1. ST. JOSEPH'S ISLAND (CONT'D)

and it's exact determination requires a study of tide elevations by field topographic party. Special attention is called to an old dyke which runs throughout the southwest quarter of the island, the determination of which is evident on the photographs. There are no trees on St. Joseph Island, but dense growths of brush are found in various places in the island.

2. LIVE-OAK PENINSULA

This stretch of land, bordered by the following bays: Puerto, Copano, Aransas, and the northern part of Redfish, extends in latitude, from about 27°-58 to 28°-07°. The shore line is characterized by bluffs in general with occasional patches of marsh on the points and marsh along the border of Port Bay. Sufficient notations have been made on the field photographs to determine this line, which is usually a grass line, but in some instances, white shell beach. The marshes consist of grass, sand flats, and bodies of intermittent water. The interior is covered by dense growth of trees averaging about 25 feet. Practically the entire peninsula between the marsh areas is sand. In few small scattered tracts of cultivation are found on the east side of Live-Oak Peninsula. In the vicinity of stations OAK and CAUSEWAY are found steep bluffs. Along the northwest shore are bluffs starting with an abrupt bluff just west of Fish Pt. and getting more sloping until it reaches Hannibal Pt. From there on around to the head of Port Bay, the ground is flat and marshy.

3. BLACKJACK PENINSULA

This area is known locally as Blackjack Beninsula, and borders the east coast of st. Charles Bay and the north part of aransas Bay. The Shore line is marked on the field photographs and can be determined from the marsh grass line. The outer fringes of this area are covered with marsh, the interior, by sand. Dense growths of trees are found in the interior as well as dense growths of shrubbery. The trees average about 18 feet in heighth and the bushes about 10 feet. There is no cultivation in this area.

4. LAMAR

The peninsula in the vicinity of Lamar is bounded by the following bays: Copano, ransas, and St. Charles. Shore line is determined by the marsh grass line in general with the exception of around Lamar, where there is a slight bluff. Marsh areas encircle this peninsula and the interior consists of trees and brush in the southeast half, and flat grassy grazing land in the northern part and along the northwest side. The trees are about 15 feet in heighth. The trees and brush grow in sand which is characteristic of this general region. If few vary dim trails are found in this vicinity. There is no cultivation on this peninsula.

GENERAL DESCRIPTION OF TOPOGRAPHY (CONT'D)

5. COPANO BAY-NORTHWEST SIDE

this area bounds Copano Bay on the nor thwest side and extends on either sides of Mission Bay; from the aransas giver to Copano Creek. In general the shore line is characterized by a bluff with a narrow strip of beach at its foot. The bluff at Bayside is about 15 feet in heighth, and the bluff at station LAP is about 4 feet in heighth. The exception to this being at the mouth of Aransas River and the entrance to Mission Bay. The shore along here being low and marshy. Notations are been made on the field prints and no difficulty should be had in following out the mean high water line or the bluff line.

the interior from Mission Bay southwest and around Bayside, is in cultivation chiefly, there being spots of trees and underbrush here and there, more so, as the shore of Copano Bay is reached.

the interior between Mission Bay and Copano Creek is all brush and trees with no cultivation. this section being difficult to get into except by boat, there is do development.

6. HEAD OF COPANO BAY

This area is bounded by Port Bay, Copano Bay, and the Aransas River. The shore line is characterized by marshy land with the exception of the shoreline on Copano Bay from triangulation station STAR *to the mouth of the aransas River, which is a bluff averaging about 8 feet in height. Notations as to shore line and bluff line have been made on the photographs so that these should be carried out with out much trouble. The interior is under cultivation and numerous roads are found running through it. There are no trees in this area and very little brush.

CONTROL

Triangulation executed by the party of Lieut. E. O. Heaton in 1934 and the first order 1931 triangulation by Lieut. F. L. Gallen form the principal control for the area covered in this report. Supplemental third order triangulation with occasional short traverse control were executed by the field inspection party. This supplemented the main control for the five lens photographs at occasional places where an additional point was needed to hold the radial line plot. The location of these supplementary points was marked on the photographs and by a are smally recoverable mark on the ground. In the ground, but he standard marks were extended.

CONTROL (CONT'D)

The field inspection party located on the ground and on the photographs points that could be used as hydrographic stations. The position of these points are to be determined by the photographic radial line plot. Recoverable topographic stations were established in the field and marked on the photographs. Positions of these stations are to be determined by the same used for the hydrographic stations.

CHANGES IN MAPS AND PUBLICATIONS

There are several piers extending from Live-Oak Peninsula which are not shown on chart # 1285. References here made to the individual photographic sheet for their proper extent and location. The same is true of the vicinity of Lamar. There are piers adjacent to the west shore of St. Charles Bay which should be shown on future maps. For their location, reference is made to the individual nerial Photo-Topographic maps of the respective vicinities.

The land in the vicinity of HAM is called by two names. The old name, which is used by old timers, is Black jack Peninsula. The newer name which is used by some, is St. Charles Peninsula,

The landmark "EAST CHIMNEY" on the north side of Copano Bay, about 28°-08.8' and 96°-07.7' should be taken from the chart as the chimney has partly fallen down and is no longer prominent.

There are a number of small piers around the vicinity of Bayside which are not shown on the old chart, and should be added. The pier in the vicinity of Copano Ruins should be removed from the chart as it is no longer there.

COAST PILOT NOTES AND LIGHT LIST CORRECTIONS

There are no changes recommended in the "Inside Route Pilot" nor in the "Gulf Coast Pilot." (for changes see special report, Coast Pilot Notes)

Notations regarding other bridges and transmission lines have been furnished by the U. S. Engineers and will be listed in the descriptive report of the sheet in which they occur.

GEOGRAPHIC NAMES

			<u> </u>
Date	<u>June</u>	15.	1935

Survey	No. T-5363
Chart	No. 1286
Diagram	No

TEXAS

Approved by the Division of Geographic Names, Department of Interior. *\frac{\times}{Referred} \tag{Posterior} \tag{Posterior}

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
J	Live Bak Ridge	(One word)			
	Aransas Pass				
J	Redfish Bay				
	Hog Island			· ·	
4	Morris and Cumming	s Cut			
	Mustang Island				·
* 1	Cormis Christi Cha	nnel			
	Harbor Island				
	Corpus Christi Bay	ou		·	
/	Big Bayou	<u> </u>			
	Taylor Island				
	<u>Talley Island</u>				
	Live oak Peninsula			,	
<u>. </u>	Rockport		-	1	
	The Cove				
	Turtle Bay	ou			
V	Quarantine Shore				<u></u>
	Lydia Ann Island				· .
	Murray Shoal:	· · · · · · · · · · · · · · · · · · ·			
. ,	Little Bay				
		APPROVED NAMES UNDERLINED IN KILL			
(,		_ Dood			
					(4.7

GEOGRAPHIC NAMES

Date	June	15.	<u>19</u> 35
------	------	-----	--------------

Survey No.	T-5363		
	 12 6 5 &6		
	_		

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	

Status	Name on Survey	Name on Chart	New Names in local use	Names assigned by Field	Location
	Fulton				
	Ninemile Point				
<i>y</i>	Frondoleg Island				
	Aransas Bay				·
✓	Mud Island				
	St Joseph Island				
	Blind Pass				
	Allyns Bight				
	Gulf of Mexico		<u> </u>		
	Aransas Channel		<u> </u>		<u>-</u>
	Port Aransas		-		
<u> </u>	Cline Point				
	Port. Aransas Cham		<u> </u>		
	Lydia Ann Channel	•		1	
		APPROVED NAMES UNDER LAND NAMES			
		ADbook			-
					(M-I

REVIEW OF AIR PHOTO COMPILATION T-5369

Date of Photographs March 1934

Scale 1:20,000.

1. Comparison with Plane Table Survey T-6229 (1934)(1:10,000).

T-6229 covers the area in the vicinity of Aransas Pass and shows complete shore line detail.

The area covered by T-6229 was left blank on the compilation. In order to make the compilation complete, T-6229 has been reduced and all detail transferred to the compilation except for the following:

(a) The following lights have been discontinued since the date of T-6229:

Aransas Pass RR Beacon 1934
Aransas Pass Spurdike Beacon, 1934.

- (b) Buoys.
- (c) Characteristics of lights and beacons.
- (d) Elevations of detail exposed at highwater: including piling, the rip rap dike and the hulk at the west side of the channel. Aransas Pass.
- (e) Topographic station names. The name of the object only is shown on the compilation.
- (f) Magnetic declinations.

Detail transferred by Bonf. M. Bevy and checked by Bg. Jones

As this compilation is on a scale of 1:20,000, T-6229 should be referred to where a larger scale survey of Aransas Pass is needed. Refer also to page 1 descriptive report T-6229 for a general description of the area, particularly the description of Aransas Pass as viewed from Seaweds seaward.

2. Shoal Areas.

The outline of the extensive shoal areas on this compilation was drawn from photographs taken at approximately mean highwater. The difference in elevation between the shoal line and the low water line is from 1/2 to approximately two feet, however, the horizontal distance between the shoal line and low water line is considerable in most cases. Actual low water line is defined in only a few areas. See pages 6 and 13 of the preceding report.

3. Comparison with Hydrographic Survey H-5693, (1935).

Comparison with H-5693 shows no discrepencies between the topographic detail and the soundings.

What appear to be two submerged jetties on H-5693 at latitude 28° 04.2', longitude 97° 02' do not show on photographs and do not are not shown appear on this compilation.

Numerous piles and beacons shown on H-5693 as determined by hydrographic positions do not show on the photographs and do not appear on this compilation. H-5603 has not been reviewed.

Comparison with H-5613 (1934).

Comparison with H-5613 shows no discrepency between the topographic detail and the soundings.

Several piles and the rip rap dike at Aransas Pass shown on this compilation and on T-6229 have not been transferred to H-5613, which has

Several beacons shown on H-5613 as plotted from hydrographic positions do not show on the photographs and do not appear on this

Pages 2 and 4 of the descriptive report H-5613 and a list of land marks at the back of descriptive report H-5613 lists the recent changes in lights and beacons in this area and lists the new positions. The new positions for the recently established lights and beacons are given in the 1935 triangulation of E. O. Heaton and on plane table survey 1-6229. The compilation has been corrected to show the new positions of lights and beacons. accordingly.

Stations plotted by R.M. Derry

and checked by

1935

Comparison with Topographic Survey T-823 (1860).

Large changes have occurred in Aransas Pass since the 1860 survey. The shore line of the inside waters has shifted comparatively little. This compilation was complete and adequate to supersede T-823.

Comparison with Chart 1285. 6.

Corrections to Chart 1285 as a result of this survey are discussed in detail on pages 9 and 10 of the preceding report and on pages 2 2, 3 and 4 of description what T6029.

Positions of lights and beacons shown on this compilation together with the additional beacons shown by hydrographic positions on H-5613 and H-5693 include all lights and beacons listed in the 1935 light list within the area of this compilation except for light No. 3963, which has been discontinued as discussed on page 2 of H-5613. All land marks other than lights and beacons shown on chart 1285 within in the area of the compilation appear on the compilation.

Respectfully submitted
Rulfl M. Bery
18 ggones

REVIEW OF AIR PHOTO COMPILATION NO. 5369

Chief of Party: T. M. Price Jr.

See page 2
Compiled by:of descriptive report

Party #20

Project: 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)
- 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)

Day beacons were not plotted, as described in report

- 3. Ground surveys by plene 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)

 Only ground surveys were short traverses for locating triangulation stations on photographs, and piers which did not show on photos.
- 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)

Only blue-prints and maps used were for name sources

- 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.
- 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 unusual or large 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-restraind rocks, and legends pertaining to them is satisfactory. (Par. 36, 37, 38, 39, 40, 41) Dotted line indicates approx. low water as obtained from the photographs only, following field inspection at low water. Dashed line indicates channel boundaries as obtained from the photos and substantiated by the hydrographic survey or shallow water limits?

 9. Recoverable objects have been located and described on Form 524
- 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)
- 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)
- A2. 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 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.
- Closely spaced lines are drawn sharp and clear for printing.
- Topographic symbols for similar features are of uniform weight.
- All drawing has been retouched where partially rubbed off.
- グ. 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: The drafting on this sheet may be too fine and lines and features often spaced too closely to print well. The draftsman has done this rather than omit detail that may be of use, or change the position of features for the sake of clear printing.
- 18. Examined and approved;

Chief of Party

19. Remarks after review in office:

Reviewed in office by:

Examained and approved:

Division of Charts

Section of Field Work

Division of Hydrography Chief,

and Topography.