



GENERAL LAND OFFICE
AUSTIN 14, TEXAS

BILL ALLCORN
COMMISSIONER

December 15, 1958 File No. Sketch File 47

HUTCHINSON County

Report by Curtis Hale

Date Filed: Sept. 23, 2002

Hon. Bill Allcorn, Commissioner
Of The General Land Office
Austin, Texas

David Dewhurst, Commissioner
By Douglas Howard

Dear Sir:

At your request, I made my plans to go to Borger, Texas with Mr. Clint Small, Jr., Attorney of Austin, Texas. We left here on Sunday, arriving in Borger at 7:00 P. M. November 2, 1958.

The purpose of this assignment was to examine the Canadian River, and make the necessary investigations to determine the exact location of the gradient boundary.

Our work consumed two days of hard work, walking along both sides of the river, in the controverted area; and making notes of the accretions, fronting the sand bed of the river.

The physical situation of the river is as follows:

My investigation began first, along the South bank of the river, near the East line of Section 64, and ran up stream about 2000 feet to the bluff, known as "Eagle Point."

I found the accretions have formed from Eagle Point down stream, as far as the Plemons Bridge crossing. This area may well be called, "Canadian River Valley."

The upper portion of the valley, is separated from the sand bed of the river, by an accretion bank from 3.5 feet to 4 feet high.

The valley lying South of the river is covered with salt cedars and grass.

I found an old bank of the river, extending easterly from Eagle Point, crossing the East line of Section 64, as much as 1500 feet South of the accretion bank.

At the time old bank was laid down no doubt the sand bed of the river extended to it.

The accretion areas seem to form, where the current of the flood waters are deflected toward the axis of the river bed by high land; having passed around the high land the flood waters are slowed down, thus dropping the silt and debris, and building the valley.

The lower portion of the valley extending easterly through Sections 63 and 62, is crossed by two streams running northerly across the valley into Canadian River. The lower valley accretions are not of sufficient height in elevation to set it apart from the river. Because there is no well defined bank; except where a stream empties into the sand bed of the river, large deposits of silt and debris have been piled up sufficiently to have formed a bank in the immediate vicinity; but the bank between the sand bed of the river and the accretion area has no continuity.

With respect to the gradient boundary; it will follow the above bank, and passing around it run inland, and where there is no well defined bank the boundary line is a gradient of the flowing water.

In Section 69, where the Highway Bridge crosses the Canadian River, another accretion area has formed. It extends from the bridge about $3/4$ miles up stream. I examined this area on foot, on a previous trip, under date of April 2, - 3, 1954 in company with Mr. John Allison, Production Supervisor of the General Land Office. At this time I observed revetments placed along sand ridges. The sand ridges are from 5 to 7 feet above the sand bed of the river. The combination of the two have served to deflect the current of the waters, thereby contributing to the building up of that area extending to the old South bank of the river. However, it is my conclusion that the above sand ridges are the result of the natural processes of the river.

The characteristics of the above accretion area, are quite different as of now than it was in April, 1954. Because this area is higher and set apart from the sand bed of the river with a heavy growth of salt cedars and cottonwood trees.

Near the South approach of the Highway Bridge, more accretions are found to extend southerly to the toe of the bluffs, about $1\frac{1}{2}$ miles distant. This area is crossed by Rock Creek. Near the South end of the Highway Bridge the accretions have been enlarged since I inspected it back in April, 1954.

Having completed my investigation along the South bank of the river, I went to the North side, below Plemons Bridge crossing.

In February 1934, I made a plane table survey of the Canadian River in the vicinity of the Plemons Bridge crossing.

I have observed quite a contrast between the topography of the river as of 1934 with the present conditions.

In November, 1958 below the bridge, I found along the North side of the river, a large area of accretions running parallel to the river, and extending back to the high land. The accretion side fronting the sand bed of the river is fairly well defined by an accretion bank. This area has been broken up by the high waters at flood time, when they over flowed the accretion bank and cut an opening through the back side; thus separating the accretions from the uplands.

When "eye balling" it through here, on foot, one gets the impression that the changes in the area have left islands in the river. Whether or not this is true, will depend on the exact location of the gradient boundary. If the gradient line goes by the pass, and not through it; but follows the accretion bank fronting the river, then it may reasonably be said, that there are no islands in the river.

From the Plemons Bridge up stream it is about 4 miles to the Highway Bridge across the Canadian River.

Along the North side between the two crossings, there is found accretions which have become attached to the bluffs.

The depth of these accretions, lying between the toe of the bluff and the sand bed of the river varies. There is a well defined bank separating the accretions from the sand bed of the river.

From the Highway Bridge, extending about one mile down stream, the high waters at flood time overflowed the accretion area, destroying the bank in places, and broke through the back side and returned to the river below.

What has been said of the islands below the Plemons Bridge, may also be said of this area.

BASIC POINT

On the South side of the river near the East line of Section 64, the basic point, was found and checked. The overall height of the qualified bank was found at 3.4 feet. The mid height point on this bank being 1.7 feet, is the gradient boundary.

No attempt was made to run out any portion of the gradient boundary line, due to the low stage of the water, trickling along the various shallow channels winding here and there across the bed of the river. Therefore, it was, and is my

conclusion, that the gradient line cannot be accurately located without sufficient flowing water or from a silt line.

Sincerely yours,

Curtis R. Hale

Curtis R. Hale, Engineer
Engineering Division

CRH:mlc



counter 27390

View looking west from qualified bank
near Patton Creek 11-4-58

CURTIS HALE
PHOTO'S

File No. Sketch File 47
Hutchinson County

Landscape Photograph of Canadian River

Filed Aug 6

GARRY MAURO, Com'r

By Douglas Howard 19 93



Looking west near qualified bank between
Eagle Point and Patton Creek, 11-4~~2~~-58

File No. Sketch File 47
Hutchinson County
Landscape Photograph of Canadian River
Filed Aug. 6 19 23
By GARRY MAURO, Com'r
Douglas Howard



Bank between Eagle Point and Patton Creek
showing toe, median point, + top.

11-4-58

File No. Sketch File 47
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Landscape Photograph of Canadian River
Filed Aug. 6 19 93
By GARRY MAURO, Com'r
Douglas Howard

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2

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Bank east of Stinnett bridge 11-4-58

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Hutchinson County
Landscape Photograph of Conrad Co.
Filed Aug. 6 19 93
By GARRY MAURO, Com'r
Douglas Howard

counter 27397



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county 27398

Bank east of Stinnett Bridge -- 11-4-58

File No. Sketch File 47 County

Hutchinson

Landscape Photograph of Canadian River

Filed Aug. 6 19 93

GARRY MAURO, Com'r

By Douglas Howard