No. 14 Original

IN THE

SUPREME COURT OF THE UNITED STATES

STATE OF LOUISIANA,
Plaintiff,

vs.

STATE OF MISSISSIPPI, ET AL.,
Defendants.

REPLY BRIEF FOR MISSISSIPPI TO EXCEPTIONS AND BRIEF OF LOUISIANA

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To THE HONORABLE SUPREME COURT OF THE UNITED STATES OF AMERICA:

PREFATORY STATEMENT

The entire thrust of Louisiana's argument is that the "hand of man" cannot change a state boundary. By advancing this argument, Louisiana either inadvertently or by design ignores the fact that the boundary between the states in the area in controversy is the Mississippi River, made so by nature, treaties, Acts of Congress and stipulation of the parties (R. 57-58).

The thalweg is the point, established by historical and judicial precedent, within the river that marks the dividing line for jurisdiction of the states and property rights of those claiming title through the states (R. 58). That point of division, being by its very nature mobile, is at all times being moved from location to location within the river by erosion and accretion caused by the forces of nature and the works of man.

It is Louisiana and not Mississippi that is urging upon the Court that the "hand of man" can change the state boundary from the live and flowing Mississippi River, with the thalweg marking the dividing line of jurisdiction of the respective states, to a stationary line that runs across and divides fast lands accreted to the Mississippi shore, over which accretions on the Mississippi side of the river Louisiana admits that it has not heretofore sought to exercise jurisdiction (R. 140).

Because of the vigor with which Louisiana urges that the "hand of man" cannot change the state boundary, we are compelled to observe the point that it is Louisiana, and not Mississippi, that is in reality asking the Court to adopt a new boundary because the upstream works of man contributed to an accretive change in the location of the established boundary in the area in controversy. By urging this, Louisiana is asking for a change in the state boundary by the "hand of man".

THE QUESTIONS PRESENTED FOR REVIEW

The State of Louisiana and the Humble Oil & Refining Company, the latter here allied with Louisiana and actively participating in these proceedings without the benefit of order of this Court permitting it so to intervene, separately filed identical Exceptions to the Report of the Special Master.

These exceptions basically present for review:

1. Should the established rules of property be ignored so as to permit Louisiana in the area which it elected to bring into controversy to eliminate the Mississippi River as its boundary and to select as its permanent boundary the geographical location of the thalweg of the river as it existed in 1932-33 rather than the continuing and present thalweg of that boundary stream; and

2. After the boundary dispute which Louisiana provoked has been decided in favor of Mississippi, has this Court jurisdiction in this Original Action to determine issues sought to be injected by the private litigant, Humble, rather than to permit those issues to be tried and, in the routine and ordinary course of judicial proceedings, disposed of in the pending suit filed November 27, 1963, by the Zuccaro family against Humble in the United States District Court in and for the Southern District of Mississippi.

SUMMARY OF ARGUMENT

1. The Special Master has correctly stated the law of this case and, on the basic issue involved, has correctly applied this law to the facts. The existence of the oil well in the area does not result to change the state boundary nor to alter the established law relative thereto.

2. The factual arguments made by Louisiana and Humble, though coyly advanced, are without true support in the evidence and furnish no basis to destroy sound and time tested rules of property and to supplant them with rules which would produce uncertainty, chaos and be upsetting to the stability and certainty of the boundaries between the states and of thousands upon thousands of private landowners throughout the length and breadth of this great nation.

3. The parties correctly agreed upon the issues for solution (R. 60-61), and the controversy between the states, the subject and basis of this Original Action before this Court, will be solved by this Court adjudicating that the thalweg has always been and is now the boundary between the states in the problem area.

4. Since an adjudication that the thalweg remains the boundary will settle the dispute between the sovereign states, there is neither basic jurisdiction, nor reason otherwise, in this Original Action for this Court to consider issues which could only be pertinent to Humble's defense to the pending suit instituted by the Zuccaro family against that oil company in the United States District Court.

ARGUMENT

1. Fundamental Legal Precedents Which Require the Application of the Rule of the Thalweg in This Case

Having failed wholly to show any sudden and perceptible change, Louisiana now argues that the change that occurred is *analogous* to an avulsion. The sole basis for this argument is that the cutoff was *started* by the U. S. Corps of Engineers for flood control and navigational purposes. The argument is so lacking in authoritative support

that Louisiana resorts to the humorous conjecture of a novelist as an authority to support one of its speculations (La. Brief p. 12, fn. 2).

However, the Special Master included in his report an excellent summary of the legal principles applicable to the facts of the case at bar. For the convenience of the Court we include the portions thereof which are pertinent to this brief, as follows:

1. When a navigable river forms the boundary between two states, the *live thalweg* or middle of the main navigable channel, with certain exceptions, is the true boundary line. This general rule is well established by a long line of decisions in this Court. To cite a few:

Iowa v. *Illinois*, 147 U.S. 1.
Louisiana v. *Mississippi*, 202 U.S. 1.
Arkansas v. *Tennessee*, 246 U.S. 158.
New Jersey v. *Delaware*, 291 U.S. 361.

The basis for this rule is the common interest of affected states in the navigation conducted on any stream forming the boundaries between such states.

> If the dividing line were to be placed in the centre of the stream rather than in the centre of the channel, the whole track of navigation might be thrown within the territory of one state to the exclusion of the other. [Justice Cardozo in *New Jersey* v. *Delaware*, *supra*, at 380.]

Even though today the mineral rights under our rivers seemingly cast a shadow over rights to navigation, the latter still remain the principal factor in determining boundaries. *Iowa* v. *Illinois*, *supra*.

* * * * *

3. When by natural, gradual and more or less imperceptible processes of erosion and accretion the *thalweg*

changes, the boundary follows the stream and remains along this varying center of the channel.

New Orleans v. *United States,* 12 U.S. (10 Pet.) 292.
County of St. Clair v. *Lovingston,* 90 U.S. (23 Wall.) 46.
Nebraska v. *Iowa,* 143 U.S. 359.
Missouri v. *Nebraska,* 196 U.S. 23.
Arkansas v. *Tennessee,* 246 U.S. 158.
Kansas v. *Missouri,* 322 U.S. 213.

There are several sound reasons supporting this retention of the varying or "live thalweg" as the boundary line. First, states bordering on rivers originally adopted boundaries running along the streams for ease of identification of territorial limits. If these rivers later underwent gradual changes, it was still thought best to retain them as the "varying" boundary, thereby obviating the possibility of one state possessing a narrow strip of territory on the opposite shore. Second, bordering states were desirous of retaining rights to the traffic proceeding up and down the river. Third, by adopting the "live thalweg" rule, states would be susceptible to the same possibility of gradual addition or loss of land over the years. *Nebraska* v. *Iowa, supra.*

As was stated in *County of St. Clair* v. *Lovingston, supra,* at 68:

> In the light of the authorities alluvion may be defined as an addition to riparian land, gradually and imperceptibly made by the water to which the land is contiguous.

4. There is a noted exception to this general rule of the "live thalweg" and that is when there is an *avulsion.* An avulsion is a drastic change in the channel of a river caused either naturally or artificially and occurring sud-

denly and perceptibly. On such a happening the center of the old channel remains the boundary, regardless of continued changes in the newly formed channel.

County of St. Clair v. *Lovingston,* 90 U.S. (23 Wall.) 46.
Jefferis v. *East Omaha Land Co.,* 134 U.S. 178.
Nebraska v. *Iowa,* 143 U.S. 359.
Missouri v. *Nebraska,* 196 U.S. 23.
Arkansas v. *Tennessee,* 246 U.S. 158.
Louisiana v. *Mississippi,* 282 U.S. 458.
Kansas v. *Missouri,* 322 U.S. 213.

The reason supporting this exception to the general rule is equally sound. Gradual additions and losses of land seemed fair to both states, but sudden changes involving large pieces of territory were inequitable. As was quoted from 8 Ops. Att'y Gen. 175, 177 by the Court in *Nebraska* v. *Iowa, supra,* at 362:

> But, on the other hand, if deserting its original bed, the river forces for itself a new channel in another direction, then the nation, through whose territory the river thus breaks its way, suffers injury by the loss of territory greater than the benefit of retaining the natural river boundary, and that boundary remains in the middle of the deserted river bed.

The test for determining whether a change was gradual and imperceptible and so not an avulsion, was laid down with clarity in *County of St. Clair* v. *Lovingston, supra,* at 68:

> The test as to what is gradual and imperceptible in the sense of the rule is, that though the witnesses may see from time to time that progress has been made, they could not perceive it while the process was going on.

It is therefore sudden and perceptible if an eyewitness could perceive it. The Court further clarified this test of

"avulsion" in *Nebraska* v. *Iowa, supra,* at 369, in ruling that, notwithstanding the rapidity with which the Missouri River cuts huge chunks of land off from the bank in a manner perceptible to an onlooker, there is still no avulsion. We quote the following:

> There is, no matter how rapid the process of subtraction and addition, no detachment of earth from the one side and deposit of the same upon the other. The only thing which distinguishes this river from other streams, in the matter of accretion, is in the rapidity of the change caused by the velocity of the current; and this in itself, in the very nature of things, works no change in the principle underlying the rule of law in respect thereto.

"Whether it [the change] is the effect of natural or artificial causes makes no difference." *County of St. Clair,* at 68. The test is always the suddenness and perceptibility of the change—not its cause.

In practically all past decisions of this Court where an avulsion was found, the river had suddenly left its old bed and formed an entirely new one through the adjoining land. A large visible piece of surface land was thereby always cut off between the two channels. Suddenness and perceptibility were easily met.

* * * * *

5. When the abandoned channel is retained as the boundary because of an avulsion, this boundary is still subject to gradual change as long as the abandoned channel remains a running stream. Once the water becomes stagnant, the process is at an end and the middle of the channel becomes fixed as the boundary.

Arkansas v. *Tennessee,* 246 U.S. 158.
Louisiana v. *Mississippi,* 282 U.S. 458.
Mississippi v. *Louisiana,* 350 U.S. 5.

There is attached to this brief an Appendix which contains a more detailed discussion of the foregoing legal principles and the cases relied upon by the Special Master in his unconditional rejection of Louisiana's argument with these words: "This contention is untenable." (S.M.R. p. 19).

2. The Principles of Accretion and Erosion and the Rule of the Thalweg Remain Applicable to the Area in Controversy Even Though an Artificial Avulsion Was Effected Upstream.

It is clear from this record, and the Special Master so found, that all of the changes which have taken place in the area in controversy, below the foot of Glasscock Cutoff, have taken place as a result of the processes of accretion and erosion as above defined.[1]

Louisiana argues that because the change in the direction of migration of the river in this area was an ultimate effect of the artificial change in the channel of the river upstream as a result of work undertaken by the U. S. Corps of Engineers for flood control and navigational purposes, the rules governing accretion and erosion should not apply here.

This Court has upheld the right of the Federal Government to construct such aids to navigation and flood control even though as an ultimate result thereof lands along the river will be adversely affected, and that any such damages are *damnum absque injuria*. *Cubbins* v. *Mississippi River Commission,* 241 U.S. 351, 60 L. Ed. 1041, 36 S. Ct. 554.

The possibility that the Federal Government, in the exercise of its unquestioned power to construct levees, dikes, revetments and cut-offs to improve navigation and

1. See Report of the Special Master, pp. 20, 50 and 51, *infra* pp. 22-23.

prevent floods, will do so in such a way as to alter the flow of the current and thus cause erosion or accretions to occur is surely one of the "chances of injury and benefit arising from the situation of the property" which the owners of riparian lands must take within the scope of the following language of this Court from *St. Clair County* v. *Lovingston,* 90 U.S. (23 Wall.) 46, 23 L. Ed. 59: *"The riparian right to future alluvion is a vested right . . . The owner takes the chances of injury and benefit arising from the situation of the property. If there be a gradual loss, he must bear it; if a gradual gain, it is his."* (23 L. Ed. 64).

But Louisiana is now asking the Court to adopt a rule which will protect it from any loss incurred thereby, but will leave it free to take full advantage of the gains which the record shows are taking place to Louisiana by virtue of accretions which are forming immediately downstream of the area where Louisiana claims the line to have become fixed. This claim is made, although the uncontradicted evidence of Geddes (R. 834-837), corroborated by that of Louisiana's witness, Latimer (R. 572), shows that these accretions, and the consequent erosion on the Mississippi shore, have been measurably accelerated in their development by the construction of Glasscock Cutoff. Louisiana cannot have its cake and eat it too. This Court and all other courts which have considered the problem have unanimously held that the rules of accretion and erosion, as herein set forth, do apply in the case of boundary streams whose course is affected by artificial constructions of whatever nature, provided only that they are constructed in pursuance of a lawful purpose and are not made for the purpose of causing such a change.

It is respectfully submitted that the leading case of *St. Clair County* v. *Lovingston, supra,* is controlling on this point. This case has been consistently followed by this

Court and has been cited and followed by the Supreme Courts of many of the states and by the United States Circuit Courts of Appeal. There can be no valid distinction between the facts of that case and of the case at bar. The Court stated:

> "It is insisted by the learned counsel for the plaintiff in error that the accretion was caused *wholly* by obstructions placed in the river above, and that hence the rules upon the subject of alluvion do not apply. *If the fact be so, the consequence does not follow.* There is no warrant for the proposition. The proximate cause was the deposits made by the water. *The law looks no further.* Whether the flow of the water was natural or affected by artificial means is immaterial. Halsey v. McCormick, 18 N.Y. 147; 3 Washb. R. Prop. 48.
>
> "In the light of the authorities, alluvion may be defined as an addition to riparian land, gradually and imperceptibly made by the water to which the land is contiguous. It is different from reliction, and is the opposite of avulsion. The test as to what is gradual and imperceptible in the sense of the rule is, that though the witnesses may see from time to time that progress has been made, they could not perceive it while the process was going on. *Whether it is the effect of natural or artificial causes makes no difference.* The result as to the ownership in either case is the same." (Emphasis supplied).

It is difficult to see how a case could be more unequivocal on the point. It is plainly stated that the argument was that the artificial obstructions placed in the channel were the sole cause of the resulting change in the river. The fact that this case dealt with the boundary of a private riparian owner is not a valid distinction since this Court has repeatedly held that "the law of accretion controls . . . and that not only in respect to the rights of

individual landowners, but also in respect to the boundary lines between states." *Nebraska* v. *Iowa, supra, New Orleans* v. *United States, supra,* and *Missouri* v. *Nebraska, supra.*

In *Arkansas* v. *Tennessee,* 246 U.S. 158, 173, 62 L. Ed. 638, 647, this Court stated:

> "It is settled beyond the possibility of dispute that where running streams are the boundaries between states, *the same rule applies as between private proprietors;* namely, that *when the bed and channel are changed* by the natural and gradual processes known as erosion and accretion, *the boundary follows the varying course of the stream;* while if the stream from any cause, natural or artificial, suddenly leaves its old bed and forms a new one, by the process known as an avulsion, the resulting change of channel works no change of boundary, . . ."

If the same rule is not applied a completely anomalous result would follow. There is no doubt in the record that there now exists land in place which constitutes, under any definition of the term, accretions to the riparian lands of the Zuccaros and others in the area in question. Louisiana's witness, Latimer, so testified:

> "Q. That is what I was getting at, like you took this survey in 1948 and 1951 here, which we are looking at here. I might ask you, right where Washout Bayou is, I am just pointing to the area west of the mean low water, was that not accretions filled in on the Mississippi side?
>
> A. Yes, that is accretions there.
>
> Q. Weren't these accretions gradually built on the Mississippi side, building downstream?
>
> A. As the right bank channel developed, yes." (R. 529).

Since it is absolutely undisputed in the record that these lands are accretions to Mississippi lands, the Zuccaros' included, they must be held to belong to the Mississippi landowners, the Zuccaros included, unless the *St. Clair County* v. *Lovingston* case is overruled.

But it is also undisputed in the record that a considerable portion of these accreted lands lie on the west, or Louisiana side, of the line which Louisiana now contends is the state boundary (R. 678). Thus, either the Mississippi landowners, including the Zuccaros, do not own this land despite the fact that the *St. Clair County* case says that they do, or the Mississippi landowners must be allowed to follow their accretions across the state boundary and now own lands in Louisiana. But this cannot be, because *Arkansas* v. *Tennessee, supra,* held:

> "How land that emerges on either side of an interstate boundary stream shall be disposed of as between public and private ownership is a matter to be determined according to the law of each state, . . . But these dispositions are in each case limited by the interstate boundary . . ."

Thus the logic comes full circle back to the proposition that the rule governing state boundaries must be the same as those governing individual riparian proprietors, and *St. Clair County* v. *Lovingston, supra,* is controlling here.

That this is a correct conclusion is fully demonstrated by *Iowa* v. *Illinois, supra,* which established once and for all that the thalweg marks the boundary between states. The facts which were considered by the Supreme Court there show that the thalweg had formerly been located closer to the Illinois shore, but that as a result of the construction of the bridge and excavations in the channel, the channel had been moved 300 feet closer to the Iowa shore. Despite the fact that the channel had been thus artificially

altered, the Court held that the boundary between the two states was the thalweg as it existed at the time of the filing of the suit.

These decisions have been followed by decisions of other courts too numerous to cite and have found their way into the texts on the subject as established principles of law with the sole qualification that the artificial structures cannot have been constructed for the purpose of causing the accretions.

Thus in *Thompson on Real Property,* Rev. Edition, Section 2560, pp. 605-606, it is stated:

> ". . . when the accretion is due, *wholly or in part,* to artificial causes, and those causes are not the act of the party owning the original shore land, the decisions hold, and justice would seem to require, that the same rules prevail as to ownership of the accretion as in the case of accretions formed solely by natural causes. So, the general rule is that a riparian owner is not prevented from acquiring title by accretion by the fact that the addition to his land is influenced by artificial causes, in which he has had no part, . . ." (Emphasis supplied).

In *56 Am. Jur.,* Waters, Sec. 486 at p. 899, it is stated:

> "Naturalness or Artificiality of Causation.—It has been stated as a general rule that it is immaterial, as respects the effect of accretion, reliction, or erosion, whether it results from natural or from artificial causes, *in whole or part.* This rule has frequently been applied in cases where the accretion, reliction, or erosion is indirectly induced by artificial conditions created by third persons." (Emphasis supplied).

In *1 Farnham on the Law of Waters,* Sec. 69—Accretions—p. 323, it is stated:

> "But the mere fact that the formation is assisted by artificial structures placed on the shore in the regular improvement of the estate will not prevent his acquiring such title. Nor will the fact that the accretion is formed by a change in the current of the stream as a result of improvements made on its bed."

One of the more recent cases which is most analogous in its facts to that of the case at bar is that of *Frank* v. *Smith,* 138 Neb. 382, 293 N.W. 329, 134 A.L.R. 458, 465, wherein it is stated:

> "The evidence in the instant case shows that the land involved was formed by accretion by the river receding from its former south bank in a gradual process, brought about *purely* by the construction of irrigation works, dikes and the fills for the bridges. There was no rapid and sudden change of channels and the seeking of a new bed, as required in avulsion. We believe that, under the circumstances and evidence as disclosed, plaintiffs are entitled to the land in controversy, and as described in their petition, by accretion, and that in such respect the trial court did not err." (Emphasis supplied).

An annotation on the question of "Waters, Rights in Respect of Changes by Accretion or Reliction Due to Artificial Conditions" appears in *134 A.L.R. 467.* No case is cited therein which differs in any respect from the above stated principle. In the annotation the opinion of the Supreme Court of Illinois in *Lovingston* v. *St. Clair County,* 64 Ill. 56, 16 Am. Rep. 516, is discussed, this being the same case which appears in the United States Supreme Court as *St. Clair County* v. *Lovingston, supra.* In this opinion the facts of the case are clarified and some cogent reasons supporting the ultimate decision of the United States Supreme Court are given, as follows:

"So, in Lovingston v. St. Clair County, (1872) 64 Ill. 56, 16 Am. Rep. 516 (writ of error dismissed in 1873) 18 Wall. (U.S.) 628, 21 L. Ed. 813), it was held that the fact that the labor of others in erecting dikes changed the current of a stream and accelerated the deposit of alluvion could not deprive the riparian owner of the right to the newly made soil, where he did nothing more than to prevent the soil formed from washing away, and *it did not appear that the alluvion would not have been formed without the artificial aids.* The court said: 'Conceded, however, that the dikes to some extent caused the accretions; they were not constructed for such purpose and appellants had nothing to do with their erection. They were built for the accommodation of the public, and to secure an approach to the ferryboats, and the City of St. Louis did some work to preserve its harbor. *Improvements were also made by the United States to throw the channel of the river toward the city.* The fact that the labor of other persons changed the current of the river and caused the deposit of alluvion upon the land of appellants cannot deprive them of a right to the newly made soil. Chancellor Kent, after declaring the common-law doctrine that grants of land bounded on the margins of rivers carry the exclusive right of the grantee to the center of the stream, unless there is a clear intention to stop at the edge, says: 'The proprietors of the adjoining banks have the right to use the land and water of the river, as regards the public, in any way not inconsistent with the easement; and neither the state nor any other individual has the right to divert the stream and render it less useful to the owners of the soil.' 3 Commentaries, 427. If portions of soil were added to real estate already possessed, by gradual deposition, through the operation of natural causes, or by slow and imperceptible accretion, the owner of the land to which the addition has been made has a perfect title to the addition. *Upon no principle of reason or justice should he be deprived of accretions forced upon him by the labor of another, without his consent or*

> *connivance, and thus cut off from the benefits of his original proprietorship.* If neither the state nor any other individual can divert the water from him, artificial structures, which cause deposits between the old and new bank, should not divest him of the use of the water.' "[2] (Emphasis supplied).

It is indeed ironic that the representatives of the State of Louisiana here are taking a position directly contrary to that taken by their own Supreme Court in reference to the same area of the river. In a well reasoned opinion in the case of *Esso Standard Oil Co.* v. *Jones,* 233 La. 915, 98 So.2d 236 (1957), that Court rejected the very argument which counsel for Louisiana are asking this Court to accept. The Court stated:

> "In this case able counsel for the State offers several exceptions to reliance upon Article 509[3] and some of his presentations are plausible to a degree in some respects, but my interpretation of the facts in this case and the law, particularly Article 509, does not permit me to adopt his reasoning. One of his contentions is that Article 509 cannot be applied because the hand of man had something to do with the change of the Mississippi River channel from Deer Park Bend to Glasscock Cutoff. It is true that the

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2. It is to be noted that in the *St. Clair County* case the artificial constructions were made for the express purpose of causing a reversal of the direction of flow of the channel. Here it was merely an incidental result. That the artificial structures there appear to have been piers and dikes and here it was a cutoff can provide no valid distinction. It would be a distinction without a difference.

3. Article 509 of the Louisiana Code reads as follows: "Alluvion by accretion defined—Ownership— The accretions, which are formed successively and imperceptibly to any soil situated on the shore of a river or other stream, are called alluvion."

"The alluvion belongs to the owner of the soil situated on the edge of the water, whether it be a river or a stream, and whether the same be navigable or not, who is bound to leave public that portion of the bank which is required by law for the public use."

> Army Engineers cut what I understand to have been a small high water pilot channel as an aid to flood control and later enlarged the cut and caused additional water to flow through it, all of which, together with the natural action of the waters, finally resulted in the cut-off becoming the main river channel. In these steps there was no designed purpose whatsoever on the part of the engineers to bring about any change in property ownership."

It then quoted from a translation of a noted French Commentary on Article 556 of the *Code Napoleon,* which is exactly the same as Article 509 of the *Louisiana Code,* as follows:

> "The application of the principle is not without difficulty when the works which bring about the alluvion have been performed by the state whether in the interest of navigation or industry. We do not think that this circumstance alone can modify the principle. The law is not based upon the cause which produces alluvion. It considers only the mode of formation of the accretions. If accretion is successive and imperceptible, there is alluvion, and the alluvion belongs to the riparian owners.
>
> "It would be vain for the state to say that it had produced the alluvion; that formed upon the bed because of the constructions made it should belong to the owner of the bed—that is the state in the case of a navigable stream. That objection falls before the text, which has no regard for the origin of the alluvion."[4]

The Court then quoted with approval the identical language above set forth from *St. Clair Co.* v. *Lovingston, supra,* pointing out that the opinion of the United States Supreme Court there was based not only on common-law

4. *Laurent,* Vol. 6, No. 283, p. 365

authorities, but also on the Roman, Spanish and French, including Louisiana.

On rehearing[5] the Court again went into the same argument which Louisiana makes here that what took place "was not true accretion, but was rather the direct result of artificial avulsion," and rejected it again, stating:

> "Moreover, counsel admits that in the cases of Amerada Petroleum Corporation v. State Mineral Board, supra, and St. Clair County v. Lovingston, 23 Wall. 46, 90 U.S. 46, 23 L. Ed. 59, the laws of accretion were applied to rivers and streams even though the works of man contributed to the changes, but seeks to draw a distinction by asserting that in the case at bar the changes were primarily caused by the works of man. No authority is cited supporting the distinction; and in the St. Clair County case, supra, the United States Supreme Court (as noted in our original opinion, footnote 4) laid down the test for 'gradual and imperceptible,' and observed that 'Whether it (alluvion) is the effect of natural or artificial causes makes no difference.' The result as to the ownership in either case is the same."

What is so pertinent to the case at bar is that the Louisiana Supreme Court, in its opinion, observed:

> "Mr. Geddes testified that the cut-off channel affects the river current as far as fifty miles upstream and ten miles downstream (Tr. 24, 25). If accretion by alluvion deposits should occur in that area along the main river channel, I dare say no one would question the applicability of Article 509."[6]

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5. In this rehearing the Louisiana Supreme Court expressly considered and found its own decision fortified by the Master's Report in the case of *Mississippi* v. *Louisiana*, 350 U.S. 5, 100 L. Ed. 6, 76 S. Ct. 29.

6. See footnote 3 above.

Yet, despite the assurance of the Louisiana Supreme Court that *no one* would raise such a question, we now find that the self-same arguments have been dusted off, wrapped in a slightly different package and are being presented to this Court. We respectfully submit that they should again be categorically and emphatically rejected.

3. Authorities Cited by Louisiana Fail to Support Its Position

In an attempt to support the new and unprecedented theory being urged upon this Court by Louisiana, the following cases are thus cited:

> "*There were problem areas downriver from artificial construction* at issue in the case of Whiteside v. Norton, supra; State v. Bowen, 149 Wis. 203, 135 N.W. 499 (1912); James v. State, 10 Ga. App. 13, 72 S.E. 600 (1911); Southwestern Portland Cement Co. v. Kezer, 174 S.W. 661 (Tex. Civ. App. 1915, wr. ref.); U. S. Gypsum Co. v. Uhlhorn, supra, and City of St. Louis v. Rutz, supra, cases now to be discussed." (La. Brief, p. 17).

Upon analysis it becomes apparent that none of these cases give any support to Louisiana's position. Of the six cases, only one, *City of St. Louis* v. *Rutz,* involved in any way "problem areas downriver from artificial construction" although counsel for Louisiana state that all do.

Two were opinions of intermediate state appellate courts, *James* v. *State* and *Southwestern Portland Cement Co.* v. *Kezer.*[7] The former dealt only with the question of jurisdiction in a criminal matter. The portions of the opinion in the latter which dealt with the question of a state boundary were withdrawn on rehearing (174 S.W. 672).

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7. Counsel for Louisiana attempt to dignify *James* v. *State* by attributing it to the Georgia Supreme Court, but this is not correct.

Three of the cases, *Whiteside* v. *Norton, State* v. *Bowen*[8] and *U. S. Gypsum Co.* v. *Uhlhorn,* involved changes of the main channel from one side to the other of an island (lands in place above mean low water), and therefore can have no application to the facts of the case at bar.

City of St. Louis v. *Rutz* was the only one of the above cited cases which actually involved a "problem area downriver from artificial construction". This lone authority makes it clear that the result reached therein did not depend upon the fact that the washing away of the land in question was caused by artificial means. What was involved was title to land which first appeared as an island in the Mississippi River within an area which had been occupied by a portion of the surveyed lands of the riparian landowner, which portion had previously been washed away by the river. The question of the location of the state boundary was not at issue.

There, the lower court found as a fact that the area in question was washed away with such extreme rapidity that the ordinary rules of erosion and accretion did not apply, but rather the rules relating to the sudden submergence and reappearance of land as set forth in the

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8. In discussing this case in their brief counsel for Louisiana erroneously state: "At some distance below the dam the new channel passed an island on the side opposite the old channel. The suit involved the island because such was the only economic interest there involved. Obviously, the new channel was in a different place in the reach of the river above the island and below the dam." (La. Brief p. 19) The opinion of the Court, however, makes it clear that the dam was actually constructed from the bank over to the island. 39 L.R.A. (N.S.) 200.

case of *Mulry* v. *Norton,* 100 N.Y. 424, 1 Cent. Rep. 748.[9] This Court in *Rutz* made clear the limited scope of its review when it stated:

> "These 'refused declarations of law' contained mixed questions of law and fact; and where such questions are submitted to the court in a trial without a jury, this court will not, on a writ of error, review such questions, any more than it will pure questions of fact." (34 L. Ed. 947).

Counsel for Louisiana on pages 27-28 of their brief contend that *City of St. Louis* v. *Rutz* somehow limited the holding of the *St. Clair Co.* v. *Lovingston* case. To the contrary the *Rutz* case is in complete accord therewith. The artificial nature of the ultimate cause is completely ignored. It is the nature of the effects which is decisive.

In the case at bar, the record shows, and the Master so found, that the changes in the area in question took place as a result of the processes of accretion and erosion. There was certainly no sudden submergence and reappearance of land. As the Master stated:

> "In the instant case there was a gradual reversal of the trend of erosion and accretion from one side of the river to the other. This reversed trend began not later than 1940 in the area directly below the foot of the cutoff and has continued at all times during the period from that date until 1964 . . . a close study of

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9. That this limited doctrine has no application to factual situations similar to the case at bar where the location of state boundaries is in question has been decided by this Court in the case of *Arkansas* v. *Tennessee,* 246 U.S. 158, 38 S. Ct. 301, 62 L. Ed. 206, q.v. At 62 L. Ed. p. 648 it is stated: "Such a case was *Mulry* v. *Norton,* 100 N.Y. 424, 53 Am. Rep. 206, 3 N.E. 581, the true scope of which decision was pointed out in Re Buffalo, 206 N.Y. 319, 326, 327, 99 N.E. 850. But this doctrine has no proper bearing upon the rule we have stated with reference to boundary streams."

> the Hydrographic Surveys for these years, 1932-1964, points out the 'over-all' gradualness of the change in the thalweg south of Glasscock Cutoff."[10]

Counsel for Louisiana make a great play on the word "semantics", using it in a pejorative sense in relation to settled legal principles. This is but one example of their rather blatant effort to influence the thinking of the Court by the use of such semantics.

By a liberal use of adjectives, unwarranted by the facts of record, counsel for Louisiana attempt to create the impression that the erosion which has taken place on the Louisiana shore and the consequent building up of accretions on Mississippi's opposite bank is something unusual and extraordinary. For example, we find:

> Page 10—"These results are physically *disastrous*"
> "The change is *extreme*"
> "The scope of its effect . . . has and does reach *alarming* proportions"
>
> Page 22—"*Momentous* physical changes took place"
>
> Page 23—"... *monumental, drastic changes* ..."
>
> Page 28—"... *wholesale destruction* of land ..."

The uncontradicted facts of record show that the average eastward migration of the river at the latitude of the well was 72 feet per year from 1817 to 1933 whereas the average annual westward migration of the low water bank lines from 1940 to 1964 in this location was 70 feet (R. 788).

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10. Report of the Special Master, p. 20. See also, additional Finding of Fact No. 26, p. 50. It is instructive to note that the actual movement of the river during the period 1951-1964 was much less than that predicted in a report prepared by Louisiana's expert witness, Osanik, in 1953 for Humble (see Humble Exhibits 10 and 11).

If Louisiana's adjectives are warranted in discussing the erosion which has taken place on the Louisiana shore since the opening of the cutoff, they would be equally applicable to the erosion which took place on the Mississippi shore during the preceding 116 years.

4. Rules of Property Are Not Altered by Economic Factors, Including the Discovery of Oil

In his Report, the Special Master found:

> "29. The elimination of historical Deadman's Bend has not only caused an erosion into Louisiana and an accretion of alluvium to Mississippi in the first 3 miles below the cutoff, *but has also caused a new impingement of the river against the Mississippi bank below Black Hills Light and a corresponding accretion on the western or Louisiana side in that area.* (R. 120)."

Louisiana does not deny this, but argues, on p. 30 of its brief:

> "Nor can Mississippi offset the seriousness of the matter by pointing out that in the area between the foot of Deadman's Bend and Bougere Bend losses and gains compensate. Of concern is the narrow problem area where the economic factor is grave, not losses and gains of land beyond that area."

But rules of property cannot be altered, as Louisiana suggests, by differences in the value of land or other economic factors. This Court in *U. S.* v. *Title Ins. & T. Co.*, 265 U.S. 472, 486-487, stated:

> "As long ago as Minnesota Min. Co. v. National Min. Co., 3 Wall, 332, 18 L. Ed. 42, this court said (p. 334): 'Where questions arise which affect titles to land it is of great importance to the public that when they are once decided they should no longer be considered

> open. Such decisions become rules of property, and many titles may be injuriously affected by their change. . . . Doubtful questions on subjects of this nature, when once decided, should be considered no longer doubtful or subject to change.' "

The law of accretion and erosion here must control and not be altered by the discovery of oil, for as said in *Oklahoma* v. *Texas*:[11] "However much the oil discovery may affect values, it has no bearing on the questions of boundary and title."

5. The Doctrine of Access to Navigation Is Not Obsolete

The Exceptions of Louisiana and Humble similarly submit that the Special Master should have found that the "doctrine of access to navigation is obsolete" in that, they say, the Master should have concluded that 473 miles in the 600 mile reach of the Mississippi "have become permanent by virtue of cutoff, both natural and artificial"—Section J (1) of both Exceptions.

The only possible basis for this amazing suggestion is Louisiana's offering, Exhibit 36. This was a compilation, according to counsel for Louisiana, appearing in the " 'Fine-Grained Alluvial Report' of Dr. Fisk" (R. 541 and R. 543). The manner in which this "information" was brought to the Special Master's attention—not really introduced into evidence—is interesting. Note the colloquy at Vol. Three, R. 538-545.

To enable the Court to have the full facts, Mississippi offered the "Flood Control and Navigation Maps of the Mississippi River, Cairo, Illinois, to the Gulf of Mexico for 1963" plus the "1962-1964 Hydrographic Survey from the Mouth

11. 67 L. Ed. 428, 260 U.S. 606, 43 S. Ct. 221.

of White River, Arkansas, to Black Hawk, Louisiana" (R. 841). These official maps and charts were received into evidence as Mississippi Exhibits Nos. 28 and 29 (R. 842).

If the Court examines these official documents, the Court will find that in the 660 miles of river channel between the Mississippi-Louisiana boundary (31 degrees 00 minutes parallel) and Cairo, Illinois, some 550 miles of the river serves as the boundary between states. The remaining 110 miles comes entirely within the limits of the respective states. Thus some 83% of the present live river remains to mark state boundaries.

Louisiana's counsel, offering Louisiana's Exhibit 36, though quick to admit that he had no special knowledge in this field (R. 540 and R. 543), did represent that the offering showed that there were 473 miles in the abandoned bendways between the head and foot of various natural and artificial cutoffs. Therefore it is clear that Dr. Fisk in preparing the chart and Louisiana in offering it recognized, no matter what the extent in mileage of the present river may be, that the reaches of the river both above and below these cutoffs (not involved in the bendways) still serve as state boundaries. It is not even suggested that this figure of 473 miles includes the problem area. Regardless of how many natural or artificial cutoffs have occurred elsewhere—"avulsions" which may have resulted to fix the boundary in those certain latitudes—we suggest that such happenings give neither logical nor legal basis for Louisiana's supplication to this Court to conclude that "the doctrine of access to navigation is obsolete" and to decree a change of boundary in this area where there has been no avulsion.

Louisiana waxes eloquent on this score at pages 12 and 13 of its brief in support of this exception; and it reaches

the zenith of its argument when quoting from Mark Twain in its footnote 2. We do not dispute that "Mark Twain" (Samuel Clemens though he be) was, as counsel says, a "renowned authority on the Mississippi River" nor are we unmindful that he was one of our greatest humorists. Either Mark Twain's humor has escaped Louisiana and Humble or theirs has eluded us. At any rate, we are here dealing with facts, not fiction; and we respectfully submit that Louisiana and Humble have to supply this learned Court of last resort a sounder factual and legal basis to change the boundary between the sovereign states of Louisiana and Mississippi than Mark Twain's pleasant suggestion that "one gets such wholesome returns of conjecture out of such trifling investment of fact."

6. Louisiana's "Permanent Line" Is Illogical, Inconsistent, Unpredictable and Without Basis in Law or in Fact

In the heading of their Point B, "Boundary Lines Between States are of Solemn Importance", counsel for Louisiana have solemnly stated a truism. It is just as true that it is extremely important that the boundaries of states and of individually owned lands be at all times certain, definite and capable of being readily located and ascertained.

But consider the position of the states and of individual riparian landowners in the area in question in 1936, four years after Louisiana claims the boundary became fixed. It is undisputed that the river here continued to migrate eastward into Mississippi from 1932 to 1936 (R. 771). If Louisiana's legal theories had been written into the law then, how would anyone have been able to ascertain the true boundary at that time?

Mr. Latimer, one of Louisiana's experts, testified unequivocally:

"Q. It has been stated for you 'With the information available today, we know that what has in fact happened was entirely predictable.' *Was it predictable in 1932 and 1933?*

A. *No, you didn't have the facts then; you couldn't predict on something you didn't have the facts on.*" (R. 524).

Thus, under Louisiana's proposed new theory of the law, people and states in 1936, and indeed much later on, would have necessarily had to have assumed that the boundary was the thalweg of the river as it then existed. But *mirabile dictu,* it would later (much later) be revealed to them that the actual boundary had been the location of the thalweg in 1932.

Lousiana's experts made the southern terminus of their "proposed permanent boundary" the point at which they found "that the changes brought about by Glasscock Cutoff become impossible to measure" (R. 498). But Mississippi's experts testified that there were effects which could be measured much further down the river (R. 692-694 and R. 834-837). And Louisiana's experts, of necessity, admitted that the "measurable effects" were different in different years and that the effects of the cutoff will continue to be extended downstream (R. 522-523). At what point in time will the present live thalweg below the end of the "proposed permanent boundary" cease to be accepted as *the* boundary and jump back to the 1932 thalweg in that location?

It is, therefore, manifest that Louisiana's present position is based upon the ex post facto judgments of geologists and engineers and was formulated after the filing of this action with the express design of preserving a claim to one oil well. This position is completely inconsistent with the positions taken by Louisiana and by Humble and its

predecessor, Carter Oil Company, in relation to this boundary in all of their previous dealings therewith.

"The proposed permanent boundary" is drawn on Geddes Exhibit 8 (Miss. Ex. 27) which shows that this line now traverses fast lands on the Mississippi side of the river; and Louisiana admits that it has not sought to exercise jurisdiction over these fast lands (R. 125, 140). The contention for the "proposed permanent boundary" is contrary to the solemn stipulation of the parties entered at Washington, D. C., that: "At all places and at all locations pertinent to this litigation, the Mississippi River separates the State of Louisiana from the State of Mississippi" (R. 57-58).

The stipulation quoted above is incorporated in subsequent stipulations by re-stipulation (R. 63) and by reference (R. 64). The river could not separate the states if the boundary is not in the river, which is clearly the case of the "proposed permanent boundary" as shown by Miss. Ex. 27.

When Louisiana in 1948 leased the bed of the river to Carter Oil Company (La. Ex. 3), the description used in the lease was ". . . thence due East to the boundary between the State of Louisiana and the State of Mississippi; thence *downstream* along the boundary between the States of Louisiana and Mississippi, *following the meanderings thereof* to a point . . ." Carter Oil Company was at that time an affiliate of Humble. The companies did not merge until December 31, 1959. The "proposed permanent boundary" could not have been the meander line referred to in the lease because if it had been fixed it could not go downstream and would no longer meander.

When Louisiana witness Osanik made the report of his study of the effect of the cutoffs, Giles and Glasscock, to his employer, Humble Oil & Refining Company, on March 13,

1953 (Humble Ex. 10), his major premise was that: "The location of the state line downstream from the lower end of Glasscock Cut-Off would, of course, be determined by the position of the thalweg according to present hydrographic conditions;" and that this, plus the other facts found by him, prompted him to conclude: "This new bend will probably form further downstream, a development which would prove favorable to Humble in the Fairview area." This exhibit and all other evidence offered by Humble was adopted by Louisiana (R. 577).

The record further shows that Mr. Zuccaro wrote to Humble on November 25, 1953 (R. 136—admitted R. 155) asking where, in their opinion, the boundary was located. Humble replied to Mr. Zuccaro by letter dated January 4, 1954, which letter showed that Humble was sending to him a map on which "the orange line depicts what we consider to be the present state line between the states of Louisiana and Mississippi" (Ex. Z-7, R. 138—admitted R. 156). The line as shown on this map (Humble Ex. 12) was the approximate thalweg of 1951 based on the latest published Hydrographic Survey of this reach of the river.

The logical inconsistency ("absurdity" would perhaps not be too strong a term) of Louisiana's "proposed permanent boundary" can be further demonstrated. In *Miss.* v. *La.*, 350 U.S. 5, 76 S. Ct. 29, 100 L. Ed. 6, the description of the boundary fixed by the Court began on the live thalweg, went around the former bed of the river and rejoined the live thalweg to close the boundary. It is axiomatic that in all land descriptions the external boundary must close in order for the description to be valid. However, the point of beginning of Louisiana's "proposed permanent boundary" is neither located on the dead thalweg of the abandoned Deer Park Bendway nor on the live thalweg of the present

Mississippi River.[12] So there is no way of connecting Louisiana's proposed permanent line with the boundary between the states immediately north of the area in controversy. This line proceeds in a southeastward direction and then in a southwestward direction, along a line that was stipulated to have been at the geographical location of the 1932-33 thalweg, but which the proof shows was never fixed in fact or stabilized by the effects of the cutoff. It then terminates at a point that does not even pretend to rejoin the recognized boundary.[13]

Finally, we are constrained to point out to the Court that the ramifications of the adoption of Louisiana's position are great and will unsettle boundaries all along the Mississippi River. Mr. Austin Smith testified, without contradiction, that most of the fifteen cutoffs constructed have had similar effects (R. 713-716). Furthermore, countless other rivers and streams throughout the country mark immeasurable miles of private and public boundaries. The principles of law announced here will be just as applicable there as on the Mississippi. We feel confident that this Court will not see fit, under any circumstances, to accept Louisiana's thinly veiled invitation to give them the oil well without stating sufficient legal justification therefor (La. Brief, pp. 33-34).

From all of the foregoing it is apparent that the Special Master was eminently correct when he advised this Court that:

> "Here again, an extension of the prevailing rule would appear to raise many questions as to the thalweg

12. This is shown on Miss. Exhibit 27, Geddes Exhibit 8, to now be on dry land at the edge of the woods in territory on the west side of Glasscock Cutoff, which everyone has recognized to be part of Mississippi.

13. This is likewise shown on Miss. Exhibit 27 and on fig. 1 of the Report of the Special Master.

below the foot of all cutoffs. It would be very difficult for the Court to establish a pattern for these 'thin-line' decisions. In any event the Special Master does not consider it wise to recommend the Court's establishing this additional exception to a rule which has been in use for so long in the Supreme Court and the various Federal Circuit and District courts." (S.M.R. p. 22).

7. Once the Boundary Dispute Is Settled, There Are No Remaining Issues for Decision in This Original Action; and There Is Nothing for Referral, or Which Should Be Referred, by this Court to "Some Other Tribunal"

Louisiana and Humble in their separate but identical "Exception II" except to the asserted "recommendation by the Special Master that the Supreme Court *refer* the remaining issues to *some other tribunal*". The Master's recommendation was that this Court "not accept jurisdiction over the nonboundary questions in this proceeding" (S.M.R. p. 34). Louisiana neglects to advise the Court with what "remaining issues" it is concerned. Humble's brief is addressed to this point and to the defenses it has interposed (listed) to the suit brought against it by the Zuccaros. Over the objection of Mississippi Humble was permitted to participate in the hearing before the Special Master and to present all the proof it had. Humble rested its case (R. 577); and later repeated that it was "finished . . . on all issues" (R. 912). That Humble failed to sustain its charges, though such fact be clear from the record, is not here at issue.

Mississippi declined, for jurisdictional reasons, to engage in any contest with Humble (R. 126 et seq.). The position of the Zuccaros was likewise made clear, especially when Humble called upon the Zuccaros to present their evidence, which the Zuccaros declined to do (R. 906-

918). Mississippi throughout objected to Humble's participation. Reference is made to Mississippi's brief bulwarked by decisions of this Court showing the grounds for this objection. See Volume Two, R. 333 to 362 and R. 386 to 396. As an Appendix to Brief at R. 333 to 357 there is a chronological resume of the filings in the private litigation (Zuccaros v. Humble) for the period from November 27, 1962, to July 1, 1964, R. 357 to R. 362, both inclusive.

The complaint at bar was filed by the State of Louisiana. That this suit provoked no controversy with its lessee (originally the Carter Oil Company) is attested by the fact that Humble, Carter's successor by merger, aligned itself with Louisiana. Therefore, it does not appear that Louisiana has any controversy with its cohort and ally, Humble. The relief sought by Louisiana against Mississippi is the fixing of the boundary in the area in dispute. That controversy will be settled upon the boundary being determined to be the live and varying thalweg as recommended by the Special Master.

What other complaint or controversy does Louisiana have with Mississippi or, for that matter, with the Zuccaro family? Mississippi has sovereignty to its state line and the riparian owners of land on the Mississippi side of the Mississippi River, under the common law, own to that state line. *Archer* v. *Greenville Sand & Gravel Co.*, 233 U.S. 60, 58 L. Ed. 850, 34 S. Ct. 567. Through an agreement—admittedly undisclosed to Mississippi and its lessors (R. 155)—Humble and Carter determined upon a line dividing their leases irrespective *of the true state line.* Based on that line and not on the thalweg of the river, Carter drilled the well in question and elected to pay royalties to Louisiana.

Upon discovering that the oil in question underlaid their lands, the Zuccaro family made claim against Carter and its successor through merger, Humble, asserting a cause of action in tort for a subsurface trespass and the taking of their property. Now where is Louisiana involved in this private action? The Zuccaro family has not sued Louisiana. The Eleventh Amendment to the Constitution would be applicable in such event. Though Louisiana has requested this Court to stay the proceedings pending against Humble alone in the United States District Court for the Southern District of Mississippi in the case of *Zuccaros* v. *Humble,* this Court has not done so. Trial of that cause has, however, been delayed for the reasons which appear particularly at Item 19 of the chronology of the Zuccaro litigation (R. 361-362).

We respectfully submit that there is neither jurisdiction in this Court in this Original Action nor reason for this Court apart therefrom to decide other than the boundary controversy between the two states.

CONCLUSION

For the reasons and authorities set forth above and hereinafter, Mississippi respectfully submits that the exceptions of Louisiana to the Report of the Special Master should be overruled and that Report as it dealt with the applicable law should be adopted by the Court.

For the reasons and authorities contained in the limited exceptions for Mississippi, it is respectfully submitted that the Report of the Special Master should be modified as requested in Mississippi's brief in support of its limited ex-

ceptions and as so modified the Report of the Special Master should be adopted by the Court.

Respectfully submitted,

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APPENDIX

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DISCUSSION OF AUTHORITIES AND SUPPLEMENTARY ARGUMENT

As has been shown in the brief, counsel for Louisiana is asking the Court to apply to the facts of this case new and revolutionary principles which would amount to a change in settled principles of law whose antiquity and general acceptance know no peer.

The United States Supreme Court in *St. Clair County* v. *Lovingston,* 23 Wall. 46, 23 L. Ed. 59, traces these principles back to, and quotes from, the Institutes of Justinian, compiled in 533 A.D., as a codification of what might be termed the statutory and common law of Rome which had developed through the course of many centuries prior to that time.

These same principles were transmitted to the common law by Bracton, the first great writer on the English Common Law, Ca. 1250 A. D., and from thence to the jurisprudence of the United States.

In *Nebraska* v. *Iowa,* 143 U.S. 359, 36 L. Ed. 186, 189, after an extensive discussion of both common law and civil law authorities and decisions, concerning the rules governing accretion, erosion and avulsion, it is stated:

> "Such, beyond all possible controversy, is the public law of modern Europe and America, and such also is the municipal law both of the Mexican Republic and the United States." (36 L. Ed. 189)

Such unanimity of acceptance and such ancient lineage attest to the practical wisdom of these rules as tools for the solving of some of the most complex of factual problems.

The primary test, as will be hereinafter demonstrated, is perceptibility, in the sense of capability of being observed visually.

Louisiana is here asking for a departure from that test and the adoption of new rules which will leave property rights to the speculations of experts concerning cause and effect based upon data which is inaccessible and incomprehensible to the ordinary landowner and even subject to diverse opinions among experts. It is submitted that, if the Court should see fit to permit Louisiana to prevail here, all for the sake of one single oil well, titles will be unsettled throughout the length and breadth of this great country where literally millions of miles of boundaries are marked by flowing streams.

POINT I.

The Court Has Original Jurisdiction in Controversies Between States, Which Said Original Jurisdiction Does Not Extend to or Include Controversies Between Private Litigants

The Special Master correctly recommended that the Supreme Court not accept jurisdiction over the non-boundary questions in this proceeding (S.M.R. p. 34).

The Court has jurisdiction of this controversy between the states by reason of Art. III, Sec. II, Par. 2 of the *Constitution of the United States* and Sec. 1251 (a) (1), *Title 28, U.S.C.A.*

Louisiana in its Complaint made Humble Oil & Refining Company and Joseph S. Zuccaro, et al., parties, in addition to Mississippi, and the relief sought against the private parties was that the private litigation be stayed until such time as the controversy between the states had been finally determined.

During the course of the hearing, Louisiana and Humble sought to inject issues material only to the private litigation into the case and to have such private issues determined in this original action. That effort was resisted by the State of Mississippi, and the Zuccaros declined to enter into the contest with Louisiana and Humble solely because the Court lacks jurisdiction to hear and determine the claims between private litigants against each other in this type case.

Jurisdiction in any case is basic and ". . . a review of the sources of the Court's jurisdiction is a threshold inquiry appropriate to the disposition of every case that comes before us." *Brown Shoe Co.* v. *United States,* 370 U.S. 294, 8 L. Ed. 510, 82 S. Ct. 1502.

Original jurisdiction of the United States Supreme Court in controversies between states is unique in our federal-state system of government. Such jurisdiction is generally limited to disputes which, between the states entirely independent, might properly be the subject of diplomatic adjustment, *North Dakota* v. *Minnesota* (1923), 263 U.S. 365, 68 L. Ed. 342, 44 S. Ct. Rep. 138. Such suits by a state must be for injuries to it in its capacity of quasi sovereign. In this capacity, the state has an interest independent of and behind the title of its citizens in all the earth and air within its domain.

Such jurisdiction and judicial settlement of controversies is an alternative to force in the abatement of outside nuisances. *Georgia* v. *Tennessee Copper Co.* (1907), 207 U.S. 230, 237, 51 L. Ed. 1038-1044, 27 S. Ct. 618.

New Jersey v. *New York* (1953), 345 U.S. 369, 97 L. Ed. 1081, 73 S. Ct. 369, held that not even a municipality could intervene in an original action when it failed to show an interest in itself apart from that of the state in which

it was located, which said state shall be presumed to represent and speak for all of its citizens and corporations.

Kentucky v. *Indiana,* 281 U.S. 163, 74 L. Ed. 784, held:

> "A state suing, or sued, in this court, by virtue of the original jurisdiction over controversies between states, must be deemed to represent all its citizens. The appropriate appearance here of a state by its proper officers, either as complainant or defendant, is conclusive upon this point."

For a more detailed statement concerning jurisdiction see R. 333-362 and R. 387-396.

That Humble has no interest here which is separate and apart from that of Louisiana is forcefully demonstrated by the fact that the exceptions to the Report of the Special Master filed by both Humble and Louisiana are verbatim transcripts of each other.

POINT II.

When, As Here, a Navigable River Forms the Boundary Separating One State from Another the Live and Varying Thalweg, or Middle of the Main Navigable Channel, of That River Marks the Boundary Between the States and Is to Be Taken As the True Boundary Line

Historically and by treaty the territory north of the 31st degree of north latitude had been divided by the Mississippi River prior to the time the United States of America became a Nation. The Mississippi River has divided that territory continuously since it became a part of the United States up to and including the present date. See Articles II, III, IV and V of Louisiana's Complaint admitted by Mississippi. See also the statement of the case of *Arkansas* v. *Tennessee,* 246 U.S. 158, 62 L. Ed. 638, by Mr. Justice Pitney, beginning on page 160.

The point within that river marking the boundary by the Treaties of 1763 and 1783 was described as "A line to be drawn along the middle of the said Mississippi River."

In the Acts of Congress admitting Louisiana and Mississippi as states into the Union, "down the river" was the term used in Louisiana's act of admission and "up the same" was used in Mississippi's act of admission, reference being made to the Mississippi River.

Iowa v. *Illinois,* 147 U.S. 1, 57 L. Ed. 55, 13 S. Ct. 239, extensively reviewed the authorities on the subject and held ". . . that the true line in navigable rivers between the states of the Union which separates the jurisdiction of one from the other is the middle of the main channel of the river. Thus the jurisdiction of each state extends to the tread of the stream, that is, to the 'mid-channel', and, if there be several channels, to the middle of the principal one, or, rather, the one usually followed."

The basis for the foregoing rule of the thalweg has been set forth by Justice Cardozo in the case of *New Jersey* v. *Delaware, supra*:

> "The underlying rationale of the doctrine of the Thalweg is one of equality and justice. 'A river,' in the words of Holmes, J. (New Jersey v. New York, 283 U.S. 336, 342, 75 L. Ed. 1104, 1105, 51 S. Ct. 478), 'is more than an amenity, it is a treasure.' If the dividing line were to be placed in the centre of the stream rather than in the centre of the channel, the whole track of navigation might be thrown within the territory of one state to the exclusion of the other."

In *Iowa* v. *Illinois, supra,* the Court stated:

> "When a navigable river constituted the boundary between two independent states, the line defining the

> point at which the jurisdiction of the two separates is well established to be the middle of the main channel of the stream. The interest of each state in the navigation of the river admits of no other line. The preservation by each of its equal right in the navigation of the stream is the subject of paramount interest. It is, therefore, laid down in all the recognized treaties on international law of modern times that the middle of the channel of the stream marks the true boundary between the adjoining states up to which each state will on its side exercise jurisdiction, . . ."

The Court has also stated, in *Arkansas* v. *Tennessee,* 310 U.S. 562, 571, 60 S. Ct. 1026, 84 L. Ed. 1362, 1367:

> "The rule of the thalweg rests upon equitable considerations and is intended to safeguard to each state equality of access and right of navigation in the stream."

In connection with the holding in *Iowa* v. *Illinois, supra,* it is important to note that the proponent of the establishment of a dividing line equal distance from the banks, Iowa, alleged as its reason for the establishment of such a line, on page 4 of the official report, ". . . *that at that point, were it not for the bridge, the middle of the steamboat channel would be, and was before the bridge was erected, fully 300 feet east of the east end of the draw in the bridge,* . . . that at places in the river there are two or more channels equally accessible and useful for navigation by steamboats and other crafts carrying the commerce of the river; and that at the Keokuk & Hamilton bridge *the channel used by steamboats is partly artificial, constructed by excavation of rock from the river bed to facilitate the approach to the lock of the United States canal immediately north of the bridge.*" (Emphasis added).

The case was disposed of on the pleadings so the facts alleged above were taken as true for the purpose of the Court's decision.

Thus, it is clearly seen that in the very case wherein the thalweg theory of separation of states bordering upon a navigable stream was adopted by the Supreme Court of the United States, the argument that a channel *that had been relocated as a result of the construction of a bridge and artificial excavation* could not serve as a boundary line was rejected by the Court. By its acceptance of the thalweg theory against the argument that the main channel, *that had been relocated as a result of the construction of a bridge and artificial excavation,* could not be the boundary, the Court of necessity accepted a varying boundary line capable of being moved from place to place within the bed of the river from both natural and artificial causes.

The rule of jurisdiction and property thus adopted in *Iowa* v. *Illinois, supra,* known as the rule of the *thalweg,* has been treated as set to rest by that decision, and that rule has been held to be controlling in all subsequent decisions by the United States Supreme Court and to be determinative of both surface and subaqueous jurisdiction and property rights. As in *Iowa* v. *Illinois, supra,* the fact that the location of the thalweg was changed from natural or artificial causes or by an indeterminable combination thereof has made no difference in the application of the rule.

In *Hill City Compress Co.* v. *Western Kentucky Coal Co.,* 122 So. 747, 155 Miss. 55, the Supreme Court of Mississippi discussed and copiously quoted from *Iowa* v. *Illinois, supra,* and in adopting the rule that the middle or thread of the main navigable channel marks the boundary, commented:

> "In subsequent cases the court (Supreme Court of the United States) has adhered to this ruling. See Arkansas v. Tennessee, 247 U.S. 461, 38 S. Ct. 557, 62 L. Ed. 1213; Arkansas v. Mississippi, 250 U.S. 39, 39 S. Ct. 422, 63 L. Ed. 832; Louisiana v. Mississippi, 202 U.S. 1, 49, 26 S. Ct. 408-571, 50 L. Ed. 913-930. We think the reasoning of the above authorities is unanswerable, and that it is necessary to follow the rule of the Supreme Court of the United States as shown in the case of Iowa v. Illinois. The different states may take contrary positions and may give able reasons for their views, but such conflicts are fruitful of trouble, and should be avoided."

Thus, it is clearly shown that the rule of the thalweg has withstood the test of repeated efforts to change it to fit differing factual situations. As is the case with all rules of jurisdiction and property based upon justice and right, the rule of the thalweg has withstood the test of time.

Mississippi submits that the application of the rule of the thalweg, as announced and followed in all prior decisions of the Court, to the stipulated and undisputed facts of this case, should be determinative of this matter.

POINT III.

Where the Course of a Boundary Stream Changes Through the Operation of the Gradual Processes of Erosion and Accretion the Boundary Follows the Stream and Remains the Varying Center of the Channel

(a) The Rationale of the Doctrine and Its Application to the Case at Bar

Missouri v. *Nebraska*, 196 U.S. 23, 25 S. Ct. 155, 49 L. Ed. 372, 374, enunciated the basis for the proposition stated above, as follows:

"The former decisions of this court relating to boundary lines between states seem to make this case easy of solution.

"In New Orleans v. United States, 10 Pet. 662, 717, 9 L. Ed. 573, 594, argued elaborately by eminent lawyers, Mr. Webster among the number, this Court said: 'The question is well settled at common law, that the person whose land is bounded by a stream of water, which changes its course gradually by alluvial formations, shall still hold by the same boundary, including the accumulated soil. No other rule can be applied on just principles. Every proprietor whose land is thus bounded is subject to loss by the same means which may add to his territory; and as he is without remedy for his loss, in this way, he cannot be held accountable for his gain.' It was added—what is pertinent to the present case—that 'this rule is no less just when applied to public than to private rights.' "

And in *St. Clair County* v. *Lovingston*, 23 Wall. (U.S.) 46, 23 L. Ed. 59, 64, the Court said:

"The riparian right to future alluvion is a vested right. It is an inherent and essential attribute of the original property. The title to the increment rests in the law of nature. It is the same with that of the owner of a tree to its fruits, and of the owner of flocks and herds to their natural increase. The right is a natural, not a civil one. The maxim 'Qui sentit onus debet sentire commondum' lies at its foundation. The owner takes the chances of injury and of benefit arising from the situation of the property. If there be a gradual loss, he must bear it; if a gradual gain, it is his."

A state bordering upon a navigable stream which changes its course gradually because of alluvial formations is subject to loss by the same means which may add to its territory. As it is without remedy for its loss in this way, it cannot be held accountable for its gain.

The evidence introduced by all parties shows that the Mississippi River below the foot of Glasscock Cutoff migrated eastwardly from the time that the respective states were admitted into the Union until some years after the opening of Glasscock Cutoff.

Mississippi Exhibit 2 shows conclusively and without dispute that the bottom hole location of the oil well that precipitated this controversy was, at the time the states were admitted into the Union, underneath fast lands well within the State of Mississippi.

As the Mississippi River migrated eastwardly, the Mississippi shore was eroded away to the point that the point to which the well was subsequently drilled was not only underneath the bed of the stream but was actually west of the live and varying thalweg.

The loss of this territory was caused solely by the erosive action of the river on the Mississippi side and accreting of alluvial formations on the Louisiana bank. This loss by Mississippi was substantial but that State was without remedy for such loss. See *Nebraska* v. *Iowa*, 143 U.S. 359, 36 L. Ed. 186, wherein the common law, as it applies to private landowners and as declared in *New Orleans* v. *United States*, 35 U.S. 10, Pet. 662, was held to apply with equal force to the states.

Loss for which there is no remedy is compensated by gain for which the state is not accountable.

It was shown without dispute that the live and varying thalweg of the Mississippi River has now migrated back to the west of the bottom hole location of the oil well in question.

If Mississippi were to lose this territory a second time it could only be accomplished by a change in the rules of

jurisdiction and property heretofore announced and uniformly followed by the Supreme Court.

(b) Definition of Accretion and Erosion and Its Application to the Facts of Record

The classic definition of what constitutes accretion and erosion is found in the case of *St. Clair County* v. *Lovingston, supra,* where the Court held:

> "In the light of the authorities, alluvion may be defined as an addition to riparian land, gradually and imperceptibly made by the water to which the land is contiguous. It is different from reliction, and is the opposite of avulsion. The test as to what is gradual and imperceptible in the sense of the rule is, that though the witnesses may see from time to time that progress has been made, they could not perceive it while the process was going on."

The operative words here are "see" and "perceive". Unless one can see and perceive changes in a river at the moment that they take place, then all such changes are by this definition accretive in nature and not avulsion. One can search from one end to the other of the voluminous record in this case, and one cannot find a shred of evidence that any of the changes which have taken place in this river could be seen and perceived while they were taking place. Therefore they must be classified as accretion and erosion.

Decisions of the United States Supreme Court subsequent to the *St. Clair County* v. *Lovingston* case have not departed from this classic definition but have applied the rule to the various factual situations presented. In *Nebraska* v. *Iowa, supra,* the contention was made that because of the rapidity of the changes which took place on the Missouri River and because:

> "Frequently, where above the loose substratum of sand there is a deposit of comparatively solid soil, the washing out of the underlying sand causes an instantaneous fall of quite a length and breadth of the superstratum of soil into the river; so that it may, in one sense of the term, be said, that the diminution of the banks is not gradual and imperceptible, but sudden and visible; . . ."

the law of accretion and erosion did not apply. However, the Court rejected this contention and held:

> "Notwithstanding this, two things must be borne in mind, familiar to all dwellers on the banks of the Missouri River, and disclosed by the testimony; that, while there may be an instantaneous and obvious dropping into the river of quite a portion of its banks, such portion is not carried down the stream as a solid and compact mass, but disintegrates and separates into particles of earth borne onward by the flowing water, and giving to the stream that color which, in the history of the county, has made it known as the 'muddy' Missouri; and, also, that while the disappearance, by reason of this process, of a mass of bank may be sudden and obvious, *there is no transfer of such a solid body of earth to the opposite shore, or anything like an instantaneous and visible creation of a bank on that shore.* The accretion, whatever may be the fact in respect to the diminution, is always gradual and by the imperceptible deposit of floating particles of earth. There is, except in such cases of avulsion as may be noticed hereafter, in all matter of increase of bank, always a mere gradual and imperceptible process. There is no heaping up at an instant, *and while the eye rests upon the stream,* of acres or rods on the forming side of the river. No engineering skill is sufficient to say where the earth in the bank washed away and disintegrating into the river finds its rest and abiding place. The falling bank has passed into the floating mass of earth and water, and the particles of earth may rest one or fifty miles below, and upon either shore. There is, no matter how

rapid the process of subtraction or addition, no detachment of earth from the one side and deposit of the same upon the other. The only thing which distinguishes this river from other streams, in the matter of accretion, is in the rapidity of the change caused by the velocity of the current; and this in itself, in the very nature of things, works no change in the principle underlying the rule of law in respect thereto.

"Our conclusions are that, notwithstanding the rapidity of the changes in the course of the channel, and the washing from the one side and on to the other, the law of accretion controls on the Missouri river, *as elsewhere*; *and that not only in respect to the rights of individual land owners, but also in respect to the boundary lines between states.* The boundary, therefore between Iowa and Nebraska is a varying line, so far as affected by these changes of diminution and accretion in the mere washing of the waters of the stream." (Emphasis supplied)

Attention is called to the emphasis given to the question of whether or not the changes are perceptible by sight at the time they take place by the use of the words "instantaneous and visible" and "while the *eye* rests upon the stream."

The United States Supreme Court has applied the visible and perceptible test in all cases where it has been applicable. Where additions to the banks of a stream are not visible while the eye rests upon the stream, that Court has held that the law of erosion and accretion applies. Some of the cases wherein the test has been applied are: *Missouri* v. *Nebraska, supra*; *Arkansas* v. *Tennessee, supra; Oklahoma* v. *Texas,* 260 U.S. 606, 43 S.Ct. 221, 67 L. Ed. 428.

Not only has this test been followed by the United States Supreme Court, but it has been quoted and cited by the Supreme Courts of many of the states. The Supreme Court

of Mississippi, in the case of *Sharp* v. *Learned,* 195 Miss. 201, 14 So. 2d 218 (1943), used the exact language quoted above from the case of *St. Clair County* v. *Lovingston, supra,* to define accretion. One of the most recent of these is the case of *Esso* v. *Jones,* 233 La. 915, 89 So. 2d 236 (1957), involving this very area of the river and the effects of Glasscock Cutoff itself. The opinion quotes the above language from *St. Clair County* v. *Lovingston, supra,* and goes on to state:

> "Another contention is that whatever alluvion deposit has occurred was not successive and imperceptible as contemplated in Article 509. 'Successive and imperceptible' are well defined and easily understood terms. They must be accepted and applied as common usage would dictate. The growing of a plant is successive and imperceptible. But some plants grow faster than others. A homely example is a morning glory, which will cover the arbor in a few weeks and what is only a bud at eventide is a full blown flower in the morning. Its growth is phenomenally rapid, yet it is imperceptible at any given moment. The evidence here shows that in some years the bank built up by deposition was more rapid than in others, but that some build up took place each year after April, 1940. *There is no evidence that one could stand on the side and perceive the development take place.* It is within the knowledge of most everybody that flood waters may rise rapidly but unless the rise is something extremely extraordinary, it would be imperceptible and I believe that the land built up to form the new bank at the location here is clearly proven to have been successive and imperceptible in the sense of the law." (Emphasis supplied)

Insofar as the changes in the case at bar are concerned, Louisiana's principal witness, Osanik, testified as follows:

"Q. And as an expert on aerial photography, this pretty vividly dramatizes the two extremes, does it not?

A. It shows it quite clearly, I believe.

Q. But it did not purport to show what occurred in between?

A. I stated it shows simply what the position was before the cut and now.

Q. The two extremes shown on this overlay and the photograph show the extreme positions of the river over a period of how long, please?

A. If you take 1932 until 1964, that is 32 years.

Q. In that intervening period of 32 years, this stretch or reach of the Mississippi River that is depicted there was a constant flowing live body of water, was it not?

A Yes, sir.

Q. Subject at all times to the forces of nature as well as the forces of man, is that correct?

A. Yes, sir.

* * * * *

Q. The changes in the 1933 location as depicted by the overlay to the position of the 1964 location, which you did not see fit to put on this particular map—did those changes in the location of the deep water pool, as depicted by blue, did they occur beneath the surface of the river?

A. I am sorry, I didn't catch that second date.

Q. 1964; the two extremes you have up there?

A. Did they occur beneath the—

Q. —Beneath the waters of the river?

A. As far as I know they did.

Q. You don't have any knowledge of any dry fast or high land appearing in that particular reach of the river at any time?

A. No, sir." (R. 449, 450 and 451)

In this connection, Louisiana's other witness, Latimer, testified:

"Q. If we knew what the river was doing out there each day, we could better tell its movement, couldn't we, I mean how gradual and progressive it was?

A. Well, I don't think you could tell much of anything with that; you would be choked down with paper.

Q. Because if you stood out there and looked at it, all you would see would be the water, isn't that right?

A. That is right.

* * * * *

Q. While it was going on you couldn't tell it was going on, you would have to come back some days or months later to make an observation?

A. That is right." (R. 528-529)

Therefore, it can plainly be seen, both from the painstaking analyses of Smith and Geddes, and from the admissions of Louisiana's own witness, that the changes which took place in the area in question, both before and after the construction of the cutoff, were the result of accretion and erosion as they have been defined by the Supreme Court of the United States and the Supreme Courts of Louisiana and Mississippi.

POINT IV.

Where a Boundary Stream Suddenly Abandons Its Old Bed and Seeks a New One, Such Change, Termed in the Law "Avulsion", Works No Change of Boundary; but, under the Facts of This Case, There Was No Avulsion in the Area in Controversy

In the preceding proposition we have affirmatively shown that the changes which took place in the area in controversy were, in accordance with the universally accepted definitions of the terms, the result of accretion and erosion. This should be determinative of the case.

However, the same conclusion can be reached by stating the proposition in reverse, that there was no avulsion. As stated by the United States Supreme Court, accretion or alluvion "is the opposite of avulsion." *St. Clair County* v. *Lovingston, supra.* In other words, if the change did not take place as the result of an avulsion, it must, *ex vi termini,* have taken place as a result of accretion and erosion. The Supreme Court of Mississippi, in *Sharp* v. *Learned,* 195 Miss. 201, 14 So.2d 218, 220, stated the same proposition in reverse: "or to state it otherwise, so far as concerns practical purposes, when a change is not by accretion, it is by avulsion."

Thus we see that the law recognizes no half-way house. If there was no avulsion in the area in controversy, as the same has been defined by the courts, then the changes have been the result of accretion and erosion. There will be no alternative than to recommend a finding for Mississippi. Otherwise, principles of law which have been handed down over the centuries and which constitute rules of property will be radically changed.

(a) Definition of Avulsion

Avulsion is defined most succinctly in *Nebraska* v. *Iowa, supra*:

> "It is equally well settled, that where a stream, which is a boundary, from any cause *suddenly abandons its old and seeks a new bed,* such change of channel works no change of boundary; and that the boundary remains as it was, in the centre of the old channel, although no water may be flowing therein. This sudden and rapid change of channel is termed, in the law, avulsion . . ." (Emphasis supplied)

Much of the confusion which has been generated concerning this case by able counsel for Louisiana and their ally, Humble, has resulted from discussing the matter as if the thalweg, in and of itself, was *the* boundary. Actually, as stipulated by the parties, the river is the boundary. The thalweg merely marks the precise geographical location within the bed of the river where the boundary is to be fixed at any given time. The thalweg is an abstract legal concept only and not a concrete and living thing like a river. It is merely "the line at which the jurisdiction of the two separates . . . when a navigable *river constitutes the boundary . . .*", *Iowa* v. *Illinois, supra.*

As was stated in the opinion in *Nebraska* v. *Iowa, supra*:

> "But, on the other hand, if *deserting its original bed,* the river forces for itself a new channel in another direction, then the nation, through whose territory the river thus breaks its way, suffers injury by the loss of territory greater than the benefit of retaining the natural river boundary, and that boundary remains in the middle of the deserted river bed. For, in truth, just as a stone pillar constitutes a boundary, not because it is a stone, but because of the place in which

> it stands, so a river is made the limit of nations, not because it is running water bearing a certain geographical name, but because it is water flowing in a given channel, *and within given banks,* which are the real international boundary." (Emphasis supplied)

A change in the location of the thalweg within the bed of a river cannot constitute an avulsion. The above definitions, along with many others, make it clear that when the Courts speak of an avulsion, they are referring to changes involving the river seeking an entirely new *bed.*

This is manifest in the following quotation from Vattel, one of the fathers of International Law, which is contained in the opinion of the Supreme Court in *Nebraska* v. *Iowa, supra,* as follows:

> "But if, instead of a gradual and progressive change of its bed, the river, by an accident merely natural, turns entirely out of its course and runs into one of the two neighboring states, *the bed* which it has abandoned becomes thence-forward their boundary, and remains the property of the former owner of the river (Sec. 267), and the river itself is, as it were, annihilated in all that part, while it is reproduced in its *new bed* and there belongs only to the State in which it flows." (Emphasis supplied)

A definitive summary of the rules regarding accretion and avulsion as applied by the Supreme Court is given in the case of *Arkansas* v. *Tennessee, supra,* as follows:

> "It is settled beyond the possibility of dispute that where running streams are the boundaries between states, the same rule applies as between private proprietors; namely, that when the *bed and channel* are changed by the natural and gradual processes known as erosion and accretion, the boundary follows the varying course of the stream; while if the stream from

> any cause, natural or artificial, *suddenly leaves its old bed and forms a new one,* by the process known as an avulsion, the resulting change of channel works no change of boundary, which remains in the middle of the old channel although no water may be flowing in it, and irrespective of subsequent changes in the new channel." (Emphasis supplied)

The opinion in *Oklahoma* v. *Texas, supra,* restates the above language quoted from *Arkansas* v. *Tennessee, supra,* and also defines what is meant by the "bed" of a river, as follows:

> "When we speak of the bed, we include all of the area which is kept practically bare of vegetation by the wash of the waters of the river from year to year in their onward course, although parts of it are left dry for months at a time; . . ."

That all of the changes which took place in the area in question after 1932-1933 have taken place substantially within the bed of the river as above defined is shown by the uncontradicted testimony of Geddes when he stated:

> "We might also note that at this location too all of this westward movement of the river is pretty well confined to the highwater channel of the river. The Louisiana top bank did not change at all laterally; the Mississippi top bank receded a maximum of about 250 feet. So except for that 250 feet, all of this change has taken place within the highwater channel of the river." (R. 826)

(b) Rationale of the Doctrine and Its Application to the Case at Bar

From the foregoing it is evident that we cannot have an avulsion, natural or artificial, without the river having adopted a completely new bed, as above defined, and leaving land in place between the banks of the old and the

new channels. The case of an avulsion is the only exception to the rule that a boundary fixed by a stream follows the changes in a stream. The authorities make it clear that the basis upon which the exception is founded is that, without its application, land in place, capable of identification by location and extent, would be subject to changes in ownership and sovereignty.

This is stated to be the basis for the rule in the language quoted from *Nebraska* v. *Iowa, supra,* where the Court stated:

> "But, on the other hand, if, deserting its original bed, the river forces for itself a new channel in another direction, then the nation, through whose territory the river thus breaks its way, suffers injury by the loss of territory greater than the benefit of retaining the natural river boundary . . ."

Later in the same decision, it is stated:

> ". . . in the very uncommon case called avulsion, when the violence of the stream separates a considerable part from one piece of land and joins it to another, *but in such manner that it can still be identified,* the property of the soil so removed naturally continues vested in its former owner." (Emphasis added)

In *Buttenuth* v. *St. Louis Bridge Co.,* 123 Ill. 535, 17 N.W. 439, cited with approval in *Nebraska* v. *Iowa, supra,* it was stated:

> "The law as stated by law writers, and in the adjudged cases, seems to be that where a river is declared to be the boundary between states, although it may change imperceptibly from natural causes, the river 'as it runs continues to be the boundary.' But if the River should suddenly change its course, or desert the original channel, the rule of law is, the boundary remains in the middle of the deserted river bed. Where

> a river is the boundary between states, as is the Mississippi between Illinois and Missouri, it is the main, the permanent, river which constitutes the boundary, and not that part which flows in seasons of high water, and is dry at other times. Handly's Lessee v. Anthony, 5 Wheaton 374. In no other way would a river be a permanent fixed boundary, at all times readily ascertainable. There are many cogent reasons why the boundary lines between states should be permanent. Otherwise, territory in one state at one time, sooner or later, might be in another state. It must be in one state all the time, or else the state would lose jurisdiction over it."

An extended discussion of the subject is found in the opinion in *Nebraska* v. *Iowa, supra.*

The same basis is found to exist in island cases, where, although the change of the main channel from one side to the other of the island may be a gradual one, the rule is applied to prevent land in place of one state from suddenly becoming part of another. But in the case at bar there is no land in place to be so affected.

The limitations and distinctions of this exception to the general rule are clearly set forth in the following quotation taken from the opinion in the case of *Frank* v. *Smith,* 138 Neb. 382, 293 N.W. 329, 134 A.L.R. 458, 465, as follows:

> "The following language from the case of Commissioners v. United States, 8 Cir. 270 F. 110, 113, expresses the general rule on this subject: '(1) That where the thread of the main channel of the river is the boundary between two estates and it changes by the slow and natural processes of accretion and reliction, the boundary follows the channel.' The opinion further explains a change by sudden and violent processes of avulsion, with which we are not here concerned, and states:

> 'To this rule, however, there is a well-established and rational exception. It is that, where a river changes its main channel, not by excavating, *passing over, and then filling the intervening place between its old and its new main channel, but by flowing around this intervening land,*[1] which never becomes in the meantime its main channel, and the change from the old to the new main channel is wrought during many years by the gradual or occasional increase from year to year of the proportion of the waters of the river passing over the course which eventually becomes the new main channel, and the decrease from year to year of the proportion of its waters passing through the old main channel until the greater part of its waters flow through the new main channel, the boundary line between the estates remains in the old channel subject to such changes in that channel as are wrought by erosion or accretion while the water in it remains a running stream.' "

The record in the case at bar shows without dispute that there was never any land in place between the location of the 1932-33 thalweg and the present thalweg of the river during the 32 years it has taken to move from the former to the latter location. Since this is so, there could not in any case have been an avulsion in the area in controversy, even if a new channel had formed "rapidly and dramatically" on the Louisiana side in the bed of the river below the surface of the water.

But the record goes further, and shows that this did not happen, but that the deep part of the channel moved from

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1. By remarkable coincidence of composition we find the witness, Latimer, in "lawyer's language", arguing in his report: "nor did the channel change by excavating, passing over, and then filling the intervening space between its old and its new channel" (R. 502). But the concluding, and most important, phrase of the above quotation was ignored by Latimer and the lawyers who drafted his report. That is, for there to be an avulsion the channel would have to change by "flowing around this intervening land"—meaning fast lands above mean low water.

east to west "by excavating, passing over, and then filling the intervening place between . . ." the location of the 1932-33 and the 1964 thalwegs. The cross-sectional graphs plotted by Mr. Smith and Mr. Geddes, highly competent and qualified witnesses, from the official government charts (Mississippi Exhibits 21-25, Geddes Nos. 4a-4j; Miss. Exhibit 15, Smith Exhibit 9) demonstrate beyond question the truth of this statement.[2]

That there cannot be an avulsion within the bed of a stream without land in place between an old and a new bed of the river is so clear and so fixed as a principle of law that it is virtually impossible to find a litigated case in a court whose decisions are reported where counsel have seriously raised such an argument. In an attempt to find some discussion of this point counsel for Mississippi have read and analyzed every case of a state supreme court, a United States circuit court of appeals and the United States Supreme Court cited under the term "avulsion" in *Words and Phrases,* including those cited in the most recent supplement thereto. In each of these cases which involved rivers there was found to be land in place between the old and new bed of the river, or the Court found upon the facts of the case that there was no avulsion.[3]

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2. Discussing these graphs, Mr. Geddes testified: "There is one other thing I would like to show on this exhibit. These cross-sections are taken at five intervals of time between 1933 and 1964. They all show on each one that the river was confined to one single main channel. That channel did change its shape during this period but at no time was it split, bifurcated, or double channeled, or anything resembling one exists, as shown by these cross-sections." (R. 814). See also R. 825-826.

3. This involved 25 cases from 13 different jurisdictions. One possible exception to the above statement involved a case applying the rare doctrine of reappearing land under a factual situation having no relevancy to the case at bar.