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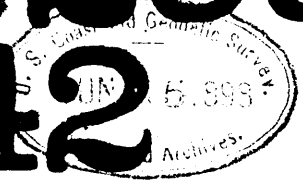
Diag. Cht. No. 1269.

Form 504 U. S. DEPARTMENT OF COMMERCE COAST AND GEODETIC SURVEY  <b>DESCRIPTIVE REPORT</b>	
Type of Survey	Hydrographic
Field No.	H-2293, H-2294, H-2295 Office No. H-2341 & H-2342
LOCALITY	
State	Louisiana
General locality	
Locality	Lake Pontchartrain, Vicinity West End.
<u>1898</u> CHIEF OF PARTY P. A. Welker	
LIBRARY & ARCHIVES	
DATE	June 15, 1898

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Diag. Ch. No. 1269

U. S. COAST AND GEODETIC SURVEY.

Henry S. Pritchett, Superintendent.

State: Louisiana

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DESCRIPTIVE REPORT.

Hydrographic Sheets Nos. { 2293  
2294  
2295  
2341  
2342

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LOCALITY:

Lake Pontchartrain,  
Louisiana.

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1898.

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CHIEF OF PARTY:

P. A. Walker, Assistant.

Write me at: Office, Washington, D.C.

Telegraph me at: .....

My Express Office is: .....

U. S. COAST AND GEODETIC SURVEY,

Washington, D.C.June 6<sup>th</sup>, 1898

2-547

Dr. Henry S. Pritchett,  
 Superintendent, U. S. Coast & G. Survey,  
 Washington, D.C.,

Sir:

In compliance with "Instructions and Memoranda for Descriptive Reports, 1887", I have the honor to submit the following report on Hydrographic Sheets Nos. 2293, 2294, 2295, 2341 and 2342.

These sheets consist of an original hydrographic survey of the main portion of Lake Pontchartrain and as a descriptive report on any one sheet would be of little value a general report on the hydrography of the lake will be made.

Lake Pontchartrain, situated entirely within the State of Louisiana, was named in honor of Louis Phelyppeaux, Count Pontchartrain, a minister and chancellor of France, during the time when Louisiana was a province of France. It is of considerable importance as its navigation is a

Source of safe, easy and cheap means of communication between the inhabitants of a large section of country. The lake has an area of 625 square miles. Its greatest length is 41 miles and greatest width 24 1/2 miles. Its main outlets are through the Rigolds and Chef Menteur Pass, thence to Lake Borgne and Mississippi Sound. There are several other outlets, but they are small and of no consequence. The water is slightly brackish, due to the gulf water entering at flood tide.

The land about the lake is one immense swamp, extending several miles interior, with here and there a few patches of firm ground, generally surrounded by swamp. At the eastern end of the lake the swamp is covered with tall grass and cane and is very much cut up by bayous and ponds. From about Little Woods around to the west and north as far as Green Point, 2 miles east of Mandeville, the swamp is mostly covered with timber, with here and there patches of grass and cane, interspersed with willows on the south shore, while on the west and especially the north shore immense cypress trees grow to the water's edge and many a considerable distance out into the water. The firm land is from 2 to 5 miles interior and the character of the timber is then changed to pine.

Milneburg, Spanish Fort and West End, suburbs of the City of New Orleans, are situated on the south shore of Lake Pontchartrain and they are connected by rail and water with the heart of the city. By means of the New Basin Canal and Bayou St. John freight can be taken into the city. At mean low water boats drawing 7 feet can enter these canals.

Along the south shore between West End and Premier are numerous bayous, none of which are important with the exception of Bayou le Branche, which has good deep water and which at no great expense by cleaning out some obstructions, dredging the mouth and cutting a short canal, could be utilized as a means of communication with the Mississippi River.

On the north shore of the lake enters Pass Manchac, which drains Lake Maurepas and its tributaries into Lake Pontchartrain. There is from 3 to 10 fathoms of water inside of this pass; but at the mouth there is an extensive bar and at an ordinary tide only 6 1/2 feet can be carried across. The bar in places is hard and there are many sunken logs and snags near the entrance. The best way for entering the pass is close to the north shore of the lake, the numerous stumps, roots and snags can be avoided at mean low water by boats drawing 6 1/2 feet and less by

following the proper channel, but there are no marks to indicate the place.

Tangipahoa River enters the lake on the north shore. Although it has navigable water after entering, it is a stream of no great importance, on account of the character of the country that it drains, which is chiefly a densely timbered swamp. Considerable cypress timber is cut in the swamp, which is floated down the river, made into rafts and transported to the saw mills at New Orleans. There is an extensive bar at the mouth of the river, the least depth at mean low water being  $4\frac{3}{4}$  feet. Boats drawing 5 and 6 feet enter the river by waiting for an extra high stage of water or by forcing them over the small banks. There are no settlements of importance upon the river.

The Chefuncti River enters the lake on the north shore. It is a broad ~~littoral~~ stream, but is navigable for only about 15 miles. At the mouth there is a bar, which makes it impossible for boats to enter drawing over  $6\frac{1}{2}$  feet at mean low water. The bar is not extensive and could be dredged at a small expense. There are no marks showing the channel. Madisonville, a town of about 1000 inhabitants, is situated about 3 miles above the mouth of the river. Its chief importance

is that it has several ship yards capable of hauling out and repairing all boats that navigate the lake. There are two large saw mills at this place and lumber is the chief industry of the locality. The town is isolated, having no railroad or telegraphic facilities. These are obtained at Corrington, at the head of navigation, about 7 miles north on the same river, into which runs a branch of the New Orleans and North Eastern Railroad. There is frequent communication between Madisonville and New Orleans by water. During the spring and summer months there is a passenger steamer running daily. Corrington is a town of a little more importance and ships considerable freight down the river, including lumber, bricks and sand.

On the north shore of the lake are the towns of Mandeville and Lewisburg, which are principally summer resorts, containing together about 1000 inhabitants. There is one saw mill at Mandeville. There is water, rail and telegraphic communication between Mandeville and the city of New Orleans.

Bayou Laconbe and Bonfrea Bayou enter the lake on the north shore. They are not within the limits of the survey and no examination was made, but according to information obtained in the locality they are navigable for boats drawing five

feet, but the entrances must be made at times when the water is higher than the ordinary stage. There are several large saw mills and brick yards in the locality.

There are numerous other small bayous entering the lake, but they are of little or no importance, as there is usually not more than one or two feet of water at their entrances, and although they have deep water inside they are too narrow for navigation and usually are only drains from the surrounding swamps.

Although the main part of Lake Pontchartrain has a depth of from 10 to 16 feet the entrances to the lake from its numerous tributaries are so shallow that it is not practicable to navigate for vessels drawing over 6½ feet of water. Vessels drawing 7 and 8 feet can be taken into the lake via Mississippi Sound and the Rigolito at high stages of the water or if they have sufficient power to force them over the shoals. Vessels drawing over 6½ feet would scrape the bottom in numerous places.

The bottom of the lake with rare exceptions is composed of soft oozy mud. Sometimes hard mud or sand is found. The anchorage is very good everywhere in the lake. The only source of danger is the floating logs and dead heads. A few of the



1

latter are located upon the sheets, but of course a large number which exist are not visible or were not encountered while sounding. They are logs which have broken away from rafts or parts of trees which have been washed out into the lake during storms.

There are seven light houses on the lake, as follows:

West Rigolets, at E. entrance to Lake Pontchartrain, fixed white.  
Pointe aux Herbes, 7 miles W.S.W. of West Rigolets, fixed red.  
Port Pontchartrain, at Milneburg, fixed white, varied by a white flash every 90 seconds.  
Bayou St. John, at mouth of Bayou St. John, fixed red.  
New Canal, at entrance to new canal, fixed white.  
Chufunde River, at mouth of Chufunde River, fixed white.  
Pass Manchac, at mouth of Pass Manchac, fixed white.

Boats entering the lake should cover the part from the Rigolets to Pointe aux Herbes during the day time, as the channel is narrow and not well defined.

The New Orleans and Northeastern Railroad crosses the lake on a trestle near the eastern end of the lake. There are two draws in this trestle, one near each end. They are constantly attended and there is no difficulty in getting through.

The regular tides of the lake are very small, usually not over  $\frac{1}{4}$  foot, but the change in the level of the lake is effected very greatly by the wind.

With a north or west wind the water falls very rapidly, not so much on account of the piling up of the water at any locality, but it is probably due to the change in the level of the gulf caused by the wind driving the water away, consequently, the water in the lake flows out with a north or west wind and rushes through the Rigolito with considerable velocity, <sup>if the wind</sup> is strong. With a south or east wind the reverse is true, the water rushes in. Although the tide effect is small, it is not unusual to have a change in depth in the water of as much as 4 feet in the course of a few days. Consequently, boats of a deeper draught than the ordinary in passing over the shoal places in the lake and its tributaries should choose a time when the wind is to the south or east.

Fish are plentiful in the water of the lake and its tributaries. Catfish of large size are caught near the mouths of the rivers and passes; croakers are caught almost everywhere; mullet and sheep's head are caught along the sandy beaches; salt water trout and eels are also abundant. There are no oysters or shell fish in the lake.

Sharks occasionally come into the lake. Alligators and snakes are numerous in the surrounding country.

The City of New Orleans, on the south shore of the lake is the center of trade of the region and is so well known that no description is necessary in this report.

The lumber trade is the chief industry in shipping on Lake Pontchartrain, in addition, charcoal, cotton, cotton seed, wood, brick, shells, sand, tar, shingles, laths, and staves are shipped. Numerous saw mills are located about the lake and its tributaries, where the excellent cypress, spruce and pine lumber and shingles, laths &c. are prepared for the market.

The following statistics, compiled from the records of the Board of Control of the New Basin Canal and the records of the Superintendent of the Old Basin Canal, show the number of vessels that entered the City of New Orleans through these canals via Lake Pontchartrain and also the amount of freight that they carried during the year 1897. This represents about 90 percent of the shipping that enters the lake:

Number of vessels arriving	4909
" .. pieces of timber	3126
" .. feet of logs	25023994
" .. feet of lumber	48733000
" .. barrels of molasses	135
" .. sacks of cotton seed	12243
" .. bales of cotton	8819

## Statistics continued:

Number of cords of wood	24824.
" " brick	9669000.
" " barrels of shells	164930.
" " " " sand	496908.
" " " " tar	847.
" " bales " moss	80.
" " barrels " charcoal	559740.
" " shingles	5497000.
" " bales	2275000.
" " staves	3673176.
" " mellow	76900.
" " barrels of oysters	57810.
" " boxes of oysters	2500.
" " fish boats entering	217.
" " hogheads of sugar	141.
" " barrels of sugar	73.
" " " " rosin	47075.
" " " " turpentine	12114.
" " sacks " potatoes	385.
" " skids	500.
" " bales of fur	5.
" " pieces of boxwood	29000.
" " headings	333300.
" " barrels of clay	2290.
" " sacks of wool	61.

Vessels entering the canals into the City of New Orleans are required to pay fees according to their tonnage.

The New Basin Canal is the property of the State of Louisiana, while the Old Basin Canal is controlled by a corporation.

The tributaries of the lake are all narrow, necessitating the use of tow boats to a considerable extent to take the sail boats in and out of them during adverse winds.

The prevailing winds throughout the year are easterly and southeasterly. There are heavy gales on the lake during October and November. Very strong winds occur, usually from the southeast and north.

Fogs are not very frequent, but there is considerable misty and hazy weather during the winter and spring, usually after easterly and southerly winds. Clear weather follows north and west winds.

Besides the vessels employed in the regular trade on Lake Pontchartrain, the Southern Yacht Club, with its club house and headquarters at the entrance to the New Basin Canal, has a fleet of 75 yachts enrolled, many of which are constantly navigating the lake and its tributaries. The members showed great interest in the survey of the lake, extended many courtesies

and furnished information and facilities aiding  
in the prosecution of the work.

Very respectfully yours,

P. A. Walker,

Asst., C. & G. Survey.

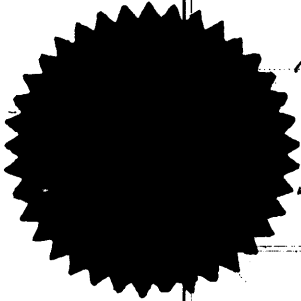
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Diag. Cht. No. 1769 and Geodetic Survey

MAR 3 1898



U. S. COAST AND GEODETIC SURVEY.

Henry S. Pritchett, Superintendent.

State: Louisiana

DESCRIPTIVE REPORT.

Hydrographic Sheets Nos 2293,  
2294 + 2295

LOCALITY:

Lake Pontchartrain

1897.

CHIEF OF PARTY:

P. A. Walker, Asst.

2293 2294 2295

Write me at: C. S. Office, Washington D. C.

Telegraph me at: \_\_\_\_\_

My Express Office is: \_\_\_\_\_

U. S. COAST AND GEODETIC SURVEY,

Washington D. C.

Feb. 24, 1898

2-547

Dr. Henry S. Pritchett  
Superintendent

U. S. C. & G. Survey  
Washington D. C.

Sir:

In obedience to "Instructions and memoranda for Descriptive Reports" 1887, I beg leave to submit the following report of Hydrographic Sheets Nos. 2293, 2294 and 2295, made by the party in charge of Mr. P. A. Walker, Asst. C. & G. S. in command of the U. S. C. & G. S. Schooner "Quick", from Feb. 18 to April 20<sup>th</sup> 1897. These sheets cover the western and northern portion of Lake Pontchartrain Louisiana, and their limits are as follows. Sheet No. 2293; scale 10,000 includes about one square mile in the immediate vicinity of West End, and this work was transferred to sheet 2294. Sheets Nos. 2294 and 2295 scale 20,000; include all of that portion of the lake west of a line drawn from West End to Pass Manchac, and they also take in a strip of from two to three miles east of that line.



There were three tidal stations established for this work: one self registering gauge at West End and Pass Manchac respectively, and a tide staff at Bayou Le Branch that was read from 6 A. M. to 6 P. M. for about 1 1/2 months, while soundings were being made in that vicinity.

Mean low water was used as a plane of reference, and was established at the two self registering gauges by taking the mean of the daily low waters for a period of about four months, excepting several days of abnormal high or low water.

The extreme range during the season was four feet, but this range was caused almost entirely by the wind and high water in the numerous bayous and rivers that empty into the lake, the daily tidal effect not being more than three tenths of a foot. The mean low water on the staff at Le Branch was established by simultaneous readings, taken on several days when the weather was calm, with West End and Pass Manchac respectively. The values determined from the two gauges agree within .03 of a foot. In reducing the soundings the nearest gauge was used, though at points nearly equidistant from any two gauges, the mean result was taken.

These results seldom differed more than one or two tenths of a foot, consequently it made no practical difference

as to what gauge the soundings were referred to. As the lake is very uniform in depth, sounding lines were run at an interval of about one mile, with cross lines of the same distance apart. When the wind was fair the schooner "Quick" was used for the long lines, though a large portion of the work was done with a naphtha launch, and the inshore soundings with a whaleboat. The water is full of snags and stumps, especially near the shore, though there are many of these snags and "dead heads" scattered throughout the lake. In many cases they are nearly submerged, and are of great danger to navigation. Whenever seen these snags were located and plotted on the sheet. Some years ago a barge was wrecked about eight miles N. N. W of West End. This was several feet out of water and a hydrographic signal known as "Wreck" was built on it. In May 1897 this wreck was destroyed by dynamite, and nothing now remains of it. The bottom of the lake is composed almost altogether of soft mud, though off the western shore there are small sections of hard bottom, partly shell and partly hard mud. The bays that run into the lake are all more or less choked up with the water hyacinth. This plant though only introduced a few

years ago has already become such a nuisance that the Army Engineers have spent much time and money in its removal.

There is a good deal of navigation between New Orleans and points on the shores of Lake Maurepas. The vessels employed are schooners of from 40 to 100 tons, and small steamers.

The maximum draught is seven feet for some of the steamers, while few of the schooners draw over six. Their route begins at the basin in New Orleans, and goes through the New Canal into Lake Pontchartrain at West End. From there they sail to Pass Manchac, passing into Lake Maurepas.

Their <sup>cargoes</sup> consists principally of lumber from the numerous saw mills on the shores of Lake Maurepas. The following light houses are shown on the sheets: "New Canal" at West End; a fifth order fixed white light: Bayou St. John, a red beacon: Port Pontchartrain, a fifth order revolving white light; and Pass Manchac, a fifth order fixed white light. See Descriptive Reports for Topographic Sheets for fuller description of these lights.

The prevailing winds are from N. E. to S. E., a westerly breeze being rare. In the spring thunder storms are very common, and they are often

(5)

quite violent, arising in the afternoon after a calm and sultry morning. Fogs while not very frequent, may be expected at any time during the winter or spring, and are usually brought in by a N. E. wind.

Respectfully submitted

Fred. A. Young

Assist. Co. G. Barney

# 2294

Diag. Chart No. 1269

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*W. S. Pritchett*

Superintendent.

State: *Louisiana*

## DESCRIPTIVE REPORT.

*Hyd. C. Sheet No. 2294*

LOCALITY:

*See*

*2293*

*1848*  
*100*

CHIEF OF PARTY:

*P. A. Walker*

2294

# 2295

Diag. Cht. No 1269

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*H. Prichard*  
Superintendent.

State: *La*

## DESCRIPTIVE REPORT.

*H. C. Sheet No. 2295*

LOCALITY:

*See*

*2293*

*1898*  
~~*190*~~

CHIEF OF PARTY:

*P. A. Walker*

*2295*

2341

Diag. Cht. No. 1269

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*H. Prichess*  
Superintendent.

State: *La*

DESCRIPTIVE REPORT.

*Hyd. C.* Sheet No. *2341*

LOCALITY:

*See*

*2293*

*1898*  
*100*

CHIEF OF PARTY:

*P. A. Wilson*

2341

2342

Diag. Cht. No. 1269

Department of Commerce and Labor  
COAST AND GEODETIC SURVEY

*W. S. Brickett*  
Superintendent.

State: *La*

DESCRIPTIVE REPORT.

*No 10* Sheet No *2342*

LOCALITY:

*See*

*2293*

~~1898~~  
~~190~~

CHIEF OF PARTY:

*P. A. Welker*

2342