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FROM FIELDS OF GOLDEN GRAIN TO BLACK LIQUID GOLD:

THE ECONOMIC CONTRIBUTION OF THE OIL INDUSTRY

TO ELLIS COUNTY, KANSAS

being

A Thesis Presented to the Graduate Faculty

of the Fort Hays State University in

Partial Fulfillment of the Requirements for

the Degree of Master of Arts

by

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B.A., Midwestern State University

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Chair, Graduate Council

ABSTRACT

This thesis will demonstrate how the financial wealth that resulted from the discovery of oil in 1928 and the continued oil production until the decline in 1970 became a major contributing factor to the economic prosperity of Ellis County, Kansas for over four decades.

The introductory chapter provides a clear picture of the agricultural background of the Ellis County economy. Confronted by economic depression from the 1929 Stock Market Crash, extreme drought, and dust storms across the Kansas prairies, Ellis County farmers and residents faced financial devastation. But when oil production began to provide an influx of financial wealth, the county of Ellis experienced an economic boost when it needed it most.

Chapters two and three cover the numerous and productive commercial oil wells that were drilled in Ellis County and the economic prosperity that resulted from them for over forty years.

In the face of nationwide economic depression, crippling weather conditions, and financial bankruptcy, the farmers and residents might have all been forced to eventually abandon their homesteads, their farms, and their land. But after the discovery of oil on the William Shutts farm November 15, 1928, the oil production that occurred over the next forty years became the major contributing factor to the economic prosperity of Ellis County, Kansas.

Where the agricultural landscape was once dead and nonproductive, golden fields of grain now flourish in the sun while pump jacks rise up in the distance, contributing economic prosperity to the county of Ellis.

ACKNOWLEDGEMENTS

I have been very blessed with a group of history professors who freely offered their time, patience and the knowledge of their experience in the completion of this thesis. Our new chair of the history department, Dr. Kim Perez, guided me on the right path from the very beginning. Dr. David Bovee spent long hours editing the rough drafts. Dr. David Goodlett is a gifted man in the art of literary prose and generously shared his expertise. Dr. Paul Harvey has been instrumental in his teaching methodologies, directing me to work hard and press on to the mark. And Dr. Norman Caulfield's constructive advice and leadership has been absolutely invaluable. Each and every one of these professors of history contributed greatly to this thesis, without which this study could not have materialized.

Many others deserve credit for their assistance. The hard-working employees of the Ellis County Historical Society deserve my utmost appreciation for providing the primary sources essential and relative to the thesis subject in a most patient, helpful, and cordial manner. And Sharon Powers, director of the Inter-library Loan Department at Fort Hays State University, always went above and beyond the call of duty in fulfilling the numerous requests for materials. She is to be credited for her efficient efforts in making the required source materials available for my research.

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CHAPTER ONE

INTRODUCTION

The discovery of oil at the William Schutts farm on November 15, 1928, was the beginning of an economic turnaround for Ellis County, Kansas, which resulted in growth and prosperity for the next four decades. This thesis will demonstrate how the financial wealth that flowed from the oil production in 1928 through 1970 was a major contributing factor to the economic prosperity of the county. This study will conclude in 1970 when crude oil production began to decline.¹

Ellis County, as well as the rest of the country, was in need of an economic boost at the time when oil was discovered. The stock market had crashed in October 1929, creating a nationwide depression. With low pay and poor working conditions, the country was heading for financial disaster. The economy had been weakened as a result of widespread borrowing on credit. Consequently, stock prices soared and the market crashed. People lost their fortunes, their homes, their savings, and personal property, and thousands became homeless and hungry.

America was suffering, especially due to unemployment. The jobless rate of some cities rose higher than the national rate. In the city of Toledo, Ohio alone, the unemployment rate stood at eighty percent in 1932.² Many Americans with high

¹ Roy Bird, *Heartland History* (New York: Cummings and Hathaway, 1952), 126.

² Thomas C. Cochran, *The Great Depression and World War Two; 1929-1945*, (Glenview, Ill: Scott, Foresman, 1953), 170.

educational backgrounds and executive job experience resorted to taking menial jobs in order to provide. The graph on page 52 shows the effect of the depression on unemployment.

Some Midwestern farmers went bankrupt. Thousands of farm families lost their homes and their land. Five percent of the nation's farms underwent mortgage foreclosures in the year 1933 alone.³ These hard times were accompanied by several years of drought and violent dust storms. According to historian James Shortridge, some Kansans, who had already fallen into financial despair from the depression, were forced to abandon their farms and homesteads.⁴ As the dust storms swept across the Midwest from Texas to the Dakotas, the Great Plains were turned into one vast dust bowl.⁵ Deserted homes and abandoned fields were scattered across rural America.

In 1859 the discovery of a commercial-producing oil well in Pennsylvania influenced the nation's economy for decades to come. The Seneca Oil Company discovered oil in a piece of land near Titusville.⁶ This discovery started a rush to discover oil all across the nation. The lust for the black gold is demonstrated by the following:

³Boyer, Paul S. and Clifford Clark, Joseph F. Kent, Thomas L. Purvis, Howard Sitkoff, Nancy Woloch. *The Enduring Vision: A History of the American People*. (Lexington, MA: D.C.Heath & Co., 1990), 871.

⁴ James Shortridge, *Cities on the Plains: The Evolution of Urban Kansas* (Lawrence, KS: University Press of Kansas, 2004), 25.

⁵ "Dust Storm Hits Kansas," *Hays Daily News,* February 1935, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

⁶<u>www.titusvillechamber.com</u> (accessed July 31, 2011)

Besides those who came to till the earth and raise stock on its grasslands, there was another much smaller group who came to look under and into the earth for whatever might enrich the searcher. Then . . . black gold . . . in time proved itself for many years the boom either directly or indirectly affecting practically everyone . . . ⁷

The history of oil has come a long way from its meager beginning as a lubricant that was used to grease the wheels on wagon freighters traveling the Santa Fe Trail in the nineteenth century. During the first quarter century, oil was found in shallow wells and in some instances, simply lying on the surface of streams.⁸

Oil began to be discovered in other parts of the country, especially across the Midwest. Oklahoma's economy prospered as a result of oil production when oil was discovered in the town of Bartlesville in Washington County in 1896. Oklahoma historians J.F. Hatcher and T.T. Montgomery stated that this discovery transformed the state's economy, from being agriculturally-based to oil production-based. Producing over fifteen hundred barrels a day, oil production became the leading contributing factor to economic prosperity.⁹ In 1906 Oklahoma became the largest oil producing state in the

⁷ "Farmers, Diggers, And Drillers," *At Home in Ellis County, Kansas: 1867-1992. Volume 1.* (Dallas, Texas: Taylor Publishing Company. History Book Committee, Ellis County Historical Society, (ECHS), Hays, Kansas. 1992), 123.

⁸ James Shortridge, *The WPA guide to the 1930s Kansas* (Lawrence, KS: University Press of Kansas, 1939), 88.

⁹ J.F. Hatcher and T.T. Montgomery, *The Elementary History of Oklahoma*, (Oklahoma City, OK: Warden Co., 1924), 287-290.

nation, peaking at an annual production of over two hundred seventy million barrels. As a result, ninety-five oil companies moved into the state, resulting in the employment of twelve thousand people in the oil industry. The population of Oklahoma City alone grew from thirty thousand in the 1930s to almost two hundred thousand by the 1970s.

In 1901 oil was discovered near the city of Beaumont in Jefferson County, Texas.¹⁰ After spewing over a hundred feet high in the air for nine days, it was finally capped. Oil producing wells were being discovered all across the state, creating jobs in the oil industry. Historian Paul Boyer points out that the discovery of oil in Texas became a major contributing factor to the state's economic prosperity, producing seventeen million barrels in 1902. In the next ten years Jefferson County, Texas, more than doubled in population from nine thousand to over twenty thousand.

In the state of Kansas the huge oil gusher near the town of El Dorado in Butler County in 1914 opened up a vast oilfield, producing millions of barrels of oil each day.¹¹ The search for even more oil wells spread north to northeast, while the oil reservoirs in western Kansas lay waiting to be discovered. The map on page 53 shows the reservoirs of oil in the Midwestern states.

In 1928 oil was discovered in Ellis County, Kansas. The historic event made headlines of the *Ellis County Star* which reported: "Locally, oil was the big news in the late 1920s with the county's first big commercial well brought in on the farm of William

¹⁰ Craig Thompson, *Since Spindletop*. (Norman, OK: University of Oklahoma Press, 1970).

¹¹ Roy Bird, *Heartland History*, 126.

Shutts on November 15, 1928.¹² And this was just the beginning. This discovery attracted attention statewide and stirred an interest in research for additional reservoirs of oil that might be hidden beneath the surface of Ellis County. In October 1929 Professor Erasmus Haworth visited Ellis. He was the former head of the School of Geology and Mines at the University of Kansas, an author of a number of books on Kansas geological formations, and state geologist for thirty years. He was invited to come to Ellis County by fellow geologist, Dean Madden, to speculate and run tests to search for more oil. Haworth predicted that there was a great potential of wealth beneath the fields of grain in the county. It needed only to be tapped into.¹³

As oil companies from across the country came rushing in to survey, test, and drill, more oil producing wells were discovered. Many farmers and landowners were able to save their farms because oil was discovered on their property. According to one article in the *Hays Daily News*, "Oil lease money and the sale of oil royalties kept many homesteaders and their farms from being lost during the depression and drought years of the 1930s, providing many Ellis Countians with a major economic boost when it was needed most."¹⁴

¹² "First Commercial Oil Well 16 Miles North of Hays," *Ellis County News*, November 15, 1928, 1920s-1930s Oil Clipping File, ECHS, Hays, KS.

¹³ "Professor Erasmus Haworth to Come to Ellis County," *Ellis County News*, December 6, 1928, 1920s-1930s Oil Clipping File, ECHS, Hays, KS.

¹⁴ "A Record Oil Deal Is Completed Here," *Hays Daily News*, December 17, 1936, 1930s-1940s Oil Clipping File, ECHS, Hays, KS.

Newspaper stories circulated about poor farmers who had struck it rich. One such example was an Ellis County farmer named Carl Rudder who had fallen into deep financial trouble.¹⁵ Then three oil producing wells were drilled on his land. The *Hays Daily News* reported, "From the sickening reality of pyramided debts, grueling work with no return; crop failure after crop failure, forcing the mortgage of his farm and home, life has emerged into a beautiful and unreal dream for Carl Rudder with three producing wells . . ."¹⁶ He was not only able to save his farm and pay off his debts, he became a wealthy man.

People came to Ellis County, seeking jobs in the oil business and oil related businesses in the years following the depression and financial adversity. The small town of Hays began to grow. According to historian Daniel Fitzgerald, "An important indicator of a town's success is its ability to employ its citizenry and to attract outside businesses."¹⁷

Along with a large number of oilfield and office employee positions needing to be filled in the oil business, a great deal of services and supply companies were also needed to support the production of oil. Businesses, such as companies involved in drilling,

¹⁵ "New Oil Wealth Is Just Like A Dream," *Ellis County News*, January 30, 1936, 1930s -1940s Oil Clipping File, ECHS, Hays, KS.

¹⁶ Ibid.

¹⁷Daniel C. Fitzgerald, *Faded Dreams: More Ghost Towns of Kansas* (Lawrence, KS: University Press of Kansas, 1994), xiii.

pumping, laying pipelines, well servicing, refining and distributing outlets started moving into the county. As more oil wells were being drilled, pump jacks began cropping up all across the golden fields of grain.

In the ongoing chapters, this thesis will demonstrate that the oil production that occurred from 1928 to 1970 became a major contributing factor to the economic prosperity of Ellis County.

CHAPTER TWO:

DISCOVERY OF OIL AND ECONOMIC PROSPERITY

IN ELLIS COUNTY, KANSAS FROM 1928 TO 1950

Once known as the Great American Desert, the Midwestern part of the United States was considered uninhabitable and impossible to farm. But due to an unusually wet period in the early 1900s, settlers and immigrants were drawn there. In the late nineteenth century the Homestead Act opened up the door for settlement, the native Indians had been overcome and placed on reservations, and the Transcontinental Railroad extended across the country. Immigrants and pioneers anxiously settled in and began farming across the Dakotas, Nebraska, and prairies of Kansas.¹

When oil was discovered in Kansas, the agricultural state transformed into a dual economy state with oil production as a second economic contributor. And Ellis County in particular became one of the leading oil producing counties in the state.²

A geographical description of Kansas is necessary to introduce the ground formations from which the numerous oil wells were discovered from 1928 to 1970. These geological formations include a series of mountain formations of the cretaceous system which extend over the entire area of the county of Ellis in west central Kansas. According to "A Study of the Oil Property Assessment in Ellis County," it is in these

¹ Boyer, *The Enduring Vision*, 581.

² "County Tops In State Activity In Early 1960," *Ellis County Farmer*, March 17, 1960, 1950s-1960s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS..

rock formations that rich oil deposits can be found which add greatly to the wealth of the area.³

The Central Kansas Uplift is a broad arch in the rock formations of west central Kansas. The rock formations within this arch have stored reservoirs of vast amounts of oil. The Sedgwick Basin, the Cherokee Basin and the Forest City Basin of south and east Kansas contain both petroleum and natural gas.⁴ A map showing the Central Kansas Uplift is on page 54. These formations are most significant because of the vast deposits of oil that lie within them. The oil is an accumulation of hydrocarbon in rock with pores where oil, gas and water reside.

Hidden deep within the earth's layers, reservoirs of oil are difficult to locate. A 3-D seismic view of the earth's substructure is located on page 55. The darker lines illustrate the reservoirs of oil. The oil is an accumulation of hydrocarbon in rock with pores where oil, gas and water reside. To extract the oil from the subsurface layers of the earth, seismic technology is used. Seismology is the scientific study of earthquakes and waves that occur through the Earth's structural layers. Seismic waves produced by explosions or vibrating controlled sources are one of the main methods of underground exploration in geophysics. Controlled-source seismology has been used to map the geologic traps in petroleum-bearing rocks. A 3-D seismic map of the oil

³ Daniel Rupp, "A Study of the Oil Property Assessment in Ellis County," (Hays, KS: Fort Hays Kansas State College, July 29, 1959), 5.

⁴<u>www.samgaryjr.com/central_Kansas_uplift.htm</u> (accessed February 25, 2012).

reservoirs of the Arbuckle formation that extend across Western Kansas is shown on page 56. Seismology has become a common and useful tool of information used by independent Kansas operators for identifying potential drilling locations. 3-D seismology data has been used to create images for practically every exploration objective in western Kansas. The estimated commercial success rate for wells drilled with 3-D seismology is 70% for wildcat wells drilled. 3-D seismology has been particularly useful for locating small structural highs and narrow channels that can be significant drilling targets, but cannot be identified with well-control alone.⁵

Erasmus Haworth was one of those people who were searching for oil reservoirs in the early 1920s.⁶ While staying at the Hotel Mulroy in downtown Hays, he was the one responsible for discovering the geological structures north of Hays that appeared promising.⁷ In 1923 a well was discovered on the Carrie Oswald farm, but it turned out to be a non-commercial producing well - one in which its product ability is not profitable. Another was discovered on Charley Polifka's farm near Catherine - also a non commercial producing well. But success finally came November 15, 1928, with a commercial well on the Charles Shutts farm, sixteen miles northeast of Hays, located in the Arbuckle

⁵ <u>www.geo.mtu.edu/UPSeis/waves.html</u> (accessed February 25, 2012).

⁶ "Erasmus Haworth Here: Widely Known Geologist And Party Arrive In Hays Late Wednesday." *Ellis County News*, June 6, 1929, 1920s-1930s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

⁷ "Haworth a Visitor," *Ellis County News*, December 6, 1928, 1900s-1920s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

limestone at a depth of 3,569 feet.⁸ At that time, one of the first big oil companies came to Ellis County. It was the Phillips Company, founded in 1917 by L. E. Phillips of Bartlesville, Oklahoma.

The Phillips-Shutts well, as the Shutts well was soon called, began producing two hundred eighty-eight barrels of oil a day.¹⁰ Robert Jolly, assistant state superintendent of Phillips Petroleum, told the *Ellis County News* that "A contract has already been made for the sale of production to the Sinclair Company which would immediately begin building a pipeline from Toulon, four miles east of Hays out to the well."¹¹ The oil tanks were being delivered to the Shutts" farm from El Dorado.¹² And in less than a year, the Shutts" well was producing over four hundred fifty barrels a day and filling up twenty-two railroad cars with oil to transport to the refinery.¹³ In the following a high level of oil productivity occurred as other wells in Ellis County were being discovered. Workers were needed in the oil field. Twenty families moved to Hays in 1929 to work in the oil development industry. As the *Ellis County News* reported, "Oil

¹⁰ Ibid.

¹¹ Ibid.

⁸ Rupp, "A Study of the Oil Property Assessment in Ellis County," 7.

⁹ "First Commercial Oil Well Sixteen Miles North of Hays," *Ellis County News*, November 15, 1928, 1920s-1930s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

¹² "Ship Two to Five Cars of Oil Daily," *Ellis County News*, August 22, 1929, 1900s-1920s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

¹³ "Ship Two to Five Cars of Oil Daily," *Ellis County News*, August 22, 1929, 1900s-1920s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

development is tending to make Hays the center of oil activity in the Western Kansas region."¹⁴ Growth and economic prosperity were stimulated by the oil productivity that was occurring in Ellis County. Other wells were discovered across Ellis County in the following years, like the one on the Joe Schmeidler farm.¹⁵ Shortly thereafter, the Phillips Petroleum Company drilled another wildcat well on the Sophus Johnson farm eight miles northwest of Hays that had the potential of producing five hundred barrels of oil a day.¹⁶

In the late 1920s oil speculation, drilling, and production were being done by numerous local drilling and pumping companies - small companies like Farmers Oil which was started by H. Oldham in 1929.¹⁷ The H. L. Popp Truck Line transported oil to the refineries.¹⁸ C. B. Gray, the field executive for the Parkersburg Rig and Reel Company, told the *Ellis County News* that they were moving to Hays to build a company warehouse for oil field supplies. They would be hiring twenty to thirty men to work as

¹⁴ "Twenty Families Come Here To Live," *Ellis County News*, February 7, 1929, 1900s-1920s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

¹⁵ "Strike Oil Thirteen Miles Northeast Hays," *Ellis County News*, April 11, 1929, 1900s-1920s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

¹⁶ "Another Oil Strike Northwest Of Hays." *Ellis County News*, June 20, 1929, 1920s-1930s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

¹⁷ www.farmersoilcoinc.com (date accessed February 25, 2012).

¹⁸ "Oil Centennial Observance Planned," *Ellis County Farmer*, August 20, 1959, 1950s-1960s Oil Clipping File, Ellis Country Historical Society, (ECHS), Hays, KS.

truck drivers to transport oil.¹⁹ These and other businesses moved into Hays. Due to the oil productivity in the area, the *Ellis County News* reported that the county's "oil crop" for the year had netted a greater profit than its wheat yield.²⁰ Don Rhodes, a writer for the *Topeka State Journal*, reported that "The development around Hays is sure and swift, and black gold now flows under yellow wealth of wheat."²¹ Ellis County was now experiencing a new wealth - that of black gold.

Soon the larger oil companies began moving into Hays; companies like Standard Oil, owned by John D. Rockefeller, the magnate who dominated the oil industry and became one of the richest men in history.²² Once the oil reservoir was found beneath the earth's surface, wells were drilled almost as fast as the rigs could be built. In the summer of 1929 oil derricks were arriving by the truckload to be assembled and mounted on the oil location sites. Six derricks alone were delivered to the Shutts and Schmeidler farms. L. R. Keith from Russell County moved his oil company to Hays, along with twenty-five employees to build drilling rigs. Thirteen of them brought their families with them. Mr. Keith established headquarters in Hays instead of Russell because, as he said, "We want

¹⁹ "Oil Well Supply Company To Hays," *Ellis County News*, September 5,1929, 1920s-1930s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

²⁰ "Oil Crop Worth More Than Wheat," *Ellis County News*, September 5, 1929, 1920s-1930s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

²¹ "Hays and Ellis County are Described as an "Oil Center Now,"" *Ellis County News*, August 22, 1929, 1920s-1930s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

²² Boyer, *The Enduring Vision*, 637.

to get closer to the present center of activity in the oil development area of Western Kansas.²³ The Farley Machine Shop moved to Hays to provide a base headquarters for its oil field supplies and repair work business. Law firms moved in to handle the legalities, like the Tulsa, Oklahoma firm of Mahan, McCarthy and Beese. These are just a few of the major oil companies and oil-related businesses that began to move in to the Ellis County area to either drill or provide oil field services. They all wanted to be closer to the oil activity. Hays was quickly becoming an oil distributing center for all of Western Kansas.²⁴

Over the years newspapers reported the good news of economic prosperity that Ellis County was experiencing as a result of the ongoing oil production. Year after year, Ellis County saw even more financial prosperity than it did the year before. The Oswald oilfield that had been discovered by the oil contractors, Stearn and Streeter Drilling, produced more than ten million dollars worth of oil in just one year.²⁵ The *Ellis County News* reported that more than two hundred thousand dollars had been paid into the county treasury for the sale of three thousand acres of land northeast of Hays, purchased

²³ "Twenty-five Rig Builders Moving to Hays," *Ellis County News,* January 24, 1929, 1920s-1930s Oil Clipping File, (ECHS), Hays, KS.

²⁴ "Make Hays Center For Oil Derricks," *Ellis County News*, May 2, 1929, 1900s-1920s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

²⁵ "The First Western Kansas Oilfield," *Ellis County News*, March 28, 1929, 1900s-1920s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

mostly by Phillips Petroleum Company.²⁶ The newspaper reported that this was only part of the financial wealth that was coming into Ellis County: "This sum is probably not one-fourth of the total amount of money paid out by oil operators and speculators in the last week for leases and royalties in Ellis County. Bankers and real estate dealers here say the total is likely in excess of two-hundred thousand." The paper also reported that, "The hotels have been filled to capacity with oil men seeking acreage in locations believed to be on highs and which are geologically right."²⁷ Hays was becoming the center for oil derricks. According to D. F. McCarthy, the Ellis County Clerk, who completed the 1929 tax rolls to be submitted to the County Treasurer, he reported that, "Property tax valuation in Ellis County is more than one and a quarter million dollars higher this year than it was in 1928.²⁸ McCarthy reported that the valuation on tangible property in the county amounted to \$24,377,280 in 1929, compared to \$23,101,596 in1928. These sums are the totals for real estate - both personal and corporate property. He reported that the city of Hays alone had a property tax valuation of \$38,815,341. McCarthy confirmed, "Oil development in the territory has been a big factor and

²⁶ "First Commercial Oil Well Sixteen Miles North of Hays," *Ellis County News*, November 15, 1928, 1920s-1930s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

²⁷ "Make Hays Center For Oil Derricks," *Ellis County News*, April 18, 1929, 1900s-1920s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

²⁸ "Show Big Increase In Tax Valuation," *Ellis County News*, October 31, 1929, 1920s-1930s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

increased the valuation approximately \$250,000." Later in the year, the County Clerk confirmed that oil had been a big factor in the financial gain for Ellis County in 1930.²⁹

Soon economic prosperity from oil production superseded that of agriculture. The newspapers focused on the financial gain. One article based on a report by the Register of Deeds Office in Ellis County in 1929 stated that the "oil crop" was worth more than the wheat crop. The income to land owners from oil leases in the last twelve months had aggregated \$777,600, while the wheat crop aggregated \$720,000."³⁰ This was a net profit for land owners without paying one cent towards the oil production. Furthermore, the article continued to state that Ellis County was better off financially because of the yearly rentals coming in on the oil leases. The oil property alone totaled more than five hundred thousand acres. As one newspaper editor stated, "This results in riches mounting into millions" He pointed out that three quarters of a million dollars were received by the landowners.³¹

Vast amounts of wealth were flowing into the Ellis County treasury as a result of the oil productivity. Mr. G. F. Rupp, the oil assessor for the county, reported that over forty four million dollars was made from 1,788 producing wells and there was a potential of almost thirty thousand barrels of oil worth over ninety thousand dollars a day.³²

³² Ibid.

²⁹ "Show Big Increase In Tax Valuation," *Ellis County News*, October 31, 1929,1920s-1930s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

³⁰ Ibid.

³¹ Ibid.

All this took place in the same year as the Stock Market Crash. In the midst of the subsequent national economic despair, Ellis County, Kansas, was experiencing an economic boom as a direct result of oil productivity in the area.

Entering the 1930s, a majority of the oil prosperity in the past few years was due to the discovery of the Bemis oil pool in the northeastern region of Ellis County. It was one of the biggest oil wells in the county to be discovered. The Jones Brothers, Winkler and Koch, from Cleveland, Oklahoma, had drilled one of the most productive wells in the county.³³ The well was located on the Fred Bemis land and was owned by the Margay Oil Corporation in Tulsa, Oklahoma. The Jones brothers had claimed that this well, located twenty-five miles northeast of Hays, could be one of the most promising in western Kansas, possibly producing as much as two thousand barrels of oil a day.³⁴ True to their prediction, the Bemis well turned out to be highly productive. So productive in fact, that another well was drilled nearby by the Phillips Petroleum Company, producing almost three thousand barrels of oil a day.³⁵ Soon after, the newspaper announced the need for more pipelines to be built to handle the flow of oil which would also provide jobs for hire.

³³"Oil Well Supply Company To Hays," Ellis County News, September 5,1929, 1920s-1930s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

³⁴ "A New Oil Strike In The Bemis Field," *Ellis County News*, March 5, 1936, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

³⁵ "Phillips-Bemis No. 1 Is Largest in State," *Hays Daily News*, September 23, 1935, 1930s-1940s Oil Clipping File, ECHS, Hays, KS.

In order to learn how to perform the various jobs in the oil industry, new employees would need some education and job training. The Smith-Hughes Act funded such opportunities. New employees could take night classes offered in the city of Hays in 1937.³⁶ All this activity resulted in an increase in businesses, population and economic growth in Ellis County. Kansas historian Robert W. Richmond pointed out that by 1938 six western counties in Kansas, including Ellis, had the capacity to produce enough oil to supply the daily requirements of the entire country.³⁷

So much oil production activity was occurring in Ellis County that both the *Ellis County News* and the *Hays Daily News* could barely keep up. One story is told from the summer of 1936: A cloud of dust could be seen as cars went racing down the rough, dusty road towards the farm of A. W. Copeland. Sixty to seventy people showed up to watch another new oil well come gushing in that was being drilled by Twin Drilling Company out of Wichita, Kansas. Nearby neighbors of Copeland''s were overheard, saying things such as, "I wish I could feel like that lucky guy Copeland."³⁸ Then in September, Ellis County experienced one of the greatest wildcat oil wells of any county in the state of Kansas.. The Winkler Koch Bemis well, drilled at 3,380 feet, became one

³⁶ "Oil Field Workers Get Free Training: Night School Classes Are Organized Under The Smith-Hughes Act," *Ellis County News*, November 4, 1937, 1930s-1940s Oil Clipping File, ECHS, Hays, KS.

³⁷ Richmond, Robert, Kansas: Land of Contrasts (Saint Charles, MO: Forum Press, 1974), 212.

³⁸ "Big Crowd Watches New Well Come In," *Ellis County News*, June 18, 1936, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

of the most active wells in the county in 1936, producing almost two thousand barrels of oil a day.³⁹

Another well was discovered on the property of J. A. Weber. The *Ellis County News* reported that the w heat crops may sometimes fail the Ellis County farmer, but in 1937 another crop, black instead of yellow gold, had come to the rescue. With only six days before the redemption period on his four hundred acre farm expired, Weber was able to pay off a judgment on his farm, pay off his past due taxes, and pay the accrued interest on his debt of nine thousand nine hundred fifty-six dollars and thirty-nine cents. He paid it in full to the County Clerk in Ellis County, and then walked away with ownership of his farm and some extra cash in his pocket. The news reporter asked Weber if he was going to celebrate his good fortune, and Weber replied, "Nope. I"ve got to get busy right away now and get my wheat in. I haven"t time to celebrate."⁴⁰

By 1937, the total oil production in Ellis County reached a cumulative amount of 4,528,882 barrels for the year. The *Oil and Gas Journal* hailed Ellis County as the most popular area for wildcat oil exploration, pushing the counties of Russell, Barton, Rice and Cowley into second place. Ellis was becoming the leading county in the state of

³⁹ "Phillips-Bemis Number One Is Largest In State," *Ellis County News*, September 23, 1936, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

⁴⁰ ""Black" Gold Comes to Rescue of Ellis County Farmer As Oil Royalty Clears Debts," *Ellis County News*, September 16, 1937, 1900s-1920s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

Kansas for oil production.⁴¹ In 1938 these counties plus two others had the capacity to produce enough oil to meet the daily requirements of the entire nation.⁴² With so much oil production, the Kaw Pipe Line Company and the Stanolind Pipe Line Company laid pipelines to Ellis County which helped to increase oil production distribution.

There was so much oil activity in Ellis County that the State Corporation Commission sent a field representative from Wichita to establish headquarters in Hays to deal with all the potential oil tests which were being processed, including any that were being done in the nearby counties of Trego, Ness, Rush, Rooks, and Graham.⁴³ The Ellis County area, united with Russell to the east and Great Bend to the south, became known as the "Kansas Oil Patch."⁴⁴ (See the table for 1940 oil production on page 57.)

At this time, a nonprofit organization was formed to represent the independent oil and gas producers in Kansas known as the Kansas Independent Oil and Gas Association (KIOGA). The purpose of KIOGA, as stated in the original articles of incorporation was to improve the market for oil and gas which was produced in Kansas and to promote the welfare of the oil and gas industry in the State of Kansas.⁴⁵

⁴¹ "Phillips Bemis No. 1 Is Largest In State," *Ellis County News*, July 30, 1936,1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

⁴² Craig Miner, *Discovery! Cycles of Change in the Kansas Oil and Gas Industry*, (Wichita, KS: Kansas Independent Oil and Gas Association (KIOGA), 1987), 212.

⁴³ "Establish Office Here For Oil Potential Tests," *Ellis County News*, July 22, 1937, 1930s-1940s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

⁴⁴ James R. Shortridge, *Cities on the Plains: The Evolution of Urban Kansas* (Lawrence, KS: University Press of Kansas, 2004), 262.

⁴⁵ www.kioga.org (date accessed July 31, 2011).

Reports came pouring in about the financial gains for the county: "One Hundred Thousand Dollars to County From New Oil Play: Money Is Still Pouring In As Companies Lease Big Acreage In This Region."⁴⁶ The money came in the form of cash payments from oil leases and royalties largely by the major oil operating companies. And only a year later, the following was reported: "A Record Oil Deal Is Completed Here: The Deal Involving One Hundred Thousand Dollars And One Hundred Sixty Thousand Barrels Of Oil Will Spur Drilling." This involved a large financial transaction in the sale of oilfield acreage and royalty money when the Carter Oil Company, a subsidiary of the Standard Oil Company of New Jersey, bought a fourth of an interest and eleven eighty-acre tracts northeast of Hays of oil productive property from the Western Oil and Refining Company. The other three-fourths were owned by Lario Oil and Gas Company in Wichita, Kansas - both major oil companies that were investing in the lucrative Ellis County oil industry. Frank Wasinger, one of the associates involved in the transaction was quoted as saying that this was creating a greater drilling campaign than this county has as yet witnessed.⁴⁷ He told the *Ellis County News*' reporter that Carter Oil, one of the largest oil-operating companies, was moving to Ellis County. Some others were the Kansas Development Company, Twin Drilling Company,

⁴⁶ "100,000 To County From New Oil Play," *Ellis County News*, December 5, 1935, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

⁴⁷ "A Record Oil Deal Is Completed Here," *Ellis County News*, December 17, 1936, 1930s-1940s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, Ks.

Creekmore Drilling Company, and Vickers Petroleum Company.⁴⁸ One Kansas historian confirmed, "The importance of the oil industry to the economy of this area can readily be seen by the large number of oil producers and other oil-related businesses dependent on the production of oil in the county." Businesses flooded into the Ellis County area, intent on investing in the vast oil production.⁴⁹

The *Kansas Oil and Gas Journal* reported, "The discoveries have been sufficiently frequent to make this area a wildcatter"s paradise."⁵⁰ The *Journal* continued to predict more wildcat activity in the coming years. And so, the influx continued of more oil companies, legal firms, accountants, and bookkeepers, all moving to Hays to set up offices to manage the highly active oil industry. Following the *Journal*'s prediction the *Ellis County News* reported, "100,000 To County From New Oil Play." Within only a ten to sixty-day period cash payments totaling one hundred thousand dollars on leases and royalties had come in.⁵¹ With all this oil productivity, pipelines were being built by

⁴⁸ "Winkler-Koch Bemis Flows 1955 Barrels," *Ellis County News*, August 13, 1936, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, Ks.

⁴⁹ Maureen Winter, *Indians to Industry: A History of Hays and Ellis County* (Ellis, KS: *Ellis County Star*, 1967), 84.

⁵⁰ "Ellis County Leads State With Wildcats," *Ellis County News*, July 30, 1936, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, Ks.

⁵¹ "100,000 To County From New Oil Play," *Ellis County News*, December 5, 1935, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

major companies out of Wichita, Kansas: Socony-Vacuum, Empire Oil and Refining Company, Texas Company, and Standish Pipeline. The *Ellis County News* reported that the construction of these new pipelines would provide employment for three hundred men.⁵² This created a need for even more businesses to come to Hays in connection with the building of the pipelines; one of which was the Jones and Brooks Pipeline Construction Company out of Tulsa, Oklahoma, which set up an office in downtown Hays.⁵³

The newspaper reported that there were more wells being explored, tested, and drilled in Ellis County than in any other county in Kansas.⁵⁴ In the 1930s the population of the city of Hays had been less than five thousand. By the 1940s the population of the city of Hays had grown to over six thousand.⁵⁵

Major historical events began to occur across the globe from 1939 to 1941. Germany and Japan began an international campaign of fear and aggression which eventually drew the United States into a second global war. Adolf Hitler had become the

⁵² "To Build A Pipeline To Western Kansas," *Ellis County News*, September 12, 1935, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

⁵³ "Oil Pipeline Company Leases Quarters In Hays," *Ellis County News*, February 13, 1936, 1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

⁵⁴ "Ellis County Led in Oil Industry," *Ellis County News,* November 15, 1945, 1930s-1940s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

⁵⁵ Fitzgerald, *Faded Dreams: More Ghost Towns of Kansas,* (Lawrence, KS: University Press of Kansas, 1994), xiii.

new Chancellor of Germany and began invading many countries in Europe. Japan invaded China. In the U.S.S.R. Joseph Stalin had risen to power. In Tokyo, Japan, nationalistic militants had gained control of the governmental system and strategized a fanatical plan of expansionism.⁵⁶ Then on the morning of December 7, 1941, Japanese dive-bombers and torpedo planes flew across the island of Oahu, Hawaii, and Congress declared war on Japan. As a result of U.S. involvement in World War II, massive government spending created an economic boost across the nation.

Entering the 1940s, the agricultural industry and the oil industry in Kansas were both experiencing an economic boost. In 1937 there were eighteen thousand wells across the state of Kansas which produced sixty-nine million barrels of oil.⁵⁷ In the following years the oil industry soared to new heights, becoming one of the three major employers in the state.

Historian Roy Bird states, "Kansas petroleum along with natural gas, accounts for almost 80% of the value of mineral production in the state."⁵⁸ And Kansas historian Bliss Isely confirmed this: "Kansas ranks fifth in the nation for production of oil and fifth in gas. These two products are the chief source of mineral wealth of Kansas."⁵⁹ Oil and

⁵⁶ Robert W. Strayer, *Ways of the World: A Brief Global History* (New York: St. Martin"s, 2011), 974.

⁵⁷ Shortridge, *The WPA guide to 1930s Kansas*, (Lawrence, KS: University Press of Kansas, 1939), 62.

⁵⁸ Bird, *Heartland History*, 126.

⁵⁹ Bliss Isely and W. M. Richards, *The Story of Kansas* (Topeka, KS: Ferd Voiland, Jr. State Printer, 1953), 165.

gas became valuable resources that contributed to the state's economic prosperity. A map on page 58 shows the abundant wells that were discovered across the Ellis County area. According to historian Craig Miner, "By 1944 there were seven hundred fifty oil fields in Kansas and a thirty million dollar investment in the industry."⁶⁰

In the years immediately following the war, oil production increased across the country, as well as in Ellis County. The newspapers were ablaze with one success story after another. Ellis County was rich in oil deposits: eight hundred sixty-two wells produced nearly eleven million barrels of oil in 1945.

On March 7, 1946, the *Ellis County News* reported, "Five New Oil Pools in Ellis County."⁶¹ From 1945 to 1946, Ellis County was the leading county in the state of Kansas in oil production. There was so much oil productivity that the news was reported in *Rinehart's Year Book*, published in Tulsa, Oklahoma. Rinehart's book was considered the "Blue Book" of oil producers and operators.⁶² On January 22, 1946, *The Ellis County News* reported, "County is Rich in Oil Deposits: Eight Hundred and Sixty Two Wells Produced Eleven Million Barrels in 1945."⁶³ On February 23, 1947, the *Hays Daily News* announced, "Ellis County Sets Pace With Eighty-Two Thousand Barrel Well: Ellis

⁶⁰ Craig Miner, *Kansas: The History of the Sunflower State, 1854-2000* (Lawrence, KS: University Press of Kansas, 2002), 275, 278.

⁶¹ "Five New Oil Pools in Ellis County," *Ellis County News*, March 7, 1946, 1930s-1940s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

⁶² Ibid.

⁶³ Ibid.

County Today Has the Largest Producing Well in Western Kansas," confirming earlier reports about the Ridler "E" oil gusher located fifteen miles north of Hays, which had a capacity of producing 82,000 barrels of oil a day at 3,570 feet.⁶⁴ Figures were released by state geologist Frank Poley with the State Geological Survey that confirmed Ellis County was the leading county in the state of Kansas, and crude oil was the state"s number one mineral asset.⁶⁵ (See table of 1945 oil production on pages 59-61; pie chart on page 62.)

More oil wells were being discovered and oil activity continued to increase across the county. *The Oil and Gas Production of Kansas* reported in their yearly bulletin that had been an increase of over eleven million barrels of oil had been produced in 1947 alone with thirty-seven additional pools producing.

The 1947 total assessed valuation of Ellis County, according to the office of the County Assessor, is 43,325,899.00. Tangible property is assessed at 339,381,752.00, and intangible property is assessed at 33,944,147.00. The oil industry is assessed at 16,184,116.00, an increase of three million dollars over the 1946 valuation, while the entire farm land of the county is assessed at 10,429,096.00. The oil industry is paying 41.1 percent of the tangible assessed taxes for the year 1947.⁶⁶

In 1948 there was so much oil activity in Ellis County following the war that dozens more oil companies moved into Hays and set up headquarters in order to handle the flow of the business. Along with those oil companies, services were

⁶⁴ "Ellis County Sets Pace With 82,000 Barrel Well," *Hays Daily News*, February 23, 1947, 1930s-1940s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

⁶⁶ Majdalani, "Economic Impact of the Petroleum Industry on Ellis County," 16.

needed of public accountants, bookkeepers and lawyers. They followed the oil activity and the oil companies to Hays.⁶⁷

In the late 1940s oil production in Ellis County was at an all time high. Due to the amount of oil production, Kansas became one of the nation's leading oil states.⁶⁸ By the 1950s, Kansas ranked fifth in the nation in oil production.⁶⁹

In Ellis County oil production had far surpassed agriculture as the economic mainstay. Oil production had become the major contributing factor to the economic prosperity of the county. (See chart on page 63, showing mineral value of oil.) This was a phenomenal transformation considering its future had been destined to be entirely dependent on agricultural products of the soil.⁷⁰ And the transition from a predominantly agricultural state to one in which the oil industry has been balanced with agriculture is one of the most significant developments in Ellis County's history.

Following the crash of 1929, the Depression of the 1930s, the devastating weather, and the war in the 1940s, Ellis County residents had known many years of hard

⁶⁷ "Three Oil Companies Are on Second Floor Wiesner Building," Ellis County News, March 29,1945, 1930s-1940s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

⁶⁸ Roy Bird, *Heartland History: Stories and Facts from Kansas* (New York: Cummings & Hathaway Pub., 1990), 122-125.

⁶⁹ Bliss Isley and W.M. Richards, *The Story of Kansas* (Topeka, KS: Ferd Voiland, Jr. State Printer, 1953), 165-170.

⁷⁰ Nyle H. Miller, *Kansas: A Pictorial History* (KS: The Kansas Centennial Commission & the State Historical Society, 1961), 265.

times, but the production of oil had been a major contributing factor to the economic stability and prosperity at a time when the people needed it most.

In 1929 the tax revenue for Ellis County was \$24,377.280.⁷¹ And by the mid 1930s Ellis County was producing over 4,000,000 barrels of oil.⁷² There were one hundred thirty-five businesses in the city of Hays.⁷³ And the population of Hays had grown from less than 5,000 in 1929 to over ten thousand in the mid thirties.⁷⁴

In the mid-1940s Ellis County tax revenue had increased to \$43,325,899.⁷⁵ Oil production had increased to almost 68,000,000 barrels.⁷⁶ There were over five hundred businesses in the city of Hays.⁷⁷ And the population was holding at ten thousand.⁷⁸

In the *Ellis County Farmer*, a Fort Hays State University student wrote an article attributing the economic prosperity of the oil production in Ellis County to Erasmus

- ⁷⁶ State Geological Survey of Kansas, 1945.
- ⁷⁷ "Hays, Kansas Telephone Directory, 1945
- ⁷⁸ Shortridge, Cities on the Plains, 383.

⁷¹ "Show Big Increase In Tax Valuation," *Ellis County News*, October 31, 1929,1920s-1930s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

⁷² "Phillips Bemis No. 1 Is Largest In State," *Ellis County News*, July 30, 1936,1930s-1940s Oil Clipping File, Ellis County Historical Society (ECHS), Hays, KS.

⁷³" Hays, Kansas Telephone Directory," Southwestern Bell Telephone Company, 1935.

⁷⁴ Shortridge, *Cities on the Plains*, 383.

⁷⁵ Majdalani, "Economic Impact of the Petroleum Industry on Ellis County," 16.

⁷⁹ Total tax revenue data for the 1930s and 1940s of this thesis study for Ellis County were unavailable by the Ellis County Treasurer's Office, April 18, 2012.

CHAPTER THREE:

ECONOMIC PROSPERITY AND THE GROWTH OF HAYS, KANSAS FROM 1950 TO 1970

Oil production in the 1950s was extremely active across the United States. The state of California had taken the lead in oil during the 1920s, but fell behind Texas in the 50s. Kansas came in third with over seven hundred thousand barrels of oil. Oklahoma came in fourth.¹ (See oil production and mineral value charts on pages 62, 63)

In 1956, the *Ellis County Farmer* reported that the leading oil-producing county was Barton County, with Ellis County taking second place. Russell County came in third, and Butler County, with the highly productive El Dorado, came in fourth. In 1960, Butler County regained first place, having produced over four hundred million barrels of oil. Barton County produced 342,462,571 barrels in second place with Russell County coming in at third, producing 314,790,802. Ellis County was fourth in the state, producing 11,231,495 barrels of oil.² However, oil production had begun to decline.

During the years of heavy oil productivity, the city of Hays grew and was able to provide jobs. According to historian Daniel C. Fitzgerald, An important indicator of a town's success is its ability to employ its citizenry and to attract outside business. The

¹ Thomas Craig, *Since Spindletop*, (Norman, OK: Oklahoma University Press, 1970), 15.

² "Ellis County Second In Oil Production For 1956," *Ellis County Farmer*, July 18, 1957, 1950s 1960s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

basic needs of a community must be met in order for that town to continue to prosper."³ The city of Hays continued to grow in business and population.

In order to accommodate the growing population in Hays, a bus line was incorporated in the 1950s. The Hays Transit Company was granted the franchise by the city commissioner to operate a passenger bus line. And later, a second bus was added. The entire city of Hays experienced a building boom. Homes were being built, along with a modern grade school, several buildings at Fort Hays Kansas State College, and several churches.⁴ The city had grown five times larger in less than four decades.⁵ Businesses had moved into Ellis County, setting up their headquarters in Hays, in order to profit financially as oil production increased. Ellis County farmers and land owners were able to pay off their debts, provide abundantly for their families, invest in new agricultural technology, increase their harvests, and save the family farm. Some cashed in on their wealth and sold out, while others stayed on and enjoyed their more comfortable situation.⁶

Comparing city population and growth in Kansas in the 1950s, El Dorado grew three times the size of the city of Hays in the 1920s, but by 1960, Hays had actually

³ Fitzgerald, *Faded Dream*, xiv.

⁴ "Settlers And Town Builders," *At Home in Ellis County, Kansas: 1867-1992. Volume 1,* (Dallas, Texas: Taylor Publishing Company, History Book Committee, Ellis County Historical Society (ECHS), Hays, Kansas, 1991), 47.

⁵ James R. Shortridge, *Cities on the Plains, The Evolution of Urban Kansas*. (Lawrence, KS: University Press of Kansas, 2004), 382-3.

⁶ Craig Miner, *The Fire in the Rock, A History of the Oil and Gas Industry in Kansas, 1855-1976.* (North Newton, KS: The Mennonite Press, 1976), 83.

outgrown El Dorado - 15,396 to 14,127. This was due to the oil productivity that occurred in Ellis County from the 1930s through the 1950s which created jobs.⁷ There was another reason for the rapid growth of the city of Hays. It has been referred to as "residential preference." According to a yearly survey by the Population Commission, research has shown that people prefer the more rural cities and towns to live in over larger urban cities. The rural or small towns included farms, open country, and small town communities like Hays was at this time.⁸

The *Ellis County Farmer* reported, "County Tops In State Oil Activity In Early 1960." For the first two months of the year, Ellis County became the leader of the state of Kansas in oil activity, according to the figures released by the State Geological Survey which confirmed this.⁹ According to state geologist Frank Poley, the total production of oil in Ellis County was valued at over thirty million dollars.¹⁰ A graph on page 64 illustrates the high increase in annual oil production from 1900 to 1960.

In the 1960s, the agricultural industry was showing an increase due to the economic prosperity of the numerous farmers and land owners who had struck oil on their property. According to a Kansas agricultural representative, J. E. Pallesen,

⁷ Shortridge, *Cities on the Plains*, 382-3.

⁸ Benjamin Chinitz, Ed., *City and Suburb: The Economics of Metropolitan Growth (*New Jersey: Prentice-Hall, Inc., 1964), 21.

⁹ "County Tops In State Activity In Early 1960," *Ellis County Farmer*, March 17, 1960, 1950s-1960s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, KS.

¹⁰ Majdalani, "Economic Impact of the Petroleum Industry on Ellis County," 26, 27.

commercial farms were yielding a much larger increase - over two hundred thirty million bushels of wheat crop alone. This was millions more than decades earlier.¹¹ Farmers who were direct recipients of wealth from oil were able to invest in farm land and more modern equipment, thereby expanding their farms and their productivity. Though agriculture had been a major industry across the Midwestern United States, in Ellis County it now assumed a much smaller role. This was reflected in the records of production for the area in 1967. But when oil production was united with the agricultural input of Ellis County, it helped greatly to increase the economy and the population.¹² Historical author T. R. Fehrenbach states it this way: "The economy could be described more accurately as a vast agricultural-mining complex than that of a true industrial state. The industries produced great variations in income and real wealth.ⁿ¹³

Evaluating the Kansas economy, the Kansas state governor's office measured personal incomes. The 1965 Governor's Report pointed out that the only way to measure income that was available to the State of Kansas was to use personal income from which estimates could be made by the Office of Business Economics of the United States Department of Commerce. "Personal income is considered to be a measure of the wellbeing of the residents of a particular state and can be used as one indicator of the

¹¹ J. D. Pallesen, *Farm Facts* (Topeka, Ks: Kansas State Board of Agriculture; Division Statistics, 1951-1976), 4F.

¹² T. R. Fehrenbach, *Lone Star: A History of Texas and Texans* (N.Y: The Macmillan Company, 1968), 671.

performance of the Kansas economy."¹⁴ The per-capita income of Ellis County residents was researched by economist Gary Mayhew in 1965. From *The Fifth Annual Economic Report of the Governor* from the Kansas Office of Economic Analysis, Mayhew reported, "There was a relatively high level of personal income enjoyed by citizens of Ellis County. In 1965 per-capita income was in excess of \$2,300." This is lower than the state average of \$2,669 and the national average of \$2,760; but Mayhew points out that level is significantly higher than that of comparable rural counties. For example, Cherokee County, with a population close to Ellis County, had a per-capita income of slightly over \$1,800, while Washington County, the top agricultural county for 1967, had an increase in per-capita income in 1965 of approximately \$1900.¹⁵ (See chart on page 65)

Specialized industries and businesses in oil production became the basic economic providers for the population growth of cities and towns across the state of Kansas. According to Benjamin Chinitz, such businesses would not have existed if it were not for the natural resource endowments that could be developed in these areas. Furthermore, this gave these areas a definite advantage to prosper economically in one or more industries over their neighboring counterparts.¹⁶

¹⁴ John Gihon, *The Fifth Annual Economic Report of the Governor from the Kansas Office of Economic Analysis*, (Topeka, State of Kansas, Dept. of Administration, Division of State Planning and Research, 1963), 10.

¹⁵ Ibid.

¹⁶ Chinitz, City and Suburb, 13.

Comparing Ellis County with surrounding ones. Ellis had several other advantages that offered a prosperous future for local residents. Kansas historian James Shortridge emphasized that Fort Hays State University had grown steadily and held the potential to serve fully half of the state¹⁷ One advantage to be considered is employment. In 1967 there were one hundred seventy petroleum businesses in Ellis County which provided jobs.¹⁸ Another advantage was the rural community environment in which many people preferred to live. Personal preference is a determining factor in population growth. During the 1950s and 1960s there was a significant influx of new residents into Ellis County, and the city of Hays in particular, as well as the surrounding smaller towns of Victoria, Catherine, and Munjor.¹⁹ It is also important to note that people are drawn to towns and cities that reflect a secure economy. During the years of economic prosperity in Ellis County from 1928 to 1970, the population increased from a little over three thousand residents to over fifteen thousand, which confirms this point. Further research on economic-based analysis shows employment opportunities rose during the years of major oil production in Ellis County, thus verifying the factor of economic security. Economist Niles Hansen goes one step further by pointing out that the economic-base approach emphasizes the importance of

¹⁷ James R. Shortridge, *Cities on the Plains: The Evolution of Urban Kansas* (Lawrence, KS: University Press of Kansas, 2004), 205.

¹⁸ Winter, *Indians to Industry*, 84.

¹⁹ Chinitz, *City and Suburb*, 13.

even outside a given area in determining the area's levels of income, employment, and financial output. Economic sectors are identified as one of the basic sectors which sell to markets located outside the given area. The service sector sells to markets within the given area. Hansen states: "The major premise of the analysis is that exports play the most important role in the economic growth and well-being of a region, because basic employment generates income for local residents that is spent on goods and services that in turn generate service employment."²⁰ This applies to Ellis County in particular because of the export of production to markets located outside the area. In turn, this contributed largely to the economic growth for the residents of the county. A graph on page 66 illustrates this.

The city of Hays was well positioned geographically to service the surrounding areas. Fifteen or more counties to the north were potential customers who increased the retail trade business.²¹ Shortridge concluded that this gave Ellis County an obvious advantage over the surrounding counties. And due to the numerous oilfields, the area was able to acquire all the public services, cultural opportunities, and discretionary capital it needed to attract new businesses and new residents. These circumstances were conducive to a booming retail trade and economic prosperity for the city of Hays, as well as Ellis County.²²

²⁰ Hansen, *The Challenge of Urban Growth: The Basic Economics of City Size and Structure.* (Lexington, Mass: D.C. Heath & Co., 1975). 33.

²¹ Shortridge, *Cities on the Plains*, 262.

²² Craig Miner, *Kansas: The History of the Sunflower State, 1854-2000* (Lawrence, KS: University Press of Kansas, 2002), 275, 278.

In the mid1950s oil production for Ellis County had leveled off at 11,165,000 barrels.²³ (1950s oil production is shown on pages 70-72.) There were over one thousand businesses in the city of Hays.²⁴ And the population of Hays was almost twelve thousand.²⁵

By 1970 Ellis County oil production had begun declining to 8,724,000 barrels.²⁶ The tax revenue had decreased to a little more than thirty million, compared to over forty million that had been collected in the 1940s.²⁷ There were almost twelve hundred businesses in the city of Hays.²⁸ And the population was over thirteen thousand five hundred.²⁹

According to Shortridge, "Such statistics, together with jobs generated by the central Kansas oil field, formed the basis for Hays becoming one of the fastest-growing cities in the northwestern quadrant of the state."³¹

²³ State Geological Survey of Kansas, 1950.

²⁴ "Hays, Kansas Telephone Directory," Southwestern Bell Telephone, 1955.

²⁵ Shortridge, *Cities on the Plains*, 383.

²⁶ State Geological Survey of Kansas, 1971..

²⁷ Majdalani, "Economic Impact of the Petroleum Industry on Ellis County," 16.

²⁸ "Hays, KansasTelephone Directory," Southwestern Bell Telephone, 1969.

²⁹ Shortridge, *Cities on the Plains*, 383.

³⁰ Total tax revenue data for the 1950s into the 1960s of this thesis study for Ellis County were unavailable by the Ellis County Treasurer's Office, April 18, 2012.

³¹ Shortridge, *Cities on the Plains*, 206.

CONCLUSION

On August 20, 1959, a celebration was held in Hays to observe and commemorate the centennial of the discovery of oil in America in Titusville, Pennsylvania on August 27, 1859. One hundred years of oil production had boosted the country's economic standing, lifted the country up out of the Great Depression years, helped supply the military in times of war, and provided for countless needs in daily life, both here and abroad.¹

Ellis and the surrounding counties had been involved in oil production for over forty years, following discovery of the productive commercial well on the William Shutts' farm in 1928. The headline of the *Ellis County Farmer* announced this main event for the citizens of the surrounding counties and encouraged them all to take part in the celebration. The newspaper stated, "Since then oil has played a tremendous role in the economy of this area . . . and Ellis and the surrounding counties have been rated at the top in the state of Kansas in crude oil production and drilling." The newspaper went on to point out that many of the legal firms that serviced the oil industry had established their main headquarters in Hays and taken offices in the local buildings. Hundreds of people in Ellis County had been employed in the oil industry - some for the service companies and some for the oil production companies, as well as other oil related businesses.

¹ "Oil Centennial Observance Planned, " *Ellis County Farmer*, August 20, 1959, 1950s-1960s Oil Clipping File, Ellis Country Historical Society, (ECHS), Hays, KS.

The intent of the *Ellis County Farmer's* publication was to show honor to the oil men and women of the area for their vital role in the oil production industry, ". . . benefitting our area in war time and peace time and saluting them on this 100th birthday of a great American industry; born in freedom and working for progress."²

The Oil Committee of the Hays Chamber of Commerce sponsored a business tour of the oil fields, ". . . to better acquaint our local business men of the community with the manner in which oil operations are conducted in this area." Harold Popp, Jr., of the Popp Truck Line, Inc., of Hays, one of the large crude oil transport companies, was the chairman of the Oil Committee.³

As a result of the major oil productivity from the late 1920s to the mid 1930s, major oil companies had moved in and bought out the smaller, independent oil companies. Then entering the 1950s when oil production became highly active again, the price of oil dropped, causing an inconsistent and less stable oil market. And once again, due to the over abundance and decrease in oil production and the unstable market, the oil companies and businesses that had moved to Hays were forced to either close their doors or move on.⁴

² "Oil Centennial Observance Planned," *Ellis County Farmer*, August 20, 1959, 1950s-1960s Oil Clipping File, Ellis Country Historical Society, (ECHS), Hays, KS.

³ "H. M. Pop Truck Line of Hays," *Hays Daily News*, September 1952, 1950s-1960s Oil Clipping File, Ellis

⁴ Roy Bird, *Heartland History*, 126.

Throughout much of the twentieth century, the price of U.S. petroleum was heavily regulated through production or price controls. In the post World War II era, U.S. oil prices at the wellhead averaged \$28.52 per barrel. In the absence of price controls, the U.S. price would have tracked the world price averaging near \$30.54. Over the same post war period, the median for the domestic and the adjusted world price of crude oil was \$20.53 per barrel. In the history of pricing, the price of crude oil has experienced wide price swings in times of shortage or over supply. And the crude oil price cycle sometimes extends over several years, responding to the changes in demand. Oil prices are mostly market driven. If there is a high demand for oil, the prices will rise.

Other oil producing nations can affect oil prices by either increasing or decreasing oil production and, therefore, affecting the supply. The price of oil has a major impact on the global market. It fluctuates constantly, depending on supply and demand. The price of oil is set by the petroleum market. The organization of Petroleum Exporting Countries (OPEC) influences the price as well.⁵

Due to the fluctuating oil market, by 1970 the economy of many of the oil productive states across the country had suffered. In the state of Kansas, the oil industry had been one of the three major employers. Oil companies laid employees off and thousands lost their jobs. Minimal producing wells were cut back or shut down al-

⁵ <u>www.wtrg.com</u> (accessed February 25, 2012).

together from pumping because it costs more to pay the taxes on the oil than it did to produce the oil. Ellis County was no exception to this oil slump. Unemployment in Kansas began to rise to over seven per cent.⁶

In spite of the fluctuating oil prices and inconsistency of the oil market over the years, the oil industry is to be credited for the financial contribution it provided on a personal, local, and state level. Elias Majdalani researched the Ellis County oil industry in the year 1970 and wrote about it in his thesis entitled, "The Economic Impact of the Petroleum Industry on Ellis County, Kansas." He pointed out that without the oil production, the county of Ellis would have experienced an economic decrease, rather than an increase, simply because it lacked economic interdependence. As he stated,

Some of the industries within the economy are basic export industries that have little, if any, dependence on each other or other industries in the county. Thus, much of the technical know-how and other services for the operations of these industries are imported from outside the region.⁷

The vital role that this industry plays in the prosperity of the county cannot be disputed. The financial contribution that oil exportation made to Ellis County was a major factor in the economic prosperity that the county experienced in the forty years preceding 1970.

⁶ Bird, *Heartland History*, 126.

⁷ Majdalani, "Economic Impact of the Petroleum Industry on Ellis County," 49.

KIOGA representative and Kansas historian Craig Miner emphasizes that any area across the state that showed any signs of oil was explored and the oil developed to its fullest potential. The state passed important laws that would restrict the oil industry according to safe and manageable standards. Miner stated, "The state framed pioneer legislation to insure that its minerals would be efficiently utilized, would co-exist in a reasonable manner with the landscape, and would yield maximum financial gain to Kansas oilmen, oil field workers, towns, and industries dependent upon ready energy. About one-fourth of the total tax revenues of Kansas have come from its petroleum industry...."⁸ Victor Murdock, editor of the *Wichita Eagle*, commented on the importance of oil in the world by pointing out how the oil derrick resembled the windmill. The derrick extracted the oil as the windmill pumped up the water from which they both provided to the county economy. The four decades of oil production in Ellis County, from the late 1920s to 1970, was a time of economic prosperity.

It is interesting to note that the value of oil has come a long way from an insignificant element by the name of "kerosene," which became one of the most useful and profitable resources of the century due to the activity of the entrepreneur and oil magnate, John D. Rockefeller. According to historian Daniel Yergin, at the turn of the century, ". . . gasoline was an almost useless by-product, which sometimes managed to be sold for as much as two cents a gallon, and, when it could not be sold at all, it was run out

⁸ Miner, *The Fire in the Rock*, 17.

into rivers at night." Today oil has replaced "King Coal" as the power source for the industrial world.⁹ (See chart of the Hubert Peak Theory is on page 67.)

Global population has increased fourfold in the twentieth century, and industrial output has expanded fortyfold. This economic growth was due in part to the expansion of industrial production of the earth's natural resources. And oil is one of the major resources that have been needed like never before to sustain life as we know it. By 1970 people around the world had come to depend on the global market: the western world, the communist world, and the third world developing countries. On page 68 a chart illustrates past U.S. energy consumption. In 2004 the U.S. used one fourth of all oil produced in the world.¹⁰ A chart illustrating this is on page 69.

The oil industry has been a major contributing factor to the economic prosperity of the United States, as it has to the state of Kansas and Ellis County. It has provided revenue, business growth, employment opportunities and personal wealth.

In 1776, the Scottish economist, Adam Smith, published *An Inquiry into the Nature and Cause of the Wealth of Nations*. Smith believed that free market economies are more financially beneficial to society as a whole, than individually.¹¹ Historian Craig Miner adds, "Wealth lay not so much in rare or beautiful items, such as gold, as well as in the productive and intellectual capacity of the people of nations to transform the useless

⁹ Daniel Yergin, *The Prize; the Epic Quest for Oil, Money, and Power*, (New York: Simon & Schuster, 1999), x.

¹⁰ Matthew Yeomans, Oil: Anatomy of an Industr, y (New York: The New Press, 2004), xiv, 71.

¹¹ Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nation*, (New York: American Home and Library Company. 1902), iii.

into the useful, and in fact to create wealth and convenience for all, where before there had been either nothing at all or something as unlikely as crude oil."¹² Gail Carpenter, former Kansas geologist, who spent his life in the oil industry, stated, "Value in product makes value in people, and value, with all its cycles and uncertainties, is what the oil business in Kansas has been all about." Carpenter further pointed out that if our nation does not produce its own wealth, then our nation becomes a society dependent on another, crippling our own ability to survive.¹³ Therefore, the oil production of our country enables us to stand strong and provide for our own needs.

When Professor Erasmus Haworth of the University of Kansas visited the area, he predicted the potential for oil production, thereby opening up the door to economic prosperity for Ellis County. An article published in the *Hays Daily News* by Willie Mannebach, a Fort Hays State University student, extolled Haworth for his educated foresight. Remembering the discovery of one of the largest oil well discoveries – the Bemis-Shutts oilfield, Mannebach stated,

That field has marketed nearly two hundred seventeen million barrels of crude oil, still making close to two million barrels per year, and spreads over twenty-two thousand acres. And it extends north into Rooks County where the Bemis-Shutts has marketed an additional three million barrels of cumulative production.¹⁴

¹² Craig Miner, *The Fire in the Rock: A History of the Oil and Gas Industry in Kansas, 1855-1976* (North Newton, Ks: The Mennonite Press, 1976), xii.

¹³ bid., xvii.

¹⁴ "Haworth Develops Area Oil Industry," *Ellis County Farmer*, July 4, 1976, 1950s-1960s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, Ks.

Fifty years after the first oil well discoveries in Ellis County, there was a total oil production of more than three hundred sixty million barrels. Despite the critical slump in oil prices during the 1960s, Ellis County remained among the three highest oil producing counties in the state of Kansas. And in 1975 all tangible property in oil was assessed at \$36,877,897.¹⁵ (See table of 1971 oil production on pages 73-79 and map on page 80.)

It is worth asking, what if oil had never been discovered in Ellis County? Would the area be as populated as it is today? What would the state of the economy be like? Would Ellis, along with all the surrounding counties, have remained only an agricultural area of three thousand? It is a fact that oil has become one of the most vital resources in our world today, and oil production has become one of the most profitable businesses in the world with an estimated value of nearly five trillion dollars.¹⁶ And for Ellis County, Kansas, to have discovered such an abundance of oil through the years and benefitted from its wealth, it is therefore easy to understand and accept how oil production greatly contributed to the economic prosperity of the county.

If oil had not been discovered in Ellis County, it might have fared well without it. But then again, there are so many stories from the newspapers in the archives at the Ellis County Historical Society, and numerous documents of geologists' reports, and countless books that have been written by Kansas historians that tell about the financial prosperity

¹⁵ "Haworth Develops Area Oil Industry," *Ellis County Farmer*, July 4, 1976, 1950s-1960s Oil Clipping File, Ellis County Historical Society, (ECHS), Hays, Ks.

¹⁶ Yeomans, Oil, 71.

that came to area farmers and land owners because of oil that was discovered on their land. Wealth came through the royalty checks they received, which was their share of the oil profits. If the land owner owned the mineral rights to the property, or owned a share of it, and oil was discovered on his land, that was an even better situation. One such land owner was George Dickey from Wichita, Kansas. He owned one of the biggest oil producing wells in Ellis County was discovered in the Bernis and the Burnett pool. By investing three thousand dollars in the mineral rights to the land in 1937, his investment turned into a financial empire with five million dollars.¹⁷

Kansans had believed that there was oil in the eastern part of the state ever since Kansas became a state. And when oil was finally discovered, it opened the door to the Mid-Continent Oil Field as it is known today. But eastern Kansas was not the only oil rich area in the state. Spreading north to northwesterly, oil was soon discovered in western Kansas. An oil boom followed and settled across the vast agricultural region of Ellis County.¹⁸

The oil industry most definitely affected the Ellis County area. It surpassed agriculture as a mainstay of the county's economy. This was a remarkable transformation in a county whose future was once considered entirely dependent on the products of the soil. Even more is the fact that the discovery of vast new oilfields

¹⁷ Miner, *The Fire in the Rock*, 83.

¹⁸ Chinn, *The Kansas Journey*, 196.

contributed to the economy of Kansas. This totally defies the old prediction made by Dr. David White of the U. S. Geological Survey in 1891, "The state of Kansas . . . possessed no real possibilities for new discoveries in oil . . . and that the current reserves would be exhausted within a decade."¹⁹ Oil and its market value benefit society as a whole, not just individuals or the companies that develop it. Such has been the case with the oil production and economic prosperity in Ellis County.

Oil production has remained steady over the years. (See chart on page 80) In 2010 the state of Kansas ranked eighth in oil production in the United States.²⁰ The oil industry remains the biggest business in the world today. As a result of the vast amount of oil production over the years, Ellis County has grown, flourished and prospered. But what is even more impressive is how this little western county became one of the major oil producing regions in the state of Kansas and a leading producer in the nation.

Historically, the county of Ellis was once considered to be only an agricultural area for farming and livestock. When oil was discovered November 15, 1928, on the Charlie Shutts farm, it changed the county's economy for the next forty years. Ellis County balanced the oil industry with the agricultural industry, creating a flourishing dual economy that contributed to growth and prosperity. Across the golden wheat fields, windmills and pump jacks lay helter-skelter across the horizon, working side-by-side, providing the working arms of industry and economic prosperity.

¹⁹ Miner, *Discovery*!, xv.

²⁰ Ibid., 74.

While driving though the prairies of Western Kansas, Victor Murdock of *The Wichita Eagle* observed the view outside his car window. The contrasting view struck him and he wrote about it: "Here is found a mixture of mining in its liquid phase with agriculture in its agronomical phase; a mixture which immediately arrests the imagination. Perhaps its most appealing manifestation in central terms is the way the derrick has jostled with the windmill on the skyline of the prairie landscape."²¹ This is the true Kansas prairie.

²¹ Miner, *Discovery*!, xiii.

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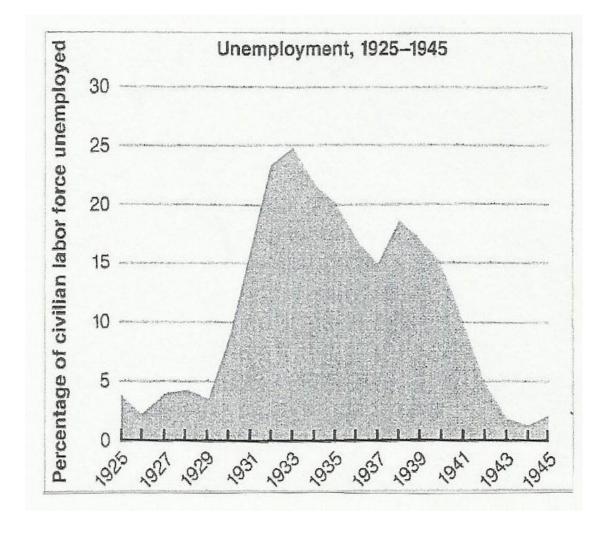
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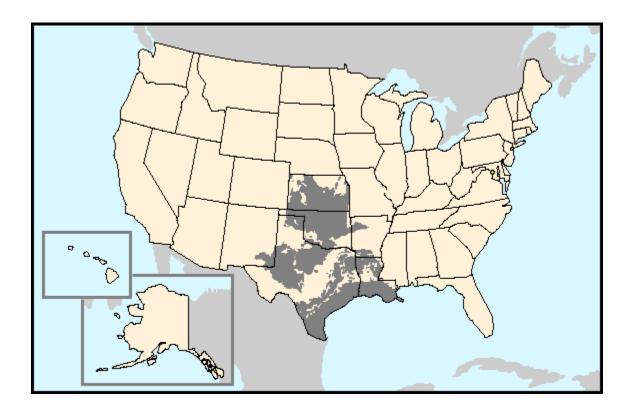
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The following graph shows the effect of the depression on unemployment.



Paul Boyer, *The Enduring Vision: A History of the American People*. (Lexington, Mass: D.C.Heath & Co. 1990), 882.

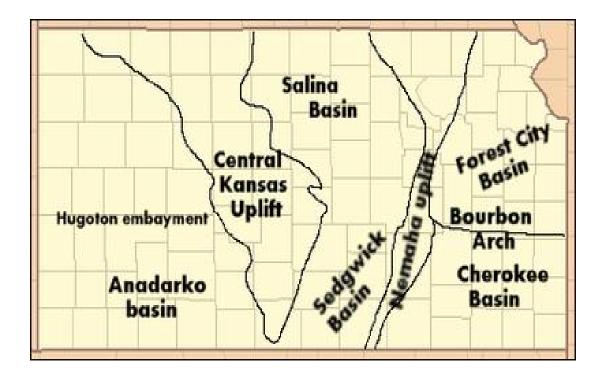
The following map shows the vast oil reservoirs in the darker shaded areas that spread across the state of Kansas.



2012).

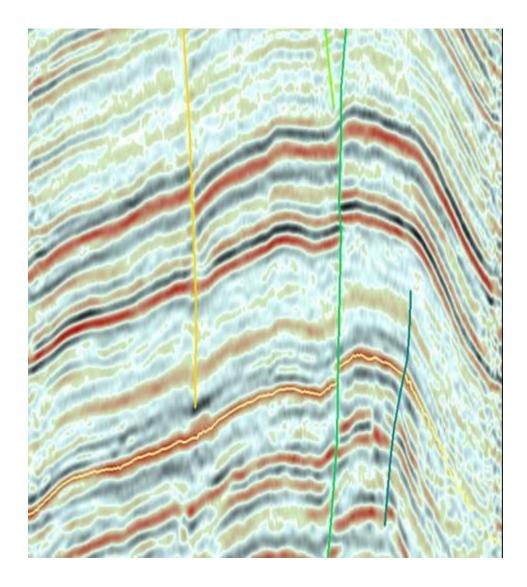
www.en.wikipedia.org/wiki/File:Mid-continent_Oil_Field_map.png (date accessed March 19,

The following is a map of the Central Kansas Uplift.



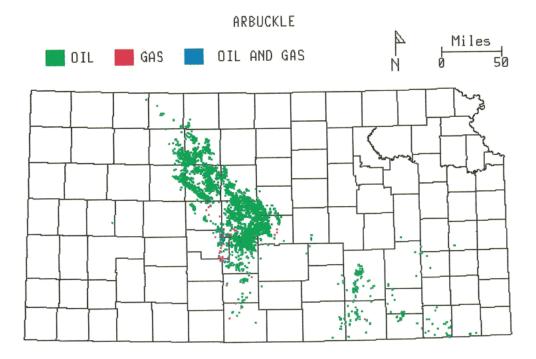
www.samgaryjr.com/central_Kansas_uplift.htm (accessed February 25, 2012).

The following is a 3-D seismic view of the earth's substructure. The darker shaded areas illustrate the reservoirs of oil and water.



www.geo.wvu.edu/-wilson/geo352.htm (accessed February 25, 2012).

Below is a map showing the oil pool of the Arbuckle formation located in the Central Kansas Uplift from the use of seismology.



www.kgs.ku.edu/Pulications/Bulletins/Sub9/indes.html (accessed February 25, 2012).

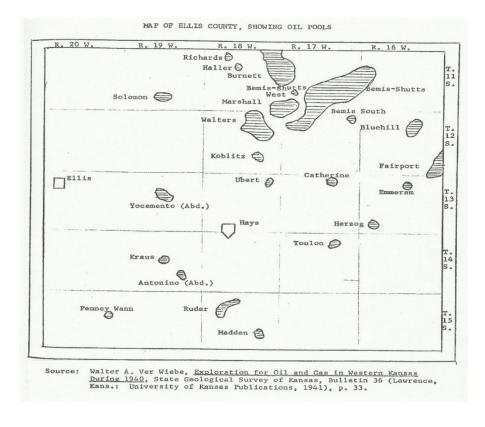
The map below shows where oilfields were located in the years from 1928 to 1940 in Ellis County, Kansas.

Pool and Location	Area, acres	Cumulative production to end of 1940, bbls.	
Bemis-Shutts, 16–11–17W Bemis-Shutts West, 20–11–17W Bemis South, 2–12–17W Blue Hill, 14–12–16W	$10,240 \\ 120 \\ 40 \\ 640$	11,669,425 37,273 17,100 179,500	
Burnett, 1–11–18W	3,600	2,098,500	
Catherine, 3–13–17W. Emmeram, 4–13–16W. Haller, 10–11–18W. Herzog, 30–13–16W. Koblitz, 23–12–18W. Madden, 26–15–18W.	$160 \\ 40 \\ 40 \\ 40 \\ 80 \\ 600$	$112,600 \\ 36,112 \\ 13,260 \\ 6,700 \\ 44,307 \\ \dots$	
Kraus, 22–14–19W Marshall, 36–11–18W Penny Wann, 13–15–20W Richards, 5–11–18W Ruder, 17–15–18W	$100 \\ 1,000 \\ 40 \\ 120 \\ 700$	52,400 467,500 25,900 66,900 632,600	
Solomon, 28–11–19W Toulon, 3–14–17W	$\begin{array}{c} 160 \\ 200 \end{array}$	48,400	
Ubert, 12–13–18W Walters, 2–12–18W	$160 \\ 1,400$	123,500 987,200	

Oil Pools of Ellis County

Elias Majdalani, "Economic Impact of the Petroleum Industry on Ellis County, Kansas." (Hays, KS: Fort Hays Kansas State College, December 4, 1970), 16.

The map below shows the oilfields that were discovered from 1928 to 1940 In Ellis County, Kansas.



Elias Majdalani, "Economic Impact of the Petroleum Industry on Ellis County, Kansas." (Hays, KS: Fort Hays Kansas State College, December 4, 1970), 16.

Pool and location of discovery well	Dis- cov- ery year	Area, acres	1945 pro- duction, bbls.	Cumulative production to end of 1945, bbls.
Beeching 34-15-16W	1943	300	45,865	109,515
Bemis-Shutts 16-11-17W	1935	14,000	5,136,455	37,678,655
Bemis South 2-12-17W	1938	40	9,575	67,495
Blue Hill 14-12-16W	1937	900	114,750	974,700
Burnett 1-11-18W	1937	5,000	3,174,250	21,893,450
Catharine 3-13-17W	1936	160	4,165	143,595
Catharine North- west 4-13-17W	1944	640	11,600	11,600
Cromb 22-11-20W	1945	40	2,221	2,221
Ellis 31-12-20W	1942	700	159,435	383,442
Emmeram 4-13-16W >	1937	160	14,365	172,155
Fairport			See Russ	ell County

The following chart shows the oil well productivity for 1945.

State Geological Survey of Kansas Bulletins, (Lawrence, KS: University of Kansas Pub., 1945).

Fairport			See Russe	ll County
Haller 10-11-18W	1936	40	1,370	21,400
Herzog 30-13-16W	1940	200	35,470	235,220
Herzog North 19-13-16W	1945	160	30,510	30,510
Koblitz 23-12-18W	1937	800	72,565	463,125
Kraus 22-14-19W	1936	100	3,225	75,450
Kraus Northwest 17-14-19W	1942	40		
Leiker 14-15-18W	1943	80	14,225	35,645
Nicholson 30-11-20W	1945	40	1,550	1,550
Penny Wann 13-15-20W	1936	80	14,415	76,655
Pleasant 2-14-20W	1944	1,000	85,910	91,850
Richards 5-11-18W	1938	120	none	106,785

The following chart shows the oil well productivity for 1945.

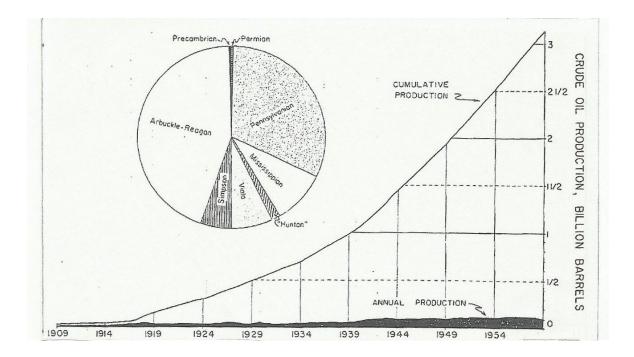
State Geological Survey of Kansas Bulletins, (Lawrence, KS: University of Kansas Pub., 1945).

The following chart shows the oil well productivity for 1945.

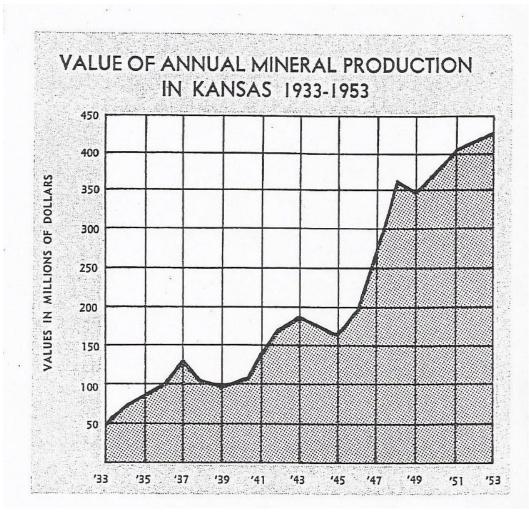
Pool and location of discovery well	Dis- cov- ery year	Area, acres	1945 pro- duction, bbls.	Cumulative production to end of 1945, bbls.	Num- ber of wells
Riverview 19-11-18W	1943	900	108,900	431,520	18
Ruder 17-15-18W	1935	700	45,890	867,875	$\frac{12}{2}$
Schmeidler 28-12-17W	1944	400	16,690	16,690	4
Solomon 28-11-19W	1936	160		*	2
Sugarloaf 17-13-17W	1941	180	22,080	, 122,980	2
Sugarloaf South- east 28-13-17W	1941	40	5,630	31,440	1
Toulon 3-14-17W	1935	200	41,600	282,860	6 2
Ubert 12-13-18W	1936	160	12,850	221,870	3
Walters 2-12-18W	1936	1,500	346,130	3,187,230	1 36
Younger 6-14-17W	1944	160	16,343	17,565	4

State Geological Survey of Kansas Bulletins, (Lawrence, KS: University of Kansas Pub., 1945).

The following chart illustrates that one third of the oil extracted for the geological structures in the state of Kansas are provided by the Arbuckle formation in the West Central Kansas Uplift, as compared to the other formations.



John Gihon, *The Fifth Annual Economic Report of the Governor from the Kansas Office of Economic Analysis*, (Topeka, KS: State of Kansas, Dept. of Administration, Division of State Planning and Research, 1953), 10.

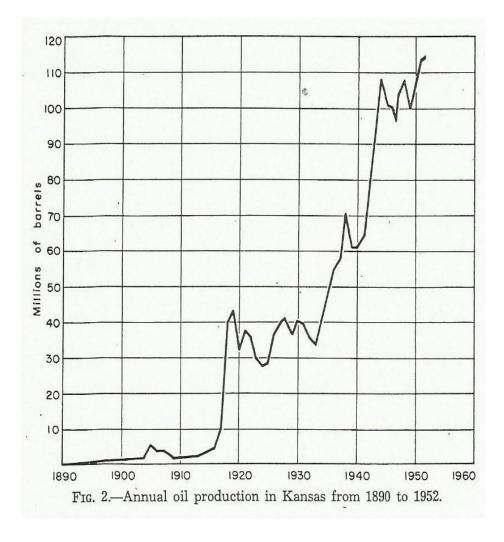


The following graph shows the rise in the value of mineral production in Kansas from 1933 to 1953.

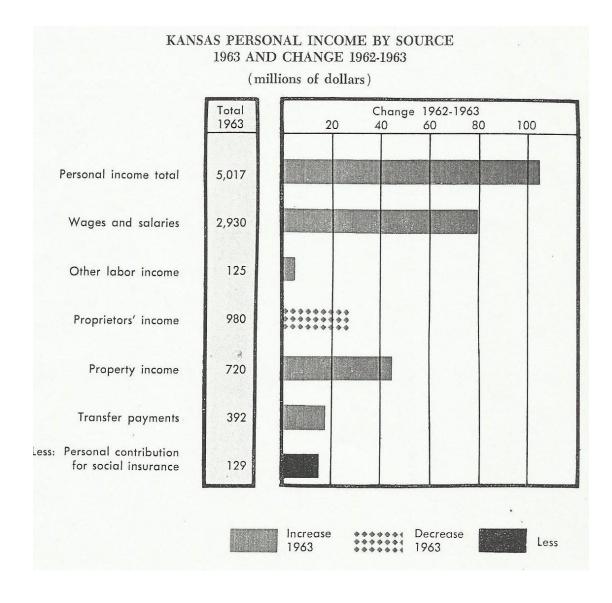
John Gihon, *The Fifth Annual Economic Report of the Governor from the Kansas Office of Economic Analysis*, (Topeka, KS: State of Kansas, Dept. of Administration, Division of State Planning and Research, 1953), 10.

Annual Oil Production in Kansas from 1890 to 1960.

The following graph shows the ever-increasing rise in oil production. Note the rise and fall of production from the 1920s to the 1960s.

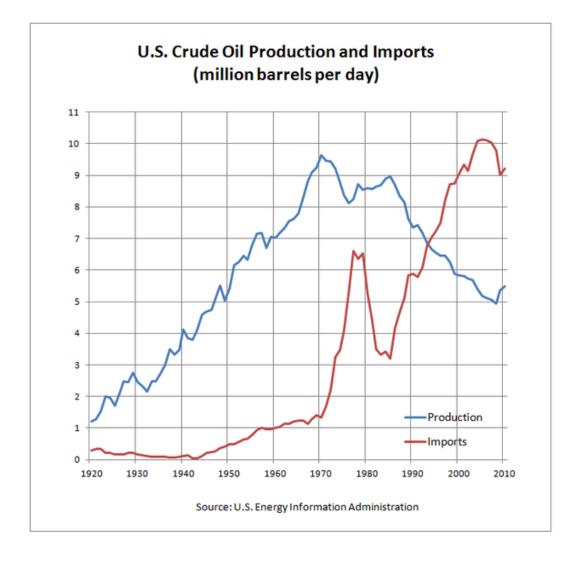


John Gihon, *The Fifth Annual Economic Report of the Governor from the Kansas Office of Economic Analysis*, (Topeka, KS: State of Kansas, Dept. of Administration, Division of State Planning and Research, 1953), 10.



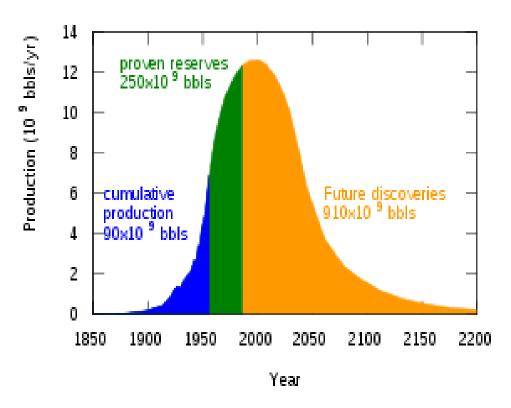
John Gihon, *The Fifth Annual Economic Report of the Governor from the Kansas Office of Economic Analysis,* (Topeka, KS: State of Kansas, Dept. of Administration, Division of State Planning and Research, 1953), 10.

The following chart shows the amount of oil production exportation and importation from across the state of Kansas



www.eia.gov images, (date accessed February 25, 2012).

The Hubert Peak Theory



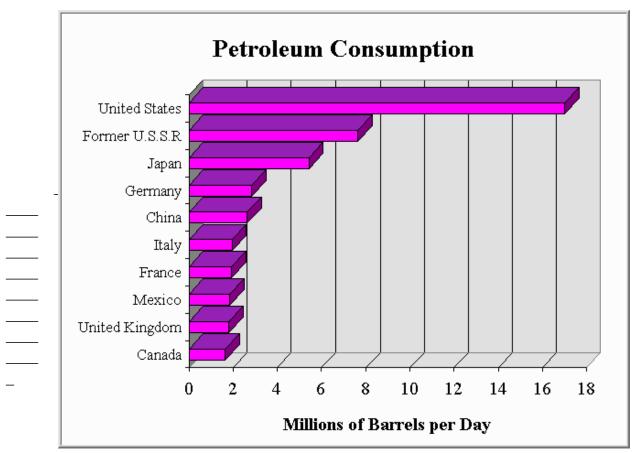
The chart below shows the cumulative production of oil, the proven reserves, and the future discoveries.

www.en.wikipedia.org/wiki/Hubert peak theory (accessed February 25, 2012).

U.S. Energy Consumption (Quadrillion of B.t.u)						
	Bituminous	Crude	Nature	Fuel		
Year	Coal	Petroleum	Gas	Wood		
1870	0.5	0.0		2.9		
1880	1.3	0.1		2.9		
1890	2.9	0.2	0.3	2.5		
1900	5.4	0.2	0.3	2.0		
1910	10.7	1.0	0.5	1.8		
1920	13.3	3.0	0.8	1.6		
1930	11.9	6.1	2.0	1.5		
1940	11.3	7.7	2.7	1.4		
1950	10.2	12.3	6.2	1.2		
1960	9.7	16.9	12.7	0.8		
1970	12.7	22.4	22.0	0.4		
1980	17.1	34.2	20.8			
1990	21.8	33.6	19.5			

The chart below shows the amount of U.S. energy consumption

twenty years.



www.pafco.com/history/h_energy.html (date accessed April 14, 2012).

The chart below shows that the U.S. used more oil than any other country.

www.pafco.com/history/h_energy.html (date accessed February 25, 2012).

Field Name	Location	Year discov	ered	Tota	<u>l oil for year</u>
Antonino	27-14-19W	1947	Ellis 200	County 15,826	66,766
Antonino Townsite	2-15-19W	1949	00	10.004	
Beeching	34-15-16W		80	13,004	13,809
Bemis-Shutts	16-11-17W	1943	500	11,880	207,388
Blue Hill	14-12-16W	1935	16,000	4,269,302	63,716,714
	14-12-10 W	1937	1,000	167,459	1,743,243
Burnett*					
	1-11-18W	1937	6,500	2,637,592	36,218,808
Burnett Northwest*	3-11-18W	1946	800	391,688	1,561,726
Burnett Southwest	22-11-18W	1946	1,600	727,110	2,286,807
		3			
and a second		And the second		<u>Carterio de la compo</u>	
Canyons	11-12-17W	1948	40	1,167	7,426
Catharine	3-13-17W	1936	460	177,567	376,171
Catharine Northwest	4-13-17W	1944	340	66,724	357,419
Catharine South	15-13-17W	1946	500	170,439	599,220
Catharine Townsite	9-13-17W	1949	40	8,027	8,027
Chrisler	22-11-16W	1949	40	7,223	13,200
Christina	22-12-16W	1949	100	13,015	13,015
Dechant	6-15-18W	1950	40	1,888	1,888
Dreiling	21-14-16W	1949	260	62,087	68,210
Ellis*	31-12-20W	1942	700	55,280	710,180
Emmeram	4-13-16W	1937	160	9,483	227,633
	27-12-16W	1949	360	23,520	25,873
Immeram Northeast Fairport*	8-12-15W	1923	1,050	461,221	

The following chart shows the oil production of Ellis County wells in 1950.

State Geological Survey of Kansas Bulletins, (Lawrence, KS: University of Kansas Pub., 1950).

Field Name	Location	Year dise	covered	Total oil	for year
Fort Hays State College Gasaway	1-14-19W 11-11-19W	1950 1950		1,203 ed during 1	1,203 1950 441
Haller	10-11-18W	1936	40	180	24,643
Herzog	30-13-16W	1940	470	120,120	913,595
Irvin Koblitz	6-14-19W 23-12-18W	1946 1937	350 500	75,033 96,629	290,338 871,176
Kraus	22-14-19W	1936	100	9,309	122,096
Krueger*	35-10-16W	1948	450	144,186	200,165
Kunz	35-14-16W	1950		ed during 1	.950 326
Leiker	14-15-18W	1943	100	11,161	98,644
Lookout Hollow	31-14-18W	1950	40	400	400
Meistrell	3-11-18W	1949	combined w	ith Burnet	
Nicholson	30-11-20W	1945	250	43,323	235,220
Penny-Wann	13-15-20W	1936	120	10,979	152,849
Pleasant	2-14-20W	1944	1,000	151,432	886,267
			· ·		:
Pleasant North	26-13-20W	1946	40	none	2,168
Pleasant Ridge	20-12-17W	1950	640	42,734	325,097
			formerl	y part of H	Bemis-Shutts
Polifka	7-13-17W	1948	40	8,974	20,662

The following chart shows the oil production of Ellis County wells in 1950.

State Geological Survey of Kansas Bulletins, (Lawrence, KS: University of Kansas Pub., 1950).

Field Name	Location	Year disco	vered	Total oil for	year
Reed	5-13-17W	1949	40	2,627	4,135
Riverview Ruder	19-11-18W 17-15-18W	$\begin{array}{c} 1943 \\ 1935 \end{array}$	940 670	158,143 49,979	1,405,786 1,069,198
Schmeidler	28-12-17W	1944	400	53,394	294,437
Schoenchen Solomon Sugarlaaf	21-15-18W 28-11-19W	1946 1936 1941	850 960	172,736 65,534 72,842	571,768 245,181
Sugarloaf Sugarloaf East Sugarloaf Southeast	17-13-17W 21-13-17W 28-13-17W	$1941 \\ 1950 \\ 1941$	280 80 120	72,842 2,263 10,624	$289,204 \\ 2,263 \\ 105,640$
Sweet William Toulon	10-12-20W 3-14-17W	1941 1950 1935	680	no report 26,645	none 435,809
Ubert	12-13-18W	1936	80	10,689	274,374
Upper Turkville	9-11-17W	1948		ed during 1950	
Walter	2-12-18W	1936	1,700	399,070	5,030,900
Warren Weigel Wheatland	12-11-20W 19-12-16W 18-15-17W	1949 1948 1949	40 abandon 40	9,234 ed during 1950 2,869	
Wheatland South Younger	30-15-17W 6-14-17W	1949 1950 1944		ed during 1950 30,255	2,869 2,177 178,770
Total Ellis County			the second se	11,077,013	$\frac{110,110}{124,172,328}$ $124,365,126$

The following chart shows the oil production of Ellis County wells in 1950.

State Geological Survey of Kansas Bulletins, (Lawrence, KS: University of Kansas Pub., 1950).

FIELD NAME AND	LOCATION OF DIS- COVERY	AREA	OIL PRODUC	CTION, BBL
YEAR OF DISCOVERY	WELL	ACRES	DURING,1971 TO	D END DF 1971
			ELLIS COUNTY	((CONT .)
ANTONINO SOUTH(,62)	35-14S-19W	500	120,488	383,803
ANTONING SOUTHWEST (, 66)	34-145-19W	120	14,103	153,209
ANTONINO TOWNSITE(,49)	02-15S-19W	80	2,588	67,995
ANTONINO TOWNSITE WEST(,66)	35-14S-19W	80	2,577	28,308
BAKER(, 66)	10-125-18W	40	978	12,739
BEECHING(, 43)	34-155-16W	200	4,727	378,766
BEMIS SHUTTS(, 28)	05-125-17W		2,458,280	208,736,645
ALSO IN ROOKS COUNTY				20011501015
BIELMAN(,52)	24-15S-18W	80	2,477	215,776
BIG CREEK(, 67)	17-135-19W	40	NO RUNS	3,784
BLUE HILL(,37)	14-125-16W	1,390	58,137	3,866,263
BLJE HILL NORTHWEST(,58)	03-125-16W	900	63,650	1,593,854
BLJE HILL SOUTHEAST(,60)	24-125-16W	160	5,221	101,255
BOOS(, 56)	20-155-17W	40	2,952	115,403
BOWL BY (, 64)	01-11S-16W	80	3,913	68,058
BOWLBY NORTH(, 66)	01-115-16W		NO REPORT	9,382
BRUNGARDT(, 52) ALSO IN ROOKS COUNTY	35-10\$-17W	200	32,868	357,760
AC30 14 10013 200111				
BUCK EYE(,67)	07-12S-18W	120	3,170	41,731
CATHARINE(, 36)	03-135-17W	630	70,788	2,671,645
CATHARINE NORTHWEST(,44)	04-135-17W	420	17,289	1,415,373
CATHARINE SOUTH(,46)	15-135-17W	1,300	119,960	5,243,230
CATHARINE TOWNSITE(,49)	09-135-17W	120	5,863	243,701
CHRIS(, 58)	34-11S-16W	120	6,388	199,442
CHRISLER(, 49)	22-115-16W	80	5,132	155,644
CHRISLER EAST(+68)	22-115-16W	40	NO RUNS	6,225

			Oil Prod	uction-bbl.
Field Name	Location of Well	Acres	during 197	<u>1 – end of 1971</u>
CHRISLER SOUTH(,58)	27-115-16W	140	3,516	188,565
COCHRAN(, 53)	08-115-18W	100	312	142,862
CROMB(,45)	22-115-20W	200	9,476	297,930
DECHANT(+56)	07-155-18W	240	13,324	299,335
DECHANT NORTHWEST(+66)	02-155-19W	80	6,495	62,638
DECHANT WEST(, 65)	01-15S-19W	420	50,808	605,721
DEGENHART(,53)	15-15S-17W	120	2,285	290,568
DINGES(,54)	09-15S-18W	80	2,653	176,633
DINGES EAST(,66)	03-15S-18W	40	2,756	35,207
DIST. 57(,70)	28-125-20W	40	2,464	4,397
DORTLAND(, 64)	24-135-16W	80	1,749	29,840
DREIL ING(+49)	21-145-16W	580	13,836	1,376,241
DREILING NORTH(, 64)	15-14S-16W	40	NO RUNS	6,597
DREILING SOUTHEAST(, 53)	27-145-16W	240	6,619	574,306
EAGLE CREEK(,54)	11-115-20W	640	18,509	827,697
EAGLE CREEK EAST(,58)	02-115-20W	40	2,008	55,877
EDSEIBEL(,66)	09-145-20W	160	9,318	89,252
EDSEIBEL NORTH(,70)	05-145-20W	280	80,316	123,331
ELLIS(,43) ALSO IN TREGD COUNTY	31-125-20W	2,090	70,443	2,794,944
ACSO IN TREES COUNTY				
ELLIS EAST(,68)	10-13S-20W	80	5,284	33,288
ELLIS SOUTHEAST(,65)	08-135-20W	40	1,332	20,091
ELRU(,64) - ALSO IN RUSH COUNTY	35-15S-19W	40	NO RUNS	22,485
EMMERAM(, 37)	04-135-16W	600	18,851	749,592
EMMERAM NORTHEAST(,49)	27-125-16W	1,060	45,719	1,768,950
	•			
ENGEL(,56)	34-145-18W	260	12,720	393,976
ENGEL WEST(,56)	33-145-18W	120	5,774	70,043
ERBERT(,53)	20-125-20W	40	NO RUNS	43,828
ET HEL (, 67)	10-145-104	60	NO DUNC	
ETHEL SOUTHWEST(,67)	19-145-19W 30-145-19W	40 40	NO RUNS 1,603	892
EXPERIMENT(,52)	08-145-18W	40	982	10,459 28,078
	00 143-10W	40	902	20,078
EXPERIMENT SOUTHEAST(, 69)	17-145-18W	40	3,206	24,041

			Oil Production-bbl.		
Field Name	Location of Well	Acres	during 1971 – end of 197		
FAIRPORT(,23) ALSO IN RUSSELL COUN	08-125-15w	1,680	94,348	5,585,912	
FISHER(,70)	08-115-20W	200	36,370	40,989	
FORT HAYS STATE COLLEGE(,	50) 01-145-19W	120	3,463	193,454	
GATSCHET(,65)	13-135-19W	120	18,739	256,167	
				*	
GATSCHET SOUTHEAST(,68) GERSTNER(,69)	24-135-19W 24-145-17W	40 80	3,237 4,226	15,567	
GIINTHER(,52)	17-115-19W	80	3,951	137,596	
-GOTTSCHALK(,57)	36-155-18W	40	18,640	22,844	
GOTTSCHALK BROS.(,70)	06-145-20W	160	15,367	41,999	
GROSS(,63)	25-135-18W	120	6,438	105,124	
GROSS NORTH(,69)	25-13S-18W	40	2,580	7,749	
HALLER(,36)	10-11S-18W	40	2,441	52,321	
HASELHORST(, 70)	15-14S-20W	40	930	3,916	
HERBERT(, 58)	18-135-20W	280	21,230	433,350	
ALSO IN TREGO COUNTY					
HERL(,51)	28-145-17W	80	3,635	227,418	
HERZOG(,40)	30-135-16W	1,420	59,231	3,030,675	
HERZOG SOUTH(, 59)	05-14S-16W	40	678	18,261	
HEYL(,56)	20-145-17W	120	2,388	113,264	
HEYL SOUTHEAST(,60)	21-145-17W	300	26,914	299,918	
HIGH SPOT(,41)	28-125-16W	160	32,417	131,106	
HIGH SPOT SOUTH(,71)	33-12S-16W	40	13,467	13,467	
HOLY CROSS(,53)	26-125-18W	40	3,015	116,773	
HOLZ(,59)	18-135-16W	80	NO RUNS	19,439	

Oil Production-bbl.

4.5.7		A		Oil Produc	
d Name	Location	n of Well	Acres	during 1971	<u>– end of 1971</u>
HYACINTH(,67)		19-125-18	3W 4	O NO RUNS	8,2
1-70(,67)		15-135-19	W 20	19,844	173,4
IRVIN(,46)		06-145-19	W 3,07	213,394	8,211,7
IRVIN EAST(,55)		04-145-19	W 8	30 3,286	54,6
JACOB(, 51)		06-115-19	W 4	0 1,659	40,1
JACOB SOUTHEAST(, 67)		06-115-19		NO REPORT	
JENSEN(,69)		34-125-18		O NO RUNS	
KAISER(,59)		30-135-20)W 30		C
KELL(,66)		19-125-20	W 6	2,708	23,8
KIPPES(,68)		06-14S-16			
KLOTZ(,69)		33-125-16		5,086	
<raus(,36)< td=""><td></td><td>22-145-19</td><td>W 1,20</td><td>55,803</td><td></td></raus(,36)<>		22-145-19	W 1,20	55,803	
KREUTZER(,68)		03-135-19	W 16	0 22,753	84,
KRUEGER(,48) ALSO IN RODKS COUN		35-105-16	W 1,07		
LEIKER(,43)	117	14-155-18	W 80		
LEINEN(143)		14-155-16	W BL	62,862	2,662,0
LEIKER EAST(,53)		12-155-18	W 1,24	93,797	4,492,8
LEIKER NORTH(,56)		02-155-18	W 20	13,279	341,2
LEIKER SOUTHEAST(,54)		14-155-18	575. OTAT		
LEINMILLER(,59)		02-125-19	W 8	2,164	104,
LEONHARDT(, 62)		20-145-18	w .	0 2,852	25 /
LIEB(,56)		17-115-16	2.01		
LIEB EAST(, 57)		16-115-16	W 28	10 11,075	322,
LOOKOUT HOLLOW(,50)	ABD.	31-145-18		0 215	1: EX531
MARTINA(,69)		23-155-19		0 2,423	
MARVIN(,69) MEISTRELL SOUTHWEST(,59		22-135-18	22. Z. Z. Z. Z.	SSV	
MEISTRELL SUOTAWEST(, 59	,)	09-11S-18	W 12	14,930	197,5
MENDOTA(,51)		05-115-20	W 8	0 4,255	162,0
MESERVE(,65) ALSO IN TREGD COUN		18-155-20	W 8	10,787	60,9
MIXER(,65)	2.20.24	07-11S-20	W 8	0 5,591	81,6
NEDDAM(, 57)		16-115-18	W 8	1,563	62,1
NELLIE BELLE(,55)		15-135-17			
NICHOLSON(,45)		30-115-20	N.S		
ALSO IN TREGO COUN	ITY	17 100 10			
PAYNE(,67)		17-125-19	4 4	0 3,522	31,8

			Oil Product	tion-bbl.
l Name	Location of Well	Acres	during 1971 -	- end of 1971
PENNY-WANN(, 36)	13-155-2	OW 40	NO RUNS	257,94
PFEIFER(,64)	19-135-1	9W 80	8,996	70,36
PLEASANT(,44)	02-14S-2	0W 2,000	113,388	4,677,95
PLEASANT SOUTHEAST(,	60) 12-14S-2	OW 40	787	23,72
PLEASANT WEST(,61)	04-145-2	0W 40	3,400	20,60
POL(,66)	08-135-1	8W 40	NO RUNS	7,61
POLIFKA(,48)	07-135-1	7W 1,000	74,534	2,073,21
POLIFKA EAST(,66)	08-135-1	7W 80	1,316	17,40
POTTER(, 56)	. 20-11 S-1	6W 700	59,581	1,549,92
RAJEWSKI(+67)	28-155-1	7₩ 120	9,541	82,12
RANKIN(,68)	33-135-2		NO RUNS	1,03
RAYNES FORD(, 52)	17-135-2		NO RUNS	103,42
RAYNESFORD EAST(, 52)	16-135-2	0W 200	11,600	433,08
REED(,49)	05-135-1	7W 40	2,956	78,77
REED NORTHWEST(,62)	31-125-1	7W 80	5,675	89,26
RICHARDS(, 56)	05-11 S-1	8W 40	NO RUNS	152,13
RIDGE HILL(,69)	12-14S-1	9W 40	NO RUNS	3,32
RIVERVIEW(,43)	19-115-1	8W 1,060	134,242	3,705,17
RIVERVIEW 'EAST(,66)	28-11S-1	8W 80	6,511	65,67
RIVERVIEW SOUTH			OMBINED WITH	PTVERVIEW .
RUDER(, 35)	17-155-1		55,482	2,413,64
RUDER NORTH(, 57)	04-155-1	8w 200	8,868	126,70
RUDER SOUTHWEST(, 59)	18-155-1	8W 40	ND RUNS	5,08
SCHMEIDLER(,44)	28-125-1	7₩ 1,220	73,271	2,359,12
SCHMEIDLER SOUTH			NO REPORT	
SCHMEIDLER SE(,55)	34-125-1	7W 80	6,413	27:87

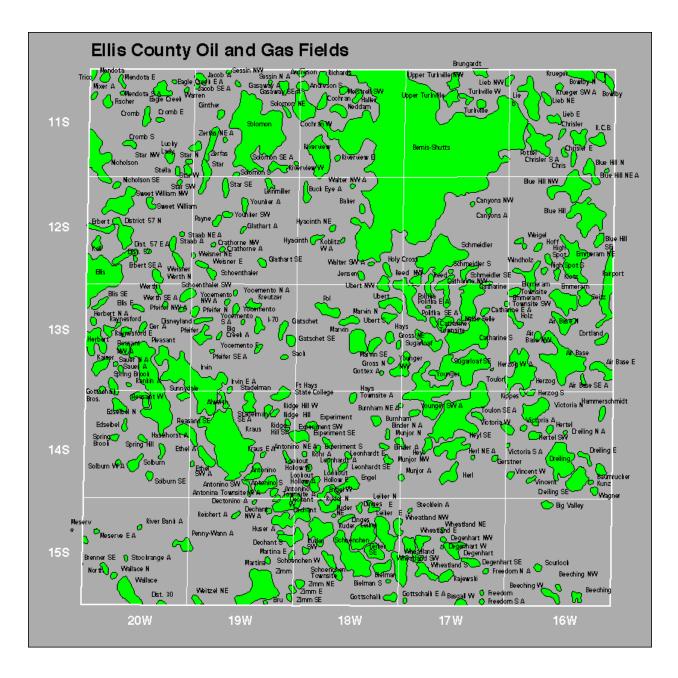
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	Oil Production-bbl.			
Field Name	Location of We	ell Acr	<u>during 1971 – e</u>	end of 1971
SCHDENCHEN(, 46)	21-155-18W	1,000	31,156	2,114,76
SCHOENCHEN TOWNSITE(,55)	28-15S-18W	40	NO RUNS	56,01
SCHOENTHALER(,64)	31-12S-19W	200	21,339	242,83
SEITZ(,56)	02-135-16W	180	15,810	103,64
SESSIN NORTH(,63)	04-11S-19W	120	10,980	86,786
SOL 3U RN (, 64)	28-145-20W	320	58,643	637,06
SOLOMON(,36)	28-115-19W	4,990	230,399	9,498,181
SOLOMON SOUTH(,57)	33-115-19W	80	4,551	1/0 05
SOLOMON SOUTHEAST(, 57)	35-11S-19W	160	2,317	169,050
SPRING BROOK (, 66)	17-14S-20W	80		210,919
SPRINGBROOK DIST.(,70)	32-135-20W	120	1,554 45,169	44,630
	22 120 200		131107	001940
SPRING HILL(,61)	23-145-20W	40	NO RUNS	8,122
STADELMAN(, 57)	03-145-19W	260	15,130	129,877
STECKLEIN(,68)	06-155-17W	40	1,415	13,580
SUGARLOAF(,41)	17-13S-17W	640	28,466	1,260,272
SUGARLOAF SOUTHEAST(+41)	28-135-17W	2,200	143,544	6,252,928
TOJLON(,35)	03-145-17W	1,900	168,597	3,411,109
TRICO(,51)	20-105-20W	300	20,494	551,642
ALSO IN GRAHAM, TREGD,	AND ROOKS COUN	ITIES		
TURKVILLE(,53)	11-11S-17W	80	1,060	140,949
JBERT(, 36)	12-135-18W	120	26,722	608,581
JBERT NORTHWEST(, 52)	01-135-18W	560	43,434	1,691,581
JPPER TURKVILLE(,48)	09-11 S-17W	80	2,510	108,815
VICTORIA NORTH(,52)	06-145-16W	320	17,066	545,181
VINCENT(,64)	32-145-16W	40	3,217	43,731
ALLACE(,65) ALSO IN RUSH COUNTY	33-155-20W	720	67,290	828,446
WALLACE NORTH(,68)	29-155-20W	40	6,959	31,530
ALTERS NORTH(,66)	02-125-18W	100	7,734	79,431
ALTER SOUTHWEST(,66)	26-125-18W	40	1,231	11,796
ARREN(,49)	12-115-20W	40	1,409	90,822
AEISNER(,49)	36-125-20W	120	5,398	37,007
JEITZEL NORTHEAST(,64)	31-15S-19W	120	23,627	188,903
ALSO IN RUSH COUNTY	51-155-194	120	231021	100,903
dERTH(, 58)	02-135-20W	40	2,638	87,235
			S	

			Oil Produc	ction-bbl.
Field Name	Location of Well	l Acres	during 19	071 – end of 197
			-	
		ELLIS	COUNTY (CONT	r•)
WERTH NORTH(,62)	35-125-20W	120	NO RUNS	67,993
HEATLAND(,49)	18-15S-17W	600	39,081	929,045
WHEATLAND EAST(,66)	17-15S-17W	400	67,643	641,954
HEATLAND NORTHWEST(,53)	12-155-18W	120	6,183	159,808
HEATLAND SOUTHEAST(, 55)	28-155-17W	120	3,740	193,970
HEATLAND SOUTHWEST(,53)	19-155-17W	580	44,526	1,885,228
INDHOLZ(,57)	32-12S-16W	160	30,862	34,697
OCEMENTO(, 29)	09-135-19W	40	2,310	95,668
OCEMENTO EAST(,67)	22-135-19W	40	845	7,025
OCEMENTO NORTH(,67)	04-135-19W	40	551	15,673
OUNGER(,44)	06-14S-17W	1,200	90,806	1,565,520
OUNGER EAST(,68)	33-135-17W	80	11,908	70,255
OUNGER NORTHWEST(,62)	30-135-17W	240	8,678	199,611
OUNGER SOUTHEAST		COM	BINED WITH Y	OUNGER
OUNGER WEST		COM	BINED WITH Y	OUNGER
OUNKER(, 59)	09-125-19W	40	1,471	47,448
OUNKER SOUTHWEST(,63)	17-125-19W	80	1,798	45,990
ERFAS(,69)	30-11S-19W	40	12,574	40,786
IMM(,69)	35-15S-19W	80	5,360	25,521
COLS OR FIELDS ABANDONED		Sec.	1.0000-52	172,812
TOTAL ELLIS COUNTY		87,820	6,758,991	333,135,875

State Geological Survey of Kansas, (Lawrence, KS: University of Kansas Pub., 1971.

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Map showing Ellis County Oil and Gas Fields.

www.kgs.ku/PRS/county/def/ellis.html (dated accessed February 25, 2012).