

D-350

W. B. CHAMBERS, C. E.
COUNTY SURVEYOR AND LICENSED STATE LAND SURVEYOR
PALESTINE, TEXAS

Dec. 1, 1955

Re: Deed of Acquittance Application
William S. Box Labor, A-94
Cherokee County, Texas
Eugene Roach, Applicant

Deed of Acquittance Application
Mrs. P. C. Latham Survey, A-964
Cherokee County, Texas
Southern Pine Lumber Company, Applicant

Good Faith Claimant Application, SF-15812
Cherokee County, Texas
Southern Pine Lumber Company, Applicant

Deed of Acquittance Application
J. D. Ford Survey, A-973
Anderson County, Texas
Southern Pine Lumber Company, Applicant

SURVEYOR'S REPORT

Hon. J. Earl Rudder, Commissioner
General Land Office
Austin, Texas

Dear Sir:

I am enclosing herewith a map showing the results of my survey of the William S. Box League, A-7, Cherokee County, Texas, and several adjoining surveys in Cherokee and Anderson Counties. Also enclosed is a geological report by one of Humble's research geologists, Mr. Alex Osanik, which sets out the scientific data on the Neches River pertaining to the position and age of the river channel at certain places.

On November 15, 1955, I reviewed my findings with the Chief Clerk of the General Land Office, Mr. Dennis Wallace, and the surveys as I have established them, were approved by him. We spent nearly two hours in his office going into a detailed discussion of the problems involved, hence you are referred to Mr. Wallace for further clarification of the following report, if necessary.

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CHEROKEE COUNTY SURVEYS

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WILLIAM S. BOX LEAGUE, A-7

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William S. Box resided in Burnett's Colony and his League Survey was laid down by Surveyor W. S. McDonald on October 29, 1835. The Box League

Counter 18201

is an odd shaped tract running northwest and southeast on courses of 45 degrees, and situated so that its long axis parallels the approximate general course of the Neches River. It is evident that Surveyor McDonald attempted to locate the league so that William Box would have access to the Neches River and yet not be incumbered with a great quantity of bottom land. You will note that most of the old surveys in this region were located on high ground back from the river, and that the less desirable bottom land was taken up by junior fill-in surveys much later.

In order to explain the lines of the Box League in the most simple manner, I have referred to them as being north, south, east and west in this report. Looking at the map straight on, therefore, will be considered north and corner "A" will be called the northwest corner, corner "K", the northeast corner, line "K-J" the east line, etc. The actual bearings and distances are clearly shown so there should be no ambiguity as to what is meant.

The high ground lines of the Box League, the north, east and south lines are straight, well marked, occupied and recognized lines, that I had little or no difficulty in establishing. The stair-stepped west lines, however, that run through and around the bottom lands, have been difficult to locate because, (1) errors in the field notes, (2) original corners destroyed, (3) lines not occupied, and (4) being a heavily timbered region, progress and thorough search was slow.

The field notes of the Box League begin at the northeast corner, corner "K" on the map, which is described as being a corner in the fork of Cane Creek. The corner, as I have established it from occupation, is in the fork of two small streams, the largest of which is now called Tales Creek. The position of corner "K", therefore, satisfies the general description as being in the fork of a creek.

The first course in McDonald's field notes runs S 45° W, 3302.8 varas. The northwest corner "A", if located in accordance with the field notes, from the beginning corner "K", would fall across the Neches River in Anderson County. The field notes do not recite a call for the north line to cross the river nor for the northwest corner to be on or near the river.

In 1845 Thomas Hays laid down the James W. Spillers and Bluford Oliphant Surveys, which adjoin the Box League on the north. The southeast corner of the Spillers adjoined the northeast corner of the Box and the southwest corner of the Oliphant adjoined the northwest corner of the Box. At the Oliphant southwest corner Surveyor Hays called for a 20" pine S 20° W, 7 varas, which closely resembles the 20" pine S 21½° W, 10.8 varas, called for by McDonald at the Box northwest corner. Hays' call to adjoin the Box northwest corner together with the similarity of one witness tree makes a strong connection. Hence, if the southwest corner of the Oliphant can be established, it will, in turn, determine the northwest corner of the Box League. The south line of the Spillers was called 1418 varas and the south line of the Oliphant was called 1660 varas. These two calls add up to 3078 varas, which represents the length of the Box north line as measured by Thomas Hays. According to Hays then, the Box north line was 224.8 varas shorter than called by McDonald. I expected, therefore, to find the north line of the Box League approximately 200 varas deficient.

In 1923 Surveyor L. T. Moore laid down the Eugene Roach Survey and said that he began at the "long, recognized, common corner of the Box and Oliphant surveys". At this corner he witnessed a pine and a red oak. The stumps of the pine and red oak are still there. The corner when set off from these witnesses, falls on a pine knot stake by a large rock which is recognized in the community as the northwest corner of the Box League. Surveyor Moore went to considerable effort to satisfy himself that the corner was, in fact, the corner it was recognized to be. In his detailed explanation to the General Land Office, he stated that he found an old marked line through virgin timber which ran west from the corner and terminated on the east margin of the Neches River at 640 varas. This is the course and distance recited by Thomas Hays in the Oliphant field notes from the Box northwest corner to the Neches River. Moore proved, therefore, that the corner was the southwest corner of the Oliphant as described by Hays and was, consequently, the northwest corner of the Box League. Surveyor Moore not only recovered the actual corner but proved its reliability from old marked lines through virgin timber and perpetuated it by marking and describing new witness trees.

The original corner of the Roach Survey, shown by original survey corner symbol at corner "A" is in my opinion, the perpetuated corner of the Box League and I have adopted it as such. You will further note that corner "A" is 3101.6 varas from corner "K" which agrees within 23.6 varas of Hays' measurement of the William Box north line. I have established the north boundary line of the Box League by connecting corners "K" and "A" with a straight line. The line, thus determined, is 201.2 varas shorter than called in McDonald's field notes.

The next fix on Surveyor McDonald was at corner "C" and Mr. Dennis Wallace has requested that a thorough explanation be given concerning the circumstances in connection with this point.

After establishing corner "A", McDonald ran, according to his field notes, S 45° E, 3150 varas, crossing a branch at 600 varas and Cane Creek Bayou at 2565.4 varas. The next course was N 45° E, 500 varas. Thus McDonald puts in the first stairstep in the western boundary of the League, and it seems evident that he was attempting to offset around a large bend in the river. The next course, which is the fourth course in his field notes, reads: "Thence S 45° E, 400 varas to bayou. Down said bayou in the channel 300 varas....." In order to retrace McDonald's footsteps, one would look for a bayou bending into a channel running S 45° E, for a distance of 300 varas, the bend occurring at a point 3550 varas S 45° E, and 500 varas N 45° E, from corner "A". This point would occur at the point designated No. 5 on the map. Point No. 5 is on a hill and is situated about N 18° E, 175 varas from the nearest water course which is the Neches River at point "HH". There is no bayou in the vicinity of the place described. The only stream that could possibly fulfill the field note requirements is the Neches River. It is possible that McDonald was mistaken and actually entered the channel of the river thinking that it was a bayou, but it isn't likely. The river is well defined with steep, sheer banks at this point, and it is difficult to conceive how a veteran surveyor could fail to recognize the Neches River, particularly in this vicinity. Instructions to surveyors in Burnett's

Colony dated at Nacogdoches, September 11, 1834, specifically set out that survey lines should not cross rivers, large streams or lakes. McDonald, a Burnett Colony Surveyor, working in 1835, would presumably have been subject to these instructions and might have called the river a bayou to prevent trouble with the authorities or possibly to avoid a resurvey of the line. The only running stream in the vicinity is the Neches River, and it has a bend that turns S 45° E for a distance of 200 varas near the place called for in the field notes. There is no other bend in the river for miles that will fit that configuration.

Now the question arises as to whether or not the present channel of the river from points "HH" to "GG" was a bayou in 1835 and that the main channel of the river could have been at some other place. I have given this question a lot of thought and have not only gone over the area carefully myself, but I have asked for help from a qualified geologist. As set out in the beginning of this report, I had one of Humble Oil & Refining Company's research geologists make a study of this question and his findings are set down in a report which is attached to this report.

My conclusions and those of Mr. Osanik, concerning the river in this vicinity preclude a channel at any other place than the present channel for a considerable period of time prior to the original surveys in the area.

The channel of the Neches River as it exists today from points "HH" to "GG" is in substantially the same position as it was in 1835 when W. S. McDonald laid down the Wm. S. Box League. There being no other streams anywhere near this vicinity and the configuration of the river channel being what it is, the inevitable conclusion is that McDonald's call for a bayou was, in fact, a call for the Neches River. The channel of the Neches River between points "HH" and "GG" will, therefore, fix the position of one of the west lines of the Box League.

Line "C-D" was established on called bearing S 45° E, through the middle of the channel of the Neches River between points "HH" and "PP". Corner "C" was established 400 varas from the point where the line entered the river at point "HH". Corner "D" was established called distance of 2400 varas from corner "C".

In order that line "C-D" of the Box League not conflict with the bed of the Neches River, the actual boundaries between points "C" and "D" as I have relocated them, are:

- "C" to "HH" (400 varas)
- "HH" to "PP" with the east bank of Neches River
- "PP" to "RR" on a line connecting "C" and "D"
- "RR" to "GG" with the east bank of Neches River
- "GG" to "D" - "D" being at a point S 45° E, 2400 varas from "C"

In order to connect McDonald's traverse from corners "A" to "C", lines "A-B" and "B-C" must be located.

As previously explained, McDonald's field notes on line "A-B" recited calls for two stream crossings. The second stream, Cane Creek Bayou,

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was crossed at 2565.4 varas, hence corner "B", according to the field notes, was 584.6 varas from Cane Creek. I have established corner "B" by placing it in a line running S 45° W (called bearing) from corner "C" at a point where it will agree with its field note position from Cane Creek. In other words corner "B" is called distance from Cane Creek and called bearing from corner "C". When located in this manner corner "B" is near the bank of Neches River 400 varas instead of 500 varas from corner "C". Line "A-B" varies 1° 05' from called course and is 90.93 varas excessive of called distance.

So far, as above explained, the first four lines of the Box League have been established in the direction they were run from the beginning corner. The remaining boundaries were constructed in reverse order by backing them in from the beginning corner, corner "K".

The east line, line "K-J", was established in accordance with occupation, marked trees and old deed corners that were called to be in the league line. Point "1" is a 1900 deed corner and points "2" and "3" are 1910 deed corners. This is the long recognized line and as established from my survey is 83.4 varas deficient of called distance.

The south line, line "J-H", was established in its marked, occupied and recognized position through an original corner of the junior Nancy Arrington Survey, corner No. "4". Corner No. 4 is called to be in the south line of the Box League and is situated 1101 varas from the Box southeast corner which distance agrees within 6 varas of its field note call from the southeast corner of the Box League. The south line of the Box League, thus established, is 60.9 varas excessive.

The lower west line, line "H-G", was established along the marked and recognized line and agrees with the called length of 1000 varas.

The offset line, line "G-F", was located in accordance with the field notes.

Corner "E" was determined from intersection. It was located by running called course from corner "D" and called course from corner "F". Line "F-E" thus located is 149.9 varas deficient and line "D-E" is 148.6 varas deficient.

The lower west line of the Box League, line "H-G", as determined from my survey, can be substantiated by the group of junior surveys that depend for their positions on this line. The Elijah Parker, Wm. Davis and E. J. Mantooth surveys agree closely with their field note positions with respect to each other and the Wm. Box League. The Parker builds off the Box League, the Wm. Davis builds off the Parker and the Mantooth depends upon the Davis for its position.

Located in this manner all the lines of the Box League are in reasonably close agreement with their field note bearing calls, the greatest deviation being in line "A-B" which has been previously discussed. The League is deficient of call in both length and breadth and the comparison between called and actual distances of each line is shown on the map.

WILLIAM S. BOX LABOR, A-94

E. G. Armstrong surveyed the William S. Box Labor on June 23, 1857, and the survey was patented on his field notes on July 7, 1862.

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JSE

I found two original corners of the survey shown on the map at "O" and "P". Line "O-P" has been relocated between these two corners. Line "P-Q" has been placed on called bearing and along occupation out of corner "P" with corner "Q" being located in the upper west line of the Box League, as called. Corner "L" has been established in the upper west line of the Box League, called distance from the League's northwest corner ("A").

At corner "M" I found the original southwest corner of the Eugene Roach, SF-12690, which was surveyed by L. T. Moore on December 7, 1923 and patented on April 17, 1924. Surveyor Moore calls for corner "M" to be in the east margin of the Neches River and in the north line of the Box Labor. Surveyor Moore furnished a report with his field notes in which he states that he searched carefully for the witness trees called for at the northwest corner of the Box Labor but did not find them. He did find two marked sweet gums and adopted one as the corner and the other as a witness. These are the trees which I found at corner "M" and they are on the east bank of an old channel. I find the river located today as shown on the map, indicating that the river has moved westward since 1923 causing a small accretion of the Box and Roach surveys. I have established the north line of the Box Labor ("L-FF") by extending line "L-M" westward to the east bank of the Neches River, as called. From "FF" to "O" I have placed the boundary of the survey with the east bank of the Neches River, as called. Located in this manner I find the William S. Box Labor to contain 195.62 acres which is 18.48 acres excessive of a call of 177.14 acres.

WILLIAM DAVIS SURVEY, A-212

The William Davis Survey was first laid down by E. G. Armstrong on June 23, 1858, but these field notes were cancelled. C. H. Hill made a resurvey on October 4, 1915, and the patent was issued on his field notes on August 27, 1923. Surveyor Hill states that he found the corners set by Armstrong at the north and east corners of the survey. He used these corners, established new witness trees, and found the distance between the corners to be 1337 varas as compared to the 1285 vara call recited by Surveyor Armstrong.

I found four of Surveyor Hill's corners denoted on the map by the letters "V", "Y", "AA", and "BB". I did not find the original north corner but have relocated it at "CC" on the east bank of the Neches River, as called. Line "V-CC" has been backed in called bearing out of original corner "V". Boundary "BB" to "CC" has been placed with the east bank of the Neches River, as called. The remaining lines of the survey have been located between the original corners previously discussed.

MRS. P. C. LATHAM SURVEY, A-964

The Mrs. P. C. Latham Survey was surveyed three times by W. S. Guinn in 1886. The field notes of the first two surveys were cancelled. The third survey was made on May 22, 1886 and the patent issued on these field notes on June 7, 1886.

Surveyor Guinn called for the survey to begin at the northwest corner of the Box Labor. He then recited courses and distances and calls for adjoiinder with the west and south lines of the Box Labor and with western lines of the Box League. This portion of the survey is shown on the map

by the letters O-P-Q-B-C-HH-PP-RR-GG-D-E-X. Located in this manner I have honored the calls for the Latham to adjoin the various lines of the Box Labor and Box League as these two surveys have been relocated by me and previously discussed in this report.

Corner "X" is the north corner of the J. L. Luckenback Survey and has been located called bearing and distance out of corner "F" of the Box League. The Luckenback Survey was laid down by W. S. Guinn on February 26, 1887 and the patent issued on his field notes on June 6, 1887. Surveyor Guinn calls for the Luckenback Survey to begin "at the southeast corner of the Latham Survey in the west boundary line of the Box League". I have actually located corner "X" of the Latham Survey by honoring this call for adjinder made in the field notes of the junior Luckenback Survey.

At the time the Latham Survey was laid down the area now occupied by the Luckenback Survey was vacant land. The William Davis Survey was not patented but the original (cancelled) survey had been made by E. G. Armstrong. Surveyor Guinn's next call in the Latham field notes was "S 30° W, 764 varas to the northeast corner W. Davis Survey." As previously discussed, corner "V" is the perpetuated original northeast corner of the cancelled William Davis Survey and I have established this line of the Latham Survey between corners "X" and "V". The next course recited in the Latham field notes was "West 1285 varas to the northwest corner of the Davis Survey on the east bank of the river." Line "V-CC" has been established west to the east bank of the Neches River, coincident with the north line of the William Davis Survey as I have relocated it.

Surveyor Guinn then recited "up said river with its meanderings" (followed by twelve courses and distances) "to the place of beginning".

I have platted Surveyor Guinn's river meanders and compared them with aerial photographs of the area and with river meanders recited by early surveyors for adjoining Anderson County surveys. I have also gone on the ground and searched for evidence that the river might have at some time occupied the position indicated by Surveyor Guinn's meander field notes. In none of these studies do I find any evidence that the Neches River was ever in the position indicated by the field notes. Under these circumstances I have honored call to "go with the river" and placed the western boundaries of the survey with the east bank of the Neches River as I find it today and show it so located on the map.

Located in this manner the Mrs. P. C. Latham Survey contains 1397.99 acres, which is 294.99 acres excessive of a call for 1103 acres.

J. L. LUCKENBACK SURVEY, A-973

H. S. Guinn surveyed the Luckenback Survey on February 26, 1887, and the patent was issued on his field notes on June 6, 1887.

The field notes call for the survey to begin at the southeast corner of the Latham in the west line of the Box League. My relocated position of this corner is shown at "X" on the map and my explanation of its location was contained in the previous discussion of the Latham Survey.

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Line "F-G" has been placed called bearing and distance out of corner "F", honoring call for adjoinder with corners "F" and "G" of the Box League. Line "G-R" has been placed along occupation, is within 0.3 vara of called distance and varies only 0° 48' from called bearing. "R-S" has been established on called bearing and distance out of corner "R". "S-T", placed on called bearing and honoring call to go to the river, is only 3.0 varas deficient of called distance.

From corner "T" Surveyor Guinn recited "Thence up said river as follows with its meanders N 45° W 600 varas to the southeast corner of the William Davis Survey". This reference was to the William Davis cancelled field note southeast corner which was called to be 1000 varas south of perpetuated original corner "V". Corner "U" has been so located out of corner "V". I find line "T-U" to be N 45° 26' W, 631.6 varas, compared to a call of N 45° W, 600 varas. I have relocated this boundary of the Luckenback in the following manner: From "T" to "W" I have honored the call to go with the river. At "W" (intersection of the river with "T-U") I leave the river and go N 45° 26' W, 207.0 varas to corner "U".

Honoring calls for adjoinder with corner "V" and returning to beginning corner "X", line "V-X" is 2° 06' off called bearing and 6.8 varas deficient of called distance.

E. J. MANTOOTH SURVEY, A-1090

The E. J. Mantooth, SF-127393, was laid down by C. H. Hill on October 4, 1915, and the patent issued on his field notes on November 16, 1942.

Surveyor Hill was apparently attempting to take up all the vacant land lying between the William Davis Survey, the J. L. Luckenback Survey, and the Neches River as evidenced by his adjoinder calls. I found original corners at "BB", "AA", "Y" and "DD". From "BB" to "DD" I have placed the boundary of the survey with the Neches River, as called.

I established corner "EE" by the intersection of lines placed on called bearing out of original corners "Y" and "DD", respectively. Located in this manner line "DD-EE" is 21.6 varas excessive of call and line "EE-Y" is 2.8 varas deficient of call.

Surveyor Hill called for corner "DD" to be on the southwest boundary of the Luckenback Survey and for corner "EE" to be the "original southeast corner of the William Davis Survey and being the southwest corner of said Luckenback Survey." The trees called for at "EE" bear no resemblance to the witness trees recited for the Luckenback southwest corner.

It appears that Surveyor Hill did not carry the Mantooth Survey to boundary "W-U" of the Luckenback Survey, leaving a strip of unsurveyed school land between the surveys. I show this area of 1.51 acres colored blue on the map with corners denoted by the letters "U", "W", "DD" and "EE".

ANDERSON COUNTY SURVEYS

G. W. CROFT SURVEY, A-904

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The G. W. Croft Survey was surveyed February 22, 1878 by F. M. Martines and these field notes were cancelled. A resurvey was made on March 19, 1881 by R. W. Watkins and the patent was issued on these field notes on April 14, 1881.

Surveyor Watkins, in his resurvey, called for the same witness trees as those recited by Surveyor Martines at the northeast, southeast and southwest corners. Surveyor Watkins called for the northwest corner to be "stake on the west bank of the Neches River from which a white oak for corner." Survey Martines, in the cancelled field notes, called for this corner as follows: "Stake on bank of river" witnessed by a 12" black gum S 70° W, 2 varas and a 16" water oak S 43½° E, 8-1/4 varas. The lengths of the survey lines recited by the two surveyors were very similar, the greatest difference being 13 varas in the north line.

At point "JJ" I found a very old moss covered pine knot on the river bank from which a 24" black gum with old scars bore S 70° W, 2.0 varas. I did not find the water oak called for by Surveyor Martines or the white oak called for by Surveyor Watkins. A local resident, Mr. G. W. Croft, told me that the pine knot was the original northwest corner of the survey and I have used it as such. Line "JJ-KK" has been located on called bearing out of original corner "JJ" to intersection with occupied line "KK-LL" and is within 0.6 vara of called distance. Line "KK-LL" has been placed along occupation and assigned called distance. "LL-MM" has been established on called bearing to the Neches River, as called. "MM-JJ" has been placed with the general course of the river, as called. Located in this manner the lines of the survey are practically identical with their field note calls.

J. D. FORD SURVEY, A-973, SF-1003

The J. D. Ford is a fill-in survey laid down by J. W. Sammons on Sept. 22, 1900 and patented on his field notes on May 1, 1901.

The field notes call to begin at the northeast corner of the G. W. Croft Survey ("MM"). Surveyor Sammons called for this corner to be witnessed by a "12" sweet gum, West 1/2 vara", while both the cancelled and patented field notes of the Croft called for the corner to be witnessed by a "10" sweet gum, N 63° W, 7 varas." I have honored the call to begin at the northeast corner of the Croft, placing the northwest corner of the Ford at "MM".

I found the original south corner of the Ford at "OO" and established "OO-NN" on called bearing out of "OO" to intersection with an extension of line "KK-LL" of the Croft Survey. Located in this manner "OO-NN" is within 8.8 varas of called distance. "NN-LL" has been established on called bearing out of corner "NN" to the southeast corner of the Croft Survey, as called. Surveyor Sammon's witness tree at this corner bears no similarity to either of the witness trees recited at this corner in the Croft field notes. Line "NN-LL" is 104 varas excessive of call. "LL-MM" has been established coincident as called with the east line of the Croft and is 11.4 varas excessive of call.

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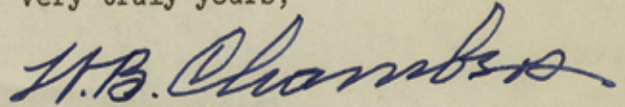
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JSE X.

From "MM" to "OO" the lines of the survey have been placed with the meanders of the Neches River, as called.

Located in this manner I find the J. D. Ford Survey to contain 477.59 acres, which is 33.59 acres more than call.

Very truly yours,



W. B. Chambers
Licensed State Land Surveyor

WBC:da

Attachments



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Counter 18213

HUMBLE OIL & REFINING COMPANY

HOUSTON 1, TEXAS

November 21, 1955

Re: Neches River changes, E. Jarvis
area, Cherokee and Anderson
counties, Texas

Dr. H. N. Fisk:

In answer to a request from Mr. V. A. Walston, the East Jarvis area in Cherokee and Anderson counties, Texas, was examined on air photographs and maps and briefly on the ground. The field check was made on November 8 in company with Messrs. F. D. Smith and H. P. Mitchell of the East Texas Division and R. A. Estes of the Houston office during a low stage of the Neches River. A sketch map of the area in question was prepared from the air photographs and is included with this letter, together with several photographs taken during the visit.

Specifically, the problem was to determine:

- (1) Whether the Neches River has shifted its position appreciably in the area of the broad eastward bend shown on the map, since the time of the first surveys in this vicinity some 125 years ago.
- (2) Whether the drainage within the bend beginning at A represents a recently abandoned course of the river.
- (3) Whether the minor tributary at G could be the "bayou" called for at that point in the original survey of the Box League.

Recent Behavior of Neches River

No recent abrupt changes in course of the Neches River are apparent. The river reached its present position in this area many years ago by normal lateral eastward migration of its channel; further movement in this direction has been prevented by the Tertiary sediments forming the valley walls. Although exact dating is not possible with available information, evidence from airphotos and elsewhere indicates that the Neches assumed its approximate present channel position long before the original surveys of this area were made some 125 years ago.

From the examination, it appears that the following events have taken place since Pleistocene time:

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- (1) Downcutting and widening of the valley, probably during Late Pleistocene time.
- (2) Alluviation during geologically Recent time partially filled the valley with sediment. Some of the accretion scars resulting from the lateral shifting of the river are sketched on the map.
- (3) The actual date when the river reached its present position cannot be assigned, however, all indications are that it has been there a long period of time.
 - (a) Trees of considerable size on both banks are probably 50 to 75 years old so that the river has been in its present location at least that long. Accretion scars reflecting a local shift in river course are absent. It is highly improbable, therefore, that the river had shifted appreciably during the preceding 50- to 75-year interval. Additional evidence of stability in course position is suggested by the absence of recently abandoned meander loops in this area. The straight course of the river has been maintained for a long time with little lateral movement.
 - (b) The occurrence of a number of large pine trees, at least 40 to 50 years old, growing between A and C on the natural levee back slope indicates that the levee is high and well drained and that it was developed prior to the seeding of the pines, suggesting a long period of growth.
 - (c) The absence of abandoned meander loops, the well-drained nature of the bend area and the well-defined channel of the Neches (Photographs 1 and 2) also suggest that a slight amount of structural uplift has taken place and the river is entrenching its course. Further support for local uplift is seen to the south where the river is cutting in Tertiary sediments at the bridge within what is apparently its floodplain (see map). Blocks of Tertiary ironstone at C and possible Tertiary material at D may also be indicative (Photographs 1, 2, and 3). The latter occurrences are questionable and should be investigated further to determine whether the materials are definitely in place.

Nature of Drainage Within the Bend Area

There is little to indicate that the drainage, shown by dashed lines extending from A southward and paralleling the river within the bend, was a former course of the Neches. Normally a river does not lengthen its course when making a change as would have been the case here. If this had occurred natural levees should be present flanking the drainage. Levees characterize streams such as the Neches which periodically overflow their banks, and remain as readily identified features along abandoned channel segments. None were recognized along the portion of the drainage seen on the ground.

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The drainage apparently represents the localization of over-bank flow of water during high stages of the river. The course this flow assumed was probably determined to a certain extent by the higher ground of the natural levee along the Neches. Swales between accretion ridges may also have locally controlled its position.

The upper end of this drainage consists of several coalescing minor channels, the largest of which leaves the river at A at a well-defined notch some four to five feet in depth in the bank (see map and Photograph 4). The local occurrence of gray clay in the bank at this point, contrasting with the yellowish sands elsewhere in the vicinity, suggests a former swale position during the migration of the river or the lower arm of an old meander loop as indicated on the map.

Near the upper end between A and B, there is a well-defined channel (Photographs 5 and 6). Downstream the channel becomes less pronounced (Photograph 7) and bifurcates, and finally near F becomes a relatively broad swampy area. The lower part was not examined on the ground. Other minor drainages such as the one at E (Photograph 8) leave the river at various points. Some have been indicated on the map.

Exposed tree roots, undercutting of the banks and uprooting of trees within the upper end of the channel (Photographs 5, 6, and 7) attest to a fairly recent period of erosion. The present enlargement and deepening suggest that if continued it could eventually take over the flow of the Neches. However, future changes in the locale of flow over the banks could reverse this procedure, filling this channel and creating new channels elsewhere.

Tributary at G

The possibility that the first surveyor of the Box League was referring to the small drainage which enters the river at G when he called for a "bayou" at that point is very unlikely. This stream is not of sufficient size to show on the U. S. G. S. topographic sheet (Slocum) of this area and is barely visible on the photographs. It is a very minor feature at its confluence with the Neches, representing only a small break in the bank, with no water flowing down it at the time of the visit. As the Neches itself is not a very large stream the surveyor was probably describing it.

Conclusions

- (1) The Neches was in approximately its present position at the time of the original surveys in the East Jarvis area.
- (2) The drainage within the bend of the river represents flow during flood stages and not a course of the Neches abandoned within the last 125 years.

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- (3) The minor tributary at G appears much too small to be the "bayou" called for in the original survey of the Box League.

The observations noted here are the result of a very brief field examination and study of air photographs and maps. If additional information is required, more field work would be necessary. In such an event, a series of surface profiles extending from the river into the bend area would be helpful.

A. Osanik

A. Osanik

AO:gp

Attachments

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Photograph 1 View looking downstream at C. Tertiary ironstone
in middle of photograph, probably not in place.



Photograph 2 Closer view of ironstone at C. Looking upstream.



Photograph 3 Looking downstream at D. Iron oxide cemented material in bank at left and visible in midstream may be Tertiary.



Photograph 4 View of notch in right bank at A. Cut into gray silty clay. Sand at top of bank and near water edge.



Photograph 5 Stagnant water in well defined channel
within bend of Neches near A.



Photograph 6 View of drainage channel a short distance
downstream from Photograph 5.



Photograph 7 Drainage channel near B.

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Photograph 8 Minor tributary at E looking southwest.

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File No. 35

CHEROKEE County
SKETCH FILE

Filed Dec. 9 1955

J. EARL RUDDER, Com'r.

By V.E. Sterzing

*Report of a resurvey
of the Wm S. Box and
adjoining surveys on
the Neches River
Also SF-15812*

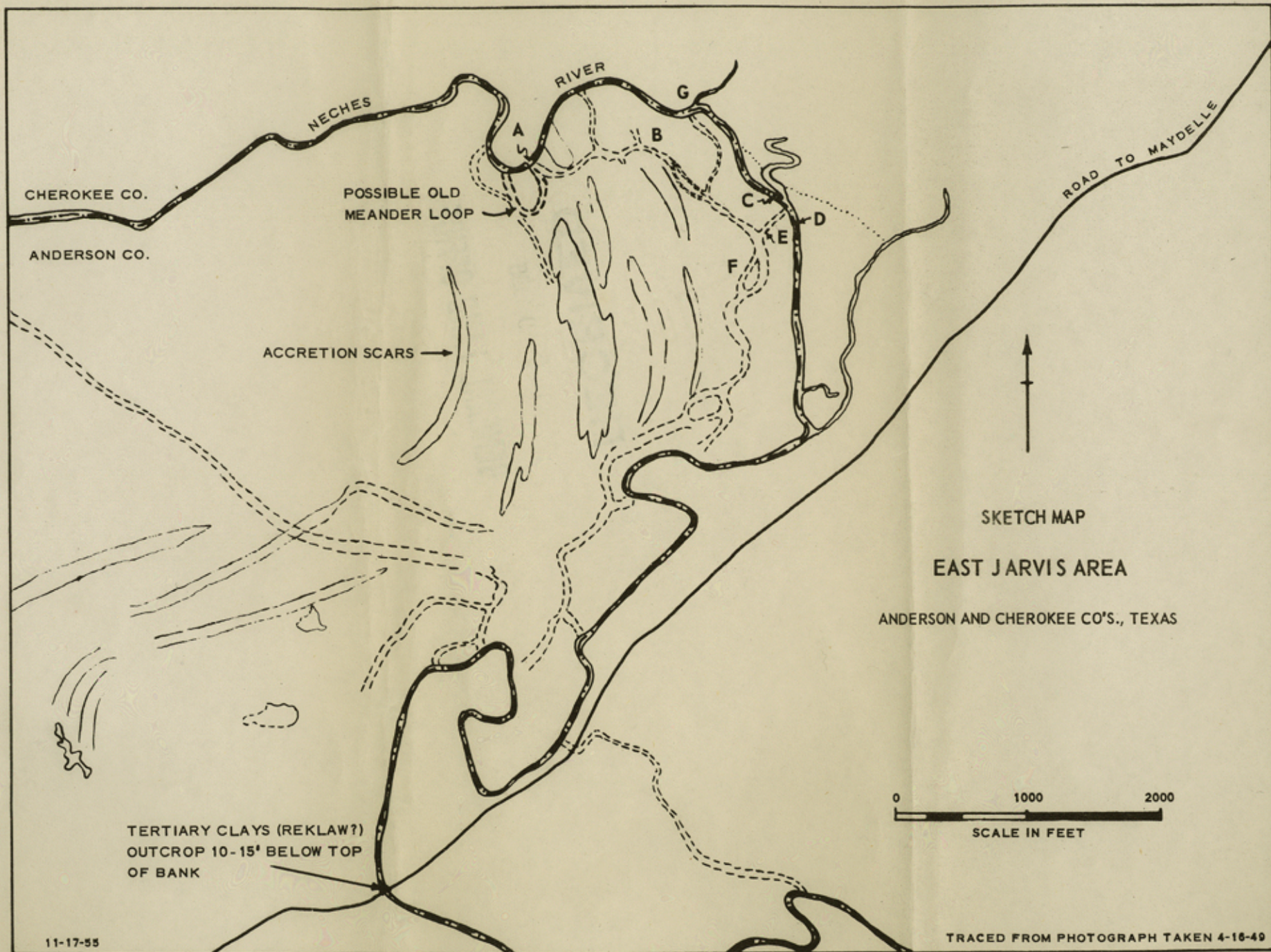
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