

ENERGY RESOURCES ON THE SOUTHERN GREAT PLAINS

*By Paul Bonnifield**

The drama of the short-grass high plains area south of the Arkansas and north of the Canadian rivers has a common heritage in time settled, origin of settlers, and stages of settlement. Although this region is divided among five states, the hazards of drought and blizzards, floods and tornadoes give the area a common, although somewhat unusual, identity. The dry cut-off of the Santa Fe Trail crossed this land, but few hardy pioneers settled long in the lower Great Plains. Buffalo hunters opened roads from Kansas southward for latter generations to follow. The hides they took boomed the economy of both Dodge City, Kansas, and Granada, Colorado. After the plains were rid of the buffalo and Indians, the large, free range cattle ranches moved in. Although many of the ranchers and their cowboys, like their cattle, were Texans, most of them used the back door to reach the range. These men first drove north to Kansas and Colorado and through a period of years drifted south. Their marketing and banking centers were connected to Kansas City.¹

The defeat of the Indians and the demise of the buffalo opened the Southern Great Plains north of the Canadian River for safe settlement by homesteaders and city-builders. But settlement came slowly, for difficult transportation combined with the hazards of the harsh climate to repel most homesteaders. Where were they to get water for themselves and their stock?

Some people answered the question by claiming land along streams. Through a period of years others turned to windmills and deep wells. The homesteaders also faced the problem of fuel. Buffalo chips have a certain romantic appeal to us of later generations who did not have to use them. But for the early settlers buffalo chips, which were more often cow pies, were not a dependable or glamorous source of fuel. Communities of any size and importance could not develop and sustain themselves long on a feces fuel supply. They needed something with a little firmer and higher carbon content.

The settlers of the lower Great Plains carried in their baggage the heritage of many generations attempting to improve the lot of man by making their tasks lighter and their creature comforts more pleasant. To accomplish these goals it was necessary to develop and improve sources of power.

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The history of selective breeding of draft animals and riding stock is the story of mankind improving its sources of power for transportation and heavy labor. Obviously a dependency on muscle to drive the various tools had its sharp limitations. If society was to escape the hardships of grueling manual labor, alternate sources of power had to be found and developed.

Using wind power to propel ships dates from antiquity, but this form of power is fickle on the seas and of limited use on land. The movement of water to aid transportation and turn water wheels is also an ancient part of man's heritage. In England by the late eighteenth century, the choice water sites for establishing mills were claimed and subdivided; thus, if the nation was to expand industrially it needed another form of power. America was slower in harnessing its streams because of the vastness of the land and the lateness of settlement. However, the availability of streams for power for mill sites was one of the major contributing factors in New England taking the lead in American industrialization.² Inventions in the eighteenth century textile industry combined with James Watts' steam engine to open new opportunities as well as problems for man in his quest for a better life.

Power to run tools was not the only goal of mankind as it wrestled with the complexities of gaining a better standard of living. The people wanted a better method of lighting their homes. Animal and vegetable oils and fats of various qualities and fragrances were handed down from generation to generation. The stories and legends which surrounded the whalers as they scoured the sea for the great sperm whale are the chronicles of men and ships involved in the task of furnishing society with a superior burning oil. In 1830 "camphene" was patented by Isaiah Jennings, but camphene had an unpleasant smell and was a dangerous explosive. In the 1840s and 1850s some Americans following the British lead began manufacturing illuminating gas from coal. The 1850s witnessed the patenting of kerosene by Abraham Gesner. Gesner's effort was followed by the development of coal oil for lighting homes and offices. The realization that oil had similar properties to coal led to the drilling of Drake's well at Titusville, Pennsylvania, in 1859. This opened the way for an abundant supply of coal oil for illumination as well as a new industry. The boom in oil development led to a glut in the market by the late 1860s. With an oversupply came the search for new markets and better means of controlling production.³

Coal oil and manufactured gas from coal were soon replaced by the electric lights developed by Thomas A. Edison. Electricity was useful for more than lighting, however; in the 1880s cities began replacing their horse-drawn street cars with electric trolley systems. Mass transit took a

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great stride forward after 1900. Although vehicles that do not operate on rails date before the turn of the century, most of these were heavy, cumbersome machines which depended upon steam. For years inventors and developers weighed the relative value of steam-powered cars to that of electrical battery-driven vehicles or cars powered by the internal combustion engine. The debate ended for the time when Henry Ford announced his Model T in 1908. The "Tin Lizzie" changed the social-economic-political structure of society. Mankind had found a new sense of freedom.⁴ With the new freedom and labor saving devices which followed came the frightening question: Was there enough oil to supply the demand for gasoline?

While people involved in developing the automobile industry wrestled with the problems of fuel for their cars, the settlers of the panhandles of Oklahoma and Texas and their neighbors in Kansas, Colorado, and New Mexico faced yet another crisis in energy. The rural areas and communities needed fuel for heating and cooking. Their problem was not new, but rather was an old and continuing dilemma in the settlement of the Great Plains. Early explorers and pioneers sought sources of fuel for generations. Lewis and Clark noted coal deposits along the upper Missouri and Yellowstone rivers in 1803 and 1804. Seven years before the discovery of gold in California sent the armies of argonauts west, Charles Frémont reported coal deposits on the Laramie Plains. In 1848 General Emory located coal on Raton Mountain.⁵

On his way to California in 1850 a Mr. Ralston discovered gold in a small stream which emptied into the South Platte River, but the amount of gold was not great enough to hold Ralston and his party. John Beck, who was with Ralston, made the trip to California where he became discouraged and returned home. In the late 1850s Beck began organizing another party to reexamine Ralston's discovery. The Russell Party, as the group became known, camped on Ralston Creek in June 1858. Here they soon were joined by a group from Lawrence, Kansas. The prospectors did not find gold on Ralston Creek and soon moved to Dry Creek. Enough gold was found to start the Pikes Peak gold rush of 1859.⁶

Because Denver and its neighboring mining communities set well out on the short-grass high plains, the miners faced the problem of fuel. Within a short time miners were hauling coal from the outcroppings along Ralston Creek to the various communities. Although the first coal mining was done in a haphazard manner and no records were kept, by 1864 the territorial officials recognized the importance of coal and began keeping records. That year Jefferson County reported mining 500 tons of coal. While coal mining was beginning in the South Platte River area,

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men were claiming coal along the Arkansas River. In 1860, Hosea Hoopingarner, Jesse Frazer, Clark Harrington, and John W. Leland discovered and claimed coal deposits near Cañon City, Colorado. This coal was high quality and located near the Royal Gorge and thus strategically located for later railroad development.⁷

Early settlers of Colorado recognized that the problems of transportation could be overcome by railroads. But railroads in the West required coal. In 1861 Captain E. L. Berthoud led a party to survey a route through the mountains from the Denver area for a transcontinental railroad. In his report he believed that he had discovered a suitable pass through the mountains, and "that the country traversed west of the pass was fine valleys, and that excellent coal abounded, . . ."⁸

In the late 1860s the federal government recognized the importance of coal in the West and organized a team for the United States Geological Survey under the direction of F. V. Hayden. In Hayden's *Notes of the Lignite Deposits of the West*, 1868, he wrote:

The construction of the Pacific Rail Roads across the continent is bringing about the dawn of a new era in the progress of the west. . . . The earth is now called upon more earnestly than ever before to yield up her treasures of gold, silver, copper, iron, and mineral fuel, and the existence of the last two minerals in the west, in workable quantities, is one of the most important practical questions of the day.⁹

Hayden also took a look at the problem of fuel on the Great Plains and reported:

But the intense interest with which they [coal deposits] are regarded now, as a source of fuel to the vast stretch of fertile but almost treeless plains, has been created anew by the advancing westward wave brought about by the construction of those great national highways. The fact, also, that the coal deposits of Iowa and Missouri are restricted in area and the coal limited in quantity, and in most cases inferior in quality, and that west of these states it may be said that there is no true coal at all, renders any source of fuel in the far west, a matter of the greatest importance.¹⁰

The report went on to evaluate the economic prospects of coal for the Union Pacific Railroad. The railroad could expect to haul freight west for many years. The cars that otherwise would return empty could be loaded with coal and, "distributed through Nebraska at a cost much less than that of wood at the present time."¹¹

Hayden's views for the Union Pacific applied equally to other railroads. A group of Denver businessmen in 1870 completed the Boulder Valley

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Railroad into Colorado's northern coal field. This railroad soon had a direct connection with the Union Pacific in Cheyenne, Wyoming, and the Kansas Pacific in Denver. The Kansas Pacific connected many of the settlers of eastern Colorado and west central Kansas with the coal mines. The arrival of the Santa Fe Railroad in Las Animas County in the mid-1870s opened a new supply of high quality coal and later coke to thriving communities and settlers along the Arkansas River. The completion of the Denver & New Orleans Railroad (Colorado Southern) and its connection with the Fort Worth & Denver Railroad provided a connection between the coal mines at Franceville, Colorado, with the ranching area in the northern Texas Panhandle and along the Canadian River.

In the late 1880s the first flood of homesteaders poured into southwestern Kansas and the Oklahoma Panhandle. The construction of the Rock Island Railroad to Liberal, Kansas, was one of the leading forces in attracting settlers to the area. But the communities in Morton and Stevens counties, Kansas, looked forward to another railroad. The headlines of the *Hugoton Hermes* for August 4, 1887, boldly proclaimed: "IT IS COMING! the D., M., & A. R'y: Before Snow Flies: HUGOTON Will be Connected with the Coal Fields of Colorado and the Commercial Centers of the East." The following article explained that the arrival of the Denver, Memphis, and Atlantic Railway would place "the vast coal field of Colorado, which are practically inexhaustible, and which yield a very excellent grade of coal, . . . at our door."¹² The DM&A never reached southwestern Kansas, and by 1889 disheartened settlers began leaving the region. By the mid-1890s the region had only a few hardy pioneers left.

With the dawn of the twentieth century settlement of the area between the Arkansas and Canadian rivers bounced to renewed life. The Rock Island began building southwestward across the two panhandles, spawning the new towns of Hooker, Guymon, Goodwell, and Texhoma in the Oklahoma Panhandle. As it reached further southwest, more towns and settlers rushed in. The construction of the Rock Island was followed by a branch of the Santa Fe Railroad across southwestern Kansas and the Wichita Falls and Northwestern along the length of the Oklahoma Panhandle. With the new growth and new settlers came a vigorous group of people. These were folks very much aware of their changing world. They knew about the great advancements in technology and the growing dependency of the nation on fossil fuels. Fossil fuels were needed to light homes, fire furnaces of factories, and power new automobiles. They also knew about their dependence on imported coal.¹³

Richard B. Moore's article, "Oil Creates an Industrial Frontier: West Texas, 1917-1937," is correct in the thesis that an oil related industrial

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frontier accompanied the agricultural frontier as it moved across West Texas. His thesis could be expanded to include the area south of the Arkansas River. In 1906 the new rush of settlements had hardly begun when F. W. (Bob) Gilman was drilling for oil in Wheeler County, Texas. In Cimarron County, Oklahoma, in 1912 the state began a reconnaissance survey of 210,000 acres. After the survey was completed, the state called for gas and oil bids. In 1917 the Segregated Oil and Gas Company and the Empire Gas & Fuel Company were making test drills. The advances in oil prices encouraged many stout hearted men to begin wildcatting. In 1910 oil sold for \$.61 a barrel, by 1916 a barrel of oil sold for \$1.10, and in 1920 oil stood at \$3.20 per barrel.¹⁴

During the latter year the nation produced well over 2 million automobiles and before the decade was out, automobile production was over 5.6 million per year. While the nation was turning to the car for transportation, Great Plains farmers were phasing out the horses and mules. In Kansas in 1915 there were about 3,000 tractors. Tractor farming grew to 66,275 by 1930. During the dark years of the depression, tractors on farms increased to 95,139. In 1920 some 3,900 trucks were on Kansas farms and by 1940 there were 42,600 trucks on the state's farms.¹⁵

A reporter for the *Panhandle Herald* in 1928 observed:

When one sees a combine and tractor manned by one person setting [sic] in the shade of a large umbrella, cutting a swath of wheat twenty feet wide, and not shaking down so much of the grain as the old ten-foot harvester did, and the clean grain falling into the wagon bed along side the combine, as compared with the header driver, four barge men and two stackers not to mention the threshing crew, which are obviated by the wonderful new machine, one realized its advantage, and the labor and expense saved.¹⁶

By the beginning of the depression the regional farmers were dependent upon the new wonders of technology.

During World War I Americans were convinced that the United States was running out of oil. The fear of an oil famine was acute for a few years after the Armistice was signed on November 11, 1918. Under these conditions men on the Southern Great Plains did not panic. They went looking for oil. The search actually began several years before the outbreak of war. A group of Amarillo, Texas, and Kirksville, Missouri, businessmen combined their resources in 1906 to form the Amarillo Gas Company. The men built a "manufactured gas distributing plant" which turned coal into natural gas which was sold to the city. These men and others came under the leadership of M. C. Nobels in 1917 to organize the Amarillo Oil Company which intended to drill for oil near John Ray Butte. In 1918

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C. M. Hapgood, who was then involved in drilling the Segregated Oil and Gas Company well in Cimarron County, was contracted to drill north of John Ray Butte. The Masterson No. 1 well was completed in December 1918 with a tremendous flow of gas. However, at that time natural gas was believed to be a waste product. The editor of the *Texhoma Times* wrote after the completion in 1921 of the Terry Thompson well in Moore County, Texas: "There is no doubt in the minds of oil men that there is an immense pool somewhere north of the Canadian River, as evidenced by the many gas wells that have been brought in throughout a big area." Further interest in gas and oil had been stimulated by the opening of the Burkburnett oil field in 1918.¹⁷

The interest in gas and oil development moved many local people into action. At Texhoma, Oklahoma, in 1919, A. H. Stores, O. F. Foster, Frank A. Sewell, Edgar Coons, and others organized the Texhoma Oil and Gas Development Company. This company planned to lease from 100,000 to 150,000 acres of prospective oil land. Local people were encouraged to join the group by taking stocks. Leasers were offered a dollar per acre for the first year and fifty cents per acre for following years. Problems within the company delayed drilling, but by November, 1921, under the name of the Home Development Company, a test well was started on the Allison property five miles north of Texhoma. In December 1922 the Allison No. 1 was completed with a large flow of gas. In 1926 the company completed the Allison No. 2 with a gas flow of over a million cubic feet per day.¹⁸

While the people at Texhoma were at work, another group of people in Guymon were organizing the Beaver Oil and Gas Company. In 1920 they began drilling near the mouth of Cold Water Creek, but the well struck gas and burned the drilling rig before it was extinguished. In Seward County, Kansas, a group of Liberal men began work on three wells. One well was never completed, and a latter had a showing of oil and gas. The third well, the Boles No. 1, struck an immense flow of gas. By 1922 fabulous gas wells had been drilled at various points from the Canadian River north to the Cimarron River. In Ochiltree County, Texas, and Beaver County, Oklahoma, S. J. Allen assembled a large tract of leases in 1917. The Empire Gas and Fuel Company made several shallow tests but failed to discover oil. During the years 1917 to 1922 several oil and gas companies were locally organized and test wells drilled with varying success.¹⁹

The *Guymon Herald* on September 4, 1919, reported on the progress of the Snorty-Gobbler well in Union County, New Mexico. "This well is 90 miles north of where the Ute Creek people struck gas and oil last week,"

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wrote the reporter, "and a considerable distance from the standard oil rig where rumored gas wrecked a derrick a short time ago. This proves conclusively that the whole country is underlaid with an oil field."²⁰ Although the residents paused to catch their wind in 1922, they were not through looking for the elusive oil fields.

In Hutchinson and Carson counties, Texas, oil was struck in 1926. Boom towns erupted overnight on the vast plains. The new town of Borger, Texas, bustled with activities. At Panhandle, Texas, the Santa Fe Railroad handled more business than any point except Chicago. The sleepy little farming town of Dumas, Texas, with a population of 250 exploded with life after the completion of the A. D. Morton well on the Jones lease in 1927. Within a week the town had a newspaper, a bank, new mercantile stores, drug stores, cafes, and hotels. Public services of water, telephones, and the school were being drastically changed and improved.²¹ A boom was on that would rival the heydays of California, Nevada, or Colorado.

To the north of the Borger and Dumas activities, men were again searching the earth for its secrets. In Cimarron County Oklahoma, W. R. and W. E. Ramsey were drilling in the general area of the old Empire test. Near Willowbar Sam Wilkinson and M. M. Walerius were at work. In 1927-1928 the Sinclair people also were exploring. In Texas County eleven prospect wells were drilled in 1926 and some forty companies spent approximately \$2 million annually for leases. R. M. (Bob) Crawford and his associates assembled a large tract of leases near Hugoton, Kansas. In 1927, the Independent Oil and Gas Company struck gas in the Crawford No. 1 well. Following in quick succession were the completions of the Hitch, Grandy, and Ham wells.²²

Through the years since the first gas well was completed north of John Ray Butte, technology had advanced and people had explored new horizons. The Amarillo people who were the first to open a large gas well soon began to build short pipe lines and sell natural gas to residents of the area. In 1922 an agreement was reached whereby the Cannon Gasoline Company built a plant north of Amarillo and they began producing gasoline. That same year the U. S. Zinc Company built a smelter near the city limits.²³

Technological advances in the mid-1920s of improved mechanical-draft burners and automatic furnace controls opened the door for a new era in home heating. Arc welding and light weight pipe made it feasible to transport natural gas over long distances. In 1927 the Amarillo interests worked with Colorado industrialists to market gas through the Colorado Interstate Gas Company to cities along the Front Range. Between 1927

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and 1931 Argus Gas Company built lines from Hugoton to Dodge City and west into Colorado. During the same period the Missouri Valley Pipe Line Company began work on a line to Omaha, Nebraska, and Davenport, Iowa. In the late 1920s Northern Natural Gas Company and Republic Natural Gas entered the field.²⁴ These were natural gas companies—not oil and gas companies—which denotes a shift in emphasis. Natural gas was no longer a waste product.

In the decade of the 1920s the region between the Arkansas and Canadian rivers went from a fuel importer to a fuel exporter. By the end of the decade the Great Plains, which traditionally had been viewed as a marketing place for coal, was making a frontal assault on the coal mining regions of the West. Denver was the center of Colorado coal mining, and Colorado was the biggest coal-producing state west of the Mississippi River and rated among the top coal mining states in the Union.

One gets an idea of the impact of natural gas on the coal producing areas of Colorado by briefly examining the Yampa Coalfield. In 1902 David Moffat began building his railroad into northwestern Colorado. This is about the same time that the Rock Island began advancing across the two panhandles. Both railroads crossed areas that were sparsely populated and large in size. The Moffat road reached the coal field at Oak Creek, Colorado, in 1909. The coal mined in the Oak Creek district had a high BTU, low ash, and low sulphur content. It was excellent for domestic purposes and sold well in Denver and communities on the Great Plains. With the arrival of the railroad and the opening of the mines, the area around Oak Creek boomed. The extension of the railroad west in 1913 and 1914 added the coal in the Mt. Harris district to the market. With the coming of the Moffat Tunnel in the 1920s and better transportation through the mountains, greater mine production and community development were expected, and two new large mines opened in the Oak Creek district. Although coal production climbed dramatically between 1909 and World War I, production began to drop after the war. In Oak Creek, few new business houses were built between 1920 and 1950, and very few if any new homes were built. This was a stagnate and dying region.

While the coal mining region in northwestern Colorado was becoming dormant and losing its vigor, communities in the five-state Great Plains area were taking on new and more vigorous activities. The nation entered the depression in 1929. Although farming was still the major source of revenue for the five-state area and some farmers were operating profitably, the economic power of agriculture was temporarily losing its hold. Despite these signs, communities began disposing of their frontier garb and dressing in a more progressive manner.

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In Guymon, businessmen spent more than \$300,000 on new and improved buildings in 1930. They also placed brick paving on seven blocks of the downtown area and improved the Fair Grounds. Boise City in 1930 showed a year of record growth in buildings and community improvements which ran over \$200,000. In November 1930, the *Hooker Advance* could honestly state, "Hooker merchants are feeling very little of [the] business depression." Citizens of Stratford, Texas, spent hundreds of thousands of dollars on construction, paving, lighting, and general improvements in 1931. Spearman, Texas, and most of the leading communities were making similar improvements.²⁵ Although other economic factors enter the picture, a substantial amount of the money spent on community improvements came from people who had profited by leasing, royalties, and stock ownership in locally organized oil and gas companies. These folks were spending their money locally to better the region they called home.

In 1920 oil had sold for \$3.20 per barrel, but in the decade that followed oil production soared and large reserves were established. Three years later a barrel of oil sold for only a dollar. It remained at this level for a few years. Still, production continued to increase and reserves accumulated. By 1928 the oil industry was in deep financial trouble. Then in 1931 the great East Texas field began production and oil dropped to as low as fifteen cents per barrel. Several steps were taken to correct the situation including establishing martial law in some of the fields. During this time the great heyday of the wildcatter came to a close.²⁶

The Missouri-Kansas Pipe Line Company began construction on a major natural gas pipeline in 1929 which was to connect the Panhandle and Hugoton natural gas fields with major cities in Kansas, Missouri, Illinois, Indiana, and Kentucky. In 1932 the pipeline company went into receivership and the Panhandle Eastern took over. The period of 1932 and 1933 were years of entrenchment by many of the oil and gas companies; at this time some leases were dropped and others went unpaid. Although the years of drought, depression, and dust storms were severe, several farmers were aided by leases and royalty checks. The Chenault gas well, which had a large flow, was completed in 1934. In February the *Morton County Farmer* stated that "one of the most encouraging signs of recovery in this section is the return of oil and gas activities." Producing companies were again buying leases and the promise to resume drilling work seemed brighter. The newspaper noted, "in 1930 the town [Rolla] grew to almost twice its former size, and then even through the depression, it did not go back very far. With a resumption of oil field activities, property values in this locality will again go up to new high marks."²⁷

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In Moore County, Texas, the Phillips and Skelly companies each built gasoline plants. Leasing activities increased in 1935. A gas well was completed in Grant County, Kansas, by the Kuhn Brothers and the McNab Oil Company planned the construction of a small gas line near Hugoton. Near Guymon the Cabot well roared in.²⁸ There is no doubt that the activities in the oil and gas fields helped many families through the hard years of the dust bowl and depression.

During the spring of 1935 the dust storms were very severe and the roller of April 14 was a terrifying experience that remains vivid in the memory of anyone who lived through it. In southwestern Kansas and southeastern Colorado a dust pneumonia epidemic took the lives of several people and nearly everyone suffered from the effects of the hard spring. At the same time the national news media made the dust bowl a national concern. While the residents of the dust bowl were suffering through this harrowing experience, the federal government began efforts to purchase land. The farmers in Stevens County, Kansas, were offered \$2.50 per acre for property which the United States Census of Agriculture valued at \$22.50 per acre. It was known that the entire county was underlaid with natural gas. The vast majority of land owners were receiving either lease or royalty money from the field. It is clear that the federal government was doing some sharp bargain hunting for land. Although advancements in the oil and gas industry were small, they were enough that the beleaguered farmers took hope and held on. The federal government did not find any bargains in Stevens County.²⁹

The year 1936 was a banner year for hard-pressed residents of the dust bowl when oil and gas development vibrated across the region. South of Springfield, Colorado, a 40,000-acre lease was assembled and a test well was drilled. In Stanton County, Kansas, a test well was completed. In Union County, New Mexico, the Olsen Drilling Company was busy on the Zurich test while the Gypsy Oil Company organized two large leases in the northern part of the county and a test well was drilled near Guy, New Mexico. Charles Hitch and James P. Pierson assembled two large leases in Hansford County, Texas, and Texas County, Oklahoma, and on these drilling was begun. Cities Service Company firmed up its leases on 122 sections (square miles) and began drilling thirty-five wells. Large tracts of land in Cimarron County, Oklahoma, and Sherman County, Texas, also were leased.³⁰

On January 18, 1936, the *Dalhart Texan* announced that two carbon black plants, which would bring employment to 600 families, would be built at Sunray, Texas. The Rock Island Railroad was building a spur to the community. Phillips Petroleum Company was planning to drill 300

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wells and Anderson & Kerr were finishing fourteen more wells in Moore County. In March it was announced that two smelters were to be built in Moore County. The construction of the Illinois Zinc Smelter would cost more than \$500,000. During this time only one carbon black plant and one smelter were actually built, but that was enough to create a critical housing shortage at Sunray and Dumas. In July the *Dalhart Texan* predicted that upwards to \$500 million would be spent by oil companies in the northwestern Texas Panhandle and northeastern New Mexico over the next three-year-period. That figure was optimistic. In 1936 oilmen in the Texas Panhandle counties of Carson, Gray, Hutchinson, Moore, Potter, and Wheeler drilled 475 oil wells, 159 gas wells, and 31 dry holes for a total of 665 wells in one year. Natural gas production in the Texas Panhandle alone for the year 1936 was valued at \$30,723,000 and the oil value for the year was \$29,851,000 for a total value of more than \$60,574,000.³¹

Panhandle Eastern Pipeline Company announced in 1937 that it planned to build a \$35 million pipeline from the Panhandle and Hugoton gas fields to Detroit. To supply this large line several new wells were needed. Panhandle Eastern also built a gasoline plant at Kismet, Kansas. The plant doubled the county's taxable property. Panhandle Eastern was not the only active gas company. Republic Natural Gas, Northern Natural Gas, and Cities Service were active among the major companies. Among the smaller companies, Tri-County Gas Company built a line to Scott City, Kansas, where a refinery was built, and a carbon black plant was built south of Ulysses, Kansas.³²

A bulletin of the American Association of Petroleum Geologists shows that in the Kansas counties, Finney had 3 producing wells, Grant 49, Haskell 4, Kearney 7, Morton 40, Seward 8, and Stevens 168. Texas County, Oklahoma, had 27 producing wells and Hansford County, Texas, had 1. The total number of wells listed was 307 with an open flow of 2,277,071,000 cubic feet. These figures do not include the ninety-one wells that Republic Natural Gas had when it was organized in 1935 or the wells it drilled in the two-year period. Nearly 400 square miles of southwestern Kansas and the Oklahoma Panhandle were producing royalty checks by 1937 in the gas field alone. To continue with a detailed account of natural gas development through the depression years would belabor the subject. According to a report of the Kansas Geological Society, the Hugoton Gas Field, not including the Panhandle Gas Field or any of the oil fields, by 1940 had an annual cumulative production in thousands of cubic feet of 211,392,576. This is the same area that many viewed as the heartland of the dust bowl: "a dead land—populated by defeated people

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who were plagued by drought and depression. No one had much hope for it."³³

When the depression ended, the development of the Hugoton Gas Field had just begun. The Kansas Geological Society report showed the field with only 300 wells in 1940; a decade later there were 1,847 wells. That is better than a six-fold increase. During the severe drought years of the 1950s the number of wells grew until in 1958 (the year the report was written) there were 3,869 wells with an annual cumulative production in thousands of cubic feet of 4,358,266,511. By 1958 some 3,869 square miles were paying royalty checks with a high percentage going to local residents. The number of man hours which drew wages for drilling and maintaining the wells was quite large. These figures do not include the Panhandle Natural Gas Field which rivaled the Hugoton field in size and production. Nor are the numerous lesser fields considered, although they were important.³⁴

Not all the communities of the Southern Great Plains benefited from petroleum development at the same time or in equal amounts. It was not until 1943 that the Keyes-Sturgis Gas Field in Cimarron County was discovered; however, by 1968 the field had 115 wells. The Griggs Oil Field was not developed until a later date. The oil field in Beaver County, Oklahoma, and Seward County, Kansas, was not discovered until 1947. The Caror field in Hansford County, Texas, did not begin producing until 1951. In 1952 three new oil fields were discovered and Beaver County had six more successful exploratory tests. In 1953 there were other oil fields discovered in Hansford County, Texas, and Texas and Beaver counties, Oklahoma. So it went until in 1961 the two panhandles were covered with a multitude of oil and gas fields.³⁵

Without a doubt the oil and gas development of the area between the Arkansas and Canadian rivers has produced a wealth that exceeds the gold boom of California. The thriving communities of Amarillo, Pampa, Perryton, Guymon, Liberal, and dozens of others owe much to the oil and gas industry, which has made a big difference in the quality of life throughout the five-state area. And nationally we have come to depend upon natural gas to heat many of our homes and power many of our industries. The development of energy on the Southern Great Plains has played a large role in this march of progress.

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ENDNOTES

* Paul Bonnifield is a resident of Yampa, Colorado, and the author of several books including *The Dust Bowl: Men, Dirt, and Depression* (Albuquerque: University of New Mexico Press, 1979).

¹ See Wayne Gard, *The Great Buffalo Hunt* (Lincoln: University of Nebraska Press, 1959); Harry E. Chrisman, *Lost Trails of the Cimarron* (Denver: Sage Books, 1961); J. Evetts Haley, *Charles Goodnight* (Norman: University of Oklahoma Press, 1949).

² Daniel J. Boorstin, *The Americans: The National Experience* (New York: Random House, 1965), p. 23.

³ Daniel J. Boorstin, *The Americans: The Democratic Experience* (New York: Random House, 1973), pp. 45–52.

⁴ Hennig Cohen, ed., *The American Culture* (Boston: Houghton Mifflin Company, 1968), pp. 210–227.

⁵ F. V. Hayden, "Notes on the Lignite Deposits of the West." *The American Journal of Science and Arts*, Vol. 45 (1868), p. 199.

⁶ LeRoy R. Hafen, ed., *Colorado and its People: A Narrative and Topical History of the Centennial State* (New York: Lewis Historical Publishing Co., Inc., 1948), Vol. I, pp. 141–152.

⁷ Wilbur Fisk Stone, ed., *History of Colorado* (Chicago: S. J. Clarke Publishing Company, 1918), Vol. I, pp. 450, 462; *History of the Arkansas Valley, Colorado* (Evansville, Indiana: Unigraphic, Inc., 1971; reprint of 1881 ed.), p. 597.

⁸ *History of the Arkansas Valley, Colorado*, p. 188.

⁹ Hayden, "Notes on the Lignite Deposits of the West," p. 198.

¹⁰ *Ibid.*, p. 199.

¹¹ *Ibid.*, p. 220.

¹² *Hugoton (Kansas) Hermes*, Centennial Anniversary Edition, 1861–1961, August, 1961.

¹³ See Paul Bonnifield, *The Dust Bowl: Men, Dirt, and Depression* (Albuquerque: University of New Mexico Press, 1979), Chapter 2.

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¹⁵ Leo M. Hoover, *Kansas Agriculture After 100 Years* (Kansas Agricultural Experiment Station Bulletin, No. 392. Manhattan, 1957), p. 47.

¹⁶ *Panhandle Herald*, Pictorial History, 1928.

¹⁷ "Petroleum Panorama, 1859–1959: The Roaring Twenties." *Oil and Gas Journal*, Vol. LVII, No. 5(1959), Sec. A, p. 46; Thomas F. Cartwright, "History of Pioneer Natural Gas Company." *Panhandle-Plains Historical Review*, Vol. XXXII (1959), pp. 60–64; Charles N. Gould, "The Beginning of the Panhandle Oil and Gas Field." *Panhandle-Plains Historical Review*, Vol. VIII (1935), pp. 27–30; *Texhoma (Oklahoma) Times*, November 4, 1921; Moore, "Oil Creates an Industrial Frontier, West Texas, 1917–1937," p. 344.

¹⁸ *Texhoma Times*, March 21, 1919, November 24, 1922; *Texhoma Genealogical and Historical Society*, comp. and ed., *Panhandle Pioneers* (Texhoma, Oklahoma: The Texhoma Times, 1970), Vol. IV, p. 29.

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²² *Boise City News*, Historical Edition; "Great Quantities of Natural Gas." *Panhandle Herald* (Guymon, Oklahoma), Pictorial History, 1928; Stuart L. Schoff, *Geology and Ground-Water Resources of Texas County, Oklahoma* (Oklahoma Geological Survey Bulletin, No. 59. Norman, 1939); *Hugoton Hermes*, Centennial Anniversary Edition, 1861–1961; Furbush, "Hugoton Field, Kansas," Vol. II, p. 55.

²³ Cartwright, "History of Pioneer Natural Gas Company," pp. 64–65.

²⁴ "Petroleum Panorama, 1859–1959: The Roaring Twenties," Sec. A, p. 49, Sec. E, pp. 30–31; Cartwright, "History of Pioneer Natural Gas Company," pp. 68–69; Clenon C. Hemsell, "Geology of Hugoton Gas Field of Southwestern Kansas." *Bulletin of the American Association of Petroleum Geologists*, Vol. XXIII (July 1939), p. 1056.

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²⁶ "Petroleum Panorama, 1859–1959: The Roaring Twenties," Sec. A, p. 51.

²⁷ *Morton County Farmer* (Elkhart, Kansas), February 9, 1934.

²⁸ Minor, "The History of Moore County, Texas, Stressing Education," Vol. II; *Hugoton Hermes*, July 19, 1935, August 9, 1935.

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³⁰ *Ibid.*, p. 98.

³¹ *Dalhart Texan*, January 19, 1936, February 5, 1936, March 6, 1936, June 5, 1936, July 14, 1936; Albert W. Weeks, "Developments in North-Central Texas and the Panhandle, 1936–1937." *Bulletin of the American Association of Petroleum Geologists*, Vol. XXI (August 1937), p. 1033; *Elkhart* (Kansas) *Tri-State News*, February 2, 1937.

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