IN THE

Supreme Court Of The United States

NO. 48, ORIGINAL

OCTOBER TERM, 1970

STATE OF MISSISSIPPI ..... *Plaintiff*

VS.

STATE OF ARKANSAS ..... *Defendant*

EXCEPTIONS OF STATE OF ARKANSAS TO REPORT OF HONORABLE CLIFFORD O'SULLIVAN, SPECIAL MASTER

JIM GUY TUCKER
Attorney General
State of Arkansas

WILLIAM H. DREW
Special Counsel to the Attorney General
State of Arkansas
P. O. Box 744
Lake Village, Arkansas 71653

TREVATHAN PRINTING COMPANY, NEWPORT, ARKANSAS

Cases Cited:

Page

Commissioners v. United States,
270 F. 110, 113 (8th Cir. 1920) 26

Durfee v. Duke, 375 U.S. 106, 115 (1963) 23

Kansas v. Missouri, 322 U.S. 229, 64 S. C. 983, 88
L. Ed. 1244 (1944) 28

Ussery v. Anderson-Tully Company,
122 F. Supp. 115, 211 5

IN THE

Supreme Court Of The United States

NO. 48, ORIGINAL

OCTOBER TERM, 1970

STATE OF MISSISSIPPI ..... *Plaintiff*

VS.

STATE OF ARKANSAS ..... *Defendant*

EXCEPTIONS OF STATE OF ARKANSAS TO REPORT OF HONORABLE CLIFFORD O'SULLIVAN, SPECIAL MASTER

TO THE CHIEF JUSTICE AND ASSOCIATE JUSTICES OF THE SUPREME COURT OF THE UNITED STATES.

The State of Arkansas respectfully excepts to the Report and Findings filed herein by Honorable Clifford O'Sullivan, Special Master, in the following particulars.

1.

Documentary evidence filed herein completely negates the contentions of the State of Mississippi and the Report of the Honorable Clifford O'Sullivan, Special Master.

2.

The physical facts associated with Luna Bar completely negates the contention of the State of Mississippi and the Report of the Honorable Clifford O'Sullivan, Special Master.

3.

The geology of Luna Bar completely negates the theory of the State of Mississippi, and the Report of the Honorable Clifford O'Sullivan that the Island is the product of a point bar migration.

4.

The Mississippi River Commission's geological investigation, accepted and published by that agency, negates the theory of Dr. Charles Kolb, the theory of the State of Mississippi, and the Report of the Honorable Clifford O'Sullivan, Special Master.

5.

The decisions heretofore entered by the United States District Court, Northern District of Mississippi, and the Chancery Court, Chicot County, are not controlling in this case, and are not a part of this record.

I.

Documentary evidence filed herein completely negates the contentions of the State of Mississippi and the Report of the Honorable Clifford O'Sullivan, Special Master.

There is no controversy between the State of Mississippi and the State of Arkansas that between 1823, the time of the original survey of Arkansas in Spanish Moss Bend (Exhibit D-1, also compiled in Exhibit P-1) and 1872, the Island formation is not shown on any map.

Dr. Charles Kolb, in behalf of the State of Mississippi, agreed that in 1841, Exhibit P-9 (TR. 321), no island formation is shown; that in 1864-65, Exhibit P-19 (TR. 323-324) no island formation is shown, but is shown in 1872, Exhibit P-100. (TR. 324)

Mr. Austin Smith, in behalf of the State of Mississippi, also concluded that in 1850 (Exhibit P-13) no island formation is shown in Spanish Moss Bend (TR. 401-402), nor is there an island formation in 1859, Exhibit P-16 (TR. 402-403), there is no divided flow of the river in Spanish Moss Bend from 1863 through 1865. (TR. 417)

Dr. Clarence Durham, in behalf of the State of Arkansas, also concluded from the same exhibits referred to above by Dr. Kolb and Mr. Austin Smith, and in addition thereto, defendant's Exhibits D-6, D-7, D-8 and D-9, all purporting to show Spanish Moss Bend in the year 1871, do not show a divided stream or an island formation in Spanish Moss Bend. Defendant's Exhibit D-8, Map of Washington County, Mississippi, in 1871 does not show either a land mass forming onto Carter Point, Mississippi in Spanish Moss Bend, nor an island, nor a divided channel, with the river in its original position.

Defendant's Exhibit D-9, an 1871 Sectional Map of the State of Arkansas, shows the sections of land in Chicot County, adjacent to Carter Point, Mississippi, to have the same size and shape as in the original Government Land Office Survey of 1823, without a divided channel or an island formation.

Dr. Kolb, Mr. Austin Smith, Dr. Clarence Durham and Mr. Spillers all conclude that the first indication of an island formation in Spanish Moss Bend appears in 1872, with Defendant's Exhibit D-11, also Plaintiff's Exhibit P-100.

Both the State of Mississippi and the State of Arkansas, by Mr. Austin Smith in behalf of the State of Mississippi (TR. 423-424) and Dr. Durham, in behalf of the State of Arkansas, conclude that the map of 1872 (Exhibit D-11, P-100) was prepared for the purpose of new levee construction, and show the levees that have been washed away.

Not only does the map of 1872, Defendant's Exhibit D-11, Plaintiff's Exhibit P-100, show the evidence of a large flood action, but also that within a one year period, between 1871 and 1872, the island appears and there is a divided river.

Major Suter in 1874, Defendant's Exhibit D-12, Plaintiff's Exhibit P-29, clearly shows in Spanish Moss Bend, an island formation, with a divided channel, with the eastern channel, east of the island, marked Spanish Moss Bend, and shows that the navigation channel is in the western channel, west of the island. Major Suter mapped the entire Mississippi River and in doing so, Spanish Moss Bend is the only place when the name of the bend of the river was placed on the bar side of the river rather than

the bendway side of the river, even when squeezed for space to write in.

The recorded evidence of all maps herein do not support the contention of the State of Mississippi that the island formed as ordinary Point Bar Accretions to Carter Point, by the slow process of erosion and accretion. These maps reject such theory in its entirety.

These maps do support the position of the State of Arkansas that Luna Bar is the product of an avulsion, occurring in the year 1872, whereby a portion of the Arkansas mainland was isolated creating an island now called Luna Bar.

II.

The physical facts associated with Luna Bar completely negates the contention of the State of Mississippi and the Report of the Honorable Clifford O'Sullivan, Special Master.

The State of Mississippi bases its claim to Luna Bar upon the theory of a point bar migration, which is given by Dr. Charles Kolb and Mr. Austin Smith. Neither Dr. Kolb nor Mr. Smith gave any testimony as to the geology, conditions, or factual evidence on Luna Bar itself, but both gave theories by which it was possible to account for the existence of the island.

As set forth in *Ussery v. Anderson-Tully Company,* 122 F. Supp. 115, 211, Judge Young stated:

> ". . . . if the theory of one expert in controversy is correct, it will find corroboration on the ground . . . . . on the other hand, a theory which is not supported by physical evidence is subject to grave doubt. . . ."

Dr. Charles Kolb did not, as heretofore set forth, detail any physical evidence from the island itself. Dr. Kolb used many abstract slides to show actions of the River generally, or as he stated, related to river morphology. Not one single bit of physical evidence on the island itself was produced by Dr. Kolb.

Dr. Kolb did prepare slides from tracings that he made from charts on file with the Mississippi River Commission, showing thereon a reference line surveyed by Mr. Guyer. From these slides and the reference lines thereon, Dr. Kolb gave certain conclusions based upon his opinion.

Dr. Kolb's profile cross-sections on Exhibits P-90 through P-93 were prepared using the reference line of Walter Guyer, across the northern portion of the island, which is not the highest part of the island and completely bypasses the central part of the island, which is the highest elevation.

Dr. Kolb also reduced the recorded elevations on the island by seven feet (TR. 325) to convert from Memphis Datum to Mean Gulf Sea Level. However, Dr. Kolb did not reduce the recorded elevations on either the Arkansas Mainland or Carter Point, Mississippi, this corresponding seven foot reduction thereby creating a vast difference in recorded elevation of the island as compared to the river bank on the Arkansas and Mississippi Mainlands.

By overlaying the maps prepared by Dr. Kolb from tracings by Dr. Kolb of Mississippi River Charts, Exhibits P-90 through P-93, the central core of Luna Bar is contained on all four maps, the central core mass of Luna Bar is represented as land on all four maps, (TR. 1002-3), Defendant's Exhibit D-81, drawn from Dr. Kolb's overlays depicting land that is common on all overlays, showing the

central high mass of the island never eroded away and has been in the same place throughout. (TR. 1004) Defendant's Exhibit D-64 shows that this island core has recorded elevations of 133.4, 133.1, 133.5, 133.5 and 133.2, five elevations that exceed 130 feet, and on the Arkansas bank, immediately adjacent to the high part of the island, the elevations are 132.2, 139.1, 136.1, 134.8, 139.0, 138.7 and 136.7; therefore, the difference in elevation of the high part of the island and the Arkansas bank is less than four feet in elevation, while Carter Point, Mississippi is two and one-half foot higher than the average Arkansas bankline. (TR. 1006) Thus, when Dr. Kolb attributed the elevation of the island at 113 MSL, he was referring to the elevation at the reference line of Mr. Guyer, not at the highest elevation. Further, he reduced the elevation on the island by seven feet, but did not make a corresponding reduction of elevation on the Arkansas bank.

Thus, the physical evidence shows clearly that the island is basically equal to the elevations of the Arkansas mainland, and is not the low-lying mass that a point bar would have been.

Richard Proctor, born November 6, 1882, who had spent a lifetime in the area of the island, said:

"Q. Did it ever wash away the bar — the island out there?

A. Well, up on the end of the bar next to Island 82, when the levee broke at Bentley Quarters it washed all the way down from the Hole in the Wall down to this house — er — kinda angling like — hit run up through there past Pastoria on up. (TR. 1095)

Q. Did it ever wash away the whole island?

A. No, sir.

Q. When you were a young man what was this island called?

A. They just called it Pastoria Bar — time that I speak about. . .

Q. What was it a part of?

A. Pastoria. (TR. 1096)

Q. Have you ever heard of Luna Bar?

A. That is what they called that Pastoria. (TR. 1097)

Q. Did the river ever cave off all of Pastoria?

A. Oh, no, sir!

Q. What was left in there?

A. There was a Point left in there on that Bar at the South end down this way. Coming from what we call the Hole in the Wall. That Hole in the Wall was the cause of that Bar caving all around up there — just this side before you get off of Linwood — let me see — on the bar — I remember an old Cistern — I don't know what became of that old Cistern — I hunted pretty well all the time round there — I remembers going and looking in that old Cistern. I found a (Mink) in that Cistern — and I cut a pole and got him out — and when I went out again I don't know what became of that cistern.

Q. This place you called a point or an island, did it ever wash away in your lifetime?

A. On this end of that island down next to Luna —

just like you go out to Pastoria Landing — that's as near as I can remember." (TR. 1098)

From the testimony of Mr. Proctor, who was living in that place from birth in 1882, there is living testimony that the island called Luna Bar was a part of Pastoria, created by the water washing through the "Hole in the Wall" on the north side. Further, from his testimony, at one time there was a cistern on the island out of which Mr. Proctor took a mink. The fact that a cistern was on the island completely rebuts the point bar migration theory.

Located on top of the island, Mr. John Putnam, an eminent forester, whose qualifications were admitted and recognized by the State of Mississippi as an expert in the field of forestry, was a red mulberry, which Mr. Putnam stated:

"Q. Did you determine whether that tree grew there or was placed there accidentally some way?

A. It unquestionably grew there." (TR. 565)

Mr. John Thompson, Chief Forester for Johns-Manville Products Corporation, stated:

"Q. Did you examine that tree at the time or that stump?

A. Yes.

Q. Was it a tree that grew there or was it cast there by some phenomenon?

A. It grew there." (TR. 647)

This relic tree was 84 years old from ring count. From the legends on the available maps from 1880 forward, there is no evidence of any tree of that age; therefore, this tree had its life at least 84 years prior to 1880, or at the very

earliest, in 1796, long before the Government Land Office Survey of 1823, and long before the island appeared as an island in 1872.

Also located on this island was a second tree stump, also located on the higher elevation of the island. Mr. Thompson stated:

"Q. Where was its location?

A. The first one was here and the second one was right up here.

Q. Up on the high ground?

A. Yes, sir.

Q. Did you check the stump to see if it was growing in place or was it just laying on the island?

A. It was growing in place. I dug around it enough to see that its roots went well down in the soil.

Q. Were you able to determine as a forester whether it grew there or came there by some other possibility?

A. It grew there definitely." (TR. 653)

This tree was 110 years old when it died. (TR. 654)

A third tree, a black walnut, was found by Mr. Thompson:

"Q. Were you able to determine what kind of tree it was?

A. Yes, sir, that was a black walnut." (TR. 655)

This tree was 55 years old when it died. Mr. Thompson studied maps available in the Mississippi River Commission, all exhibits herein, and the notes on the 1879-80 survey, and neither the maps or notes did not indicate any

trees represented by the three stumps. The Aerial Photographs (D-31) conclusively show that the trees represented by these stumps could not have lived and died between 1880 and 1930, nor at any time between 1930 and the current date. (TR. 657)

Mr. Thompson located cypress stumps in the west channel on the west side of the island (Exhibit D-52) which dated 200 years plus. This Exhibit, D-52, was from a group of stumps that grew there, evidenced by their position and the "knees" growing around the stumps, all of which were in place. (TR. 663)

From the foregoing, the physical evidence completely rebuts the theory of Dr. Kolb and Mr. Smith that Luna Bar had its origin as an extension of Carter Point by reason of point bar migration. The testimony of these expert witnesses, standing alone, would raise a presumption that their theory was a possible explanation for the existence of the island. If their theory was correct, it would be substantiated on the ground, by the absence of proof to the contrary. However, this theory is conclusively shown to be incorrect, and like all presumptions, when proof to the contrary is shown, the presumption fails. Trees that date 200 years or more in the past, could not have been there had the island originated as a point bar. Richard Proctor could not have captured a mink in a cistern on the island, had the island been the product of a point bar. The evidence conclusively shows that the river did not by imperceptible slow process of erosion and accretion creeping across the intervening space occupied by Luna Bar, erasing the land and restoring same by accretions to Carter Point, thereafter cutting across the accretions to form a divided channel and leaving this accretion product as an island then isolated from Carter Point.

III.

The geology of Luna Bar completely negates the theory of the State of Mississippi, and the Report of the Honorable Clifford O'Sullivan that the Island is the product of a point bar migration.

To sustain the theory of the State of Mississippi, Mr. Austin Smith theorized that the flow of the Mississippi River was hard against the Arkansas bank, and, therefore, much caving was taking place, with a contemporaneous accretion to Carter Point, on the Mississippi side.

When the United States Corps of Engineers made its historical study of this reach of the River, the Engineers prepared and filed with the Mississippi River Commission a map, Exhibit D-32, showing the bank line of the river from 1882 through 1930. This map shows the area in question, Spanish Moss Bend with the island, virtually stable from 1882 through 1930, with the two channels of the river on each side. There is no appreciable caving of the bank on the western side of the island, nor any accretions to Carter Point, Mississippi. The navigable channel in the western side of the island was hard against the Arkansas bank, west of the cypress stumps that are found on the west side of the island.

Mr. Austin Smith, reading from Report to Congress in June, 1866, read from Exhibit P-134:

> "In the Bend above Columbia, the bank is caving badly. There are two breaks at Bellview and Pastoria." (TR. 419)
>
> "Besides the local importance of these breaks, the crevassed water through them floods the land be-

low the Tensas. Part of the floods through the breaks above Columbia passes into the bed and does not reach the Tensas bottoms." (TR. 420)

It is respectfully noted that General Humphrey mentioned Pastoria by name, and referred to a badly caving bank above Columbia. General Humphrey did not report a badly caving bank at Pastoria, or in Spanish Moss Bend, but used the words "in the bend above Columbia".

Mr. Austin Smith used these words to substantiate his theory of a caving bank, by stating, "the bend above Columbia is Spanish Moss Bend". This is, of course, a possibility, which if supported, could be accepted.

The U.S. Corps of Engineers outlined the caving of the bank as occurring above Columbia, between Luna and Columbia, and not in Spanish Moss Bend. General Humphrey also noted that the floods through the breaks in the levee above Columbia "passed into the bed and does not reach the Tensas bottom". The only way the flood could return to the "bed" of the river was for the flood water to return through a low lying area, such as an ancient abandoned channel.

Dr. Clarence O. Durham, admitted to be qualified by the State of Mississippi, head of the Geo-Science Department at Louisiana State University, being informed of the contention of the two States, investigated the island on the "Multiple Hypothesis" basis, wherein he sought evidence to confirm, or refute, one of the theories. He spent two days on the island itself, in addition to studying all maps introduced, commencing in 1765. Dr. Durham also noted that all available maps from 1823 through 1871 did not show a divided channel, or the existence of an island in Spanish Moss Bend. By comparing Exhibit D-9 with the

original survey of 1823, the sections shown on Exhibit D-9 were apparently identical with Exhibit D-1, also P-4. Exhibit D-8, ownership map of Washington County, Mississippi, dated 1871, does not show an island formation off Carter Point, Mississippi, nor accretions attached thereto, *nor a divided channel.* In 1872, Defendant's Exhibit D-11, also Plaintiff's Exhibit P-100, shows an abrupt shift of the Arkansas western bank, in a one year period, levees breached. Dr. Durham concluded, just as Mr. Austin Smith concluded, that the purpose of Exhibit D-11, was to plan new levee construction, which is shown completed on Exhibit D-13, and is west of swale, identified an abandoned prehistoric channel of the river. Dr. Durham further found evidence of this ancient channel by checking elevations when investigating the western channel, or the channel between the Arkansas mainland and the island of Luna Bar. From the position of the cypress stumps on the Arkansas mainland and the cypress stumps on the west side of Luna Island, he found physical evidence on the ground to verify that a prehistoric river channel did in fact exist west of the island.

Dr. Durham concluded that Luna Bar was at one time, pre-historically, an island with an abandoned river channel lying west of Luna Bar, evidenced by the physical lay of the land and cypress stumps which represent an old clay plug that represents an abandoned channel, that existed prior to the Government Land Office Survey. Dr. Durham concluded that prior to the Government Land Office Survey, Exhibit D-1, the river had occupied the channel west of the island, but in 1823, when Exhibit D-1 was surveyed, this channel had been abandoned and the river occupied the channel east of the island, as shown in 1823 by Exhibit D-1.

"The Master: Then to use a crude expression, your position is that the river has been see-sawing back and forth in that area?

A. Exactly.

Q. Did the see-sawing take place prior to 1823?

A. All of the see-sawing except the last event, which happened in the Seventies, had occurred before the land surveys.

Q. Of 1823?

A. Of 1823."

Dr. Durham also noted the position of the levees breached on Exhibit D-11, were in the position that they were to be west of the abandoned channel on the west side of the island into which the river avulsed, because levees are positioned to be behind the next swale or abandoned channel.

Dr. Fisk, in Exhibit D-30, reached the same conclusion reached by Dr. Durham, that the river avulsed around the island, not by erasing. This is clearly shown on Exhibit D-30 by the legend 10, in the center of Luna Bar.

Dr. Kolb agrees with Dr. Fisk that the clay plug shown by Dr. Fisk, and its alignment on the Arkansas bank west of the island, but apparently contended that this ancient abandoned channel stopped with the Arkansas west bank and did not extend further east. Dr. Kolb did not explain why this ancient course number 10 would stop at that point abruptly and not extend further onto the island itself as found by Dr. Fisk and Dr. Durham. Dr. Durham, (at TR. 1010) was not in complete agreement with Dr. Fisk's orientation of channel 10 as shown by Ex-

hibit D-30, Dr. Durham finding that Dr. Fisk's course 10 was at a higher angle to the relic cypress stumps that he found in the western channel, and oriented to the north of the cypress stumps representing the abandoned channel rather than in a northwest-southeast direction making the abandoned channel run counter to the positioning of Dr. Fisk. Whether Dr. Fisk's orientation of the abandoned channel is correct, or that of Dr. Durham is really moot, since both conclude that the center of the island is the hard base of an ancient clay plug that dates many years prior to 1823 and is still in place today.

The escarpment on the eastern side of the island's central core coincides with the shore line of Arkansas in 1823. By overlaying Exhibit D-1A, plastic overlay of Exhibit D-1, Original Government Survey, with any exhibit, and particularly aerial photographs, Exhibits D-65 and D-66, the eastern escarpment is remarkably intact and coincides with the original survey of 1823.

Dr. Durham further noted that the survey of Mr. Burkhart, Exhibit P-130 A, shows the section lines 500 feet further east than the section lines actually are (TR. 1013-1015), therefore, the overlays of Dr. Kolb, Exhibits P-90 through P-93, actually eliminate 500 feet of the island that actually existed.

Mr. Spillers made numerous borings on the highest land mass of the island itself and could not find any swales or clay plug materials associated with a point bar. There were no materials found in that area compatible with point bar formation. (TR. 846)

Mr. Spillers' borings also substantiated that the alignment of the ancient channel referred to by Dr. Durham was southeast, and was clearly evidenced even today with

the cypress stumps alignment. Mr. Spillers also found that the cypress stumps lay east of the thalweg of the western channel.

The breached levees to the west of the island, allowing the river in its direct approach to the breached levees north of the island, over the years to scour out the land, then adopt the existing abandoned channel and around the island leaving it isolated. Mr. Austin Smith, quoting from General Humphrey's report of 1866, states that the levees were breached in 1866, and we know that the levee at that point was breached through 1872. It is common knowledge that with each spring rise on the river, the waters will flood through the breach. The Mississippi River is, at the north side of the island, flowing due west, and in flood stage would continue flowing due west rather than make the ninety degree turn to head south.

Since the soil structure on the island is incompatible with point bar accretion, the only conclusion is that the island is not part of that origin. How the river would isolate this land mass is clearly shown by Dr. Durham and Mr. Spillers, substantiated by the ancient trees, represented by stumps found on the high island area, aged without regard to carbon dating at 80 to 100 years old prior to 1880, well before 1823, the time of the Original Survey, and substantiated by "Part of the floods through the breaks above Columbia passes into the bed and does not reach the Tensas Bottom." The only breaks reported above Columbia is at Pastoria, and in 1866, General Humphrey reported part of the flooding passing into the bed. The only way a part of the flood could pass to the bed is exactly as concluded by Mr. Spillers and Dr. Durham.

The physical facts simply rebut the presumption and theory of Dr. Kolb and Mr. Smith.

IV.

The Mississippi River Commission's geological investigation, accepted and published by that Agency, negates the theory of Dr. Charles Kolb, the theory of the State of Mississippi, and the Report of the Honorable Clifford O'Sullivan, Special Master.

The position of the State of Mississippi is that the land mass known as Luna Bar formed as ordinary Point Bar Accretions to Carter Point, Washington County, Mississippi. (TR. 34) Even though Luna Bar occupies the geographical area of land originally in the State of Arkansas, the State of Mississippi contends that by the slow process of erosion and accretion creeping across the intervening space between the location of the navigable channel in 1823 and its location in 1880, erased the land area now occupied by Luna Bar, replacing same with accretions that now constitute Luna Bar.

To support its theory, the State of Mississippi called Dr. Charles Kolb, Chief of the Geology Branch of the Waterways Experiment Station.

Dr. Kolb, when commencing his lecture on the morphology of a river used many slides, to depict the expected actions of the river.

> "The Master: This is an abstract drawing, it is not fitted into Luna Bar?
>
> A. Not at all, no, sir. In fact most of the slides that I will show you now are slides that I use in a class which I teach at the Waterways Experiment Station in Engineering Geology when I start talking about rivers to my students." (TR. 267)

Dr. Kolb admitted that the slides he used did not concern Luna Bar, but were used to illustrate some features that he felt applied to Luna Bar. (TR. 283) Dr. Kolb gave great weight to the comprehensive study made by Dr. H. N. Fisk for the Mississippi River Commission. (TR. 300)

> "Coming back to the way Fisk and his colleagues began work on this, they came up with a series of maps, and this is Exhibit P-98, and Plates 8 and 9 of Fisk's geological investigation . . . . . What Fisk and his group have done was to try to date the position of the Mississippi River in 100 year increments, going back 15 or more centuries . . . . . You have to overlay these channels of the river one on top of the other and, of course, this makes for a very difficult method of portraying this. (TR. 302) The only river you can show in its entirety is the river that was current at the time, the 1939 river shown in white here. The river shown there for the previous century is shown in green, that is the 19th century, and whenever it crosses that white, of course it is cut out, it can't be shown because it went under that river, and so on. The previous one was cut out by the 19th and 20th century ones. So by the time you get back ten centuries in this dating, you can show very selective segments of the river, because the other areas are preempted by all these colors . . . . . Everyone of these colors once was the river. . . . .
>
> "Q. Doctor, for the record, does that bear a number 10, which (TR. 303) would indicate the 10th century?
>
> A. Yes, it does.
>
> Q. What is the color of that?
>
> A. It is red with a light red stripe and a heavy red

stripe . . . . . Fisk believed that particular plug was formed in the 10th century.

The Master: You mean sometime about the Tenth Century, the river changed its course there?

A. Yes, sir, and cut itself off. (TR. 304)

Q. Dr. Kolb, what effect did this clay plug or other clay plugs have on retarding the caving of the river bank where the clay plug was in existence as against caving of river bank where you were dealing with old Point Bar formations?

A. The clay plug very definitely retarded the growth of a bend. . . .

Q. Would that have a retarding effect on the ability of the river to jump over bank, as contended by Mr. Spillers, and course back into this clay plug area?

A. No, it wouldn't.

Q. Not on that?

A. No.

Q. His mapping this Number 10 course and shows this clay material, does that help you in dating the age of the soil?

A. Yes, it does. If we take Fisk at face value, (TR. 311A) it would suggest that the soil that fills this particular plug was laid there sometime in the 10th Century.

Q. Moving over to Luna Bar, is there any indication in Luna Bar at this location of a similar soil formation of ancient origin?

A. No, sir. (TR. 312)

Q. Are there any points to be made?

A. The point I would like to make because this is appropos to the next two exhibits that I show, which are also geological maps, the point I would like to make is the very one that you mentioned, Mr. Ward, and that is this: That if an outside avulsion occurred in this area, it would have isolated a part of the Arkansas Bank, which would have included this clay plug."

The State of Arkansas contends that Luna Bar is not the product of a point bar migration, but is in fact, an isolated part of the Arkansas Bank, just as surmised by Dr. Kolb. An examination of Plaintiff's Exhibit No. 98, also Defendant's Exhibit No. 30, readily shows that Luna Bar contains the coloring alluded to above by Dr. Kolb, contains the legend 10 ancient course, and conforms identically to the high area of Luna Bar, from which the red mulberry found by John Putnam, recognized by the State of Mississippi as an expert in the field of forestry, by visable ring count 84 years exclusive of sap rot (TR. 566) and aged by Dr. Iddings to be 555 years, plus or minus 180 years. Also in this area was found a walnut, flagged and left in place by Mr. John Thompson, Forester, (TR. 653) aged 110 years old at time of its death. (TR. 654)

Dr. Fisk, in 1944, in behalf of the Mississippi River Commission, clearly shows on Exhibit No. P-98, also Defendant's Exhibit No. 30, that the high land mass of Luna Bar dates back to the 10th Century. The physical evidence found by Mr. Putnam and Mr. Thompson completely and absolutely confirms the geological investigation of Dr. Fisk. Further, there appears stumps east of the

western channel of the river that could not exist had the river migrated across the land area known as Luna Bar.

Had the origin of Luna Bar have been an ordinary point bar forming as an accretion to Carter Point, the physical evidence evidenced by these trees, cypress stumps east of the western channel of the river, could not have existed. They would have been erased by the migration of the river. While the State of Mississippi states that these tree relics could have washed in by flood waters, this indeed may have been an imaginary possibility.

The Master's Report states that the contention of the State of Mississippi in that these stumps washed in was sustained by prior courts is erroneous. The evidence of the relic trees found on top of the island were not discovered at that time, and this record is the only record of their existence. This red mulberry and walnut were discovered by foresters, both qualified in their field, and both agreed that the trees represented by the stumps grew there and did not originate anywhere else.

Dr. Fisk's geological survey, Exhibit D-30, also Plaintiff's Exhibit No. P-98, accepted and published by the Mississippi River Commission, clearly showing the central core of the island to date back to the 10th Century, plus the relic trees, clearly date the age of the central part of the island back beyond 1823.

These facts clearly negate the theory of the State of Mississippi and the inferences and presumptions created by Dr. Kolb and Mr. Smith.

The land mass is an isolated portion of the State of Arkansas, created by the action of the river passing around a portion of the Arkansas mainland, and not the product of a point bar accretion.

V.

The decisions heretofore entered by the United States District Court, Northern District of Mississippi, and the Chancery Court, Chicot County, are not controlling in this case, and are not a part of this record.

Prior litigation between private parties cannot resolve boundary lines between States or impair the sovereign rights of the respective States. The Court, in *Durfee v. Duke*, 375 U.S. 106, 115 (1963), said,

> "It is to be emphasized that all that was ultimately determined in the Nebraska litigation was title to the land in question as between the parties to the litigation there. Nothing there decided, and nothing that could be decided in litigation between the same parties or their privies in Missouri, could bind either Missouri or Nebraska with respect to any controversy they might have, now or in the future, as to the location of the boundary between them, or as to their respective sovereignty over the land in question. *Fowler v. Lindsey*, 3 DALL 411; *New York v. Connecticut*, 4 DALL 1; *Land v. Dollar*, 330 U.S. 731, 736-737. Either state may at any time protect its interest by initiating independent judicial proceedings here. CF *Missouri v. Nebraska*, 196 U.S. 23."

No prior court has had before it the evidence before this Court in behalf of the State of Arkansas.

The foresters who are familiar with the formation of lands by accretion have accepted the fact that the type trees found on a given area will determine the age of the soil on which the trees grow. Both the State of Arkansas and the State of Mississippi recognize this fact. All fores-

ters herein are in agreement that trees grow on newly formed alluvial lands in a definite and predictable pattern. First appear the primary species, cottonwood and willow, which cannot re-seed themselves in their shade, but must have sunlight. This primary forest exists alone, with isolated individual trees therein as exceptions for 30 to 40 years, (TR. 145) (TR. 560) at which time the Secondary species appear, as the secondary species is more tolerant to shade; however, this secondary species does not become dominant for 50 to 60 years thereafter. (TR. 145) (TR. 560) The secondary species are trees such as sycamore, sweet pecan, box elder, ash, etc., are followed by the climax series of trees, such as sweet gum, water oak, bitter pecan, red bud, winged elm, decidious holly, hawthorne, sassafras, swamp dogweed, etc. (TR. 635)

There is no conflict in any foresters testimony that lands where climax trees appear in abundance, not as isolated trees, the land mass on which they grow is at least 150 years old.

There is actually no conflict in the testimony of the foresters. Mr. Guyer, in behalf of the State of Mississippi, limited his statements to the "predominate forest" on the island as a whole. Since all the island except its higher areas is the production of accretion to the high area, his statement would be true to the island as a whole, but totally incorrect insofar as the high land is concerned.

Mr. McKnight did not go upon the high area of the island, but only went on the south end of Luna Bar and the eastern side, but did not go on the high area, the north or west side. (TR. 148) Mr. McKnight simply did not go to the oldest area of the island, the higher plateau area, therefore, he would not have seen the climax series of trees.

On the top of the island, all of the climax species are found. (TR. 635) In addition to the climax series, there are numerous introduced species of trees, trees that are not native. Mr. John Putnam believed them to be planted there during some period of habitation, since their arrangement would not likely happen otherwise.

The age of a particular tree, or for that matter the trees available, is not the criteria for determining the age of the land on which the trees grow. It is the type or class of trees, the biological forest. The mere presence of stands of climax trees ages the land at more than 150 years.

From the tree growth on top of Luna Bar, or Luna Island, or Pastoria Bar, whatever it is called, the physical facts exists that the forest on top of this land mass is of the climax series, which standing alone would negate the presumptions raised by the testimony of Mr. Austin Smith and Dr. Kolb.

CONCLUSION

Given its highest probative value, the entire case of the State of Mississippi is based upon theoretical presumptions, without one shred of physical evidence to verify the presumptions. The theories of Dr. Kalb and Mr. Austin Smith do not find any corroboration on the ground.

Verifying the theory of Dr. Clarence Durham is the physical evidence of the pre-existing west channel; the climax forest on the top of the island; ancient trees found in place aged well over 200 years by map observations and actual ring count; aged at well over 300 years by carbon dating at time of their death; evidence of a cistern on top of the island within the lifetime of Mr. Proctor and by Mr. Proctor stated to be a part of Pastoria cut off by the action of the river; maps on record to the year 1871 completely rebutting the theory of a caved bank; Geological study published by the Mississippi River Commission completely and unequivocally supporting the State of Arkansas that Luna Bar is an ancient, isolated portion of Arkansas; the borings made by Mr. Spillers negating the theory of point bar migration; recorded flood waters particularly in 1872; the positioning of Spanish Moss Bend by Major Suter in 1874; the official County Map of Chicot County dated 1828 by W. A. Mahla, clearly showing the island in the State of Arkansas; tax records; evidence of trees that grew east of the Western thalweg of Luna Bar over 200 years old by ring count, all collectively or individually negate the presumption raised by the theory of the State of Mississippi.

In *Commissioners v. United States*, 270 F. 110, 113 (8th Cir. 1920), the Court considered the effect of a shifting of the thalweg of the Arkansas River around an island from South to North, and concluded:

"The general rule on this subject is: (1) that where the thread of the main channel of the river is the boundary between two states and it changes by the flow and natural processes of accretion and reliction, the boundary follows the channel; (2) but, where it changes by the sudden and violent process of avulsion, the boundary remains where the main channel was at the time of the avulsion, subject always to such changes as may be wrought after the avulsion by accretion or erosion while the old channel is occupied by a running stream. Counsel rely upon the first clause of this rule. That clause is applicable to and governs cases where the boundary line, the thread of the stream, by the slow and gradual process of erosion and accretion creeps across the intervening space between its old and its new location. 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, 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 states remains

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." (Citations omitted)

"In Davis v. Anderson-Tully Co., 252 F. 681, 685 (8th Cir. 1918), the Court applied the same rule announced in Commissioners v. United States, supra, to a boundary dispute involving the state line between Arkansas and Mississippi.

"(1) The authorities therefore appear to be uniform in holding that the State line, located in the thalweg, or the middle of the main channel of navigation of a navigable river only moves with those changes in the thalweg which occur when the river through natural processes, excavates, passes over, and then fills the intervening space between its old and its new main channel; i.e., changes made by the slow and natural processes of accretion."

The same ruling is found in *Kansas v. Missouri,* 322 U.S. 229, 64 S. C. 983, 88 L. Ed. 1244 (1944).

There is but one conclusion that can be reached herein, that Luna Bar is an isolated part of the State of Arkansas, isolated in 1872 by the avulsive action of the Mississippi River changing its main channel by flowing around the intervening land which never became its main channel.

Luna Bar is in the State of Arkansas and the boundary between the State of Arkansas and the State of Mississippi

is in the same channel that has always existed lying east of Luna Island, between the Island and Carter Point, Mississippi.

Respectfully submitted,

JIM GUY TUCKER
Attorney General
State of Arkansas

WILLIAM H. DREW
Special Counsel to the Attorney General
State of Arkansas
P. O. Box 744
Lake Village, Arkansas 71653

REQ. A29193 75 COPIES MAY 8, 1973