

4030

G. & G. SURVEY
L. & A.
1725 1/2
Acc. No.

Form 504
DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

State: *Louisiana*

11-5813

DESCRIPTIVE REPORT.

Topog. Sheet No. *4030*

LOCALITY:

Mississippi River Delta

Doullut Canal to Entrance

of

Grand Pass

192²₃

CHIEF OF PARTY:

G. C. Mattison

4030

A DESCRIPTIVE REPORT TO ACCOMPANY

Sheet #1.

This sheet was constructed by using airplane photographs made by personnel of the Navy Air Service in April and May 1922. The Photographs were examined in the field by G. C. Mattison in October 1922.

The office work of reduction and plotting began in the latter part of January 1923, and was finally completed in November 1923. The work could not be completed at one time as it was found necessary to work on some of the sheets lower down the delta before the final completion of this sheet. G. C. Mattison constructed the first 50 mosaics used on this sheet, and H. C. MacNab, draftsman, constructed the remainder. MacNab made all pantographic reductions. Mattison plotted the reduced data on the sheet, and inked the sheet

DEGREE OF ACCURACY: The accuracy varies throughout the sheet. Where control points are numerous and the photographic work well done, it is believed that the accuracy is greater than that attained in plane table surveys, especially in country similar to the delta. In the southern portion of the sheet, control points are scattered, there being a distance of 7 or 8 miles between them in some cases. An outside estimate of the possible error in the location of the minor topographic features in the interior of the delta in this area is 1/60. Along the river and in all areas where triangulation stations are spaced at intervals of 2 miles or less, the accuracy should be as great as that attained in plane table work.

INTERPRETATION OF PHOTOGRAPHS: The photographs were made at a time when the delta was flooded, but this did not affect the shoreline as shown in the photographs, except possibly the area northeast of the river between Ft. St. Philip and Baptiste Collette. The area affected was the marsh within 1/4 mile of the river. It is possible that some minor streams have been omitted on the sheet, as the flood waters may have hidden the shoreline. The streams and bodies of water that appear on the sheet are those recognized as water areas in the photographs. The areas covered by water-lilies were shown as land. There were only a few minor bodies of water which were covered with the lilies, and these were in areas where a field inspection would be almost an impossibility.

AREA NOT PHOTOGRAPHED: A gap was left between photographic flights just southwest of Bayou Grand Liard. This is shown on the sheet. The section is unimportant, and can only be reached by means of very light canoes, and then with difficulty.

GENERAL DESCRIPTION OF THE COAST.

This whole area is flat and only a few feet above sea level. The only solid ground is that within the reclamation projects, or along the banks of the river and the larger passes, or on the outer coast line. Almost all the remainder is marshy.

BAYS: Almost all the Bays and Lakes shown on this sheet are very shallow, with channels through some of the principal Bays where boats of 3 foot drafts may navigate with local knowledge and this only at high tide. Most of the Bayous are fairly deep, especially when they are open to the sea so that tidal action may have its effect. Changes are continually taking place in the depths of these Bayous and Lakes, and local knowledge is an absolute necessity for purposes of navigation.

VEGETATION: Northeast of the river, practically the whole area is covered with grass about 3 or 4 feet high. There are patches of cane in the Baptiste Collette area. The offshore banks of the delta are almost all covered with a growth of Mangroves. There are some willows along the banks of the river and in the Baptiste Collette area in scattered clumps.

The area south of the river and west of Bayou Grand Liard is covered with short grass 3 or 4 feet high. There are only one or two clumps of mangroves in this large area. Willows grow along the river bank and along Bayou Grand Liard, with one or two clumps in the interior of the delta. Between Bayou Grand Liard and Grand Pass the short grass is dotted with patches of cane that become larger as Grand Pass is approached. There are also large areas where willows and some few other varieties of trees grow, generally in the vicinity of the Passes, Bayous or the river.

THE JUMP: The Jump is at the lower end of the sheet and is supposed to extend down Grand Pass. Some people say that this name applies to Grand Pass all the way down and others say that it only applies at the upper end where it joins the river. Above the Jump on the southwest side of the river, there is a district that has been reclaimed. A Levee runs along the river edge, and a back levee has been built up about 1/5 mile in shore. This area extends to within 3/4 mile of Ft. Jackson, and is planted with Orange trees in the northern half. Vegetable farms predominate in the lower half, although there are some orange trees in this section also. I have heard this called the "Venice Reclamation District" by some people. I am not certain as to the official name for this section. Houses are scattered along the river edge of this district and the different sections are designated by names. It is almost impossible to differentiate between the various towns, so I gave up the task of trying to find the names and their proper locations. It is probable that the Post Route Maps will be the best guide for the names in this section.

BAPTISTE COLLETTE: This is a section that has grown up within the last few years when the river enlarged the small canal that cut the narrow banks of the river. This name seems to apply to the whole area and is not limited to the main Bayou. The Bird Islands that are shown on the previous charts as lying off shore from here, have all disappeared. The only Island known as Bird Island at present is the small Island shown on the chart as Sable Island. The Baptiste Collette area is covered with patches of cane with a fringe of willows along the older Passes.

OLGA: This is a small settlement about 2-1/2 miles above the Jump on the northeast side of the river. There is a small marine railway here with some facilities for repairing launches. The plant is in a very delapidated condition and it is doubtful that it will be kept up in the future. The area northeast from Olga has not changed much since previous surveys. The numerous small Island are dotted with oyster camps. The marsh is covered with grass about 3 or 4 feet high. Mangroves grow on the offshore banks of all the Islands.

FT. ST. PHILIP: This is an abandoned fort, although there is a caretaker here to look after government property. The range tower and the water tank furnish land marks that are visible for several miles. The marshy area back of the forts is covered with the same short grass that grows above Baptiste Collette. Mangroves grow along the outer shores, and this is true for the marshy area northwest of here.

OSTRICA: This is a small settlement opposite Buras, and used to be quite an important oyster canning center. The old buildings still remain and give the locality the appearance of being more important than it really is. There is a canal here with locks for the accommodation of boats passing between the river and Quarantine Bay. The canal is not kept up at present and is getting shoaler each year. There is a reclamation area extending from Ostrica beyond the upper limits of the sheet. That area appearing on the sheet is very little used at present. Rice is occasionally grown here.

QUARANTINE BAY: This is a large Bay taking its name from the Quarantine Station which was at one time located at Ostrica. The ruins of the old Station are quite prominent at present. The Bay is very shallow with numerous channels through which small launches can pass. North of this Bay the low marshy land is almost covered with mangroves. The remaining sections being covered with the short grass.

SABLE ISLAND: This is the Island that is called on the chart "Little Bird Island". The Island is much smaller than shown on the chart, it having been cut away by wave action.

HOG ISLANDS: These Islands lie two miles northeast from Sable Island and are much smaller than shown on the chart. They are almost covered with mangroves.

BATTLEDORE ISLAND: This Island is much smaller than shown on the chart. About 2 miles southwest from Battledore Island there is a sandy island about 400 meters long with another small ~~sandy~~ island lying about 150 meters northeast from it.

DOULLUT CANAL: This canal is quite an important one and is used for boats passing from the river to the Bays west of the limits of the ~~canal~~, where there are extensive oyster beds. The ground at Doullut Canal and for 3 miles south is fairly solid for a short distance back from the levee. There are numerous small vegetable farms close to the banks of the river between Doullut Canal and Buras, with some orange groves scattered along the bank.

BURAS: This is a small town 4 miles below Doullut Canal. It is the terminus of the railroad running ~~across~~ ^{along} this side of the river. There are two shrimp canneries here. A few ship chandlers and other supplies can be obtained here. Below Buras is a reclamation district extending about 1/2 mile back from the river. This is a large orange section, the largest on the river. Some vegetables are also grown here.

FT. JACKSON: This is an abandoned fort opposite from Ft. St. Philip

BAYOUS.

BAYOU FONTANELLE: This is a shallow Bayou running between Fontanelle Bay and Bay Adams.

BAYOU LONG: This is a deeper Bayou running from Bay Fontanelle to Bay Adams.

BAYOU AUGUSTE: This is a short Bayou connecting Bay Pomme D'Or and Cyprien Bay. This is a very deep Bayou said to be 20 or more feet in depth.

There is a Bayou running from English Bay almost to the sea. This is said to be very shallow.

BAYOU SCOFIELD: This Bayou runs from Skipjack Bay to the Ocean. It is said to be 20 or more feet deep throughout its length. There is a bar at its mouth where 4 or 5 feet can be carried.

DRY CYPRESS BAYOU: This Bayou is very shallow except in the short distance between Bay Jacque and Skipjack Bay, where it is said to be quite deep.

BAYOU GRAND LIARD: This Bayou is said to be very shallow.

BAYOU COQUETTE: This is a very deep Bayou.

BAYOU JAQUE: This is a very deep Bayou.

BAYOU TANTE PHINE: I could not obtain any information as to the depth of this Bayou but it is said that only 2 feet can be carried into either end, except on extremely high tides.

TIGER PASS: This Pass is very deep but navigation is limited to 5 feet as there are oyster beds in the Pass. A sill has been built across the upper end of the Pass and care must be taken crossing it.

BAYOU BAPTISTE COULLETTE: This Bayou is very deep and this is also true of some of the branches.

I was unable to obtain definite information regarding the remainder of the Bayous on this sheet.

ROADS AND LEVEES: The only road on this sheet is on the southwest bank of the river between Doullut Canal and the Jump/ It is on the top of the levee except for a short distance below Buras where it leaves the levee and runs through the orange groves for a distance of 1-1/2 miles. The levee on this side of the river is well constructed and extends down to the Jump.

The levee on the northeast bank of the river is well constructed as far down as Ft. St. Philip, but below this point it gradually decreases in size until at Olga it is very small in dimensions. It continues almost down to Baptiste Collette.

RAILROADS: The single track railroad extends from Buras up to Algiers opposite New Orleans. There are two passenger trains a day in each direction.

RIVER TRANSPORTATION: The Spicuzza Brothers Transportation Company maintains biweekly service by gasoline launch between New Orleans and all points on the river on this sheet. Other small vessels, principally freight carriers, serve the territory along the river above the forts.

METHOD OF CONSTRUCTION OF SHEET.

The office reduction on this sheet was started just northeast of the settlement of Olga. The photographs in this vicinity were very clear and showed very little tilt, so that this section was the best place to make a beginning and would give the draftsman the least trouble. The mosaics will not be taken up in numerical order, but will be described working north from Olga.

Mosaic #1, (58-66Y) three miles long, was controlled by \triangle "Olga" at the river end and \triangle "Rattlesnake Bayou Camp" at the northeast end, with \triangle "Second Bayou Camp" between, about onemile from \triangle "Rattlesnake Bayou Camp." Three additional triangulation stations south of \triangle Rattlesnake Bayou Camp gave ample control for the northeast end.

This mosaic had a swing in it occurring near \triangle Second Bayou Camp, due to the fact that the only overlapping land was close to the edge of the photographs. Adjusting for this, which could easily be done owing to the numerous triangulation stations, the mosaic checked exactly. A supplemental control point was located northwest of \triangle "Olga" for Mosaic #2. *\triangle "Rattlesnake Bayou Camp", \triangle "Second Bayou Camp", and the supplies.*

Mosaic #6, (70-78Y), three miles long, was controlled by \triangle Olga control point near Olga. It checked exactly. The overlap varied from 50 to 60 percent.

Mosaic #7, (82-88Y), two and one half miles long, checked with adjoining strips.

Mosaic #3, (89-93Y), two miles long, was controlled by \triangle Coquille Point and \triangle Fort Bay Camp. The overlap here was 60 percent. This mosaic was only used for detail in and near Fort Bay.

Mosaic #2, (27-32K), a strip along the river could not be used owing to excessive tilt occurring in the bend at the forts. There were no control points between \triangle Coquille point and \triangle Raccoon, a distance of three and one half miles, so it was necessary to carry supplemental control from one strip to another. Strips #3, 5, 4, 14, and 9, in the order named were the strips used. The closing error, all in azimuth, was 60 meters, or the ratio 1:90. This was all adjusted at Fort Bay, and mosaics #3 and #5 only used to fill in detail. These two mosaics did not check with the adjoining and showed evidences of distortion. These were difficult mosaics to construct with any degree of accuracy.

It was necessary to carry supplemental control between \triangle Olga and \triangle St. Philip's Bend Light. This checked exactly.

Mosaic #5, (5-10Z), was used only for detail.

Mosaic #4, (13-21Z), was controlled by \triangle Tank and a supplemental point. It checked with #15, the next mosaic north.

Mosaic #14, (30-34Z), only two miles long, and checked with adjoining strips.

Mosaic #9, (25-36W), a control flight 3-1/2 miles long, from a supplemental control point close to △ Bolivar Point Light, and ending at △ Raccoon. There was an intermediate control point △ Bay Dennesse Camp, at the edge of the photographic strip, and therefore not considered as an accurate check. This point did not check by 20 meters. The overlap was 50 percent or more.

Mosaic #15, (43-46W) was used for the detail between △ Bolivar Point Light and FC. St. Philip. It checked with adjoining mosaics.

Mosaic #12, (18-23W), 3-1/2 miles long, ran from a supplemental control point on the river to △ Raccoon. △ Bay Dennesse Camp was about midway on the mosaic. It checked within 5 meters, or the ratio 1:700.

Mosaic #10, (2-10W), 2-1/2 miles long, was controlled by △ Neptune, △ Bay Dennesse Camp, and △ Little Raccoon Camp, all three near the edge of the strip. These checked within 20 meters, giving an error of 1:100.

Mosaic #11, (12-15W), covered Sable Island, and was 2 miles in length, controlled by △ Sable Point, △ Peak and △ Little Raccoon Point. They checked exactly when reduced.

Mosaic #13, (37-40X) covered the Hog Islands. Less than 1 mile in length.

The supplemental control along the river between △ Bolivar Point Light and △ Neptune was carried through mosaics #15, 9, 12 and 10. The control checked exactly at each end. See mosaic #40.

Mosaic #40, (43-49K). Along the river between △ Bolivar Point Light and △ Neptune. This was constructed for detail and as a check on supplemental control. This mosaic could not be accurately constructed, and could not be considered as an accurate check. This mosaic checks the intermediate control points for distance, but at the center does not check in azimuth by 25 meters or a ratio of 1:80.

Supplemental control was carried along the north bank of the river between △ Old Quarantine Light and △ Spire, through mosaics #21, 20, 18 and #16, with a closing error of 30 meters; in the distance of three miles. The ratio of error is 1:180. The error was distributed.

Mosaics #22, 21, 18 and 20 were short ones and showed the area close to the river. They were plotted without trouble.

On the outer fringe of the delta, the control was carried between △ Biyou and △ California Point through mosaics #19, 18, and #16, a distance of 3-1/2 miles, with a closing error of 10 meters, or 1:640. This was distributed.

Mosaics #19 and #18 were short ones, and were used to plot the area near Spanish Point.

Mosaic #16 was the control strip for the northern limits of the work on this side of the river. It ran between △ Spire and △ California Point, a distance of 5-1/2 miles.

Mosaic #17 was constructed as a check on Mosaic #16. It checked in azimuth throughout, but did not check in the middle for distance by 30 meters. The ratio is 1:120.

The southwest side of the river was now taken up, and the work carried downstream from Doullut Canal. The strips, normal to the river, were too long for a single mosaic, and they were usually constructed as two separate mosaics.

Mosaics #28, 27, 25, 30, 32 were used to cover the area between Doullut Canal and Buras and extending about 4 miles from the river. No trouble was experienced here as all mosaics overlapped exactly or within 5 meters at the most.

Mosaic #31 was a difficult one to construct, as the land features were near one edge. This mosaic did not check the adjoining by 25 meters, or an error of 1:100. This mosaic was only used to tie in detail with the adjoining ones.

Mosaics #33, 34, 35, 36, 37 completed the area to the Fort Bend and inland to Cyflen Bay. Discrepancies of 10 meters were found between some of these mosaics. The error was distributed.

The area on the outer edge of the delta west of Scofield Bayou, was next taken up. This was covered by the remaining half of the photographic flights that had just previously been used to cover the area nearer the river.

Mosaics #38, 39, 41, 42, 43, 44, 45, 46, 47, were used to plot the area just mentioned. Mosaic #43 showed a discrepancy of 20 meters, but otherwise the mosaics overlapped each other and checked on triangulation stations within a distance of 5 meters or less. There was no triangulation station at the southwest limit of the work, the nearest being 2 miles away,

△ Bilot Camp.

Mosaics #48, 49, 50, 51 and 52 were next constructed and this completed the area down to Bay Tambone.

The area southwest of the river, and west of Bayou Grand Liard, was now almost completed. This area was well sprinkled with triangulation stations and it is my belief that no point in this area as shown on the sheet is in error greater than 20 meters, and probably not over 10 meters. The numerous triangulation stations, and the satisfactory checking of adjoining mosaics lead me to this opinion.

The next area to be taken up was that east of the section just completed and bounded by the river, Grand Pass, and the southwest shore

of the delta. This was the largest area without control on the sheet.

Control strips had been flown around this area and these included the nearest triangulation stations. The regular flights were normal to the river. One control flight was made across the interior, normal to these flights, but was not of much value as it crossed a lake and this resulted in a weak construction of the mosaic.

Mosaics #53 and 54 were the two control flights that had been made along the river between Fort Bend and the Jump. These two mosaics checked each other with an error of 10 meters in azimuth in the center when the two ends were joined. This was an error of 1:500. Mosaic #54 was used for the control between \triangle Olga and \triangle River Light at Jump while Mosaic #53 was used between \triangle Ft. Jackson Light and \triangle Olga. These strips were used as control for the river end of the cross flights.

Mosaic #55, (43-54L), was constructed for the purpose of furnishing control along Grand Pass between \triangle River Light at Jump and \triangle Campbell's Derrick. One of the photographs in the center of the mosaic showed excessive tilt, and caused a swing in the mosaic. It was necessary to construct the mosaics for sheet #3 in order to establish accurate control on Grand Pass. After completion of sheet #3 control points were transferred to this sheet, and mosaic #55 was plotted to fit the new control. This showed an error in azimuth in the mosaic of 100 meters in the center when the mosaic was fitted at the two ends. This error was in the ratio of 1:40.

Mosaic #56, (55-67L), extending along Grand Pass below Campbell's Derrick, checked with the control on Sheet #3.

Mosaic #59 (13-24L), was the control strip on the outer edge of the delta, running between \triangle Sandy Point and \triangle Tiger. Carrying supplemental control between these two points through 10 mosaics, checked control in azimuth, but distance did not check by 10 meters. This was an exceptionally good check as the distance was over 5 miles.

Mosaic #57, and #122 to #131 inclusive, were used to fill in the detail between the River, \triangle Sandy Point and \triangle Tiger. As these mosaics were in some cases 8 miles long, it was necessary to examine them closely, and compare each with its adjoining mosaics in order to use the most accurate ones in case they did not check each other. Mosaic #124 was not of much value as it could not be accurately constructed. When matched at the two ends with Mosaic #125, there was a discrepancy in azimuth in the center of 180 meters, or an error of 1:40. There was very little detail on this mosaic, so it was fitted in between the two adjoining mosaics.

Mosaics #60, 61, 62 and 86 to 90 inclusive, were used to fill in the detail over the upstream portion of this area. Mosaic #61 did not check with #60 and #62, and upon examination was found to be weak in construction. It was used to fill in the detail between #60 and 62. It did not check by 40 meters which was an error with a ratio of 1/140. The detail below Tiger Pass was filled in from Mosaics #132 to #138 inclusive.

Mosaic #118 was a control strip extending from \triangle Tiger to a point near \triangle Grand Pass. This was used as a control for the cross strips. Supplemental control, as carried through the various mosaics, fell short in distance by 115 meters, or in the ratio of 1:60. This was probably due to the small amount of overlap at the edges of some of the strips. Using the control as obtained from the control flight, Mosaic #118, the various strips checked each other within a few meters.

This completed the large area west of the river and Grand Pass and south of the Forts. This area, with control only around the outside, was the only area where control points were as widely spaced as 7 miles or more. The photographic detail was not very good in this locality, probably owing to the few water areas encountered. It may be safely stated that the point in this area, that is the greatest distance from a triangulation station, is in error less than 100 meters. This would be the ratio 1/60 or better.

Mosaics #79 to 85 were used to complete the area between Mosaic #1 and Baptiste Collette northeast of the river. The river end of the mosaics were controlled by the control flights along the river. Carrying supplemental control along the outer fringe of the delta from \triangle Baptiste Collette to \triangle Second Bayou Camp, the control was short by 80 meters, or a ratio of error of 1/100. This was distributed. \triangle Adolph Camp furnished a check for the intermediate control.

Mosaics #171, 173, 174 and 175 completed this sheet covering the area below Baptiste Collette to a junction with Sheet #4 at \triangle North Base. A control point for the outer shore of the delta was transferred from Sheet #4. Carrying a supplemental control through the various mosaics between \triangle Baptiste and this point gave an exact check. The supplemental control along the river did not check by 15 meters, but this was traced to one strip, and the error corrected there. This was done by comparing the control with that obtained from the river control strip.

Oct. 22, 1923

Respectfully submitted,
J. C. Matheson

DEPARTMENT OF COMMERCE
U. S. COAST AND GEODETIC SURVEY

TOPOGRAPHIC TITLE SHEET

The finished Topographic Sheet is to be accompanied by the following title sheet, filled in as completely as possible, when the sheet is forwarded to the Office.

U. S. Coast and Geodetic Survey.

Register No. 4036 # 1

State Louisiana

General locality . . . Mississippi River Delta.
Doullut Canal to Entrance of Grand Pass

Locality Upper delta between Doullut Canal and "The Jump".

Chief of party . . G. C. Mattison

Air- Survey
Photographs by Naval Air Service
Surveyed by

Date of survey . April-May, 1922.

Scale 1:40,000.

~~Height in feet above~~

~~Contours in feet~~

Inked by G.C. Mattison . Lettered by G.C. Mattison

Records accompanying sheet (check those forwarded): Photographs,

Descriptive report, Horizontal angle books, Field computations,

Data from other sources affecting sheet

Remarks: The negatives of the aerial photographs are already on file. Photographs, pantographic reductions and notebooks will be forwarded upon the completion of all the sheets.