Supplemental Report to

To Expert Report

Effects of the Mississippi River Gulf Outlet on Coastal Wetlands and Other Ecosystems in Southeastern Louisiana

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Submitted by:

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This supplemental report provides further information on the status of the wetlands along reaches one and two of the Central Wetlands Unit just prior and during the construction of the MRGO. Figure A, the 1930s map provided from the FitzGerald expert report (Fig 4.8) is very similar to the 1945 photomosaic (Fig B) in terms of the location of cypress forests. Comparison of Corps photos from 1958-60 corroborate the continued existence of scattered cypress trees with the 1930's map. The "scattered cypress" in Figure A. was mapped as fresh marsh in the FitzGerald et al. expert report. This was due to mapping interpretation rather than habitat change. The scattered trees were not uniformly dispersed on the landscape but occurred as clumps and along ridges that were interspersed with large expanses of fresh marsh. The photos also demonstrate the existence of extensive forest and fresh and low salinity marsh in reaches 1 and 2. In addition, low level photos clearly show the presence of fresh to low salinity marsh with plants greater than two meters high (detailed below). This information corroborates previous information in our expert report. All images were supplied on two CDs submitted by USACE along with their expert reports (Dec. 2008). Detailed descriptions of the photos are given below.

15 May 1958 Photographs

Figure 1 is taken at the junction of the IHNC and the GIWW, station 0.00, looking to the north east. The smaller channel on the left is the back access channel to build a dredge spoil retention dyke or levee. Notice the very thick and healthy cypress forest in the area to be dredged for Reach 1 of the MRGO and the eastern part of the CWU. These trees would have had a very significant ability to protect the eastern flank of New Orleans during hurricanes such as Katrina.

Figure 2 is taken at station 110.00 looking due east along the GIWW. Dredging gives an idea of just how much this channel was enlarged to become Reach 1 of the MRGO. The method of dredging involved first removal of trees, then digging out the tree stumps and then dredging. Notice that this throat area of Reach 1 was heavily wooded with mature cypress. Also evident is the access channel to dredge the spoil retaining dykes. Deposition of dredged sediments led to the death of cypress. This photo also portrays the extensive areas of cypress within the CWU.

Figure 3 looking south into the CWU shows extensive cypress forest. This image also shows the tree removal to aid in dredge material disposal station 69.00 of GIWW.

6 June 1958 Photographs

Figure 4 is looking due west with New Orleans in the background. Notice removal of trees in area to be dredged as GIWW is widened and deepened. Also note tree removal to aid in dredge spoil disposal. Trees hindered the movement of disposal pipe so were thinned or removed from many disposal areas prior to dredging adjacent channel. Also evident is the deposition of dredged spoil material in the cypress forests.

9 July 1958 Photographs

Figure 5 is looking due east towards Paris road in the background. Note cypress tree removal before dredging. Based on the three story height of dredger, trees were about 40 feet tall. The figure also shows extensive cypress forest in the CWU.

19 January 1959 Photographs

Figure 6 is looking east along Reach 1 (former GIWW) showing that channel dredging to Paris Road was almost complete. Note the sediment laden water "smothering" vegetation. Figure 4.2 of the FitzGerald et al. (2008) report shows patches of cypress forest that were logged during the dredging operation.

12 March 1959 Photographs

Figure 7 is a view southeast over the St Bernard marshes that will be bisected into the Golden Triangle and the CWU by MRGO. The MRGO Reach 2 will cut across the top left quarter of the picture. Note the tall trees including the typical rounded shape of mature live oaks along the bayous, especially Bayou Bienvenue that crosses the middle of the view. There are trees in patches in various locations and smaller trees and brush along the GIWW (shown in more detail in subsequent images). The black marsh in the foreground was burnt as a method to keep the wire grass down to improve the quality of the fresh to intermediate marsh for muskrat.

Figure 8 is a similar view to Figure 7, but taken from a higher altitude. Note the extensive stands of trees along Bayou Bienvenue and the dense patches of trees in the throat area of the funnel. The thin channel snaking off to the left and then up into the background is an access channel setting the Lake Borgne side of the spoil retention dyke. The thin straight channel on the right is the back levee spoil retention dyke. If you look carefully at the various water bodies you will see the outlines of trees. All levee systems were tree lined. In addition, there appears to be large expanses of dense, tall marsh vegetation most likely characterized by *Phragmites australis* (roseaucane), *Zizaniopsis miliacea* (giant cutgrass), or *Spartina cynosuroides* (big cordgrass) (Russel et al. 1936, Penfound and Hathaway 1938) in the center of the photo (southeast of Paris Rd.).

9 October 1958 Photographs

Note: these photos were taken on a day with strong south winds and setup of water in the wetlands.

Figure 9 with Bayou Bienvenue crossing the foreground southeast of the access channel for the Lake Borgne side spoil retention dyke. The MRGO channel will be dredged to the left or east of this retention dyke. There exist tree lined levees and numerous patches of trees.

Figure 10 is in the opposite direction of Figure 9, facing north up the spoil retention dyke. The photo is taken south of Bayou Dupre which crosses the center of the picture and flows into Lake Borgne. Most channel systems, some quite sinuous, are tree lined. There is also a very thick tree cover along some ridges on the right side of the photo. These are close to the shoreline of lake Borgne suggesting that even in this southern location the land was high and fresh enough to support trees. The big round shapes suggest very old live oaks and the salinity of the lake must be very close to fresh.

Figure 11 is of the northern most excavator shown in Figure 10 at station 600.00 dredging a spoil retention dyke. Notice the thick and tall marsh grass. Biological reports from 1936 suggest that the whole shoreline of lake Borgne was dominated by this marsh type as high as 12 feet in places. Note the almost continuous line of trees along the shoreline, as reported to exist in the 1930's (Russel et al. 1936, Penfound and Hathaway 1938).

Figure 12 is of the same excavator as Figure 11. Note the healthy stands of very tall reeds everywhere in this photo. These tall reeds are most likely characterized by *Phragmites australis* (roseaucane), *Zizaniopsis miliacea* (giant cutgrass), or *Spartina cynosuroides* (big cordgrass) (Russel et al. 1936, Penfound and Hathaway 1938) These plants were reported in this location in the 1930's suggesting very little vegetation change between then and when this photo was taken. An expression of the height of the reeds is how much of the lower structure of the dredger and workboats are obscured. Note the trees on the left horizon.

Figure 13 is an aerial view of the excavator looking southeast down the length of the future MRGO Reach 2 channel. Note the trees along the bayous with live oak coverage on Bayou Dupre which crosses the upper background from right to left and the tree cover along all the sinuous bayous and channels and patches elsewhere (darker color). There are also extensive strands of reeds.

Figure 14 is taken from Bayou Dupree looking northeast up the Reach 2 spoil retention dyke. Note the tree cover around the camps, the quite tall trees near the survey tower just to the left (east) of the camp and again the dark patches of trees and sinuous tree lines along former channels and bayous. These marshes are typical of a very healthy fresh to slightly brackish marsh. There are tree patches scattered throughout the photograph. This is in accordance with 1930's reports for this area and shows that the trees were more extensive than revealed by the 1932 T sheets (FitzGerald et al. 2008). Trees are interspersed with numerous patches of very tall reeds.

9 December 1959

Figure 16 is taken close to station 600.00 looking towards the northwest. In the upper part of the photo the funnel junction of the GIWW and Reach 2 is discernable. There are wide spread patches of trees and brush, especially along Bayou Bienvineu and the channel in the foreground.

In the foreground, there are large areas of tall reeds. There is a person in a small boat in front of the dredge for the height of reeds.

Figure 17 is of the dredge in figure 16 but from the opposite direction. Note large patches of darker trees and brush and tree lined channels.

Figure 18 is a lower altitude picture of the dredge in figure 17. The trees and extensive tall reed beds are more easily discernable. This suggests a relatively healthy marsh with scattered trees and tree lined channels.

Figure 19 is of the same dredge as the previous pictures but at an even lower altitude and looking to the north west. It is possible to discern the patches of trees and fairly extensive and the tall reeds. This is an area that was not mapped as 'scattered trees' in the 1930's T sheets suggesting that there is overlap between scattered trees and fresh marsh. This sort of mix of trees and tall reeds is a very effective surge damper and all act as wind breaks, especially the linear patches of trees. Patches of trees and brush can be seen throughout the area, indicative of a fairly stable and healthy environment. Note the flooded spoil retention areas west of the dredged channel. The person in the boat in front of the dredge provides a scale to judge the height of the reeds.

Figure 20 is taken around station 576.00 looking south. It is the dredge that can just be discerned in the very top of figure 18. Note patches of trees and tree lined channels. Canal running from left to right down the right side of the photo is a pipeline canal, one of the first dredged in this area.

Figure 21 ids a close-up of the dredge in figure 20 looking to the west. Note the brush and tall reeds in the foreground.

Figure 22 is taken almost at the Bayou la Loutre ridge (station 1287.00) looking northwest. Lake Borgne is in the upper left of the photo. The two access channels for the spoil retaining dykes stand out very clearly. The dark patch on the left-center of the photo are cypress trees, occupying the same footprint a they did in the 1930's.

30 March 1960 Photographs.

Figure 23 taken near station 600.00 where the pipeline cross the MRGO channel is looking up the Reach 2 channel to the north west. This is one of the clearest photos of the new data supplied by the US attorneys and the numerous patches of trees are very discernable. They stand out as the dark features. This is a wetland with a high density of trees. Some of this area was mapped as scattered trees in the 1930's T sheets and some not, but what is very readily discernable is that here in 1960 the area is dominated by trees which would have been very effective surge buffers and certainly would have been very effective wind breaks during the passage of tropical

cyclones. Throughout the photo, there are large patches and lines of trees suggesting a very healthy and diverse fresh to near fresh wetland with tall reeds interspersed amongst the trees.

Such dense tree coverage would have played a significant role in reducing Hurricane Katrina's surge and waves, if they had not being destroyed by the salinity increases once the MRGO dredging broke through the Bayou La Loutre ridge.

Figure 24 is south of figure 23 is also south of bayou Dupre which can be seen discharging to Lake Borgne. There are, as seen on earlier photographs, trees in patches and along old channels and bayous. The tree line seen along the right side of the photo would have been a very effective wind break and wave buffer. Also evident are extensive areas of reeds.

Figure 25 was taken near to station 380.00 and is looking north of the Reach 2 channel. Bayou Bienvenue is at top of photo. Note scattered trees, large patches of trees and trees along channels and bayous. In areas adjacent to the channel it is believed that many trees would have been cut down as part of the site preparations, but still here in 1960 a very good tree cover.

Figure 26, same dredge as figure 25 but looking south. Lake Borgne is to the left and the Central Wetlands Unit is to the right. Scattered trees, patches of trees and tree-lined levees can be seen throughout the area.

Figure 27 is taken looking west at the apex of the Golden triangle. Paris Road crossing is at center of photo. Initial dredged canal of MRGO turns toward lower left. There is thick tree cover in this area with evidence of very tall trees.

Figure 28 is initial MRGO channel towards northwest near station 780.00. Bayou Dupre in center of photo crosses MRGO channel and discharges to Lake Borgne. Scattered trees, tree lined levees and ridges can be seen. There are also reed beds.

Figure 29 is near station 828 looking towards the southeast. The MRGO channel is to the left. The photo shows the area of thick forest mapped in the 1930's and still present in all 1940's photos. There are logging scars from the initial logging of the areas. There are still numerous tall trees present.

29 July 1960 photographs

Figure 30, taken 3 years into the project, and located near station 576.00 and facing north shows that there are still numerous trees in the area.

Figure 31 looking south across the Bayou La Loutre ridge gives some idea of the robustness of this feature which crossed from west to east and formed a very effective salt water barrier between Breton Sound and Lake Borgne. Tree cover is very dense and the bands of trees broad, elevations probably ranging from 6 - 9 feet above sea level. This photo indicates that shortly

after July 1960 this ridge must have been breached. Part of the MRGO channel is in the upper center of the photo.

Figure 32 Bayou la Loutre ridge looking north. Shortly after this photo was taken, the ridge was breached. The ridge is extensively wooded. Marsh in foreground appears to be reeds.

Figure 33 is taken in the vicinity of station 550.00 looking northwest. The image shows that even three years after dredging started there was still a very good cover of trees and tall reeds.

Figures 34 and 35 are undated but are believed to be after the passage of Hurricane Ethel in September 1960. This is immediately south of Bayou Bienvenue. Both shots are looking to the north with the Golden Triangle on the right and the funnel entrance to the upper left. The image shows where the spoil retention dyke breached in an area that is fronted by open water in the marsh. Even though a storm seems to have come through, the trees all appear to be minimally disturbed.

Jan. 27, 2009 /s/ John W Day Jr.

Dr. John W. Day, Jr.

/s/ Gary P. Shaffer

Dr. Gary P. Shaffer



15 MAY 1958

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9736-10

MISSISSIPPI RIVER - GULF OUTLET

Dredging Mississippi River-Gulf Outlet 36' x 500' channel from Station 0+00 to Station 130+00. Under contract No. DA-16-047-CIVENG-58-408 with Jahncke Service, Inc., New Orleans, La., dated 12 March 1958.

View northeast from over the Industrial Canal at approx. Station 0+00. Dredge MANCHAC can be seen working in upper center at Station 69.



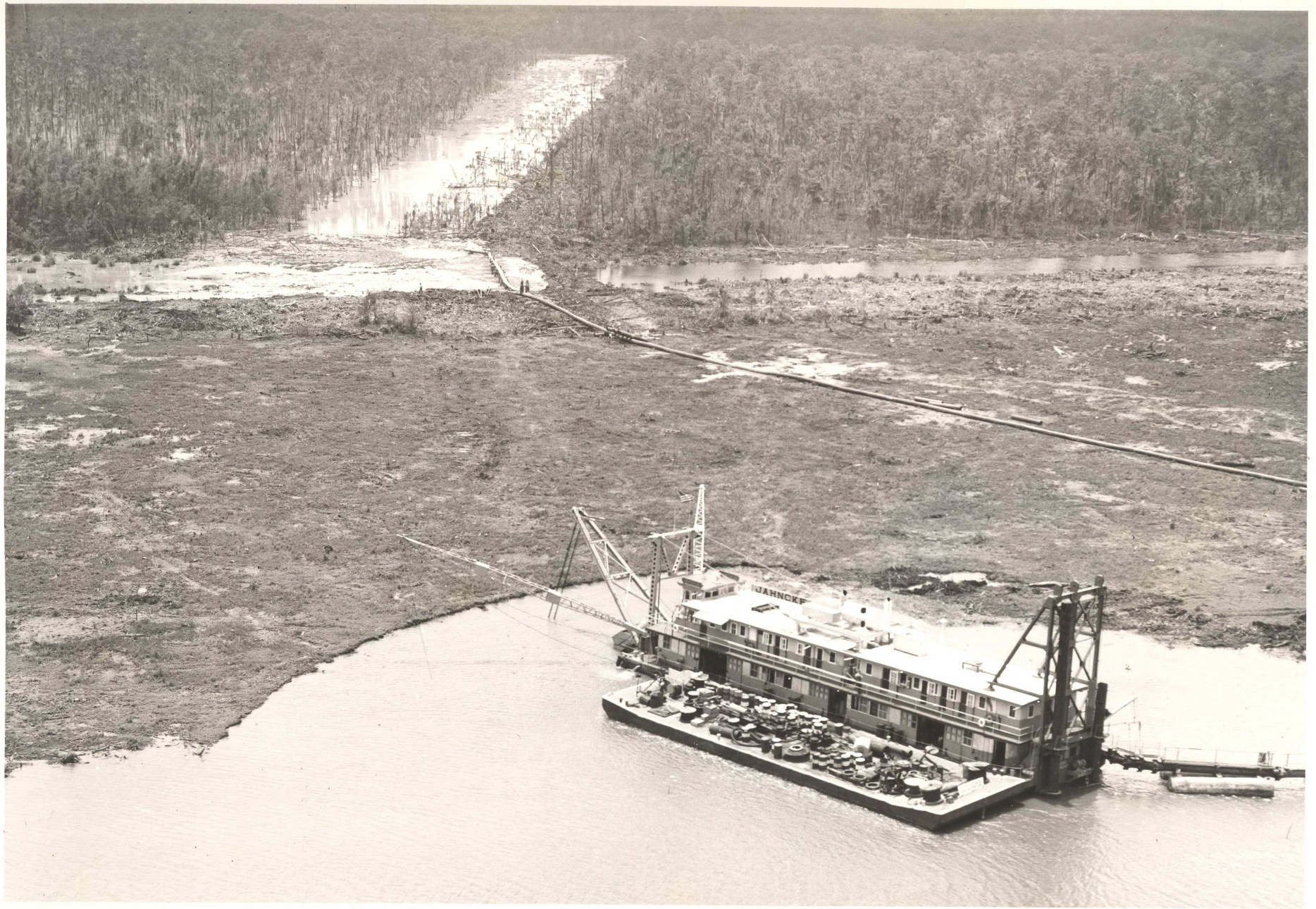
15 MAY 1958 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 9736-5

MISSISSIPPI RIVER - GULF OUTLET

Dredging Mississippi River-Gulf Outlet 36' x 500' channel from Station 0+00 to Station 130+00. Under Contract No. DA-16-047-CIVENG-58-408 with Jahncke Service, Inc., New Orleans, La., dated 12 March 1958.

View east from over approximate Station 100. GIWW at left, Dredge TCHEFUNCTA working at approx. Station 110. Eastern limit of work, Station 130, in upper center of photograph.

NED-275-000000014



15 MAY 1958 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 9736-1

MISSISSIPPI RIVER - GULF OUTLET

Dredging Mississippi River-Gulf Outlet 36' x 500' channel from Sta. 0+00 to Sta. 130+00. Under contract No. DA-16-047-CIVENG-58-408 with Jahncke Service, Inc., New Orleans, La., dated 12 March 1958.

Dredge MANCHAC working vicinity Station 69.

NED-275-000000010



6 JUNE 1958

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9765-2

MISSISSIPPI RIVER - GULF OUTLET

Dredging Mississippi River-Gulf Outlet 36' x 500' channel from Sta. 0+00 to Sta. 130+00. Under contract No. DA-16-047-CIVENG-58-408 with Jahncke Service, Inc., New Orleans, La., dated 12 March 1958.

View west. Dredges TCHEFUNCTA and MANCHAC working parallel to Gulf Intracoastal Waterway vicinity Station 59+00.

NED-275-000000021



9 JULY 1958 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 9773-6

MISSISSIPPI RIVER - GULF OUTLET

Dredging Mississippi River-Gulf Outlet 36' x 500' channel from Station 0+00 to Station 130+00. Under Contract No. DA-16-047-CIVENG-58-408 with Jahncke Service, Inc., New Orleans, La., dated 12 March 1958.

View east vicinity Station 26+00. Dredge working in upper center. Spoil area for Item No. 1 at right.

NED-275-000000043



19 JAN 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9850-1

MISSISSIPPI RIVER - GULF OUTLET

Dredging Mississippi River-Gulf Outlet 36' x 500' channel from Station 0+00 to Station 130+00. Under contract No. DA-16-047-CIVENG-58-408 with Jahncke Service, Inc., New Orleans, La., dated 12 March 1958.

View east vicinity Station 0+00 Items No. 1 and No. 2 under construction.

NED-275-000000056



12 MAR 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9866-4

MISSISSIPPI RIVER - GULF OUTLET

Dredging Mississippi River-Gulf Outlet 36' x 500' channel from Station 0+00 to Station 130+00. Under contract No. DA-16-047-CIVENG-58-408 with Jahncke Service, Inc., New Orleans, La., dated 12 March 1958.

View southeast vicinity Station 268+00. Pre-construction view of proposed area for channel.

NED-275-000000074



9 OCT 1959 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 9917-5

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River – Gulf Outlet, Bayou Dupre to Bayou Yscloskey, St. Bernard Parish, La., under Contract No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Texas dated 29 July 1959. Funds: Construction, General.

View southeast vicinity Station 273+50 Access channel under construction, Paris Road Bridge (La. State Highway No. 47) at lower left.

NED-275-000000077



9 OCT 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9917-8

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Bayou Dupre to Bayou Yscloskey, St. Bernard Parish, La., under Contract No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Texas dated 29 July 1959. Funds: Construction, General.

View southeast vicinity Station 376+00. Retaining dikes and access channel under construction. Lake Borgne in upper left.

NED-275-000000079



9 OCT 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

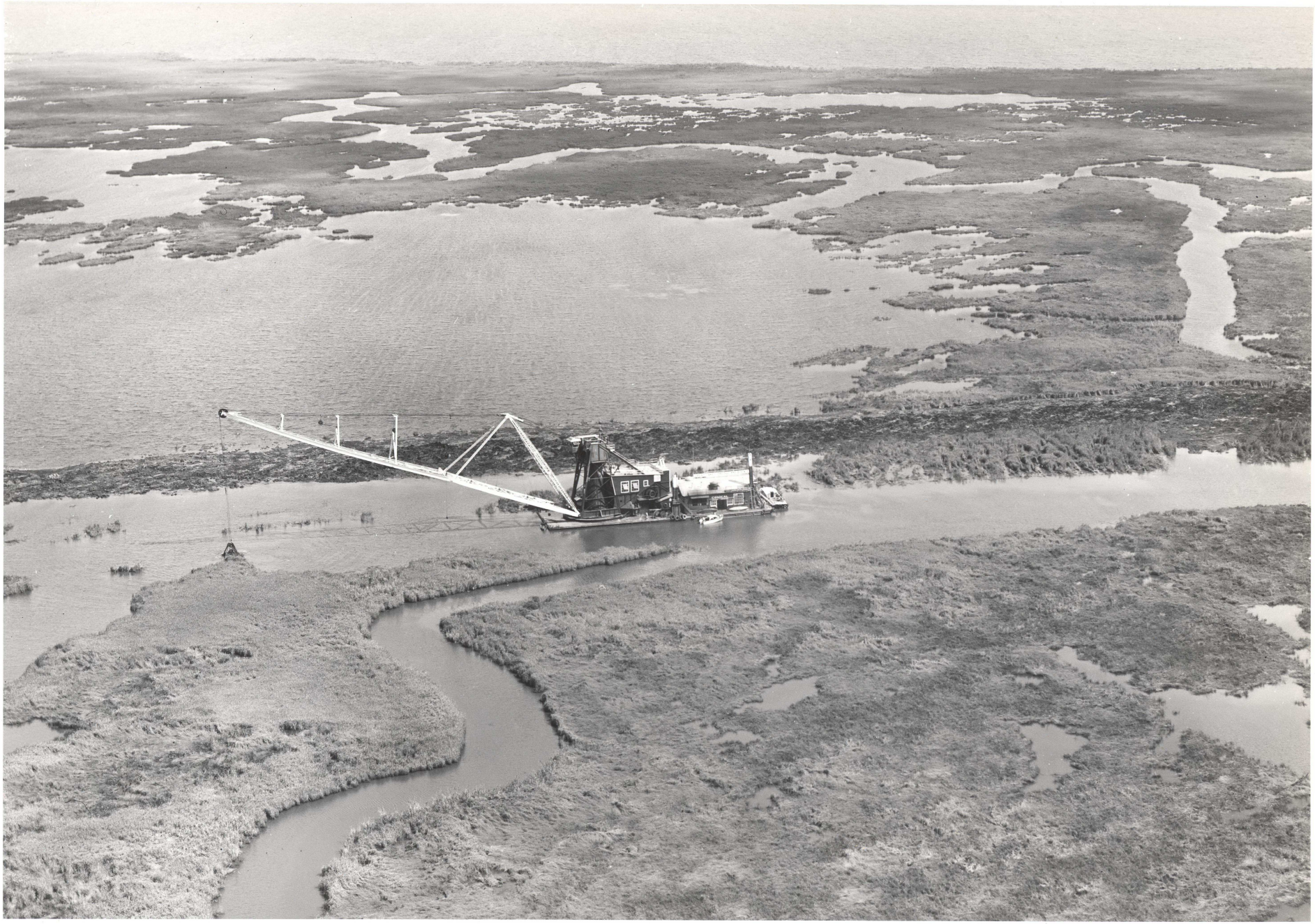
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MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Bayou Dupre to Bayou Yscloskey, St. Bernard Parish, La., under Contract No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Texas dated 29 July 1959. Funds: Construction, General.

View northwest vicinity Station 790+00. Retaining dikes and access channel under construction. Lake Borgne on the right.

NED-275-000000083



9 OCT 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9917-14

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Bayou Dupre to Bayou Yscloskey, St. Bernard Parish, La., under Contract No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Texas dated 29 July 1959. Funds: Construction, General.

Dredge CONICAL working vicinity Station 600+00. Lake Borgne in background.

NED-275-000000085



9 OCT 1959 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 9917-15

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Bayou Dupre to Bayou Yscloskey, St. Bernard Parish, La., under Contract No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Texas dated 29 July 1959 Funds: Construction, General.

Dredge CONICAL working vicinity Station 600+00. Low aerial photograph.

NED-275-000000086



9 OCT 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9917-9

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Bayou Dupre to Bayou Yscloskey, St. Bernard Parish, La., under Contract No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Texas dated 29 July 1959 Funds: Construction, General.

View southeast vicinity Station 576+00. Dredge CONICAL dredging access channel and constructing retaining dikes.

NED-275-000000080



9 OCT 1959 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 9917-10

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Bayou Dupre to Bayou Yscloskey, St. Bernard Parish, La., under Contract No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Texas dated 29 July 1959. Funds: Construction, General.

View northwest vicinity Station 683+78. Retaining dikes and access channel under construction. Dredge CONICAL working vicinity Station 600+00 in background. Bayou Dupre in lower photograph.

NED-275-000000081



9 OCT 1959 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 9917-13

MISSISSIPPII RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Bayou Dupre to Bayou Yscloskey, St. Bernard Parish, La., under Contract No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Texas dated 29 July 1959. Funds: Construction, General.

View south vicinity Station 1100+00. Machine constructing retaining dikes.

NED-275-000000084



9 DEC 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9944-9

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959, located in St. Bernard Parish, La. Funds: Construction, General.

View northwest vicinity Station 475+00. Dredging access channel.

NED-275-000000095



9 DEC 1959 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 9944-4

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River – Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959 located in St. Bernard Parish, La. Funds: Construction, General.

View southeast from vicinity Station 450+00. Dredges constructing access channel. Lake Borgne in upper left.

NED-275-000000090



9 DEC 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9944-11

MISSISSIPPI RIVER - GULF OUTLET

Dredging 16' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959, located in St. Bernard Parish, La. Funds: Construction, General.

View southeast, vicinity Station 450+00. Dredge constructing access channel. Portion of Lake Borgne on the left.

NED-275-000000097



9 DEC 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9944-9

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959, located in St. Bernard Parish, La. Funds: Construction, General.

View northwest vicinity Station 475+00. Dredging access channel.

NED-275-000000095



9 DEC 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 9944-10

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959, located in St. Bernard Parish, La. Funds: Construction, General.

View south vicinity Station 550+00. Dredge working vicinity Station 576+00.

NED-275-000000096



9 DEC 1959

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

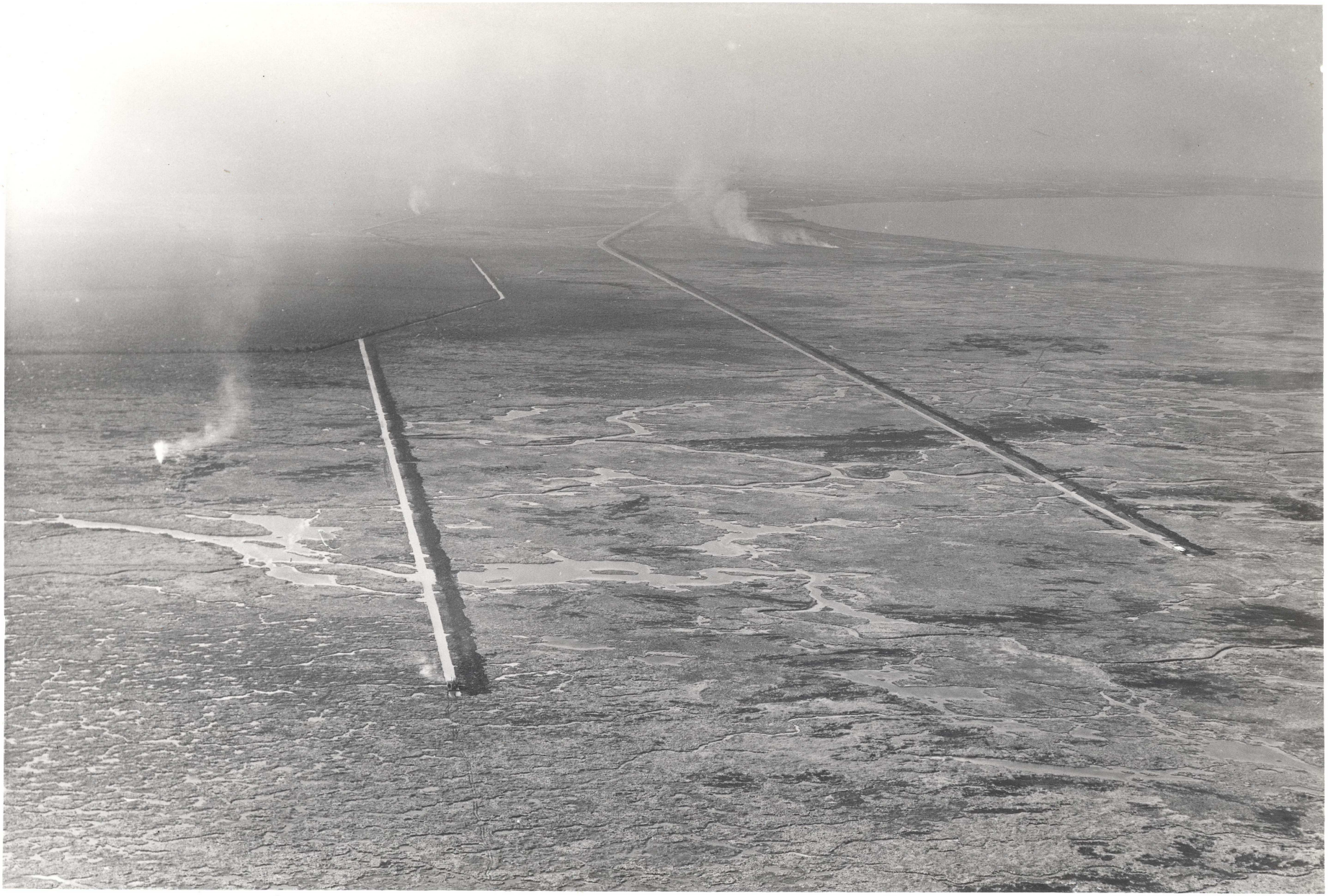
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MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Ysclosky, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959 located in St. Bernard Parish, La. Funds: Construction, General.

Dredge working vicinity Station 576+00.

NED-275-000000088



9 DEC 1959 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 9944-7

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Ysccloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959 located in St. Bernard Parish, La. Funds: Construction, General.

View northwest vicinity Station 1287+00. Machines constructing retaining dikes. Lake Borgne on the right.

NED-275-000000093



NED-275-000000111



30 MAR 1960 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 10013-7

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959 located in St. Bernard Parish, La. Funds: Construction. General.

View northwest. Dredge working vicinity Station 770+00. Lake Borgne on the right.

NED-275-000000109



30 MAR 1960 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 10013-8

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959, located in St. Bernard Parish, La. Funds: Construction, General.

View northwest. Dredging operations underway vicinity Station 380+00.

NED-275-000000110



30 MAR 1960

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 10013-4

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959 located in St. Bernard Parish, La. Funds: Construction, General.

View southeast vicinity Station 400+00. Dredge in operation.

NED-275-000000106



30 MAR 1960 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 10013-1

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959 located in St. Bernard Parish, La. Funds: Construction. General.

View west vicinity Station 301+00, Paris Road Bridge (Louisiana State Highway No. 47) in center. Retaining dike on the left.

NED-275-000000103



30 MAR 1960 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 10013-6

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959 located in St. Bernard Parish, La. Funds: Construction, General.

View northwest vicinity Station 780+00. Dredging underway. Bayou Dupre in upper center. Lake Borgne on the right.

NED-275-000000108



30 MAR 1960

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 10013-3

MISSISSIPPI RIVER - GULF OUTLET

Dredging 18' x 140' Access Channel, Mississippi River - Gulf Outlet, Mile 63.2 to Bayou Dupre, Mile 55.9 under Cont. No. DA-16-047-CIVENG-59-338 with Standard Dredging Corp., New York, N. Y. dated 28 April 1959, and from Bayou Dupre to Bayou Yscloskey, under Cont. No. DA-16-047-CIVENG-60-24 with Bauer Dredging Co., Inc., Port Lavaca, Tex., dated 29 July 1959 located in St. Bernard Parish, La. Funds: Construction, General.

View southeast vicinity Station 828+00. Retaining dikes.

NED-275-000000105



29 JULY 1960

U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS

NO. 10050-4

MISSISSIPPI RIVER - GULF OUTLET

Dredging 36' x 250' Interim Channel and Appurtenant Work, Mississippi River - Gulf Outlet from Louisiana State Highway No. 47 (Sta. 279+05) to Bayou Dupre (Sta. 683+78), Orleans and St. Bernard Parishes, La., under Contract No. DA-16-047-CIVENG-60-255 dated 26 February 1960 with Jahncke Service, Inc., New Orleans, La. Funds: Construction, General.

View northwest vicinity Sta. 576+00. Dredge working in channel.

NED-275-000000135



29 JULY 1960 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 10050-8

MISSISSIPPI RIVER - GULF OUTLET

Dredging 36' x 250' Interim Channel and Appurtenant Work, Mississippi River - Gulf Outlet from Louisiana State Highway No. 47 (Sta. 279+05) to Bayou Dupre (Sta. 683+78), Orleans and St. Bernard Parishes, La., under Contract No. DA-16-047-CIVENG-60-255 dated 26 February 1960 with Jahncke Service, Inc., New Orleans, La. Funds: Construction, General.

Channel to be dredged, retaining dike on the right.

NED-275-000000139



29 JULY 1960 U. S. ARMY ENGINEER DISTRICT, NEW ORLEANS NO. 10050-7

MISSISSIPPI RIVER - GULF OUTLET

Dredging 36' x 250' Interim Channel and Appurtenant Work, Mississippi River - Gulf Outlet from Louisiana State Highway No. 47 (Sta. 279+05) to Bayou Dupre (Sta. 683+78), Orleans and St. Bernard Parishes, La., under Contract No. DA-16-047-CIVENG-60-255 dated 26 February 1960 with Jahncke Service, Inc., New Orleans, La. Funds: Construction, General.

Dredge working in channel.

NED-275-000000138



NED-275-000000115



NED-275-000000213



NED-275-000000127