

State of Kansas v. State of Colorado : abstract of complainant's testimony

Section 7, Pages 181 - 210

A summary of testimony given by Kansas residents in the State of Kansas v. State of Colorado U.S. Supreme Court case. The court case centered upon Kansas' claim that Colorado irrigators were using more than their fair share of water from the Arkansas River. In their testimony, numerous Kansans commented on the decline in the flow of the Arkansas River between 1870 and 1900. In 1907, the court decided the case in Colorado's favor, refusing to order Colorado to restrict its use of Arkansas River water. However, the court left open the possibility that at some point in the future the economic damage caused to Kansas by Colorado's use of the river might give Kansas the right to relief. Under this doctrine of "equitable apportionment" of economic benefits from water resources, Kansas sued Colorado in 1943. This suit led to the negotiation of the Arkansas River Compact which was approved by Congress in 1949. Kansas sued Colorado again in 1986 claiming that Colorado violated the terms of the compact. The court ruled in Kansas' favor.

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from the outlying country and drains toward the river. It never has any water in it or wet places except in times of rain. This draw is about 150 feet from the well. The water in the well is lower than the ground in the draw. When the water rises in the river so that it raises the water in the well within 4 feet of the surface, the water backs up in a lateral which I have across this draw. During the later years our crops have fallen off at least one-half. We pasture our alfalfa fields some, but not enough to hurt them. I have discovered no injury from that cause. I had 100 acres in alfalfa at one time. I have not any now. I plowed it up last spring because there was none there. I think our lands now are just as productive as they were formerly if we had plenty of water for irrigation. Crops cannot be profitable in Hamilton County without irrigation. I do not think farm lands in Hamilton County are worth as much under present conditions as they were 8 or 10 years ago, and I think they are selling for less. Uplands and lands that are not irrigated are worth more than they were 7 or 8 years ago.

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about a mile long and perhaps 20 feet wide. The length of the
E. J. PYLE, called with the river. From the GARDEN CITY, KANSAS.
Garden City, September 20, 1904. Pages 1812 to 1852 of the record.
the water being about 3 feet deep in it. People used to go swim-
ming in it, and during the first years it was well filled with fish.

I have lived in Garden City, Finney County, Kansas, since
1885. I am in the real estate business, and am well acquainted
with this county and the Arkansas valley through this county.
The average flow of the Arkansas river for the first 5 or 10 years
that I knew it was from 2 to 2 1/2 feet deep during the dry season
of the year. The average flow of the river for the last 5 years
during the same season of the years would not average one foot,
and is dry most of the time. The flood seasons come at most any
time in the years and are very uncertain. I recognize Exhibit
A-45 as a photograph of the bridge on Main street in Garden City,
Kansas, across the Arkansas river, and is a correct picture of the
bed of the river and of the bridge as it appeared last April.
There was no water at all in the river from July, 1903, until
May, 1904. the crops. They are not nearly so good as formerly.

The Arkansas valley through Finney County is on an average
about 3 miles wide, and alfalfa is raised to considerable extent.
The river valley consists of first and second bottom lands. The
first bottom lands are near the river and are covered with wild
hay. The second bottoms are 3 or 4 feet above the first bottoms,
and the depth to water on the first bottoms depends upon the amount
of water in the river. When the river is full of water the water
level in the first bottom lands will be about 3 feet below the
surface, and when the river is dry it is about 5 or 6 feet to water.
From my experience I have learned that the water saturates back
under the first bottom lands and rises and falls with the rise and
fall of the water in the river. It is generally understood in this
country that this water under the first bottom lands has a distinct
and positive current flowing parallel with the river. It is a little
over a half of a mile from the center of Garden City to the river,
part of which is first bottom land, the city being located on the
second bottoms. On the first bottom lands, directly between the
city and the river, there used to be a lake or pond, which was



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about a mile long and perhaps 80 feet wide. The length of the lake was parallel with the river. From the time I came to Garden City in 1885 down to about 1890 that lake was always full of water, the water being about 5 feet deep in it. People used to go swimming in it, and during the first years it was well filled with fish. The depth of the lake was quite uniform, and the lake was filled from the underflow, and there was no inlet to it from the river, and no streams running into it at all. During those early years the water in this lake stood on a level with the water in the river, rising and falling with the river water. Within the last 10 years this lake has gone entirely dry and the bottom is nearly all grassed over, a few places in the middle of it not being grassed over as yet. There was an outlet from this lake running across Main street east about a half a mile and emptying into the river. There is no water either in the lake or in this outlet during recent years, except in times of freshets.

The lowering of the water in the river and under the first and second bottom lands through this county, has had a material effect upon the crops. They are not nearly so good as formerly. The alfalfa is the main crop, and has been injured by the falling of the water to the extent of 50%. This loss extends on an average to the whole alfalfa crops of the valley. The ~~crop~~ crop has been decreased to the same extent. Ranch and grass lands have been increased in value since I came here. During the dull times from 1893 to 1895 this upland could be bought for \$50 or \$100 a quarter. It is now worth \$200 a quarter. Improved bottom lands from 1887 to about 1890 were worth from \$25 to \$50 an acre. It is now worth from \$15 to \$30 an acre. It has decreased in value because it does not produce the crops that it did during those early years. A great deal has died out and the tonnage is not so good. Nearly all the bottom lands that I have referred to are under ditch. There has been a great deal of talk during all these years about irrigation at Garden City. Some people claim that if the water simply ran down the river we would have more rain, that it would create a more humid atmosphere. People in this country would prefer to have the water to irrigate their lands. I think the river did have a uniform flow during the first years that I saw it. I was on the



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Arkansas river during the months of September, October, November, and December, 1865 and the river then had a uniform flow. With the exception of 5 or 6 years I have been on the river all the time since 1865. From the years 1885 to 1888 the river had an average, uniform flow throughout the year. There was more water during the month of June than during other months, but it was uneven and uncertain during recent years. Since about 1890 there has been neither regularity nor uniformity in the flow of the river. I have been in Colorado and have seen the irrigation as practiced there. There is some irrigating done during the winter and some people claim it is better to irrigate when the ground is cold. I have seen this done to quite an extent during the winter time. I think that the dryness of the river during the years 1903 and the spring of 1904 is due to the taking of water for irrigation above here. The lake between Garden City and the river is not located within any old channel of the river so far as the knowledge of the old settlers goes. This lake began to decrease in about 1889. Perhaps there are 300 wind mills in this valley in Finney County. It is a fact that the level of the underflow has fallen, but this is not because of the little water that is pumped up by the wind mills, but is because the water is lower in the river.

The Garden City ditch has its headgate about 3 miles above Garden City, and all the land near Garden City is under this ditch. All this land could be watered if there was water for irrigation purposes in the ditch.

The Kansas ditch or as it is now known, the Farmers ditch has its headgate about 11 mile up the river, and of course is back of the Garden City ditch and between it and the foot hills. The second bottom lands are the only ones that were irrigated to any extent when the ditch was in full operation. To take all the water from these ditches permanently would have an injurious effect upon these bottom lands, but I could not say to what extent because they are in bad condition now. I know of one place which would be suitable for a reservoir site to catch the flood waters from the river. It is on the uplands and contains about 640 acres. In the deepest place it is about 30 feet deep and perhaps would average 7 or 8 feet in depth over the section. This site is about 7 miles



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N. W. of Garden City. It would be of great benefit to this country to have the flood waters stored along the river above this place either in Kansas or Colorado and used throughout the years for irrigation purposes. I saw the Arkansas river first in the month of October, 1865, at Great Bend, and followed up the river and crossed it a number of times. I was freighting for the government and I know that the river then had a great deal more water in it than it has now.



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I. L. DIESEN,

GARDEN CITY, KANSAS.

Garden City, September 20, 1904. Pages 1853 to 1893 of the record.

I have lived in or near Garden City since the spring of 1885.

I am farming and in the ice and cattle business. I have been acquainted with the flow of the Arkansas river since I have been here. During the first few years that I knew it it was never dry at any time--there was always some water in it. During the dry season of the year in those first years it would average something like a foot to a foot and a half deep from bank to bank. During the last 10 years, excluding 1904, it has been perfectly dry for 2 or 3 months every year, with the exception of one. Yesterday there was practically no water in the river. I recognize Exhibit A-45 as a correct photograph of the Garden City bridge across the Arkansas river, and correctly represents the condition of the river from July, 1903, to May, 1904. During ^{the} last fall, winter, and spring, the river was absolutely dry.

The first bottom lands lie directly between the river and Garden City and are about a half a mile wide. The second bottoms lie back of the first bottoms and are about 2 1/2 miles wide and are about 3 to 5 feet higher than the first bottom lands. The Fair Grounds are located between the city and the river on both the first and second bottom lands. I remember the lake or pond that used to be located upon the present site of the Fair Grounds. The lake was 60 or 70 feet wide and perhaps 1/3 of a mile long and 3 or 4 feet deep. They used to go swimming in it, and during the early years there were plenty of fish in this lake. During the last 5 or 6 years this lake has had no water in it except during the few periods of freshets. This lake was fed entirely from the underflow, and there was no inlet to the lake and no connection between the river and the lake from above. There was an outlet from the lake flowing down across Main street and into the river about a mile below the lake. That lake never went dry until the river went dry, and the water in the lake would rise and fall with the water in the river. From 1885 to 1891 I had ice houses built

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on the outlet from this lake and got my ice from it. For the last 10 years there has been no water in it to make ice.

The underflow beneath the first and second bottom lands near Garden City has certainly gone down within the last few years. In 1885 I dug wells on my land adjoining the city on the N. W. It was then 6 feet 6 inches to water. In 1889 I dug a large well on that land and it was 7 feet 8 inches to water. In 1892 I put down two more wells and it was a few inches less than 10 feet to water. A few weeks ago I repaired one of these wells last dug. I measured the water and found that it lacked one inch of being 11 feet to water. These wells are all located so that they show the fall in the level of the underflow.

The lowering of the underflow has had the effect that there is not as good crops produced on this valley land as there was in the earlier years. This condition of affairs extends up and down the valley through this whole country.

The Garden City ditch has its headgate 3 or 4 miles west of the Garden City bridge. The ditch is 8 or 10 miles long and was dug in 1879 or 1880. It was chartered as the Garden City Irrigating Water Power Manufacturing Company. When I came here in 1885 the ditch was completed, the water running in the ditch, and during that year I bought water for irrigation purposes and used it at any time I wanted it that whole season. It remained in this condition during 1886 and 1887, but after about 1889 there was very little water in it except during the flood periods. Since 1890 there has been no water in the ditch excepting during these flood periods, and after the flood water had run down the river was dry and the ditch was dry.

The next ditch near here is the Amazon ditch. It extends back beyond the Garden City ditch, coming within 4 or 5 miles of the city of Garden City. Beyond that is the Great Eastern ditch. Its headgate is located in Kearney County. There was also a ditch known as the Kansas ditch, called also the Illinois ditch, and is now known as the Farmers ditch. It was chartered as the Kansas Irrigating Water Power & Manufacturing Company. This ditch ran within a mile or mile and a quarter of Garden City. All the farmers along this ditch were irrigating their lands from it from



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1885 down to 1890. During the last 5 years prior to 1904 there was ^{not} much irrigating done in any of these ditches because they did not have the water. The loss of water in the river, the lowering of the underflow and the loss of water for irrigation purposes, ^{as} injured the crops to the extent of at least one-third, and the land under these ditches during the later years has not been as productive as it was during the early years. The value of the land ^{as} determined by their productiveness alone, ~~and it~~ is not as great as it would be if there was as much water now as there was in the former years.

If it were found to be true that the water level back a number of miles from the river beneath the uplands should be higher than the water in the river, it would not show that the source of supply for the underflow in the valley was from other sources than the river itself. The rainfall back upon the uplands goes into the ground and of course to that extent may increase the amount of water beneath all of these lands, but the rainfall upon these uplands is very small. During the year 1904 there has been some water during the months of June and July flowing in the ditches that I referred to. Our crops for the year 1904 have been backward. There was no water in the river until May and our rains came very late. I am interested in the Garden City ditch. I have two farms, one in the bottoms and one back in the foot hills. I have given considerable attention to the matter of irrigation and have visited many of the irrigating ditches in Colorado. Instead of the people in western Kansas following the example of the people in Colorado in respect to irrigation, the fact is quite the reverse, and Colorado is simply following the example of the people near Garden City. I think there are something like 75 or 100 thousand acres of land now under these ditches in the state of Kansas west of Kinsley that could be supplied with sufficient water for irrigation purposes if there was sufficient water in the river. In its present condition the land will have to largely go back to the ranging of cattle and to the raising of rough crops. If the flood waters could be impounded in reservoirs in the state of Kansas the waters that now go to waste could undoubtedly be used for the purpose of irrigating a large bit of the land which is now arid and unproduc-



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tive. I think there are reservoir sites in western Kansas that could be used for storage; and if water could be stored in these reservoirs and then be used in the dry season of the year it would increase the population and make our lands much more valuable.

Exhibit A-46 is a copy of the charter of the ~~the~~ Kansas Irrigating Water Power & Manufacturing Company, filed for record in the office of the Secretary of State of the state of Kansas on March 1, 1880.

Exhibit A-47 is a copy of the charter of the Garden City Irrigating Water Power & Manufacturing Company, filed for record on November 8, 1879.

Exhibit A-48 is a copy of the charter of the Great Eastern
Irrigating Water Power & Manufacturing Company, filed for record on
October 8, 1880.

Exhibit A-49 is a copy of the charter of the Amazon Irrigating Company, file for record on November 29, 1887.



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C. S. LONGSTRETH, LAKIN, KANSAS.
Garden City, September 20, 1904. Pages 1894 to 1929.

I have lived 2 1/2 miles S. W. of Lakin, Kearney County, Kansas, since 1873. I own 240 acres of land, and am engaged in farming and fruit growing. For a number of year after I came here I handled real estate ^{and railroad} lands in this part of the country. My land is under the Western Irrigating ditch, which has its headgate in the Arkansas river about 9 miles above Lakin, and is about 25 miles long. The Western ditch was at first called the Minnehaha, and was begun in 1879 or 1880. I built this ditch, and it was completed within a reasonable time after it was commenced. The water was then turned in and I irrigated my lands from that ditch. When this ditch was begun in 1879 or 1880 there was an abundance of water in the river flowing all the time, and the river during those years never went dry. The supply of water for the ditch at that time was sufficient at all times to supply all its needs. The water began to fall in this ditch somewhere about 1887 and continued to fall until there was no water in the ditch at all. About 1892 or 3 or 4 we did not get any water in the ditch at all during the whole season. We did as much irrigating from this ditch as we could, and generally speaking we would get some water during the month of June, but sometimes and oftener during July, August and September we did not get any water. This season of 1904 has been better than it has been for a number of years. During the last few years there is not half the water that there was during the early years. For a number of years prior to 1904 the river has been dry every fall, especially September and October, and stays dry until the cold weather, when it will rise and some water will come in. Then it is dry again in the spring from early March until about June. The water that comes in June lasts only a few days. Our principal crop was alfalfa. My first crop of alfalfa was sown in 1886. I have also 70 acres in orchard. I can raise a fair crop of alfalfa on the bottom lands without irrigation, but a much better crop with irrigation. The falling off of the water in the



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river has affected my crops to at least 50%, that is the productive-
ness of my land has been decrease at least one-half, because of
not getting the water at regular seasons. The time for irrigation
varies somewhat according to the season. We irrigate in the winter
if it is very dry, but in the spring if we get rain we do not irri-
gate until the land needs it. If we do not get the water for irri-
gation when the alfalfa needs it, it decreases the crop. There is
a decrease in the grain crops and everything of that kind. We got
no water at all in this ditch during the year 1903 and none until
about May, 1904. There are about 25000 acres of land that could
be irrigated from this Great Eastern ditch if there was a good
supply of water in it. The decreased flow in the river and my
inability to get water to irrigate my orchard has reduced the pro-
ductiveness of the orchard in the same way and to the same extent
that it has affected my alfalfa crop. I have been growing fruit
for the last 50 years. We did not get the water in the ~~river~~^{ditch} be-
cause there was no water in the river, and it was not because the
ditch was out of repair--I know that. There is a wastegate in the
dam at the head of the ditch, through which the water goes into the
river. I placed the wasteway there myself. The first time I ever
saw the river dry was in the year 1886 or 1887, and the river was
not dry at my place in 1874, and if any witness has testified that
the river was dry from Wichita to Colorado during the year 1874,
they were most assuredly mistaken. During the years 1876 and 1877
there was ample water in the river at this point, and there never
was a time ~~that~~^{at} there was not flowing water in the river at this
point prior to 1886 or 1887. Prior to those years, however, the
water was lower in the river down at Hutchinson than it was at
Lakin. In my handling of the ~~Colorado~~^{railroad} lands I became familiar
with the river from the year 1873 on down to the present time.
Frequently during the years from 1873 the river would be very low
at Hutchinson, and I think very probably that in 1874 that the river
was ~~practically~~ dry at Hutchinson for a short time during August
and September. This was the grasshopper year. My observation was
that the river was lowest between Great Bend and Hutchinson. The
bridge at Garden City is from 800 to 1000 feet wide, and the river
generally ran there from a few inches to 1 or 2 feet deep entirely
across the river bed. I have found that my orchard does best when



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irrigated according to the amount of water needed. This year I have irrigated my orchard five times. The last time it was irrigated was only a few days ago. I plow my orchard up about once in three years. I am not personally interested as an owner in any ditch. I rent the water from the ditch company. The lack of water has most certainly decreased the productiveness of my land. I have always taken all the water I could get, when I needed it. This year I have not been able to irrigate as much land as I should have done^x if I had known there was going to be a supply of water in the ditch. We must know beforehand that we will get the water or we will not be ready for it when it does come. If I had known I would be sure of water I would have put all my land in; and for that reason I have lost the crops I could have put in if I got the water. There has been sufficient water this season, but last year and the year before and for many seasons before that the water was so scarce that this year I did not want to take those chances. I think the flow of the river has gradually fallen off in late years fully 50% or more, although there is more water flowing in the river in the winter time than there is in the summer time. I think that the cutting off of the timber in the mountains has the effect of melting the snows more quickly and the water does not last as long in the river as it did when there was more timber in the mountains. There is a great deal of water that runs to waste in the Arkansas river during the flood periods which would be sufficient to bring under irrigation many thousands of acres of land that is now arid. There are natural reservoir sites along the river in which this water could be stored within the state of Kansas. I think ~~that~~^{if} just north of Sherlock a large reservoir could be placed, and there are other sites west of that. I had an engineer at one time run some preliminary surveys between Lakin and these sites, and the engineer told me that if these reservoirs were once filled up that the water would never go out. We have also a good reservoir site right on this ditch in the bottom, that if once full of water would irrigate that whole valley in dry seasons to the extent of perhaps 25000 acres. I have been interested in the subject of irrigation and have pioneered in that line here in Kansas. The subject of irrigation has been of great interest for more than 20 years along this valley, and irrigation has brought in settlers along the river.



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We make contracts for water each year for so much an acre and pay that price as rent. I think that winter irrigation is now generally regarded by irrigators as a profitable one when they can get the water. Even this spring when the river ran full of water it did not last long, and the water in the river known as the June rise does not last as long as it used to. I think the taking of the water for irrigation purposes by the ditches in Colorado, and carrying it from the river has had a great effect on the flow of water in the river at this place. I have never noticed and I do not think anybody else has noticed that there has been any run of water into the river from the irrigating ditches after the water has performed its function of irrigating the lands. If water is taken out onto the uplands by the irrigating ditches 5 or 10 miles from the river to cultivate the lands where it is 30 or 40 feet down to sheet water, very little of that water would ever run to the river again. It is a well established fact that $\frac{4}{5}$ of the water in the Arkansas regions goes into the atmosphere, and a very small percentage of the water used for irrigation ever runs to the river. In extensive irrigation regions with $\frac{4}{5}$ of the water going into the air it would increase the rainfall. Our winds in this country come mostly from the S. E. and S. W. Our rains often come from the west. The clouds, however, do not come from the west. The clouds form right over our heads in this country. The moisture is in the atmosphere, and whenever it becomes condensed enough or forms clouds it comes down.



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E. M. KERP, GARDEN CITY, KANSAS.
Garden City, September 20, 1904. Pages 1930 to 1935 of the record.

I have lived in Garden City for the last 20 years; am publishing a newspaper, and do real estate business. I have been acquainted with the Arkansas river during all these years. I recognize Exhibit A-45 as a picture of the Arkansas river taken at this city by Mrs. Stroch, the photographer, which was taken sometime in the early part of May, 1904. It is a correct picture of the river as it appeared in March, April, and part of May, 1904, showing that there was no water in the river at all. Exhibit a-50 is a photograph taken of the Arkansas river at Garden City, Kansas, of the same bridge that is shown in Exhibit A-45. It was taken by the same photographer in July, 1904, and shows the river full of water during one of the flood periods. I remember the lake or pond located between Garden City and the river in the present site of the Fair Grounds. This lake used to be deep enough for swimming, and in the early years there was a good supply of water in it, and it was always understood that it was fed from the underflow. At least there was no inlet flowing into this lake. Sometimes at a very heavy rain a little surface water might flow into this lake, but it did not get its supply of water from the rainfall. There was no water in this lake last year at all and had not been for a number of years before that.

Western, the State Engineer, of the Arkansas River, which was designated about 1880, after the parties began settling there. It was not long afterwards that the irrigation ditch was completed, and they immediately got water in it for use. The ditch was used in way for irrigation purposes ever since, and they have been able to supply water from the river. During the first years after that ditch was completed there was plenty of water in the river to supply the needs of the ditch. During the last 5 or 6 years there has been but very little water in the river, and consequently water in the ditch only at certain times.



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C. A. LOUCKS, LAKIN, KANSAS.
Garden City, September 21, 1904. Pages 1936 to 1944 of the record.

I have lived in Lakin, Kansas, continuously since 1878, and am in the real estate and abstract business. I have been familiar with the Arkansas river during all these years. The Arkansas valley through Kearney County on an average is about 3 1/2 miles wide. At Lakin it is about 7 miles wide and consists of first and second bottom lands, the second bottom lands being 8 or 10 feet above the first bottoms. The average depth to water on the first bottoms is about 6 feet, and in the second bottoms is 16 to 20 feet. The Arkansas river through Kearney County is about 300 yards wide, and during the years from 1878 to about 1890 we always had what is known as the June rise, which came gradually and went gradually. The average amount of water flowing in the river during the ~~last~~ ^{last} 10 years as compared with the first 10 years, is very little. Exhibit A-45 is a fair view of the river through Kearney County during the ~~last~~ ^{last} 4 or 5 or 6 months of 1903, and the first few months of 1904, showing no water in the river at all. In the late years the river has materially decreased in its flow during the dry season as compared with the early years. The first time that I ever saw the river dry was in 1887. Since about that time during the whole fall of the year it is always dry.

There are three irrigating ditches in Kearney County, the Western, the Great Eastern, and the Amazon. The Western ditch was constructed about 1880. After the parties began working upon it the work was continued without interruption until it was completed, and they immediately put water in it for use. The ditch has been in use for irrigation purposes ever since, when they have been able to secure water from the river. During the first years after that ditch was completed there was plenty of water in the river to supply the needs of the ditch. During the last 5 or 8 years there has been but very little water in the river, and consequently water in the ditch only at certain times.

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The Great Eastern ditch was commenced about the year 1880, and the work was pushed to completion from the time they started it, and was not interrupted until the water was turned in. During the first years they had plenty of water in the Great Eastern ditch for all its needs. The diminution of the water in the river caused them to cease operating the ditch. During the last 5 or 10 years there has not been sufficient water to supply the needs of this ditch.

The Amazon ditch was constructed some 5 years after the Great Eastern. The work on the Amazon ditch was continued without interruption until it was completed and the water turned in. The head of the Amazon ditch is about 11 or 12 miles west of Lakin, and passes about one mile north of the city of Lakin. The diminution of water in the river has affected the amount of water in the Amazon ditch as well as the others.

The headgate of the Western ditch is about a half mile west from Lakin. I saw these ditches during their construction almost every day. They were close to where I lived most of the time. During the early years the river did have an average flow past Lakin, but at the present time it has not. During the early years the river would be high during the greater portion of the month of June and sometimes longer than that. The Western ditch was from 16 to 20 feet wide on the bottom, and when filled carried 3 or 4 feet of water. The Great Eastern ditch was about 18 feet wide on the bottom, and would carry about 3 feet of water. The Amazon was about 10 feet wide on the bottom, and would carry 3 or 4 feet of water. The Great Eastern and the Western ditches have dams in the river, and the Amazon ditch has a temporary wing dam.

The fact is that since about 1890 we have not had big water again because we cannot get water so close to the river as we could in the spring. Between the years 1880 and 1890 we had sufficient water for irrigation purposes, but since about 1890 we have not had enough water to make the crops. However, during the last 10 years the water has been practically cut off from the river during the dry seasons of the year, and it cannot be used for irrigation.

The next ditch that was constructed was the Lakin ditch, the head of which was in the river about 12 miles west of Lakin.



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JAMES CRAIG

GARDEN CITY, KANSAS.

Garden City, September 21, 1904. Pages 1951 to 1980 of the record.

I am 52 years old, and have lived on my present homestead, 3 1/2 miles north of Garden City, since March, 1879. I am now farming, and during the first 10 years after I came here had charge of some ditches in this neighborhood. I am acquainted with the ditches in Finney and Kearney Counties.

The Garden City ditch was the first ditch constructed in this valley. The first work was done on that ditch in the fall of 1879, and the winter of 1879 and 1880. Its headgate is located 4 miles west of Garden City. This is the ditch whose charter was introduced in evidence as Exhibit A-47. After the work on this ditch was commenced it was continued uninterruptedly until the work was completed, and water was turned into that ditch in the year 1880. At first this ditch did not exceed 3 1/2 miles in length. Then it was extended 10 or 12 miles or more. Water has been used continuously in that ditch for irrigation purposes since the year 1880 whenever during the later years they could get water. There was a great deal of irrigation done from this ditch from the time it was constructed down to about 1887. There has not been near so much land irrigated from this ditch in the last few years as there was during the years prior to 1888. Along in May or June of nearly every summer there was some water in the ditch for 2 or 3 months, but during the last 10 years from August until the last part of the year there has not been sufficient water in the ditch to amount to anything. The fact is that since about 1890 we have quit raising summer grain because we cannot get water to start the crop in the spring. Between the years 1880 and 1890 we had sufficient water for irrigation purposes, and while it was low at times there would always be plenty to make the crops, however. During the last 10 years the water has been practically out of the river during the dry season of the year, and of course no water in the ditches.

The next ditch that was constructed was known as the Kansas ditch, the charter of which was introduced in evidence as Exhibit

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A-46. This ditch covers my own home farm. We began work on this ditch in the fall of 1880; continued the work without stop; turned the water in in 1881; and got the water down to my place in July, 1881. This was 15 miles from the headgate. The headgate of the Kansas ditch is just on the county line between Kearney and Finney Counties. During the first years after this ditch was constructed we always had water in it, but during the last 10 years there have been period of from 5 to 9 months each year when we have had no water in the ditch at all. This ditch was originally about 15 miles long and cost 15 to 20 thousand dollars. The name of this ditch has been recently changed and is now known as the Finney County Farmers Irrigating Association.

The next ditch that was constructed was the Great Eastern, the charter of which was introduced in evidence as Exhibit A-48. The headgate of this ditch is located at the town of Hartland, in Kearney County. The survey for this ditch was commenced in July, 1881, and I carried the rod on that survey, and the work was commenced in that year. The work was continued without serious interruption until the ditch was completed, and the water was turned in in the fall of 1882, and ran down about 15 miles. During the last 10 years after this ditch was completed there was sufficient water in the ditch for irrigation purposes. This ditch has been extended until it is now probably about 35 miles long.

The next ditch that was constructed was the Western ditch, sometimes known as the Minnehaha ditch. The headgate is on the south side of the river at Hartland, almost directly across the river from the headgate of the Great Eastern on the north side. This ditch was constructed at the same time that we were working on the Great Eastern. Work was begun on it in the year 1880. The work was continued uninterruptedly, and water was turned in in 1881. I frequently went across the river to see how their work was progressing. That ditch was perhaps 15 miles long and cost \$20,000. During the first ²/₃ years they had plenty of water in that ditch for irrigation purposes. For the last 10 years prior to 1904, although I have not been up in that country to examine it, I know that there has been no water in the ditch, because there was no water in the river.

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The next ditch that was constructed is the Amazon ditch, whose charter was introduced in evidence as Exhibit A-49. Work was commenced on this ditch in the fall of 1887, and was pushed rapidly and continuously until it was completed, and they got water in that ditch in 1888. The headgate of the Amazon ditch is at Kendall in Kearney County, 5 miles above Hartland. The ditch is about 100 miles long and cost \$150,000. I assisted in the construction of but two of these ditches, the Kansas and the Great Eastern, but know of the construction of the others.

I think that probably 50,000 acres of land has been irrigated from these ditches referred to, but this is only a small portion of the land that could be irrigated if we had sufficient water, and I think that 100,000 acres of land in Finney County could be irrigated from these ditches if we had water to fill them. Irrigated lands where the water right is ~~an~~ ample ~~one~~ in Finney County, are worth on an average \$35 an acre. Without water for irrigation this land would be worth about \$2.50 an acre. In Kearney County probably 30,000 acres of land lie under these ditches. The value of land in Finney County and in Kearney County is relatively the same. Large quantities of water run to waste each year in the Arkansas river. If these waters were stored so as to make them accessible to the ditches in Kansas, many thousand acres of land would be increased in value in the proportion that I gave above. The land already covered by ditch is only a small part of the land that could be reclaimed by irrigation, if there was sufficient water. So far as my knowledge goes I recall only one site for a suitable reservoir for storing these flood water between Garden City and the Colorado line. This is near Hartland where the Great Eastern and South Side ditches take their water. The hills are 200 feet high I should judge on each side of the river, and the valley is very narrow. The valley widens right west of that point, and I do not know how far it would ^{back} ~~take~~ the water up that valley. It would make a large reservoir at least. I have driven up and down the river on both sides clear to the Colorado line, and know that it would be a great advantage to Western Kansas if the flood waters of the Arkansas river falling on the headwaters of the stream and its tributaries could be stored in suitable reservoir sites in the state of Colorado. If the Federal Government by the

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expenditure of the moneys it has set aside for the reclamation of the arid regions should construct large reservoirs on the Arkansas river in Colorado and fairly distribute that water between the people of Colorado and Kansas, in my judgment it would be of great advantage to both states. The welfare of the people of Kansas from Kinsley west depends very largely upon the ability of the citizens to secure water for the irrigation of these lands. I have had considerable experience in raising alfalfa on bottom lands where it relied on water in the soil rather than irrigation. If you wish to raise a crop of alfalfa seed the water needs to be deeper below the surface than where you wish to raise a crop of hay. If you want hay, 2 or 3 feet below the surface will be all right. Lately the seed crop has been the most profitable here. So far as my observation goes I think the water back from the river in the uplands is higher than the level of the water in the river. I do not know what is the source of this ground water or what is known in the valley as the underflow, but it does seem that back from the river the level is somewhat higher than near the banks. I have stated that some of the ditches have gone into the hands of receivers in the last few years. It is true that their going into the hands of receivers did not cause the flow of the river to diminish, but it is also true that the diminishing of the flow of the river did cause the ditches to go into the hands of receivers.

These ditches were constructed by the government and were for the purpose of irrigating the lands between Kinsley and the river. When the river was in flood the water would come down the river and back up the ditches and the water would be used for irrigation. During the recent years there has been a decrease in the flow of the river and the water has not come down the river frequently, often down as far as Herculano, 12 miles west of here. Now there is no way for the river to come on. I was familiar with the flow of water in the irrigating ditches during the early 1890's. During the summer months there was sufficient water in these ditches for their needs. One of these ditches opened into the river about 55 miles east of here so that the surplus water would return to the river. During those early days there



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E. B. STOTTS, GARDEN CITY, KANSAS.
Garden City, September 21, 1904. Pages 1981 to 1999 of the record.

I am 32 years old, and have lived in Garden City since 1880, and at the present time am engaged in farming. During the early years we had a farm a mile and a half east of town. From 1880 to 1890 I was well acquainted with the river and saw it every day or so. For the last 10 years there has not been near as much water in the river as there used to be. During the early years we had a stream of water the year round, and I never saw it dry until 1887 or 1888. During the months of July, August, and September of the early years there was always running water in the river. During the latter part of 1903 and the spring of 1904 there was no water in the river to speak of. The river banks are not as wide by 200 feet as they used to be, and the river bed has filled up from one to two feet. From 1879 down to about 1887 there were ponds or lakes on both sides of the river both east and west, upon which I used to go duck shooting and hunting. These ponds are not now in existence. They have all dried up, and this is due to the fact that the water level in this country has sunk. There is not as much water flowing in the river now as there was at that time. These ponds were fed from the river and from the underflow.

When ^{we} first built a house in Garden City we had a cellar 6 or 7 feet below the surface, and this cellar in the early days when the river was up was frequently filled with water. When the river would go down the water in the cellar would go down with it. During the recent years there has been no water in the cellar at our house. During the early years I have skated up and down the river frequently, often down as far as Pierceville, 12 miles east of here. Now there is no ice in the river to skate on. I was familiar with the flow of water in the irrigating ditches during the early '80's. During the summer months there was sufficient water in these ditches for their needs. One of these ditches opened into the river about 55 miles east of here so that the surplus water would return to the river. During those early days there



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was considerable water returned to the river, as unused and had sufficient flow to wash out the ditch where it empties into the river to the depth of 3 or 4 feet. During those times there was often more water in the ditch than was need for irrigation purposes. During the recent years, excluding 1904, there has been very little water in any of these ditches, and in the west part of Garden City we have no water to irrigate with. I am interested in the cultivation of alfalfa, and have now an interest in about 100 acres. We have not been able to irrigate that alfalfa for the last 13 or 14 years. Prior to that time we had plenty of water for that purpose. The crop of alfalfa is not now nearly as luxuriant as during the days when it was irrigated. During the early years the grass on the bottom lands was very heavy and grew quite abundantly. Recently the grass has not grown nearly so heavy, and does not grow to as great a height as it used to. The decrease in the growth of grass and willows along the river is due to the lack of moisture--the lack of sub-irrigation under the soil. I was in Colorado 3 or 4 years ago for the purpose of inspecting some land located 3 or 4 miles north of Lamar, Colorado. There was an irrigating ditch within a mile of the land. The land was practically a bog--wet and very boggy. We could not drive across it and were compelled to turn around and go back. This was on the uplands away from the river, and was prairie land, unbroken and uncultivated. The water had seeped out of the canal onto this land; and the driver said that the land had been damaged there by the seepage of the ditches and that other land in the county had been damaged in a similar way.

It would be of great value to our alfalfa lands if we had sufficient water for irrigation. A part of our alfalfa lands last year failed to grow anything. We have not been able to irrigate from these ditches around Garden City for the last 13 or 14 years, and this is due to the lack of water in the river. The country would be better off if the water were running in the river now as it used to run, even if the water was not used for irrigation, but the greatest profit would be in using at least a great part of this water for irrigation. There has been more water in the river this year than there was, but not as much as there was in the former

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years, and not enough so that water came into our cellar. The banks of the river vary from 2 to 5 feet high, and the river has been out of its banks a great many times in my memory.

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O. V. FOLSOM,

GARDEN CITY, KANSAS.

Garden City, September 21, 1904. Pages 2000 to 2003 of the record.

I have lived in Finney County since 1882, and in Garden City since 1888. During the year 1883 I was farming bottom lands a mile and a half west of Garden City. These lands were irrigated from the Garden City ditch in the year 1883. After that in the year 1884 I moved onto my claim, and then irrigated my lands for the next 5 years from the Great Eastern ditch. I moved off from this place in 1888. Sometimes during those early years for a few weeks we did not get as much water as we wanted for irrigation, but generally we had all that was needed. From 1883 to 1888 I crossed the Kansas ditch every time I came to town, and during the years 1883, 1884, 1885, 1886, and 1887 they were using the water from this ditch for irrigation purposes. I think the supply of water in the Great Eastern ditch during 1884 and 1885 was not as good as it was in the Garden City ditch during the same period. It is very essential for us in this country to have sufficient water for irrigation, and the lands would be worth 2 or 3 times as much as they would be without the water.

...the value of the land under the irrigating ditch when it had a sufficient supply of water, was double what it is now. This was because he had more water. It would be to our advantage to have the water in the river even to go by, because the water now is at a greater depth, and where we depend upon the alluvia rocks reaching the surface below it does not do it so ^{readily} ~~readily~~ now as when water stood higher in the valley under the surface. The more water goes down the river, the higher it extends under the surface in the



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M. F. GRIGGS,

GARDEN CITY, KANSAS.

Garden City, September 21, 1904. Pages 2004 to 2011 of the record.

I came to Finney County in 1882, and lived a mile and a half east of Garden City for a number of years, and 13 years ago I moved to Garden City. During the year 1882 the people were irrigating from the Garden City ditch one mile and a half east of Garden City, and they seemed to have plenty of water for that purpose. In the year 1883 I irrigated lands from the Garden City ditch, and there was plenty of water in the ditch that year at any time. In 1884 I began irrigating from the Great Eastern ditch and irrigated from this ditch from 1884 to 1890. My lands were located right at the tail end of the Great Eastern ditch in 1884, and I did not get as much water as the parties above me. This was about 30 miles below the headgate of the ditch. During the years 1882, 1883, and 1884 other people near here were irrigating from the Kansas ditch also. Down to about 1890 the supply of water in all of these ditches was quite good, but since that time, excluding the year 1904, it has been very limited.

The population of Garden City is about 1700, but during the years 1885, 1886, and 1887 the population was from 6 to 8 thousand. The population of Finney County is about 3500. The city of Garden City is under the Garden City irrigating ditch, and gets its only supply of water for irrigation purposes from this ditch. The fair value of the land around Garden City under the Garden City ditch, with as much water supply as has been furnished by that ditch for the last few years is from \$12 to \$50 per acre. General crops cannot be raised successfully without irrigation. The general average value of the lands under the irrigating ditches when we had a sufficient supply of water, was double what it is now. This was because we had more water. It would be to our advantage to have the water in the river even to go by, because the water now is at a greater depth, and where we depend upon the alfalfa roots reaching the moisture below it does not do it so ~~readily~~ ^{readily} now as when water stood higher in the valley under the surface. The more water goes down the river the higher it extends under the surface in the



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W. H. PATTERSON,

GARDEN CITY, KANSAS.

Garden City, September 21, 1904. Pages 2012 to 2027 of the record.

I have lived in Finney County since 1886, and in Garden City for the last 4 years. I am superintendent for the Farmers Irrigation Association, formerly known as the Kansas ditch. I have been superintendent of that ditch since 1887. When I took charge of that ditch in 1887 we had a good flow of water most all the time. We had an ample supply for irrigation through the growing season, August and September. The river went dry during that summer, but stayed dry only a little while. At first we put a dam out in the river long enough to catch what water we wanted. In 1888 and in 1889 we put it clear across. The supply of water was pretty good until about 1893, and in 1896 we had hardly any, and since that time we have had but little run of water, and it would not last very long. The supply of water from 1893 down to the last year during the growing season was not near so good as it was during the first years that I operated the ditch. This ditch depends on the river for its supply of water, and this loss of water to this ditch was because there were more ditches taking water out of the river. The flow of the river since 1893 down to 1904 is not near what it was prior to that time, and because of that we have less water in the ditch. Taking the summer through we have not now 1/2 as much water in the river as there was in 1887. The river is frequently dry at this point during the growing season. I have seen the high line ditches in Colorado, and their taking water and putting it on the uplands is in my judgment what has caused the loss in the flow of water through this country. This loss of water has affected this part of the country a great deal, and has set the country back a whole lot too. I know that the water level under the ground here which we call the underflow has lowered 4 feet anyway. When I came to this country first they could hardly use their cellars in this city on account of water rising in them, and now you cannot strike water anywhere here less than 10 or 12 feet. It is a fact that since 1893 down to this year the Kansas ditch has



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been almost abandoned so far as supplying water is concerned, and this is because we could not get the water supply. The company I used to work for owned all three of those ditches, the Garden City ditch, the Kansas, and the Great Eastern ditch, and I worked on all of them, and these facts that I have stated in regard to one of them applies equally to all of them. The Kansas ditch went into the hands of a receiver because it could not get water enough to pay running expenses. The Great Eastern and the Kansas ditch are both larger now than the Amazon. The Amazon used to be a large ditch, but it is filled up until now it is very small. Land under ditch with an ample water supply would be worth a good price, and without it it would not be worth very much, that is, with the water supply it would be worth \$40 an acre, and without it, would not be worth over \$4 or \$5. There is in this county 8,000 acres of land covered by the Kansas ditch, but there is considerable more land that could be irrigated if we had sufficient water. Under the Farmers ditch I think there would be about 20,000 acres of land, and perhaps 100,000 acres under all of these ditches in Finney County. This same proportion would be true in Kearney County. The river is 300 or 400 feet narrower now at the headgates of the ditches than it used to be, and the bed of the river has filled up considerable since I came here, somewhere from 2 to 3 feet. During the recent years we have some high water in June, but it is not as much nor does it last as long as it used to.

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C. A. SCHNEIDER,

GARDEN CITY, KANSAS.

Garden City, September 21, 1904.

Page 2028 of the record.

I live in Garden City, and am acquainted with all the ditches in Finney County. The Illinois ditch, the Kansas ditch, and the Farmers ditch are all the same, and are just three names for the same ditch.

Witness my hand and seal this 21st day of September, 1904.

C. A. SCHNEIDER.

Notary Public for Kansas.

My commission expires the 1st day of January, 1905.

Given under my hand and seal this 21st day of September, 1904.

C. A. SCHNEIDER.

Notary Public for Kansas.

Witness my hand and seal this 21st day of September, 1904.

C. A. SCHNEIDER.

Notary Public for Kansas.

Witness my hand and seal this 21st day of September, 1904.

C. A. SCHNEIDER.

Notary Public for Kansas.

Witness my hand and seal this 21st day of September, 1904.

C. A. SCHNEIDER.

Notary Public for Kansas.

Witness my hand and seal this 21st day of September, 1904.

C. A. SCHNEIDER.

Notary Public for Kansas.

Witness my hand and seal this 21st day of September, 1904.

C. A. SCHNEIDER.

Notary Public for Kansas.

Witness my hand and seal this 21st day of September, 1904.

C. A. SCHNEIDER.



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I N D E X .

Baxter, D. D.

Beeson, C. M.

Bell, H. B.

Benedict, James.

Bonsall, I. H.

Breese, D. E.

Caldwell, A. B.

Campbell, B. H.

Carpenter, L. J.

Chambliss, H. D.

Chew, E. R.

Cowie, James.

Craig, James.

Denton, R. H.

Dickson, G. N.

Diesen, I. L.

Edwards, R. E.

Emery, O. C.

Franey, P. H.

Fullington, C. H.

Gallagher, S. J.

Griggs, M. F.

Greene, R. H.

Hansen, H. H.

Harrison, J. W.

Hess F. J.

Hoyt, E. J.

Huss, W. O.