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DEVELOPMENT OF THE OIL INDUSTRY IN TEXAS

THESIS

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By

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## PREFACE

The object of writing this thesis was to present a brief though fairly detailed history of the oil industry in Texas. The material and facts contained herein were gathered from various sources including books, newspapers, magazines, bulletins, radio programs, letters, and authorized conversations. The main body of the thesis is composed of seven chapters, each of which deals with a certain phase of the oil industry or its effects. The study, even though accomplished in a very short time and in the presence of many difficulties, has been most interesting, and it is truly hoped that it will be of value to others.

My indebtedness extends to all who have written upon the oil industry in general, but I am especially grateful to those who responded so graciously to the numerous requests for materials. I desire to extend my sincere thanks to Hon. C. V. Terrell for informative typewritten material; to Carroll Sullivan for his helpful and courteous interviews; to Miss Wayne Martin, former Cooke County librarian, and Mrs. Olna Boaz, present Cooke County librarian, for their untiring efforts in securing materials from other libraries; and also to the Texas, Magnolia, and Gulf Oil Companies, which graciously supplied

materials relative to the history and accomplishments of  
their companies.

Grace Roberts

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## CHAPTER I

### DEVELOPMENT OF THE VARIOUS OIL FIELDS OF THE STATE

Petroleum history in Texas began in 1867 with the discovery of oil at Oil Springs, about fifteen miles south of Nacogdoches and near the present town of Chireno. Oil had long been known to the inhabitants of the region, and the oil springs located there had attracted attention for a long time. The Indians gathered there to scoop off the scum of oil and use it for medicine. The pioneers of the region took long poles, stirred them around in the pools to cause more crude to rise to the top, then skimmed off the oil and placed it in handmade barrels. Many barrels of this crude were carted to Galveston and shipped to France to be used as a medicine.

White men, with the famous Drake discovery in Pennsylvania in 1859 still fresh in their minds, decided that the "rock oil" was the result of seepage from some underground reservoir and drilled the first well there in 1860. However, the Civil War soon came on and caused the venture to be abandoned.

In 1867, after the close of the war, interest was revived again and the first producing well was drilled. This

first oil well in Texas resulted from the experience of two young men, Emory Starr and Peyton F. Edwards, who, while hunting in Nacogdoches County, dug some shallow holes at the edge of Oil Springs Branch and let them fill during the night. They skimmed off the oil and used it as harness oil and for other domestic purposes. Later, John F. Carll dug a well four miles northeast of Oil Springs on Caney Creek and found a little oil.<sup>1</sup> A company was soon formed which drilled an eight-inch hole to seventy feet, where oil was found in sand. "The first day's test made 250 to 300 barrels, which operators were unable to handle and let waste. The well stopped flowing the next day and had to be pumped."<sup>2</sup> In 1886, a group of New Orleans capitalists drilled a well to the depth of one hundred feet in which they struck oil. In the same year, Pennsylvania financiers drilled a number of wells.<sup>3</sup>

Meanwhile, activity around Oil Springs increased, and from 1887 to 1890 ninety wells were drilled, and about 4,000 barrels were marketed at Chireno. The Lubricating Oil Company drilled forty wells, twenty of which were still in operation in 1890. The producing wells were from 185 to 254 feet deep and yielded from two to six barrels daily.<sup>4</sup>

Chireno was not the sole center of oil activity prior to

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<sup>1</sup>Texas Almanac, 1936, p. 264.

<sup>2</sup>Ibid.

<sup>3</sup>Tyler Courier-Times-Telegraph, December 2, 1934.

<sup>4</sup>Texas Almanac, 1936, p. 264.

1895. Of these earlier developments the Dallas News says:

Other early exploration was in Greenvine, in Southwestern Washington County, on the Cenvanke farm. In August of 1879 William Seidell drilled an eleven-inch hole to 150 or 160 feet and got a good gas flow from sandstone. The gas was burned in a near-by house but was put to no commercial use. Several other wells were drilled in this section between 1879-1883, but caving holes made production impossible. In 1888, after operations had been suspended five years, three other wells were put down, one to 154 feet near the first, another 350 feet southeast to 134 feet, and the third half a mile northwest to 114 feet. The three produced about 1,500,000 cubic feet of gas daily, it was reported.<sup>5</sup>

The oil from two producing wells on the George Dulling ranch, seven miles south of San Antonio, Bexar County, gave Texas her first commercial production of oil, which "was given in statistical tables in 1889, when the twelve month's total listed for the state was forty-eight barrels, a minute's flow for one of the biggest Texas wells now."<sup>6</sup> Production in these wells was from two hundred feet. The oil brought \$7.08 per barrel in 1889 and \$4.20 in 1890. Oil was also retailed by the gallon, bringing 30 cents a gallon in five-gallon cans and 35 cents for less than five-gallon lots. This was considerably more than the highest test ethylized gasoline costs today after considerable processing.

In the fall of 1890, Col. William L. Prather of Waco, while drilling for water on his McLennan County farm near the

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<sup>5</sup>Dallas News, October 1, 1935.

<sup>6</sup>Texas Almanac, 1936, p. 264.



Bosque, found oil at 265 feet. A few barrels were produced and analyzed, but nothing further came of this discovery.<sup>7</sup>

The actual development of the oil industry in Texas dates from the accidental discovery of oil at Corsicana. The municipality was drilling a water well, and was somewhat disappointed when the well showed traces of oil. The following year Alexander Beaton, seeing the commercial possibility of oil, formed a partnership with John Davidson, a driller, and on October 15, 1895, succeeded in bringing in the first well at Corsicana, which produced about two and one-half barrels per day. The story of successive drilling activity has been told as follows:

A second well was drilled north of the Cotton Belt tracks and a third at Fourth and Collins Streets got oil and gas at 1,040 feet and settled down to a daily flow of twenty-two barrels. These and others were completed in 1896 and that year Corsicana was credited with a production of 1,450 barrels.<sup>8</sup>

A brief description of the Corsicana field in 1898 is given in the Tyler Courier-Times-Telegraph as follows:

Total number of wells in field, 113; dry holes, 13; wells flowing, 17; rigs available, 115; daily output, 130 barrels; wells on pipeline, 94; wells pumping, 30; wells completed in March, 200; and daily payroll, \$400.<sup>9</sup>

The Corsicana district has been a producing locality since

<sup>7</sup>Dallas News, October 1, 1935.

<sup>8</sup>Ibid.

<sup>9</sup>Tyler Courier-Times-Telegraph, December 2, 1934.

1897.

The next important oil discovery in Texas was that of the old Powell field, near the city of Corsicana, in 1900. By this time other areas were being explored, but Texas did not come into the spotlight internationally until the discovery of Spindletop in 1901.

Spindletop is in Jefferson County on the southern outskirts of the city of Beaumont. The history of this first great Texas field dates back to 1892, when Patillio Higgins founded Gladys City. "In founding this city Mr. Higgins honored Miss Gladys Bingham, a scholar in his Sunday School class, by naming the city for her. Miss Bingham is now Mrs. Bain Price, a resident of the city of Beaumont."<sup>10</sup> Gladys City was originally planned as a health resort. On account of gas pressure found in the Sour Springs located there, Mr. Higgins was led to believe that oil could be found. As a result, he formed the Gladys City Oil, Gas, and Manufacturing Company, in existence at the present time, which immediately began to drill for oil in the vicinity of Spindletop Heights. Spindletop was a piece of marsh land on which stood a grove of pine trees. In the center of the group was a tall dead tree which, when viewed from a distance, resembled a spindle with a ball of yarn around it; thus it got the name, "Spindletop".

After some unsuccessful efforts to get production, the

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<sup>10</sup>Albert Cranz, A Short History of Spindletop Oil Fields, p. 1.

Gladys City Oil, Gas, and Manufacturing Company, on June 20, 1899, assigned a lease to Captain A. F. Lucas who, in turn, assigned his contract to the J. M. Guffey Petroleum Company.<sup>11</sup> Captain Lucas, having had experience with the salt domes in southern Louisiana, expressed a firm belief in the oil prospects of the vicinity.

Materials were gathered and work was begun. After some days of drilling, enough oil was found to fill two jugs. Drilling was resumed, and on January 10, 1901, the Lucas gusher, at a depth of 1,139 feet, came in with an astounding roar. While workmen had stopped to change the bit, the well blew in with such force that the top of the derrick was shattered and a string of four-inch pipe was blown several hundred feet into the air. A column of oil spouted nearly two hundred feet over the top of the derrick. Captain Lucas was forced to flee to escape being drowned in a sea of oil.

The well flowed at the rate of 19,000 barrels a day, which was largely wasted for the first ten days, due to valve trouble and lack of storage facilities. Embankments of sand were thrown up to prevent the spread of this huge sea of oil to the surrounding territory. The oil became impregnated in the fog, which is common in the Gulf district, and when the fog cleared, oil was visible on the housetops of the city of Beaumont. What followed the miracle of Spindletop is well

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<sup>11</sup>Ibid.

told in the following summary:

The sensational Lucas gusher focused the eyes of the oil industry on Texas..... Prices fell and outlets were controlled by large companies and sometimes closed to those with small holdings.

Texas production jumped from 836,039 barrels in 1900 to 4,393,658 in 1901; and in 1902 Spindletop alone produced 17,421,000 barrels, or 96 per cent of the State's entire output. This large production had its effect on prices, and during the height of the Spindletop boom, the price of crude oil hit an all-time low of 3¢ a barrel.<sup>12</sup>

Petroleum became the leading mineral of the state in 1902, a position it has held since that time.

Spindletop started a campaign of salt-dome drilling. There are, within one hundred and fifty miles of the coast, some forty or fifty salt domes. A few have been found in central East Texas in Anderson and Van Zandt Counties. Not all of these domes produce oil, and only two, one near Palestine and the other at Grand Saline, are worked for their salt.

In 1902, oil was discovered in Hardin County. Oil had been known to exist there because of the oil seeps. "In 1895 a well was drilled by Pete Willis,....which made some 16-gravity oil."<sup>13</sup> "During 1901 the Guffey Petroleum Company drilled a well in this locality which gave spasmodic flows of petroleum accompanied by gas and water."<sup>14</sup> Production from this pool up to the close of 1907 was 22,672,107 barrels.

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<sup>12</sup>Texas Almanac, 1936, p. 265.

<sup>13</sup>Dallas News, October 1, 1935.

<sup>14</sup>Texas Almanac, 1910, p. 68.

The Batson pool, which is located eight miles west of Saratoga, was discovered in 1903. It is known for its sudden development and rapid decline.

During 1903 there were but 4,518 barrels produced from this pool, as it had just been discovered, but in 1904 it produced 10,904,737 barrels, falling off remarkably at the close of the year. In 1907 it produced 2,164,457 barrels.<sup>15</sup>

The Saratoga district is located ten miles northeast of Sour Lake and has been a comparatively small producer. Its production in 1903 was estimated to be 160,000 barrels, but in 1907 the production was 2,130,928 barrels.<sup>16</sup>

The Matagorda pool, lying three miles from the town of Matagorda, was opened in 1904. The production for that year was 151,936 barrels. At the close of the opening year there were thirty producing wells, a number of others having been abandoned.

Four or five wells were drilled on the Hoskins ranch, near Galveston, prior to 1905; and a number of other wells have been completed there since that time.

The Humble pool was the next step in coastal developments, an account of which is given in the Texas Almanac:

Humble pool is an important oil field located 16 miles north of Houston. The Beatty well was the first to be completed in this field in 1904, but no oil was marketed until January, 1905. During this year it developed into one of the most prolific pools in Texas, shipping a total of 15,594,310 barrels of oil. The

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<sup>15</sup>Ibid.

<sup>16</sup>Ibid.

daily production increased rapidly from the first development of the pool until in March, when it reached a production of 90,000 barrels a day..... The production has gradually fallen since this time; during 1907 it produced 2,929,640 barrels. During July, 1905, the field was visited by a disastrous fire, which destroyed over 2,000,000 barrels of oil.<sup>17</sup>

The field soon became settled, but it was revived again in 1915 and produced over 11,000,000 barrels.

Dayton, in Liberty County, was successfully tested in 1905. The area known as Dayton Hill, with an elevation of from twenty to thirty feet above the surrounding plain, had been considered a favorable location for a long time prior to 1905. During 1907 this field shipped 108,038 barrels of oil.<sup>18</sup>

Goose Creek and Markham pools were also opened in 1907. Goose Creek is located in the southeast corner of Harris County on a creek by that name which leads into Buffalo Bayou. A large number of producing wells were developed here. The deeper pay sand was found in 1916, and it was then that the field was at its best. It is thus described:

It was in this year that the American Production Company, drilling at a depth of 2,030 feet, finally found the "big pay" at Goose Creek, the well coming in at a rate of 10,000 barrels daily. The drilling campaign which followed did not bear fruit until 1917 when the total production for the field amounted to 7,300,000 barrels as compared with only 397,000 barrels for the previous year. Goose Creek was the chief factor in bringing the state's production for 1917 to 32,437,000 barrels, a new high peak to which Wichita and Wilbarger counties contributed 9,542,000 barrels.<sup>19</sup>

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<sup>17</sup>Ibid.

<sup>18</sup>Ibid.

<sup>19</sup>P. J. R. MacIntosh, "Wonder Story of Texas Oil," Bunker's Monthly, II, 493.

At Markham, in Matagorda County, a number of wells were drilled, some of the oil from these wells being sold by the producers for fuel purposes.

During the first decade of Texas oil history, 1895 to 1905, production jumped from an annual production of 850 to 30,000,000 barrels. In the same period, national production had grown from 53,000,000 to 135,000,000 barrels, of which latter figure Texas contributed more than 22 per cent.<sup>20</sup> At the close of 1907 Texas ranked sixth in the list of oil-producing states.

North Texas development began with the discovery at Petrolia in Clay County in 1904. Although the Petrolia Field is noted chiefly for its gas production, it opened a new area for development. Henrietta, also in Clay County, has developed into a commercial field. It produced more than 65,000 barrels of oil in 1904 and better than 83,000 in 1907, when there were 169 producing wells in the field. The wells were from the 300-foot level, and were supplied by a gray sand.

The first great oil field in North Texas was in the vicinity of Electra, near the western line of Wichita County. While drilling for water on his ranch in 1910, W. T. Waggoner struck oil and thus opened up the field, naming it for his daughter, Electra. A stratum of oil was found at 1,000 feet and another at 1,800 feet. The wells yielded from 200 to 500 barrels of oil daily. Some of them were gushers. "In August,

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<sup>20</sup> Ibid., p. 491.

1911, the field was producing 6,000 barrels of oil daily and fifteen cars of oil were being shipped out per day..... October 23, 1911, there were about ten producing wells in the field and over forty rigs drilling."<sup>21</sup> "This field brought Texas production up to more than 15,000,000 barrels in 1913 and 20,000,000 in 1914."<sup>22</sup> Texas, in 1912, had climbed to third place in the list of oil-producing states.

In 1917 Archer County was added to the list of North Texas fields, when oil was discovered at Holiday. The Holiday Field developed rapidly, and by 1922 production had reached the 13,000,000 barrel mark.<sup>23</sup> Oil was found also at Jacksboro.

In the meantime minor discoveries were made in different parts of the state. These discoveries included Riser, in Webb County; Somerset, in Bexar County; Crowther, in McMullen County; Iowa Park, in Wichita County; Trickham, in Coleman County; Kiser Hill in Brazoria County; Thrall, in Williamson County; the Mission Field near Liberty; Moran and Strawn in middle West Texas; Toyah, in the Trans-Pecos region; South Bosque, in McLennan County; Brownwood, Cisco, Rising Star, Palo Pinto County; Caddo Lake Field, and the Orange Field.

The next section of the state to be opened for production was North Central Texas. The discovery of the Ranger Field in

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<sup>21</sup>Texas Almanac, 1912, p. 163.

<sup>22</sup>Tyler Currier-Times-Telegraph, December 2, 1934.

<sup>23</sup>MacIntosh, op. cit., p. 608.



1917 was the first in this section. It proved to be the gaudiest of all the oil skyrockets. Ranger, previously a small village in Eastland County named for the Texas Rangers who had once camped there, was experiencing a severe drought. The quest for oil started when Gholson, a merchant at Ranger, and Cull Moorman, a banker there, decided that a test for oil might bring back prosperity and a revival of business. Through their efforts a delegation called on W. K. Gordon, general manager of the Texas-Pacific Coal Company at Thurber. Mr. Gordon had been blocking acreage in several counties to prospect for oil. The historian of the Ranger Field has graphically described what followed:

So he listened to the half humorous complaint made by the pale Gholson and seconded by the ruddy Moorman, that he had been neglectful in not including Ranger in his plans. 'I have had Ranger in mind right along but I didn't want to have to face a price boom,' he told them frankly. 'But if you will give our company a block of 30,000 acres around Ranger, we will drill four deep wells. We are willing to wager \$200,000 that there is oil.' This was in February. A month later, the leases were delivered, and four days thereafter, rig timbers were unloaded on the Nannie Walker farm, half a mile north of Ranger. Gordon himself chose the location. When drilling had been begun and a steady pace was being maintained on this test, Gordon drove a stake just a month later for the location of a well on the John McClesky farm, nearly a mile south of Ranger. This test was spudded one July day.<sup>24</sup>

And, as the account runs on:

In August, 1917, the Nannie Walker test provided a thrill. At 3,200 feet, gas was struck and 10,000,000 cubic feet a day came roaring forth. But gas was not oil and there was no market for this flow. So the well

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<sup>24</sup>Boyce House, Were You in Ranger?, p. 3.

was left in solitude to hurl the gas into the air.<sup>25</sup>

On October 21, 1917, Frank Champion, the driller at the McClesky, heard a rumbling. What happened next is very well described as follows:

An instant later there was a spray of oil. Immediately the flow increased -- a beautiful sight with the late autumn sunshine glistening on the broad column of greenish gold that had climbed half way to the top of the eighty-four foot derrick. Earl Root, the water pumper, came running up from the earthen tank and for a moment, Champion and Harvey Wells, the tool dresser, stood gazing in amazement, heedless of the drenching of oil they were receiving. Then Champion raced to shut off the pipe, for the glistening drops were beginning to shower upon the boiler..... Champion and Root walked to town. Unnoticed as yet, they stopped at the telephone office and the driller informed Waggoner,....that the McClesky was an oiler.<sup>26</sup>

The depth of the McClesky well was 3,235 feet when oil was found. Not only to Mr. and Mrs. McClesky, who were absent when the well came in, was the news of the discovery exciting, but visitors by the dozens flocked in during that afternoon, and next day Mrs. McClesky, with typical Texas hospitality, cooked dinner for twenty-eight.<sup>27</sup>

McClesky's income from his one-eighth royalty on his lands soon amounted to two hundred dollars a day. To increase his earnings, he built a modern hotel to care for the swarms of people now pouring into Ranger.

A curious coincidence is reported to have followed:

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<sup>25</sup>Ibid., p. 8.

<sup>26</sup>Ibid.

<sup>27</sup>Ibid., p. 13.

To make matters unanimous, the Walker, which had been gassing for months, unnoticed and all but forgotten by the townspeople, soon after the McClesky well came in emitted a roar that caused the folks to come running. They found the Walker had blown itself into an oil well and was gushing at a greater rate than the McClesky.<sup>28</sup>

The well which was brought in on the Merriman School grounds in the Ranger Field made this the richest school in the world. Former Governor Colquitt, in commenting, declared that the sum of money derived from the royalty was sufficient to give every child in the district a high school education and four years in college.

The numerous oil companies operating at Ranger took names adapted to the region. Such names as Hog Creek, from a creek in the region, Hog Town from the man upon whose land operations were being performed, Grand-Duke, from the Duke farm, and Duke Extension, were a few of the many names used.

Production soon spread to the surrounding areas of Breckenridge, Burkburnett, and Desdemona, Burkburnett being the first of these areas to be developed. In 1918 the startling discovery was made, and here again it was quite by accident. The drilling machinery was unloaded by mistake on the wrong location on the farm of S. I. Fawler. Due to the expense incurred in moving, Fawler decided to drill where the machinery had been placed. The result was one of the biggest gushers in that territory. Later tests proved that had he drilled on the

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<sup>28</sup>Ibid., p. 12.

original site, he would have gotten a dry hole. Fawler received a return of \$12,000 for every \$100 invested. As a result of the shallow production, Burkburnett became one of the most active areas of the entire region.

Close on the heels of the Burkburnett Field came the Desdemona Field in 1919, which brought production back to Eastland County. The field was located on the southern edge of the county. The field before and after the boom is picturesquely described by Boyce House as follows:

In 1918 Desdemona had a population of perhaps fifty. There were three stores and a blacksmith shop in the village, which was tucked in the southeast corner of Eastland county near the boundaries of Comanche and Erath counties..... A young lawyer who came from Eastland occasionally to appear in the court of Justice of the Peace Winer suggested that the village be named Desdemona in honor of the Squire's pretty daughter, and the suggestion was adopted.....

It was Monday night, September 2, 1918. The crew was drilling away on Harvey's test, expecting nothing out of the ordinary. The people in Desdemona had gone to bed at an early hour, just as the inhabitants had always done in the serene half century of the hamlet's existence. There was a roar; a tower of oil soared toward the stars; then instantly there came a flash and the derrick was flaming. Scant minutes later, the machinery was a twisted mass of metal, the derrick was in ashes and the oil was a column of billowing, bellowing fire. So vivid was the glare than in Ranger, twenty-five miles away, a night watchman thought it came from a blaze in the edge of that city. The entire population of Desdemona came pellmell to talk and marvel. The next day hundreds gathered as near the gusher as safety permitted. Estimated as making 10,000 barrels of oil, the well represented a daily loss of wealth that was the equivalent of the yield of hundreds of sandy acres planted in peanuts and harvested in back-breaking toil. .... At night a newspaper could be read in the town by the intense light that the huge torch a mile and a half away, provided.<sup>29</sup> [This was the Duke well.]

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<sup>29</sup>Ibid., pp. 60, 61, 68.

Activities at Desdemona were more intense than at Ranger, even though confined to a smaller area. The chief reason for this fact was that the majority of the land had not been leased when the discovery was made; thus the field became a paradise for "men with more than the proverbial shoestring. Of the two hundred and eighty-eight wells drilling at one time, the companies and individuals putting them down numbered ninety-seven -- not counting those having smaller interests in the venture."<sup>30</sup> The derricks were so close together that five wells were reported to have been drilled on a four-acre plot. The volume of oil received from this field can be determined from the following account:

When the Magnolia's C. T. Terrell came in for 8,000 barrels a day, one hundred teams and a regiment of men were thrown into action, digging reservoirs to capture the golden flow of the wild well. This geyser in fifty days produced \$491,000. When the Humble Ellison came in for 10,000 barrels, the tanks were inadequate and the petroleum ran off across a pasture. From moderate production, the Knowles well responded with an output of 10,000 barrels when it was deepened only three feet, and McMann's Reynolds was estimated at 12,000 barrels..... Most spectacular of all was the Cosden well on the S. R. Carruth farm. This test came in as a gasser, producing between 50,000,000 and 65,000,000 cubic feet of gas a day -- enough to provide the fuel for the homes and factories of a city.<sup>31</sup>

The field grew to large proportions. In October, 1919, three hundred wells were drilling and seven hundred and fifty were awaiting equipment. The proven field was thirty-two miles square and the potential field eighty-four miles square.<sup>32</sup>

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<sup>30</sup>House, op. cit., p. 71.      <sup>31</sup>Ibid., pp. 72, 73.

<sup>32</sup>Ibid., p. 75.

The southwestern part of the state came in for the next oil play, with the wildcat area near Iuling. Edgar B. Davis, a resident of Brocton, Massachusetts, began the operations on the Cartwright lands. Not enough oil for commercial production was secured here, but a test on the farm of Rafael Rios located the edge of the structure. Oil from the Iuling field was of a low grade and did not command a high price. Production for the last three months of 1922 was only 8,000 barrels. The Magnolia Petroleum Company contracted to buy all the oil from the Iuling Field in 1923. In 1926 they bought holdings valued at \$12,100,000, the largest amount ever paid for oil holdings in the state up to that time. In 1929 the field had 500 producing wells, most of them on the pump. The output at that time averaged 14,000 barrels daily.<sup>33</sup>

The next big splash on the oil canvass was the Rising Star of Mexia in the Corsicana area. Mr. MacIntosh, in describing this field, says:

Gas had been produced for a number of years at Mexia from shallow wells around 750 feet,.... Colonel Humphreys drilled a well. On November 11, 1920, the pay sand was found at a depth of 3,055 feet, the well coming in at the rate of 115 barrels daily,.... Real development, however, did not begin at Mexia.... until after the bringing in of the famous Disenberg gusher, and soon thereafter the field became the scene of activity similar to that which had prevailed at Ranger, Breckenridge, and Burkburnett.<sup>34</sup>

Mexia served as a prelude to the revival of the Powell

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<sup>33</sup>MacIntosh, op. cit., p. 604.

<sup>34</sup>Ibid., p. 598.

Field, which had been a small producing area since 1906. It proved, with the new, deeper pay, to be the greatest field along the Balcones Fault. J. K. Hughes, an independent operator from Mexia, brought in the first well of the new field. "While the well was still uncompleted it caught fire and burned thirteen workmen to death -- one of the worst disasters, so far as loss of life was concerned, in the history of the Texas oil fields."<sup>35</sup>

The development of the Powell field was rapid and its vast output created a new menace to the oil market. Its production during 1923 was approximately 32,000,000 barrels, reaching its peak on November 14th, the figure for that date being 319,291 barrels -- a record up to that time for any field in the United States. To date [1929] the Powell field has produced 100,000,000 barrels of oil.<sup>36</sup>

In December, 1921, the Humphreys Oil Company brought in the Currie Pool in Navarro County, midway between Corsicana and Mexia. Currie was never a large pool, its peak production being about thirteen thousand barrels daily from twenty-two wells, but it proved to be profitable owing to its superior grade of oil, which tested 42 gravity.

Development in the Panhandle area dates back to 1904:

C. N. Gould, then professor of geology at the University of Oklahoma, was given a commission by Theodore Roosevelt to trace the water sources of the Canadian River drainage area. It was while engaged in

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<sup>35</sup>MacIntosh, "The Wonder Story of Texas Oil," Texas Monthly, III, 74.

<sup>36</sup>Ibid.

this work in Potter and Hutchinson Counties that he noted and mapped the structure that later was to produce such valuable quantities of oil and gas.<sup>37</sup>

The information obtained by Mr. Gould remained forgotten until 1916, at which time the Masterson gas well was completed. The Masterson well stimulated interest and research work. Major companies flocked to the area and secured leases. About three years later oil was discovered by the Gulf Oil Company on the Burnett ranch in Carson County, a few miles east of the completed gas wells. The well produced about one hundred and seventy-five barrels of oil daily. The Gulf Company had drilled a well on the Burnett ranch prior to this, but it had resulted in a gas well. Development was rather slow at first due to lack of facilities for handling the oil, but within the next four years a definite pool had been opened in the vicinity of the discovery well. The Gulf Company extended operations to the north into Hutchinson County. A thirty-five hundred barrel well on the Dial ranch was completed. Development between the two fields resulted in the bringing in of the Borger Field.<sup>38</sup>

The opening up of the Borger Field caused production in this section to reach new high levels. A few hundred barrels of oil had been produced in Panhandle counties before 1925, but the Borger discovery in that year put Hutchinson County far in the lead. Mr. Bartlett, oil editor of the Globe-News

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<sup>37</sup>Amarillo Sunday News-Globe, August 14, 1938.

<sup>38</sup>Ibid.



Publishing Company, Amarillo, gives the following account of the Borger area in Hutchinson County:

The first big oil producer in this area was drilled in 1925 by the Twin Six Oil Company, a group of Amarillo men, 12 in number. It was located east of the site that later was to become Borger, one of the wildest of oil boom towns. The Twin Six, headed by Jay Ray, sold the lease in the heyday of the boom for a cool million dollars.

The success of this group inspired literally hundreds of people living in Amarillo to invest in local oil companies that drilled on tracts ranging in size from 10 acres to 500 acres. In all, some 114 local companies sold their stocks to ready buyers. In that form of promotion about \$12,000,000 was invested of which \$8,000,000 had to be chalked up on the loss side of the ledger. In other words, Amarillo people absorbed about \$8,000,000 worth of worthless oil stocks in the first two years of the boom.

The extensive development of the Borger field started off with the announcement January 11, 1926, of the Dixon Creek Oil Company, another local concern, of its No. 1 Smith spouting into the tanks to the tune of 10,000 barrels a day. From that time on during the following two years the excitement was intense and the usual boom accompanying the finding of a new major pool was on in earnest.<sup>39</sup>

Production soon spread to near-by counties, including Wheeler and Gray. Borger's first railroad was completed in October, 1926, at which time there were sixteen counties in West Texas and the Panhandle which did not have a single mile of track, and dozens of others which had only a few miles.

The far southwestern part of the state was opened to production in May, 1923, with the discovery of the Big Lake Field in Reagan County. It soon spread into Winkler and Pecos Counties, where the prolific Yates pool is located. Other impor-

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<sup>39</sup> Ibid.

tant fields in this area are the Church Fields, the McElroy pools of Crane County, the fields in Howard-Glasscock Counties, and the McCamey-Tylor Fields of Crane-Upton Counties.

This section of the state is notable for several reasons. First, the remoteness of the region, the lack of geological knowledge, lack of water, and lack of roads made it a region of many difficulties which were hard for the oil companies to solve. Then the depth of the oil was another factor which added to the cost of production. The deepest oil in Texas came from this region, and up until recent years it contained the world's deepest hole.

While the Powell Field was developing, a new field was unexpectedly opened for production far out on the western plains in Reagan County, seventy-five miles west of San Angelo. The well was the Texon Oil and Land Company's Santa Rita No. 1, which blew in on the morning of May 28, 1923, with an initial flow of seventy barrels daily.<sup>40</sup>

The Big Lake Oil Company and the Texon Oil and Land Company owned all the producing area in 1929. They did not develop it at first because of the heavy production at Powell. Production in 1924 was 11,243,000 barrels, increasing to nearly 40,000,000 in 1929.

The McCamey Field, in this section of the state, came into existence in the latter part of 1925, when a seventy-barrel pumper was drilled to a depth of 2,272 feet. It is forty

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<sup>40</sup>MacIntosh, "The Wonder Story of Texas Oil," Texas Monthly, III, 74.

miles west of the Big Lake Field, in the southwestern corner of Upton County. The discovery well was drilled by Johnson and McCamey, independent operators of Fort Worth. The well and the surrounding block of acreage was sold soon afterwards to the Republic Production Company for \$500,000. The chief significance of this test is that it marked the genesis of a new major producing area which later included not only the Church Fields area, but the Gulf McElroy sections and the Wentz pools. The McElroy and Church Fields were later merged into one, including an area one and one-half miles wide and two and one-half miles long with one hundred and eleven wells.

The Chalk Field, in Howard County, had been discovered in 1925, but the development was gradual and it was not until a year later that the field had made a creditable showing.

Late in 1926 two wildcat strikes were made which greatly extended petroleum development in Texas. They were the Mid-Kansas and Transcontinental Yates No. 1 in Pecos County and the Westbrook Hendricks No. 1 in Winkler County. Both were in areas remote from other production and were the rankest of wildcats.<sup>41</sup> As development progressed, the wells became larger and larger; 5,000-barrel wells created amazement until others were discovered which produced 10,000 barrels, followed by others of 25,000 and 50,000 barrels. It became impossible to handle all this volume of oil in the absence of pipe lines.

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<sup>41</sup>Ibid., p. 215.

As a result a proration schedule went into effect which fixed production tentatively at 50,000 barrels daily.

Howard and Winkler Counties were opened for production in 1927.

The Yates pool was named after the late Ira Yates upon whose land the oil was found. The town of Iraan was also named for him and his wife Ann. Another town was named Red Barn because it grew up on the site where Mr. Yates' red barn once stood.

The largest single beneficiary from royalty in this section of the state is the University of Texas, which owns all the land covered by the Big Lake Field and royalty interests in about half the production from Crane County.

Any attempt at a connected history of the oil industry in Texas after 1925 is a rather difficult task. Prior to that time the story is little more than a record of one producing area after another. Each field prior to this time was more or less developed before another was discovered. Since 1925 one producing area has followed hard upon the heels of another. The market has not had time to assimilate the production from new fields until other and more prolific fields were discovered; thus overproduction has resulted.

In 1925, Spindletop enjoyed a revival from the deeper paying sands of the salt dome district. Frank Yount drilled the new discovery well in November, 1925, to a depth of 2,500 feet. Yount sold his holdings to the Stanolind for approxi-

mately \$42,000,000 cash, which was among the larger deals in the history of the industry. Mr. Yount's income amounted to between \$45,000 and \$50,000 daily.

Numerous strikes have been made in the Gulf Coast Region since the revival of Spindletop. Included in the list are South Liberty, Lyton Springs, Sugarland, Pettus, and Raccoon Bend.

Production began in the Laredo district in 1922. It extended a distance of about forty miles through Webb, Zapata, and Jim Hogg Counties. The chief fields opened were Mirando City, Schott, Mid-Ojuelos, and Aviators', the latter being developed by a number of airmen from the United States Army fields at San Antonio. This section received a greater play in 1926, and production was extended through Star County. The Spanish land grants in this section have caused considerable difficulty in clearing titles. The allotments given by the King of Spain in 1760 have remained in families for generations and have been subdivided until they are only small lots. It is said to have cost an oil company \$100,000 to clear the titles of one block of acreage.

The Joe Bruner pool in Caldwell County, and the Rockdale-Minerva pools, were opened in the vicinity of Iuling between 1923 and 1929. Both were prolific pools.

Cooke County strengthened North Texas production. Oil was first discovered in Cooke County by the Big Indian Oil Company in 1922, when they brought in their Davis well in the north-

eastern section of the county. The Davis well has been producing about ten barrels of oil a day since that time. The county now has developments in almost every section, including numerous pools. The Meunster and Anderson Kerr pools are the most prolific. The latest development is in the Walnut Bend Area in the northeastern section of the county on the Best farm.

The Van Field in Van Zandt County is an outstanding development of 1929. The acreage owners in the area pooled their holdings under the unit plan of operation. As a result, the field was carefully and slowly developed.

New discoveries were made in East Texas in the years 1925 and 1926. The Wortham Field was brought in. Boggy Creek came in in March, 1927. Following its discovery the eastern portion of the state was treated to a very extensive geological and geophysical play. Nigger Creek along the Balcones Fault in East Texas caused considerable excitement for awhile.

The above discoveries and the testing campaign which followed were but preludes to the discovery of the great East Texas Field, discovered in October, 1930, by a veteran wildcatter, C. M., or "Dad", Joiner.

Joiner had leased some land in East Texas in 1925, but the drilling of the first well did not begin until 1927. Early operations of Mr. Joiner in East Texas are stated by Harry Harter as follows:

Dad Joiner started his first well on the Daisy Bradford farm of one thousand acres. The machinery was poor, most of it being second-hand. The two boilers could not build up more than one hundred and twenty-five pounds of steam. Yet with this equipment the miracle of bringing in a new oil field was actually accomplished. The first well drilled by Joiner encountered many difficulties and numerous shutdowns. The work naturally progressed slowly and financial difficulties were encountered from the start. There had been so many wildcat promotions already; it was difficult to dispose of the acreage. The drill pipe, which was old and unreliable, stuck in the hole and twisted off. After numerous costly fishing jobs, the hole was finally abandoned, the derrick skidded and a new hole begun. The enthusiasm of the East Texas farmers was an essential factor in Joiner's final success. It was they who were ever ready and willing to lend a helping hand whenever an opportunity presented itself. It was necessary to sell some of the leases in order to finance the work further. The second hole was abandoned, and the third begun. It was now that Joiner seemed most discouraged. At times, he had no money to pay wages, to pay the grocer at Overton for the groceries consumed by the drilling crew, or to buy needed equipment. The well was shut down sometimes for days waiting for funds. Mr. Walter D. Tucker, an Overton banker, who held some leases prior to Joiner's time, turned these over to Joiner to help the cause along. Tucker and his associates strained their resources to keep the well going. Tucker himself worked on the well with the drilling crew, while his wife superintended the cooking for them. Such was their belief in the Joiner wildcat. The head driller, E. C. Laster, kept the job going in spite of every obstacle. Out of the Joiner holdings of five thousand acres, about one fourth of the amount was syndicated and offered for sale. Among those holding certificates in the various syndicates were policemen, postal clerks, merchants, waitresses, farmers, and even a reputed gambler or two. It is to these that the success of the venture is largely accredited. Joiner in an article, "I Owe a Lot to the Other Fellow," said, 'I owe a lot to the other fellow. He has done much for me. As a matter of fact, the other fellow has made me possible. I cannot recount here all the kindly favors and helps I have received through the years; but that they are a part of me and my success I am sure.'<sup>42</sup>

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<sup>42</sup>Harry Harter, East Texas Oil Parade, p. 67.

Needless to say, everybody was on hand the day the well came in. Dad Joiner was there waving a friendly hand. Daisy Bradford and her brothers were there as were farmers and people from all walks of life. It was a busy day indeed as people walked up and down with joy, tossing straw hats into the air. "I always dreamed it, but I never believed it," remarked Dad Joiner as the oil came forth.<sup>43</sup>

The discovery well indicated that a good-sized pool had been found, and promoters kept Dad Joiner busy. However, it was not long until some one brought action to force a receivership on his Bradford holdings, and the first fruits of his success were at once tied up in litigation.

The Joiner holdings were sold to H. L. Hunt of El Dorado, Arkansas, an independent operator who had already achieved some success in the oil business in that state and in Louisiana. The entire lot of leases held by Mr. Joiner, consisting of approximately four thousand acres in Rusk County, was sold to Mr. Hunt for a consideration of about one million and a quarter dollars. Seventy-five per cent of the Joiner holdings lay in unproven territory, so a large part of the purchase price was made payable from future oil production.

The development of the properties, held in the name of the Hunt Production Company, has entailed the drilling of two hundred and thirty wells, and the maintaining of a force of more than two hundred men in the field. This company, through its fortuitous purchase from Joiner, ranks thirteenth among the leading companies operating in the East Texas Oil Field, a position that many of the major companies have not attained in this district.<sup>44</sup>

Within a few weeks, the boom was on in earnest. Joinerville grew up around the site of the discovery well, springing

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<sup>43</sup>Ibid., p. 73.

<sup>44</sup>Ibid., p. 208.



into a town within twenty-four hours after the discovery. Joinerville, however, did not continue to grow so rapidly. As the center of activity moved north and west, the business and trade of the town went with it.

The extensive drilling campaign which followed the bringing in of the discovery well is described by Harter as follows:

By December, 1930, there were several completions in the "Joiner" field, with two dry holes chalked up that defined the eastern shore line. The first completion to follow the discovery well was the Deep Rock Oil Company's number one Ashby well, about one mile west. This well, showing greater pressure and volume than the Joiner discovery, was all that was needed to send drilling activities to fever heat. By leaps and bounds the western limit of the field was extended, two, three, and even four miles within the first six months of the drilling campaign, a fact that astounded all observers. Nothing like it had ever been known in any field.<sup>45</sup>

Development and its far-reaching effects, expressed in the language of the poet, might be as follows:

The drilling rigs punch down an elegant hole,  
An oil-bearing stratum's their ultimate goal,  
Which gushes out oil that's flowed into tanks  
That's turned into money that's put into banks.<sup>46</sup>

The larger oil companies failed to realize at first that the discovery would lead to a prolific pool. They thought only a small pocket had been found. It had been condemned by their geological departments, so the field was left open for speculators and smaller operators. "Where, at first, the independents were the only true believers in the field, it did not take

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<sup>45</sup>Ibid., p. 85.

<sup>46</sup>Ibid., p. 131.

the major companies long to make up their minds to get in the parade. Today, major companies hold approximately seventy per cent or about 85,000 acres of the proven leases."<sup>47</sup> The Humble Oil and Refining Company has fourteen hundred producing wells on its holdings. Due to the irregularity of the Mexican land grants in East Texas, as at Laredo, well spacing has been a problem.

The great East Texas Field, the largest in the world, is approximately ten miles wide and fifty miles long. In 1934 the London townsite, covering about fifty acres, was the most densely drilled section of the East Texas Field, with an average of one well to each acre. At Gladewater, the wells averaged one to every four acres, and at Kilgore, one to every three acres.

The East Texas Field proved to be a Pandora's box as far as the economic situation was concerned, the added production being a burden upon the industry. Over-drilling has prevailed there to a greater extent than in any other large oil field. There seemed to be no great change in the drilling policies of operators in the field, whether large or small. The usual race to see which could get the oil first was the guiding policy of the companies. It was thus that such words as "shut-down", "martial law", "proration", and "hot oil" came to have a meaning in the oil industry.

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<sup>47</sup>Ibid., p. 88.

Texas production jumped from 290,457,000 barrels in 1930 to 510,318,000 in 1937, the latter figure representing Texas' peak production. The 1938 figures were 470,760,325 barrels, a decline over the previous year of 39,657,675 barrels. Pro-ration rulings caused this decline. The field threw so much oil on the market that drilling operations in all sections of the state were curtailed.

Finally, the tale of oil comes home to the oil springs near Nacogdoches. Near Trinity in Houston County is found the latest oil discovery, a matter of a few miles from the seep holes which were popular with the Indians, who rolled in the "sour dirt" found there.<sup>48</sup> In behalf of this discovery the Dallas News says:

Attempts for considerably deeper production have been under way recently on the Metteaver farm, four miles south of Chireno, at the spot where in 1867 leaders of the community gathered under a shady oak tree to form Oil Developers, perhaps the original oil company of Texas.<sup>49</sup>

The largest Texas development since the discovery of the East Texas Field was across the Texas-Louisiana line in Cass County. The K. M. A. Field near Wichita Falls and the Bennett-Wasson Field in Yoakum and Gaines Counties were the two principal discoveries of 1937, development of which continued in 1938. During 1938 no outstanding discoveries were made, al-

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<sup>48</sup>Tyler Courier-Times-Telegraph, December 2, 1934.

<sup>49</sup>Dallas News, October 1, 1935.

though there were new developments in Crane, Jones, Nueces, Refugio, Victoria, Galveston, Chambers, Cooke, and some other counties. Eighty-eight new fields were discovered during the year.<sup>50</sup> Of the two hundred and fifty-four counties in Texas, one hundred and forty-one now produce oil and gas. Texas is the foremost producing area not only in the United States but in the world. Texas alone now produces 39 per cent of the United States total and approximately 24 per cent of the world's total production.

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<sup>50</sup>Texas Almanac, 1940, p. 217.

## CHAPTER II

### SOCIAL EFFECTS OF TEXAS OIL

In the wake of the drill came the inevitable growth of population. People literally swarmed to each new field as it was discovered. In general, there was a great similarity in these movements of population into oil fields. People seeking employment, people seeking adventure, people seeking sudden riches, as if these riches came by magic, and people simply seeking excitement, -- they all came.

Spindletop, the earliest of them all, got her share of the oil spectators and job hunters. One single train, since this was before the day of automobiles, is said to have carried over two thousand people to see the Spindletop gusher.

The rush to Ranger is very well described by Boyce House as follows:

The sidewalks overflowed with men. Many just out of the army were still in uniform. Others were wearing the rough costume of the oil fields. Still others.... were in ordinary garb. A few Mexicans; here and there, negroes; even Chinese and Indians were in the shifting throngs. The man who jostled the stranger's elbow might be a New York capitalist or he might be a fugitive from justice of some distant state. Big-hatted "laws" came along, six-shooters at their side. A cow puncher in a ten-gallon Stetson hat and a red handkerchief knotted about his throat swung down the sidewalk in his high-heeled boots..... A thousand a day came on trains. Hundreds arrived in automobiles over the abominable

roads. Some came on horseback. Many walked in the new El Dorado. Hotel lobbies were clouded with tobacco smoke and were packed with perspiring, gesticulating humanity -- 'Offsetting production, only \$4,000 an acre'; 'It will spud in next week'; 'It looks good for 10,000 barrels'. 'Ranger is like the New Jerusalem -- there is no night there,' one observer wrote.<sup>1</sup>

A few of the notables who were in this influx of humanity that came to Ranger were Martin W. Littleton, John Ringling, the circus owner, William G. McAdoo, Jr., whose father was the leading candidate for the Democratic presidential nomination; Capt. Leonard Wood, whose father was in the van for the Republican nomination; William Howard Taft, former President of the United States; and General Obregon of Mexico. In one day sixteen states and two foreign countries were represented in the register of the McCleskey.<sup>2</sup>

The schools became so crowded that eight hundred children, which was as many as the entire population of Ranger before the discovery of oil, were thrown out of school. The rush to the postoffice was amusing with its long line of patrons waiting to get to the general delivery window. Unemployed people, it is said, would stand in line several hours until they got near the window, then sell their places to people who did not care to stand so long.

The great influx of population with its constant activity was more than the streets and roads at Ranger could stand.

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<sup>1</sup>Boyce House, Were You in Ranger?, pp. 49-50.

<sup>2</sup>Ibid., p. 56.

The heavy field machinery, hauling of oil, and other traffic soon made the streets and roads impassable. Pedestrians fell in the mud at the crossings; and it was not considered incongruous for a woman to wear diamonds, furs, and rubber boots.<sup>3</sup> One is said to have earned a comfortable sum of money transporting people across the streets with a sled drawn by a gray horse.<sup>4</sup>

The rush to Desdemona was so great that one hundred service cars were engaged in carrying people into and out of the field. Radiators boiled dry, and a thrifty farmer charged drivers a dime for water to refill them.<sup>5</sup>

Mexia became another uproarious oil town, with the same day-and-night activity, and the same influx of assorted and unassorted humanity. There were a few slight differences, however. The mud was deeper and blacker and stickier, and the bootlegger was numbered among the added attractions. In the balmy days of Ranger and Burkburnett, prohibition was too recent an issue to affect the supply of liquor refreshments.<sup>6</sup>

At the time of the discovery of oil, the Crane-Upton area had only eleven families totaling thirty-seven people, one to every one hundred and twenty-five square miles. The people have since taken a new lease on life. Towns have grown up and modern hotels have been built. Before the discovery

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<sup>3</sup>Ibid., p. 26.

<sup>4</sup>Ibid.

<sup>5</sup>Ibid., p. 81.

<sup>6</sup>P. J. R. MacIntosh, "Wonder Story of Texas Oil," Bunker's Monthly, II, 598.

of oil there was only one modern hotel between Sweetwater and El Paso; whereas now there are several, ranging all the way from one hundred to two hundred rooms each.

Harry Harter, in describing the situation in East Texas Field during boom days, says:

In the wake of the boom came the inevitable influx of humanity. New legal talents, oil field supply agents, scouts, promoters, sharp-shooters, engineers, surveyors, secretaries, adventurers, and gamblers poured into the new oil land.....

Not merely hundreds, but thousands of the unemployed oil field workers from other parts of the country poured into the new oil domain. Hitch-hikers, bums, riding the blinds, families afoot, weary with their burdens, trekked into Henderson and Overton daily, forced to ask charity when they found no jobs awaiting them. As usual, the news of a new oil field had been spread by wire to newspapers the world over, and this human tide was the response..... No one needed to ask the direction of the well, for the country road had become a solid phalanx of traffic. Amid the din of hammer and saw arose a tumult of sound from motor vehicles, as well as the crack of the whip of the four-up mule teams hauling in heavy oil field machinery. In no time the country road became impassable.

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Upon the highway, a mile from the well, the offspring of the discovery of oil, unheralded and unchristened save for the blasphemy of countless laboring men, Joinerville was born.

In Henderson the owner of the Justright Hotel, where once a dozen guests meant a prosperous week, were sent scurrying to the furniture dealers for extra beds. It was quickly discovered in this city that a double room would contain six or eight people. Private homes soon were filled with "paying guests" and the man who could get a decent room for fifteen dollars a week was indeed fortunate. Dining room furniture became almost useless, as family after family began to eat in the kitchen and rent the dining room for an extra bed room. What did it matter. All the best people were besieged with demands for bedrooms. Even the mayor had to give up a part of his home. The newcomers, themselves, as in any oil boom community, set the prices for their accommodations. Could banker Jones help it, if someone begged him to take sixty or seventy dollars a month for his spare bedroom?



Everywhere signs declared the opening of this or that new subdivision..... The schools became so crowded that children attended school only half a day. Old towns put on new fronts; new towns formed about the nucleus of oil field camps. Gladewater, Willow Springs, London, Kilgore, Arp, Longview, Overton, Wright City, Turnertown, New London, Pirtle, Sexton City -- these are but a few of the wider places in the road raised from comparative obscurity to the dignity of recognition as "towns".<sup>7</sup>

One noticeable fact about the oil field throngs is the democracy of dress. It is hard to distinguish the millionaire from the oil field worker. Such a mistake, for instance, might often occur as when a lady at Ranger tossed former Governor O. B. Colquitt, owner of the well he was watching, a dollar because he was dressed in soiled working clothes.

Needless to say, this great influx of humanity created a housing problem that was not easily solved. As a result, the inevitable tent and shanty life sprang up almost overnight. People crowded into these huts until it was no uncommon sight to see as many as eight persons living in a ten-by-twelve-foot tent. Of Ranger it is reported:

Barns were made into habitations and rich men from eastern centers paid two dollars a night for shelter and gladly. The owner of an eight-room house made from twenty to thirty dollars a night renting cots. A stranger went into a hotel that was still under construction and was shown to a room. There were no panes in the windows and there was no door. 'But I want to stay here tonight,' he protested. 'It will be ready by then,' he was assured..... 'Three dollars in advance please.'<sup>8</sup>

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<sup>7</sup>Harry Harter, East Texas Oil Parade, pp. 80-84, 88.

<sup>8</sup>House, op. cit., p. 29.

It was a common occurrence for men to pay two dollars a night to sleep in a barber's chair. Others often slept in the plants where they worked. It was remarked by one: "In the old days Diogenes lived in a barrel and went around with a lantern looking for an honest man, but if he were in Ranger the old fellow would be going around with a lantern and an honest man looking for a barrel."<sup>9</sup>

In the East Texas Field, at the height of the boom, rooms had to be rented in shifts, one sleeper taking the place of another.

The excitement of the leasing campaign which followed the new oil strikes is almost indescribable. Exorbitant prices were paid. After the discovery at Spindletop, leases which had originally sold for twenty dollars an acre brought five hundred and fifteen dollars, and some were said to have sold for as much as \$90,000 an acre.<sup>10</sup> A wildcat campaign of drilling followed, with independents and majors elbowing each other around the productive Spindletop field.<sup>11</sup>

Following Spindletop were the lessons in other fields. It is said that in Ranger, before the boom, friends had sympathized with an unfortunate farmer who could not lease his land because of a defective title. He could only look on

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<sup>9</sup>Ibid., p. 30.

<sup>10</sup>Albert Cranz, History of Spindletop Oil Fields, p. 3.

<sup>11</sup>Texas Almanac, 1939, pp. 40, 216.

while his friends and neighbors received seventy-five cents an acre for their leases. But after the discovery of oil, a company was glad to straighten out the title and then pay him \$31,000 an acre. Likewise an old man who was no longer able to pay the taxes on his land offered to give it to the bank cashier, Frank Day, who was reluctant to accept the gift. "The old man replied, 'Let me have that shotgun that your father gave you when you were sixteen.' So the swap was made."<sup>12</sup> A few years later the boom came and Frank Day leased the land for "\$40,000 -- a handsome return on an investment of a much-used shotgun."<sup>13</sup> "What of the ex-soldier who acquired a 'condemned' lease for twenty-seven dollars, saw a well on an adjoining tract go deeper than the others had gone to open up a new level, and then disposed of his land for \$50,000?"<sup>14</sup>

Everything at Ranger was leased, including the Merriman School grounds and the church lot. They even tried to lease the cemetery. The church congregation continued to worship in the building until the splattering of oil on the roof made it unsafe. It was decided by the congregation to give all the royalty to God's cause, fifteen per cent to be retained "for the needs of the church, and the remainder was allotted to home and foreign missions, colleges, hospitals, orphanages, and the care of superannuated ministers."<sup>15</sup>

During the boom at Ranger, the McCleskey lobby witnessed

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<sup>12</sup>House, op. cit., p. 46.

<sup>13</sup>Ibid.

<sup>14</sup>Ibid., p. 56.

<sup>15</sup>Ibid., pp. 20-22.

the payment of as high as \$15,000 an acre exclusive of the royalty. The royalty from the Slayden farm brought \$8,000 an acre. Royalty on another farm brought one hundred and seventy-five dollars an acre for one-fourth interest.

Leases in the East Texas Field which first sold for ten dollars an acre advanced to from five hundred to fifteen hundred dollars per acre. Speculators and independent operators made deals for leases on the basis of one-fourth to one-half in cash and the balance in oil, to be paid when oil was found. For this reason much higher prices were paid than would otherwise have been possible.

Along with the leasing campaign went the buying and selling of royalties. Brokerage houses were established in the leading cities, the buyers being stationed in the oil fields. Conversations similar to the following could be heard in the hotel lobbies and on the streets of the oil towns:

'There's oil all under the state of Texas, if you only know where to find it. How about blocking up some leases in the north-eastern part? There might be an extension to the Caddo pool. Don't forget Burkburnett, Mexia, Powell and all those others.' The speaker could have been any of a dozen persons, voicing an opinion on the choicest area for some wildcat exploration for oil. Texas is a wildcatter's paradise.<sup>16</sup>

A major oil company paid an East Texas land owner fifteen thousand dollars monthly as royalty on his land upon which there were one hundred and thirty producing wells. There is

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<sup>16</sup>Harter, op. cit., p. 41.

estimated to be about fifty such landowners in the field.

The discovery of oil has resulted in a vast amount of litigation. Titles to property are constantly under attack in the various courts of the state. Unknown heirs have claimed their share of the riches to be obtained. Abstract and title companies have been kept busy recording titles and making new abstracts. Long-forgotten papers have been taken from their hiding-places and rushed to the county clerk's office for recording. The admonition that "a wise man records his deed"<sup>17</sup> was recalled. Land was re-surveyed to establish correct boundaries and to search for vacancies. This is especially true in the East Texas Field where Spanish land grants of irregular surveys existed. A few feet of land in a great oil field like East Texas might mean the loss or gain of a small fortune. Poetically speaking, we might say:

The Engineers have hairy, long ears;  
The way they work would drive you to tears.  
Measuring, walking, and looking around  
To see if a vacancy can be found.<sup>18</sup>

The new oil fields were invaded with so-called oil promoters selling fake oil stocks. This evil seemed to be at its height during the Ranger boom. Sudden rise to riches was pictured very vividly by these promoters, who sold stocks which were fake or, at best, yielded a small income after long delay. Unfortunately, the "sucker lists in the hands of these

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<sup>17</sup>Ibid., p. 82.

<sup>18</sup>Ibid., p. 77.

promoters reveal that a majority of the investors are hard-working business and professional people, doctors, dentists, school-teachers, ministers of the gospel, yes, even lawyers."<sup>19</sup> For these, the "only dividends were disillusionment, disappointment, and despair."<sup>20</sup>

The people in the oil fields were not the only recipients of the high prices for property. Real estate became almost as valuable as a rich oil lease. Two twenty-foot lots in Ranger, "occupied by the Wilson pool hall and the Wide Awake Lunch, sold for \$37,000, a profit of \$13,000 in less than sixty days."<sup>21</sup> These figures and others which are to follow sound almost as astounding as those paid for royalties and leases:

A lot purchased for \$14,000 was resold four days later for a gain of \$4,000 and the owner was offered five hundred dollars a month ground rent,.... Fourteen years before, the villagers had laughed when the Rev. C. H. Ray bought a lot with a frontage of one hundred feet for two hundred dollars. Now he sold half of the lot for \$100,000.<sup>22</sup>

The discovery of oil furnished employment for countless numbers of workers. Teamsters hauling timber and oil field machinery, unskilled labor digging slush pits, rig builders putting up rigs, repair men repairing broken machinery, carpenters building shacks to house oil field workers, and lunch

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<sup>19</sup>Ibid., p. 174.

<sup>20</sup>House, op. cit., p. 126.

<sup>21</sup>Ibid., p. 52.

<sup>22</sup>Ibid.

counter operators serving lunches were familiar scenes of activity. In addition to the oil field activity, such business establishments as cafes, grocery stores, gasoline stations, cold drink stands, and drug stores soon sprang up and furnished employment to a great number of people. It was during the East Texas boom that the saw mills got the first real orders they had had in several years. Back in the city or near-by town, stenographers were busy tapping typewriters, typing abstracts and titles. Oil scouts were scurrying about on the streets with papers under their arms getting abstracts and titles recorded and examined. Merchants were busy selling merchandise to the newcomers. Rooming house proprietors were scurrying to the furniture dealers, furnishing new rooms or putting up another bed in the room that formerly had only one. Bank cashiers were busy cashing checks and making deposits for the participants of the various transactions which were being made.

A bank at Ranger "eleven days old had \$330,000 in deposits and there were two other banks, each with \$1,500,000 on deposit."<sup>23</sup> The owner of a fruit stand banked as high as three hundred dollars a day.

Within a brief time after the rush was over, and law and order restored, a complete metamorphosis of the oil region occurred. A new prosperity prevailed throughout the region. New homes replaced the tumbledown dwellings. Magnificent new

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<sup>23</sup>Ibid., p. 30.

schools were built. Mortgages were paid and the landowners had money in the banks for a rainy day.

Lawlessness and crime seemed to go hand in hand with the new oil towns. The most outstanding fields in this respect were Ranger, Burkburnett, Iuling, Mexia, and Borger. Crime in the oil fields was prevalent for several reasons. In the first place, the lower element of society seemed to follow the derricks -- people who had lost their self-respect and cared only for making quick money. In this class the gamblers, bootleggers, and worthless women are to be included.

In the second place, the mixed population and the hardships of the life in the new oil towns created undesirable environment for the better classes. In the third place, the rush was so sudden that local peace officers could not take care of the situation. Usually the sentiment grew so strong against regulatory measures that the officers were outnumbered until they practically had to stand idly by and let the crime wave spread before their very eyes. Sometimes the situation reached such a stage that the state police force had to be summoned.

The driving monotony of oil field labor is such that the workmen are eager for diversion at the end of their shifts. Moving picture palaces have had to vie with dance halls and gambling dens for patrons. Gambling, drinking, and carousing flourished. The jail houses usually became inadequate and had to be replaced with new ones. The conditions were so de-



plorable in Ranger, and human life was so cheap, that the Ranger Daily Times became better known as the Ranger "Daily Crimes", later to be called the Ranger "Hard Times". Some workmen, after hearing shots in the alley, might find a murdered man, which crime might go unnoticed in the local paper.

Boyce House says:

Hardly a street but had its story of sudden death. In front of the city hall itself one man was slain and beside the building two others were killed. In the same block a girl was fatally shot -- four homicides in one square. Saloons, thinly disguised (out of defense for national and state prohibition) sprang up; gambling places were opened; dance halls were numerous..... The sea of crimson reached high tide when over one week-end five men were shot to death. Arrests were few, indictments were fewer, convictions were almost unheard of. When a man was fined seventy-five dollars for murder in Ranger, it was one of the rare instances of any form of punishment for the shedding of human blood.<sup>24</sup>

In closing the case the judge said to the convicted:

"If you ever assassinate another of our citizens, I'll give you the full limit of the court -- two hundred dollars and costs. Call the next case."<sup>25</sup>

Luling became famous for its Gander Slue where dead bodies were concealed in the brush and found in slush pits. The Texas Rangers were called to clean the place up. As the Rangers went about the field making their arrests, they found no place to put their prisoners; consequently, they chained them to trees and came back at the end of the day to collect their day's catch.

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<sup>24</sup>Ibid., pp. 146-148.

<sup>25</sup>Ibid.

Burkburnett is sometimes called the wildest of all the oil towns. Here also Rangers were called to restore order.

The situation at Borger was no less serious, the place soon gaining quite an evil reputation.<sup>26</sup> When the Rangers arrived here, the painted ladies were sent on their way immediately. It was no uncommon sight to see them leaving the town a-foot, walking the highways in all directions.

East Texas was no better than all the rest -- the same crowd, the same activity, except that there were perhaps not so many murders as at Ranger and Luling. Gambling, bootlegging, drinking, and the dance halls seemed to thrive.

While the foregoing remarks seem to apply principally to the throngs that come and go with a boom, the effect of oil discovery changed also the lives of the old inhabitants of the various fields. This change is well described in the following:

The younger element, naturally, revel in their newly-gotten riches and are likely to indulge in an orgy of expensive cars and fine clothes. But their parents keep their heads fairly well,.... Ask any of these farmers what he intends to do now that he has become wealthy and need work no longer, and the answer is almost always the same: "Well, I'll wait till I get my cotton in and then I'll see."

I recall an instance of an old lady upon whose farm oil had been discovered, making her independently wealthy..... For years she had nursed and tended a small grove of fruit trees and this was the first year they had showed signs of bearing. But the shower of oil had ruined them and not all the riches which were

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<sup>26</sup>E. B. Garrett, "Oil Is King in Texas Panhandle," World's Work, December 2, 1927, p. 168.

to be hers could atone for the loss of her precious peach, apricot, and plum trees, their once pink blossoms now black with oil.<sup>27</sup>

Joe Duke, on whose farm the discovery well at Ranger had been drilled, could have sold the farm for \$10,000, but instead he kept right on hauling hay and repairing his own fences.

That sudden wealth is not conducive to happiness is suggested by the same rustic philosopher who summed up the reactions of his neighbors as follows:

Before they found ile here, everybody was poor and happy. Cost o' livin was goin' up, price o' cotton was goin' down, and the boll weevils was eatin' everything up. That was just as it should be and nobody minded. Now everybody is rich and miserable. A farmer gets a fortune for his leases and lays awake nights worryin' because he didn't hold for more. Half the neighbors ain't on speakin' terms with each other because each one thinks the other got the best deal. Cotton is open and nobody cares whether it's picked or not. Young folks has all gone away to buy big cars and silk stock-in's, and the missus is figgerin' on gettin' her hair dyed and her face lifted. This ile is just plumb ruin-in' the country.<sup>28</sup>

Thus we see that the social effects of oil have been both good and evil. The evil effects have been of a temporary nature, passing with the boom; while the good effects are still with us, the evidences of which we witness daily.

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<sup>27</sup>MacIntosh, "The Wonder Story of Texas Oil," Texas Monthly, III, 70.

<sup>28</sup>Ibid.

## CHAPTER III

### PRODUCTION AND TRANSPORTATION OF PETROLEUM

Before scientific methods of discovery of oil-producing lands were devised, haphazard methods were used by prospectors. The most famous of these doodlebug methods was the wiggle stick or divining rod, which was believed to contain some magic power that attracted it to the spot where oil was. The simplest of all these devices was a forked peach tree switch which worked on the theory that it would switch in the hands of the wielder when passing over oil deposits. Others employed a small vial of oil swung as a pendulum within the doodlebug. Still others used an electroscope or a sort of radio which sounded a horn when they were carried over oil deposits.

Oil companies did not have much confidence in these oil witches. The big companies have various ways of checking the truth of the doodlebugs. One company official keeps a can of oil hidden somewhere on the three floors of his office in the Humble Building at Houston. When a doodlebug dowser appears, he is invited to find the oil. No one has succeeded as yet. Another company official lets the doodlebug dowser make his claims. He then places sand in three cigar boxes, conceals

some oil in the sand of one of the boxes, shuffles them, and invites the dowser to find the oil. The offer is still open.<sup>1</sup>

The outcome of the famous doodlebug oil drilling case styled Albert Schram et al vs. Pearl Oil Corporation et al has given the doodlebug devices some recognition of value. Schram, a doodlebug wielder, had agreed to furnish the locating instruments for the finding of oil on a two hundred acre lease in East Texas. Large production was discovered on the lease. Schram claimed that, according to agreement, he should receive half of the oil interests thus found. Consequently, upon the oil company's refusal to grant him this interest, he sued it. Both the trial court and the appellate court at Austin rendered judgment against Schram and the doodlebug system of locating oil. Schram appealed to the Supreme Court which granted him a writ of error, but the attorneys on both sides settled the case by agreement.

Wildcat drilling was another thoroughly haphazard method often used to locate oil. Oil seepages, the escaping of gas, or a hunch, were signs which led to wildcat drilling. Wildcat wells were so-called because they were usually located in sections far from production, just as wildcats are supposed to inhabit remote territory. One author has defined a wildcat as "any well that is drilled for oil where the presence of petroleum has not yet been demonstrated by a well already

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<sup>1</sup>Herman B. Deutsch, "Taming the Wildcats," Saturday Evening Post, June 11, 1938, p. 15.

flowing."<sup>2</sup> As implied in the definition, all wells outside of proven territory are wildcats. Lacking scientific methods of exploration, the early results of wildcat tests were highly problematical. Consequently, the number of dry holes was large.

The technique of finding oil has made great advancement during the last decade. The shallow fields have been marked by surface geology such as oil seeps, and other indications, which have led to the discovery of many new fields. Shallow salt domes have been located with simple geophysical methods. Naturally, the more obvious fields were found first. There is no sure method of finding oil, but great progress has been made by the geologists and the geophysicists in locating and identifying structural traps which house the oil underground.

Texas has been the pioneer in the art of locating oil structures, just as she has been the pioneer in the development of the rotary drill which was introduced forty years ago. The most spectacular progress in finding oil has been made in geophysics. By the use of magnetometers, geophysicists are able to detect anomalies in the earth's magnetic field. Comparison of information thus obtained with conditions in existing fields leads to the location of new fields. The seismograph is used to locate buried structures which may be favorable to the accumulation of oil. By the use of these newer methods, oil at greater depths has been located.

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<sup>2</sup>Ibid., p. 14.

Although scientific methods have supplanted the earlier haphazard and unscientific ones, the discovery of oil still rests largely upon trial and error, "for the oil man says, 'the only proof of oil production is in the drill.' For example, in 1930 more than twenty thousand wells were drilled at a cost of about \$500,000,000, nearly one-third of which were dry."<sup>3</sup> During the year 1938 a total of 120,361 wells were drilled, 49,961 of which were dry. The latter figures show that the number of dry holes has increased since 1930. The dry holes drilled in 1938 represented an expenditure of \$99,220,000, an average of \$20,000 per well.

Drilling methods are of two general classes or types -- cable tool or percussion drilling, and rotary drilling. Cable tool drilling is the oldest method. It includes both portable and permanent rigs. Originally, cable tool drilling was used in regions where hard rock formations were encountered. The equipment of a cable tool rig consists of a wooden or steel derrick and other drilling machinery. The hole is drilled by raising the bit and letting it fall with considerable force, thus pulverizing the rock. This type of drilling is similar to pile driving. Rotary drilling, as the name implies, rotates a bit in the bottom of the hole which, by its revolving motion, cuts the earth. Rotary tools are used in regions where the earth's surface is soft. Rotary drilling was intro-

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<sup>3</sup>Texas Company, Petroleum Products, p. 20.

duced at Spindletop. It is much faster than cable tool drilling.

Improvements in the technique of drilling have likewise progressed in recent years, keeping pace with those of the oil-finding processes. Improved drilling equipment has been made available to the industry, and it is now possible to drill a ten-thousand-foot well with no more difficulty than was formerly encountered in drilling a one-thousand-foot well.

The cost is greater, however; the average time required to drill a one-thousand-foot well is ten to twenty days. Drilling a ten-thousand-foot well might extend over a period of a year. The deeper the hole, the greater the cost per foot. The cost of drilling a one-thousand-foot well may range from \$1,000 to \$4,000, while that for a four-thousand-foot well is likely to be between \$25,000 and \$40,000, and that for a ten-thousand-foot well may reach the sum of \$250,000.

At the beginning of the industry, almost all wells were shallow. Wells seldom exceeded 2,000 feet, and the cost rarely exceeded \$1,000. Today the wells are much deeper, ranging from 4,000 to 10,000 feet. The "average depth now is 4,000 feet, compared with an average of 2,500 feet between 1926-31, and only 1,200 feet prior to 1920."<sup>4</sup> "The deepest well in Texas on January 1, 1939, was in Agua Dulce field, Nueces County, where a drilling operation was approaching 14,000 feet. This was the second deepest well in the world

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<sup>4</sup>Texas Mid-Continent Oil and Gas Association, Important Facts About Texas Oil, p. 20.



at that time."<sup>5</sup> A California well, the Continental Oil Company's K. C. L. A. 2 in San Joaquin Valley claims the distinction of being the deepest hole ever made in the earth; it was drilled to a depth of 15,000 feet and brought up oil from 13,100 feet; it is also the deepest producer.<sup>6</sup>

What are the problems of such drilling? Will those who risk their fortunes find oil? These are not idle questions. Men are planning to probe deeper into the earth's geological past, but few will attempt to go so deep until the visible supply of oil dwindles to the point where rising prices will justify the added cost. Texas at the present time is confronted with overproduction to such an extent that exploration for deeper sands is not receiving much attention.

A change in tactics and policy has taken place along with the changed technique and improved machinery. Oil companies formerly worked alone. They guarded their drilling logs and structural information with the utmost secrecy. Now there is more teamwork and co-operation among the companies. Information gained in drilling is shared with each other. Group meetings are held for the exchange of ideas. Everywhere the co-operative spirit is manifest, rather than individual selfish interests as in the past. Company officials have begun to realize that the co-operative spirit is to the best of their

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<sup>5</sup>Texas Almanac, 1939-40, p. 218.

<sup>6</sup>"Deepest Hole," Time, July 4, 1938, pp. 22-23.

interests.<sup>7</sup>

Drilling is often controlled by mutual agreement among the oil companies. "In fields where tracts are large and are controlled mainly by the major companies, there will often be a kind of 'gentlemen's agreement' whereby there will be little or none of this competitive drilling."<sup>8</sup>

When a well has been completed, provision must be made to take care of the oil. The flow from the well may be automatic, caused by the gas pressure behind the oil, or it may be brought to the surface by pumping. When the gas pressure is great, the oil may spout from the well with great force. Gushers are undesirable. Oil men try to bring in wells under control. The most desirable way is to turn the oil into tanks and pipe lines without any loss.

The question of storage for Texas oil dates back to the first wells at Nacogdoches. The original tanks there were of 2,000-barrel capacity. Oil was shipped by wagon in drums of about one hundred gallons each. Since that time we have witnessed rapid advancement. Temporary storage tanks spring up in the new fields as the wells are brought in. The oil is allowed to remain in these tanks until it can be shipped or run through pipe lines to the refining centers.

The first pipe line in Texas was laid at Nacogdoches,

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<sup>7</sup>MacIntosh, "The Wonder Story of Texas Oil," Bunker's Monthly, II, 301.

<sup>8</sup>MacIntosh, "The Wonder Story of Texas Oil," Texas Monthly, III, 73.

the starting point of the great oil industry we have today. This first pipe line was five and one-half miles long. It was discontinued as a distributor of oil and taken over by the municipality and used as a part of the city's water system. When the first pipe line reached Ranger, there was \$5,000,000 worth of oil in storage. Similar conditions have been found in other fields. Texas now (1939) has the greatest system of pipe line transportation of any state or of any comparable area anywhere in the world. The system includes about 36,000 miles of oil pipe line and 28,000 miles of gas pipe line. Ninety per cent of the annual Texas production goes to terminal refining and shipping centers by pipe lines. Gas lines originating in Texas fields supply gas to fourteen other states and the foreign country of Mexico.<sup>9</sup> The remaining ten per cent of Texas oil production is transported by rail or truck. The never-ceasing activity of transporting oil is very well expressed in these lines:

With a rattle, rattle, chug, chug, beep, beep, beep,  
They transport oil while you wake or you sleep.  
Some of it's cold and some of it's "hot",  
But it's moved from the oil field whether or not.<sup>10</sup>

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<sup>9</sup>Texas Almanac, 1939-40, p. 492.

<sup>10</sup>Harter, op. cit., p. 86.

## CHAPTER IV

### REFINING AND PETROLEUM PRODUCTS

The refining industry in Texas dates back to the development of the Corsicana area in 1897. James E. Whitesell, mayor of the city of Corsicana at that time, saw the necessity of a refining plant, and, having heard of J. S. Cullinan's work in Pennsylvania, wrote Mr. Cullinan asking him to come to Texas and look over the Corsicana Field. The Pennsylvanian accepted the invitation and looked over the field with Mayor Whitesell, Governor Culberson, and others.

Attracted by the possibilities, he made a contract with Senator Mills, Fred Fleming, Dr. Johnson, John Gibson and others to sell him 150,000 barrels of oil at 50¢ a barrel, contingent on his putting in a pipe line system, storage tanks, and a refinery and developing a market for oil.<sup>1</sup>

Mr. Cullinan's financial backers soon quit because of the doubtful possibilities of finding oil in Texas. He then secured the partnership of Henry Folger and E. R. Brown. Mr. Brown later became president of the Magnolia Petroleum Company. To these men belongs the honor of building at Corsicana the first oil refinery in Texas. Mr. Cullinan is sometimes referred to as the founder of the petroleum industry in this

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<sup>1</sup>Dallas News, October 1, 1935.

state.

The opening of Spindletop and other coastal fields created a need for additional refineries, and by 1910 Texas had seven, all of which were in the Sabine district, except the one at Corsicana and another at Dallas. By 1919 the number had grown to forty-three, with a refining capacity of 277,200 barrels daily.

Today Texas leads all states in the number of refineries, having, in 1938, one hundred and eleven of the four hundred and twenty-two refineries in the United States. Not only is Texas the leading refining state, but it deserves international leadership as well. The Conservationist, a leading oil journal, says:

Texas is the oil producing and refining center of the world, supplying the dominating portion of both the crude and finished petroleum products being consumed in all nations,....the refineries constituting one of Texas' greatest industries; an industry bringing many millions of dollars into the state. Of these enormous quantities of refined products, a scant 16 per cent is consumed within Texas, the remainder being diverted to trade channels which carry them even to the far corners of the earth.<sup>2</sup>

The forty-nine per cent increase in the manufacturing industry in Texas during the period from 1935 to 1937 is due chiefly to the refining of oil, natural gasoline manufacture, and from the production of carbon black. Of the daily capacity of 3,749,835 barrels shown by the operating plants of the

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<sup>2</sup>Texas Oil and Gas Conservation Association, Conservationist, March 4, 1933, p. 4.

United States, 961,870 barrels, or twenty-six per cent, were refined by operating plants in Texas.<sup>3</sup> The proportion of Texas crude oil processed by Texas refineries has shown a steady increase, from 54.2 per cent in 1933 to an average of 79 per cent in 1938.<sup>4</sup> Moreover, "nearly 76 per cent of all the natural gas produced and 90 per cent of all the natural gasoline made from natural gas is utilized by home industry."<sup>5</sup>

Although more than three-fourths of the refineries are located at Gulf ports, there are plants located in practically every section of the state. The Port Arthur-Beaumont district leads, with the Houston area second. There is also appreciable activity in the East Texas Field and at Dallas, Fort Worth, Wichita Falls, Amarillo, and in the oil field centers of West Texas. In addition to refining plants, Texas now has one hundred and forty-four natural gasoline plants, furnishing employment to many Texas citizens.

Upon the arrival of the crude oil at the refinery, the manufacturing process begins. Various methods are used to change the dark fluid into gasoline, kerosene, lubricating oils, wax asphalt, and many other products. A modern refinery employs a large number of men who have special training in petroleum technology. This science has become so important

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<sup>3</sup>Dallas News, October 18, 1936.

<sup>4</sup>Texas Mid-Continent Oil and Gas Association, Important Facts About Texas Oil, p. 16.

<sup>5</sup>Ibid., p. 17.

that petroleum refining and research employs more chemists than any other single industry.

When the crude oil reaches the refinery, it is first analyzed so it can be manufactured into the products to which it is best suited. A rough classification is made prior to shipment, but final determination of the products it will yield is made at the refinery. Some crude oils are high in gasoline content. Others will produce good lubricants. Others will yield valuable wax products, while others will be utilized for their asphalt content. The refinery considers all of these qualities before actual refining begins. The petroleum industry has roughly classified crudes into three groups according to their basic content. There are those with naphthene base, those with paraffin base, and those with a mixed base. These bases are used as a rough classification only, the final determination to be made with actual refining.

The process of refining consists of primary and secondary functions. The primary function being that of separation of the crude into definite portions or cuts, termed fractionation, and the chemical treatment of these cuts to make the finished products.

The primary method used in crude refining is distillation, although cracking is used to great advantage in the manufacture of gasoline. Cracking is accomplished by heating the oils to high temperatures which change their molecular structure. Cracked gasoline comprises thirty-eight per cent

of the amount now sold, although it is never sold as such. The commercial product is obtained by mixing it with natural and distilled gasoline.

Approximately thirty-nine per cent of the present production of crude is converted into gasoline, the most important single product of the petroleum industry. Some crudes yield as high as sixty per cent gasoline, while others yield only ten per cent. The gasoline content can be changed considerably by the method and type of equipment used in the manufacturing process. Cracking greatly increases the gasoline content. The naphthene and paraffin base crudes are suitable for the manufacture of lubricating oils. The process of manufacturing oils from these two bases is somewhat different, however.

During 1938, 374,573,000 barrels of crude were processed in Texas refineries. The refining industry alone employed 35,000 people, and paid out in its payroll \$40,000,000.

The scope and purpose of this paper will not permit a more detailed discussion of the refining process. Nor is it feasible to describe the highly technical processes. The foregoing account serves only as an introduction to the treatment of petroleum products which is to follow.

Besides such well-known petroleum products as fuel oil and lubricating oils, there is no end to the list of products and by-products of petroleum and to the uses which they can be prepared to serve. Research workers are developing and discovering new uses daily. The modern refinery utilizes every



part of the crude oil.

Oil was used as early as the time of Abraham, long before the Christian era. Ancient people found it useful as mortar in their construction work. Legend tells us that the Greeks destroyed the fleet of an enemy by pouring oil on the sea and setting fire to it. A Roman general is said to have poured oil on the backs of swine, ignited it, and driven the flaming hogs into the ranks of an enemy. The Assyrians mixed oil with ashes and used it as a fuel. The medical properties of oil have long been recognized. Early European explorers found the American Indians using it as a medicine. Certainly, these early uses of oil pointed to the time when it would touch the every-day lives of all people everywhere.

Petroleum was first sought in the United States to be used in the preparation of medicines. Soon the use of oil lamps for illumination created more demand for kerosene; then, as industrial machinery came into use, there arose a demand for petroleum lubricants. The coming of the internal-combustion engine and the first automobiles and airplanes in the early part of the twentieth century caused gasoline, which had previously been discarded as a waste product, to come into use. A demand for petroleum was soon thereafter intensified by the World War, when rapid transportation of men and supplies increased the use of fuel oil by railroads and ships.

Immediately after the war automobiles came into general use, which meant more and still more gasoline was needed. Since

then the petroleum industry has marched steadily forward. New uses for petroleum products and by-products have been developed.

One of the most important products derived from crude is asphalt. Petroleum and petroleum jelly are used widely in the making of medicines, cosmetics, metal coating, and in the lubrication of light machinery. The residual oils are used as fuels in industrial plants, buildings, ships, and locomotives, whose fuel efficiency they have increased tremendously within the past few years. Coke, pitches, and sulfonic acids have the same source.

So numerous and so varied are petroleum products and their uses that no complete catalogue of them has ever been made, and no full account of them will be attempted in this study. It may be briefly stated that oil or some of its properties enter into the manufacture of perfumes, paints, electric lights, rubber tires, cleaners' naphtha, solvents, and emulsifying oils. Numerous chemicals owe much to petroleum derivatives. Solvents for the silk, rayon, and lacquer industries have oil in them. Petroleum has a place in the manufacture of aldehydes which are used in the production of bakelite and similar products. It is also used in antiseptics and denaturants. Anti-freeze solutions used in automobiles contain oil, as do certain resinous products used in the chemical industry. Benjol and tulnol, used in explosives, are not strangers to petroleum. There are processes by which oil may

by used in the manufacture of fatty acids and edible fats such as butter and lard substitutes. It is also used in the making of soap, dyestuffs, and saccharine. Synthetic rubber and artificial leather must not be overlooked. What uses of oil could we think of in connection with druggists' supplies, clothing, automobile tires, and other products? Moreover, there is is said to be convincing evidence that oil will take the place of coal tar as the basic element for chemical manufacture. This may mean that the petroleum industry of the future will be a tremendous chemical undertaking.<sup>6</sup> The varied uses of oil have been further summarized as follows:

The uses of petroleum and its products are more varied than is generally known, there being some 400 derivatives of crude now daily employed in industry and in the home. These uses range all the way from fertilizer to cosmetics, from road paving materials to medicines. There is hardly a branch in business, a portion of the home or even a means of entertainment that does not reflect in some vital way the usage of petroleum products.

In the home, paints, soap, fuels are derivatives of petroleum; some cloth is lubricated by a highly refined oil product in the making; the mechanical refrigerator uses a cooling agent made from oil; ointments and cosmetics come from the same source. All branches of industry from cleaning plants to candy makers use oil, the latter employing a specially refined product. Chewing gum, rubber tires, inks, matches, polishes, all contain oil derivatives. Other uses range from drug extraction to illuminating light houses.<sup>7</sup>

Thus we may realize how important to Texas it is that

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<sup>6</sup>"Petroleum -- Its Hundreds of Uses," Texas Weekly, February 15, 1936, pp. 6-9.

<sup>7</sup>"Petroleum Has Many Uses," Conservationist, July 2, 1932, p. 15.

this state leads all others in the production and refining of oil. "Historians of the future will probably refer to our times as the 'Age of Petroleum,' for petroleum has made possible the mechanical development of this era."<sup>8</sup> The conveniences that grow out of the automobile, the airplane, the tractor, the ocean liner, and the modern asphalt road are dependent upon a constant supply of petroleum products.<sup>9</sup>

Because of the wide variation in the nature of the demand for and the physical characteristics of petroleum products, different methods of handling and marketing have been developed. Some products are sold by the gallon. Others are sold in small consignments of a few thousand barrels. Some products are liquid; others are solid. Refineries located near the consuming centers usually distribute the liquid products by tank truck. Isolated refineries may ship by tank car, tank ship, or pipe line. A common practice is to ship by one or all of the methods to a local distributing plant where the products remain in storage until needed by local service stations and retail outlets.

Greases are usually shipped in barrels or tins. Large consumers receive barrel lots, while smaller consumers receive the smaller cans from bulk stations.

Large producers often own and operate their own shipping

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<sup>8</sup>Texas Company, Petroleum Products, p. 8.

<sup>9</sup>Ibid.

facilities. Refineries often operate their own can factories for the contents of these refineries.

Much improvement has been made in recent years in the service equipment as well as in the efficiency of the service rendered. There is uncertainty as to whether the first service station was established at Vancouver, B. C., at Houston, or at Dallas, Texas. At any rate, service stations started as distributing centers about the year 1908. Since that time they have increased rapidly, and are now the chief retail outlets for petroleum products. In the cities and towns there is a service station on almost every corner and some in between. They are numerous on the highways and in rural communities.

Service stations distribute a wide variety of petroleum products including motor oils, gasoline, waxes, polishes, household oils, cleaners' naphtha, and kerosene.

Modern service stations are examples of courtesy and efficiency. Service station attendants have established a reputation for courtesy, patience, and efficiency unequalled in the entire field of merchandising. The motorist gets more service for the expenditure of a smaller amount of money than is available in any other type of retail trade. He no longer pumps his own tires, puts oil into his crankcase, or wipes his own windshield.

The refining of petroleum and the marketing of its finished products is probably the most important phase of the

petroleum industry, for it is through this branch of the industry that the products of petroleum are made available for direct use. At the present time, there appears to be no substitutes for some of these products. What the future will bring only time will tell.

## CHAPTER V

### MAJOR OIL COMPANIES FORMED IN TEXAS

An account of the oil industry in Texas would hardly be complete without a brief history of the major oil companies which have grown up with the development of the industry.

Chief among the major oil companies formed in Texas is the Texas Company. J. S. Cullinan, the shrewd Pennsylvanian who established the first oil refinery at Corsicana, was its chief promoter. Soon after the refinery opened, the Spindletop boom was on. Being close at hand, Cullinan went to Beaumont to pick up from producers there some orders for tanks. There was no demand for tanks, however, because there was no sale for the oil that was to fill them. Mr. Cullinan saw the value of the opportunity. He wired back East to some friends for funds with which to build some storage tanks in the Beaumont district and fill them with oil which could then be bought at the astonishingly low price of three cents a barrel. He raised \$50,000. "Thereupon was organized on March 28, 1901, the Texas Fuel Company, authorized capital \$50,000, chartered to do a general oil and pipe line business in the state of Texas."<sup>1</sup> A short time afterwards the Texas Fuel Company was

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<sup>1</sup>Texas Company, "History of Texas Corporation," abstracted from World Petroleum, 1933, p. A-11.

expanded by uniting with the Hogg-Swayne syndicate which owned considerable storage facilities and right of way near Beaumont.

At the beginning of 1902 production at Spindletop was running far ahead of storage facilities. The stockholders of the Texas Fuel Company pushed forward, purchasing additional facilities and making new contracts to handle future production. All these activities called for more capital, and on March 21, 1902, an agreement was drawn for chartering the Texas Company with a capital of \$3,000,000, to take over all properties and obligations of the Texas Fuel Company.<sup>2</sup>

The incident which determined the future of the industry was the raising of \$1,000,000 cash which was asked for the option to drill three wells in the Sour Lake section. The enormous price demanded was due to the fact that the section was an established health resort for anemics. Mr. Cullinan believed that the oil found there would be of superior quality. It was through his efforts that the money was secured from "John W. (Bet-a-Million) Gates and Arnold Schlaet."<sup>3</sup> Gates, a Chicago railroad financier, maintained a summer home at Port Arthur, and had a warm place in his heart for the town which was named for Arthur Stilwell, a spectacular figure in the railroad history of the United States.

While the tests were going forward in the Sour Lake region, and the prospectors were trying to get a reduction in

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<sup>2</sup>Ibid.

<sup>3</sup>Fort Worth Press, Centennial Scrapbook Edition, 1936.



the option price, well number three blew in as a gusher. A million dollars for the option now became a cheap price. The rest was easy. Additional capital was quickly obtained. The organization of the Texas Company was confirmed by a state charter on April 7, 1902.

Within a year the company boasted one hundred and nineteen stockholders, a number that has now grown to 89,000, no one of whom owns more than three per cent of the company's stock. From its beginning the Texas Company has maintained its reputation as a great independent corporation.<sup>4</sup>

J. S. Cullinan, who had been the animating spirit in its formation, served as the first president of the company.

"Other officers were Arnold Schlaet, first vice-president; Fred W. Freeman, secretary; A. C. Migtietta, assistant secretary; Herbert E. Marshall, treasurer; T. J. Donoghue, assistant treasurer."<sup>5</sup>

The accomplishments of the Texas Company were numerous from the beginning. By 1910, though it had been in business less than ten years, it had emerged from its earlier position as a local organization and was operating on a nation and international scale. Its crude production had reached 7,192,552 barrels annually. It had built 1,276 miles of trunk, branch, and gathering pipe lines in the states of Texas, Oklahoma, and Louisiana. It had refineries in operation at Port Arthur,

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<sup>4</sup>Texas Company, "History of Texas Corporation," abstracted from World Petroleum, 1933, p. A-14.

<sup>5</sup>Ibid.

Port Neches, and Dallas in Texas, and at Tulsa, Oklahoma. Its products were being distributed through two hundred and thirty-one bulk stations in twenty-one states and through branches in eleven foreign countries.<sup>6</sup>

The Texas Company ranks fifth among the producing agents in the United States. It holds free or under lease more than 5,400,000 acres of land and operates over 6,600 wells. Its peak production was reached in 1929, when it produced 50,675,363 barrels of oil. Since 1929 production has been cut to comply with the conservation program. The company has developed production in only one foreign country, Mexico, although it controls through subsidiaries vast acreages in Colombia and Venezuela.

For the movement of the vast production of the company, it owns and operates more than 6,600 miles of pipe lines, the main stem of which extends from Tulsa, Oklahoma, to Port Arthur and Houston.

The Texas Company reached a position of leadership early in the refining field, a position it has since held. It now owns and operates some seventeen refineries located throughout the United States. These refineries produce more than four hundred separate products. In addition to the petroleum industry, the company has entered into the manufacture of asphalt and the production of sulphur and salt. The asphalt plant at Port Neches was acquired in 1906. It is probably

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<sup>6</sup>Ibid., pp. A-14 to A-16.

the largest plant of its kind in the world, employing from three hundred to four hundred men. The Texas Can Company, a subsidiary of the Texas Company, manufactures containers for the company's products.

Marketing of Texaco products is extended throughout the forty-eight states of the Union, and its export departments operate in 106 countries. The Domestic Sales Department is composed of four territories with headquarters at New York, Chicago, Houston, and Los Angeles. These territories are subdivided into thirteen districts. The distributing department has expanded from one single station at Laredo in 1905 to 1,840 bulk stations and 16,000 service stations, which employ 21,800 dealers.<sup>7</sup>

Outstanding among the petroleum organizations is the Gulf Oil Corporation, which had its humble beginning only a few miles from the city of Houston, and today covers the world.

The year 1901 is to be remembered not only as the date of the famous Spindletop gusher but also for the beginning of the Gulf Oil Corporation. The founders of the Gulf Oil Company were willing to gamble fortunes in the belief that Spindletop was merely the forerunner of even greater wells, the products of which would result in increased efficiency and economy.

The sales organization of the Gulf Oil Company occupied its first quarters in the city of Houston. In 1904, when the office was established, there were three people in the person-

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<sup>7</sup>Ibid., pp. A-18 to A-24.

nel -- E. M. Taliaferro, O. H. Carlisle, and his secretary, Miss Aline Knight. Expansion called for larger quarters, and in 1907 the organization was moved to the top floor of the First National Bank Building. A more rapid expansion resulted in a series of successive moves which took the company to the old Scanlan Building, to the Kress Building, to occupation of the Rusk Building, then to the Mason Building, and finally to the present Gulf Building, the tallest skyscraper in the state of Texas.

The Gulf Oil Company, from its humble beginning thirty-five years ago, has made an impressive panorama of progress. It has marked each progressive step with new services and improved products. The 40,000 Gulf dealers contribute greatly to the vast network of service stations which serve the motorist. The Gulf Oil Corporation and the thousands of Gulf employees have helped to make Houston a great oil city and have shared largely in the development of the oil industry of Texas.<sup>8</sup>

The beginnings of the Humble Company can be traced to the early efforts of William Stamps Farish and R. Lee Blaffer, who formed a partnership and drilled wells in the Humble Field in 1905. The Humble Oil Company was formed by Ross Shaw Sterling and his brother Frank, and C. B. Goddard. Soon Farish, Blaffer, and Harry Wiess, along with several others,

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<sup>8</sup>Fogle West Company, "Parade of the Pioneers," radio program, January 19, 1939.

purchased stock in Sterling's Humble Oil Company. In March, 1907, the holdings of the various units were pooled and the Humble Oil and Refining Company was born. Its capital stock was valued at \$4,000,000.<sup>9</sup>

Production of the company aggregated less than 8,000 barrels a day in 1917, and its payroll amounted to \$547,902. Within the next eight years the capital stock had increased to \$75,000,000.

When the company later needed cash, Farish was successful in securing it from a friend, Walter Teagle, whom he had met during the World War while serving on the War Industries Board. Teagle was associated with the Standard Oil Company of New Jersey. The New Jersey company, being anxious to secure an organization in Texas, made a bargain between Farish and Teagle by which the Standard acquired fifty per cent of Humble's stock for \$17,000,000.

The Humble Oil Company today leads all other companies in the production of crude oil in Texas.<sup>10</sup>

The Magnolia Company dates back to the early history of oil, but it did not operate under the present name until 1911, when it was organized by John Sealy and Company who bought at a receiver's sale the original refinery established by J. S.

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<sup>9</sup>Fort Worth Press, Centennial Scrapbook Edition, 1936.

<sup>10</sup>Ibid.

Cullinan at Corsicana and another at Beaumont.<sup>11</sup>

John Sealy and Company operated these properties until 1925, at which time the pipe line department was separated from the sales and refining departments and separate corporations organized under the laws of the state of Texas. One was known as the Magnolia Petroleum Company and the other as the Magnolia Pipe Line Company. The Magnolia Petroleum Company produced, manufactures, and sells petroleum products, while the Magnolia Pipe Line Company is a carrier of crude oil.

The Magnolia Petroleum Company owns and operates six refineries in Texas. They are located one each at Beaumont, Magpetco, Luling, and Corsicana, and two at Fort Worth. These refineries manufacture practically every petroleum product. The company produces oil in five other states besides Texas. Magnolia has in operation 6,803 oil wells and 265 gas wells, besides thirty-two casinghead gasoline plants. The sales department consists of 931 service stations, 770 tank wagon stations, and seventy-six iron barrel stations. In addition, the company has 25,222 outlets through which its products are sold. The Magnolia Pipe Line Company has trunk lines serving the fields of north Central Texas, Southwest Texas, the Panhandle region, and the new East Texas Field. The Magnolia companies and their subsidiaries employ 55,000 persons. The

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<sup>11</sup>MacIntosh, "The Wonder Story of Texas Oil," Bunker's Monthly, II, 313.

average monthly payroll is \$2,000,000. The companies pay out each year vast sums in rentals, royalties, and taxes.<sup>12</sup>

Probably no less could be said of the numerous other companies doing business in Texas at the present time, but the purpose here has been only to show from a historical standpoint how these major companies which were formed in Texas have grown up with the industry and have been direct products of its development.

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<sup>12</sup>Magnolia Oil News, Founder's Number, April, 1931, pp. 24, 25.

## CHAPTER VI

### THEORIES AND PRACTICES OF OIL TAXATION

Few people realize that in the past few years oil has contributed almost half of the money required to run the state government. Oil men have been forced during the past few years to submit to the increased taxes until today the industry bears a share of local, state, and federal taxes.

The state list includes a gross production tax, a franchise tax, a gross receipts tax, an ad valorem tax, car and truck licenses, drilling permit fees, payroll taxes, city and county taxes, and other taxes levied by numerous independent taxing agencies. There is also a tax on retail gasoline which is paid by the consumer.

Of the above-named, the gross production tax on Texas crude oil has shown a tremendous increase during the past fifteen years. "In 1922, the State collected from this source only \$2,523,370, whereas in the fiscal year 1938 the State's revenue from this source amounted to \$16,871,565. This represents an increase of 570 per cent over 1922."<sup>1</sup> Taking a monthly basis, tax collections from this source have nearly tripled within a period of forty-two months. "In February,

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<sup>1</sup>Texas Mid-Continent Oil and Gas Association, Important Facts About Texas Oil, p. 4.



1934, these collections amounted to less than 573 thousand dollars. In August, 1937, a period of peak demand, collections from this source aggregated \$1,610,000."<sup>2</sup> The increase in gross production taxes in recent years has been due to rising production and improved market prices. The gross production rate was increased in 1936, from two per cent to two and three-fourths per cent of the market value. The increase in price amounted to more, however, than the increase in the tax and at the same time increased the revenue of the state from this source.

State and local records reveal that the state received during the year 1938 from its regulatory tax on petroleum production \$892,862, while the production tax yielded the state \$285,600 during the same year, and the gross receipts tax yielded the sum of \$577,385. The ad valorem tax bill of the industry is no small item; it amounted to \$24,431,900 for the year 1938. In addition to the ad valorem taxes paid to county taxing agencies, Texas oil operators must also pay local taxes to independent taxing districts such as schools, roads, navigation, water improvement, levee districts, and city taxes. "In 64 oil counties of the State embracing 107 independent school districts, the oil industry pays 40 per cent of all tax revenue. In 15 of the larger school districts located in oil producing areas, 88 per cent of all school tax revenue is obtained from the oil industry."<sup>3</sup> Other state taxes on Texas

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<sup>2</sup>Ibid., p. 5.

<sup>3</sup>Ibid.

oil for the year 1938 amounted to \$2,569,640. This included car and truck licenses, tax on gasoline used by company cars and trucks, fees and permits, etc.

Local subdivisions of government receive the major portion of the oil industry's tax money. An analysis of the tax rolls for the year 1938 shows that in forty oil-producing counties of the state, tax levies on oil property amounted to sixty-eight and four-tenths per cent of all local taxes levied.

The gasoline tax originated in Oregon in 1919. It was levied as a state tax for the purpose of financing the construction and maintenance of highways. The original tax was one cent a gallon. Within a decade every state was imposing a tax on gasoline. Rates soon increased, but in spite of this fact, it was still a popular levy. Within a few years, however, the gasoline tax lost its identity and original purpose as a special highway tax.

Despite the fact that it was paid only by motor-vehicle owners, the states began to divert the funds derived from the gasoline tax to other uses. As a result, the levy has tended to become more of a general revenue tax. In Texas one-fourth of the gasoline tax goes into the school fund. Two taxes, federal and state, are paid on each gallon of gasoline in every state. In some states the gasoline consumer pays four taxes -- federal, state, county, and municipal. The Federal Government imposed a motor-fuel tax of its own in 1932. The rate imposed at that time was one cent per gallon. The rate was raised to

one and one-half cents in 1933, but was reduced back to one cent in 1934, where it has remained since that time. Texas now has a retail sales tax of four cents per gallon on gasoline, the state's levy of four cents and the federal levy of one cent making a total levy of five cents at the present time.

Gasoline is the most heavily taxed commodity in general use. Within the last fifteen years the retail price of gasoline has been cut in half. In the same time the taxes have been multiplied several times. The gasoline tax which is paid by the consumer is in effect a retail sales tax on motor fuel. Even though retail sales taxes on most commodities seldom exceed three per cent, the sales tax on gasoline ranges all the way from twenty to one hundred and twenty per cent. The average is approximately forty per cent. Gasoline tax rates have increased to levels which make them higher than the wholesale price, and larger than retail profits.

High rates have encouraged gasoline bootlegging and tax evasion. Motor fuel is often smuggled across state lines in order to take advantage of tax rates which may be lower in other states. Fraudulent refund claims are often filed to take advantage of provisions in gasoline tax laws exempting from tax gasoline not used in motor vehicles. Tax-free kerosene is often mixed with gasoline and sold through equipment marked with trade names of known advertised brands.<sup>4</sup>

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<sup>4</sup>"Petroleum Taxation," Petroleum, 1935, pp. 78-85.

Gasoline tax evasion is an organized and successful racket of national scope, and constitutes one of the oil industry's most serious threats.<sup>5</sup> Every Texas community has its bootleg gasoline problems.

The state of Texas has launched a concerted drive to eradicate the gasoline tax evader. An effort has been made to make it impossible for the gasoline bootlegger to continue in business. Local law enforcement officers are co-operating with state authorities in eradicating this evil. The city of Fort Worth went so far as to prohibit the disposition of gasoline in tank trucks except during the daytime. A number of other Texas cities later followed the example set by the city of Fort Worth.

The oil industry serves not only as a large contributor to governmental expenses, but it is a collecting agency as well. Never has an industry functioned so extensively as an unofficial tax collector for government as does oil.<sup>6</sup> Collection of the gasoline tax costs the petroleum industry almost as much as it does the government. It is probable that the industry employs more people either at full or part time to assist in collecting this tax than do all the taxing units of government combined.<sup>7</sup> The comptroller's department is responsible for the collection of the gasoline tax, but co-ordination of the efforts of various state departments became necessary.

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<sup>5</sup>Texas Oil and Gas Conservation Association, Conservationist, April 16, 1932, p. 2.

<sup>6</sup>Ibid., September 17, 1932, p. 14.

<sup>7</sup>Ibid.

The American Petroleum Institute's financial analysis of investments and net profits for the petroleum industry shows over a period of seventeen years that the return on the investment was slightly more than two per cent. The highest figure during the period was 4.96 per cent. Oil interests point out that this is a small return compared to other industries which yield from ten to twenty per cent, or more.

The chief reasons given for such a small return are the rising taxes on petroleum products and the added cost of equipment. These factors, coupled with the low production allowable under proration rulings, have undoubtedly contributed to the high unit cost of operation. It takes several years to pay the original cost of drilling under proration orders today.

The tax on Texas oil production now averages nine and three-tenths cents per barrel. The industry paid during 1938 over forty-four million dollars in state and local taxes. The Texas oil industry through all of its divisions pays directly forty-five per cent of all state taxes. This one industry's total state and federal tax bill last year was more than one hundred million dollars.

The revenues and expenditures of the oil industry are of such vital importance to Texas that if the industry should cease operations permanently, the state would find it necessary to close down many of its public institutions, cease construction of roads and other public improvements, and effect a complete readjustment of its stupendous tax structure

so that business might continue. The oil industry declares itself willing to bear its fair share of taxes and the burden of governmental expense. Today the burden seems to the industry to be excessive, but a study of the theories and practices of taxation reveals that tax experts and legislators have come to the agreement that there never was and never will be a perfect tax.<sup>8</sup> Adam Smith, an able and noted writer of political science, says:

The moralist calls for just taxes, but taxes cannot be just. The administrator asks for simple taxes, but experience shows that they cannot simply be simple. The business man demands practical taxes, but financial history proves that it is impracticable to make them merely practical.<sup>9</sup>

Smith was the first to recognize that ability to pay should be a foundation for tax levies. This principle is almost universally accepted as being a satisfactory one for appropriating the tax burden.<sup>10</sup> Taxes on corporate incomes conform to the ability to pay; therefore, they are not embarrassing to the corporations.

Another tendency of modern taxation principles is to tax natural resources. Since they are a gift of nature, it is believed they should be taxed to support the government.

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<sup>8</sup>William Raymond Green, The Theory and Practice of Modern Taxation, p. 18.

<sup>9</sup>Ibid., p. 19.

<sup>10</sup>Ibid., p. 20.

## CHAPTER VII

### VALUE AND CONSERVATION OF TEXAS OIL

Petroleum is recognized as an essential of modern civilization. It is a necessity to all civilized peoples and an indispensable element of the national security of every modern country.

Last year, 1938, the crude oil output of Texas was over 475,000,000 barrels, which was as much oil as was produced in the entire United States during the first thirty years of American petroleum history. Concurrently, Texas accounts for thirty-nine and three-tenths per cent of the national production. Concerning the value, Mr. W. R. Boyd, vice-president of the American Petroleum Institute, says:

Last year the cash value of Texas crude came close to \$600,000,000, a sum nearly \$100,000,000 greater than the total cash income from Texas surface crops and livestock. In other words, the amount of money coming into the state in exchange for the products of its farms and ranches was doubled because of the petroleum industry.

Best available estimates indicate the total wealth of our state aggregates \$11,000,000,000. The economic contributions of the petroleum industry to Texas to date are estimated at close to \$6,000,000,000. This sum represents the income from approximately 5,250,000,000 barrels of oil produced in Texas from the development of some 298 oil fields in more than a hundred counties, from the drilling of thousands of wells and from the expenditure of these and other developments of a sum of money almost exactly equivalent to the value of the crude oil produced. Again it appears that Texas is twice as well

off financially because of the petroleum industry.<sup>1</sup>

This great wealth flowing from the petroleum industry is widely distributed throughout the state. Mr. Charles P. McGaha, president of the Texas Mid-Continent Oil and Gas Association, in an address before the Texas Chamber of Commerce Managers at Marshall, declared that, "If you live in Texas you are in the oil business," and recited the following regional statistics to prove his point:

In West Texas, comprising forty-eight counties, all of which are under development, the petroleum industry produced 63.7 per cent of all the wealth produced in that area last year. In the Panhandle area, comprising twenty-seven counties, the oil industry produced 40 per cent of all the wealth produced last year. In Southwest Texas, embracing twenty-two counties, the industry produced 51 per cent of all the wealth produced. In the Gulf Coast section, comprising twenty-seven counties, 44.4 per cent of all the wealth produced was contributed by petroleum. In North Texas, comprising twenty-one counties, 21 per cent of the wealth was produced by petroleum. In West Central Texas, comprising twenty-one counties, petroleum contributed 38.8 per cent of all the wealth produced. In East Texas, embracing thirty-seven counties, petroleum accounted for 79.9 per cent of the total production of wealth in 1937. In East Central Texas, a ten-county area, 30 per cent of all the wealth produced came from oil. And in South Central Texas, embracing twenty-seven counties, 21 per cent of the total production of wealth came from petroleum.<sup>2</sup>

The Texas Mid-Continent Oil and Gas Association, in a recent economic survey of the Texas petroleum industry, found that a large amount of borrowed capital was being employed by

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<sup>1</sup>"What Oil Means to Texas," Texas Weekly, June 11, 1938, p. 8.

<sup>2</sup>"Where Does Oil Income Go?", Texas Weekly, June 25, 1938, p. 8.



the industry. Such information as the following appears in a recent bulletin issued by the organization:

A conservative estimate based upon canvass of banks in the larger cities of Texas reveals that loans to oil operators now held by these institutions alone aggregate over 51 million dollars. On top of that, the equipment and supply companies have extended credit to Texas oil operators to the extent of another 25 million dollars. Loan figures furnished by some of the larger banking institutions outside of Texas, representing in part money advanced on Texas oil properties, total over 77 million dollars.

This makes a total of over 153 million dollars of borrowed capital and credit known to be employed by independent oil operators of Texas. In addition to this, the proportion of long-term funded indebtedness chargeable directly to the Texas petroleum industry as a whole now amounts to about 493 million dollars. This makes a grand total of more than 646 million dollars of borrowed capital now standing against all branches of the Texas oil industry. Interest charges on these bank loans and bond issues amount to at least 30 million dollars a year.<sup>3</sup>

In behalf of the fact that oil loans are as good security as other property, Mr. Harry C. Weiss, president of the Humble Oil and Refining Company, said, in an address before the Fifty-third Annual Convention of the Texas Bankers' Convention:

Through improvements in producing and refining methods, and by the development of sound conservation policies, we have reached the point where, in my opinion, oil properties are as good as any other collateral and oil loans are as good as any other loans. It is fortunate that this is true because in a state where oil is as important as in Texas it is essential that bankers make loans on oil properties.<sup>4</sup>

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<sup>3</sup>Texas Mid-Continent Oil and Gas Association, Important Facts About Texas Oil, p. 8.

<sup>4</sup>Harry C. Weiss, The Banker and the Oil Man in Texas, p. 4.

About one-sixth of the population of Texas is either directly or indirectly employed by the petroleum industry. The 1938 figures show a total of 175,000 people employed by the producing, refining, marketing, and other departments of the industry, while the allied branches employ an additional 40,000 people, making a grand total of 215,000 people.<sup>5</sup>

Last year this one industry distributed more than \$725,000,000 in Texas. "This sum of money may be compared with \$717,000,000 spent in Texas by the Federal Government during the period March 4, 1933, to January 1, 1936, an average of only \$151,000,000 a year."<sup>6</sup> The petroleum expenditures amounted to nearly five times the total Federal funds available annually in the past few years.

Based upon the latest census figures, the annual expenditures of the petroleum industry in Texas amounted to approximately five hundred dollars per family. This money is being spent by the industry at the rate of \$13,500,000 per week, \$1,990,000 per day, \$83,000 per hour, and \$1,380 per minute.<sup>7</sup>

The greater part of the petroleum dollar goes for labor. The industry's payroll for 1938 was \$185,000,000, exclusive of the allied branches, which was \$45,000,000.

Employment statistics of the United States Department of Labor show that there has been a steady increase

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<sup>5</sup>Texas Mid-Continent Oil and Gas Association, Important Facts About Texas Oil, p. 12.

<sup>6</sup>W. R. Boyd, "What Oil Means to Texas," Texas Weekly, June 11, 1938, p. 9.

<sup>7</sup>Ibid.

in employment of the petroleum industry since 1932. These figures also show that there has been a reduction in the number of hours worked per week, but at the same time there has been a substantial increase in the average weekly wages paid.<sup>8</sup>

The average number of hours was reduced during the period from forty-six hours per week in 1932 to forty hours in 1938. Yet the average wages increased from \$26.80 per week in 1932 to \$33.30 per week in 1938. These figures are significant in the face of rising costs of operation.

The oil industry has increased the population of Texas. Figures over a period of ten years show that in fifty-five oil counties the increase was 35.6 per cent, while in the remaining counties of the state it was but 20.6 per cent. Certain towns near oil fields have had more startling gains. For instance, Breckenridge gained 310 per cent, Amarillo gained 178.4 per cent, and Longview gained 400 per cent during the same ten-year period.<sup>9</sup>

The business structure of our nation depends in a large measure upon oil, and the welfare of our own state, more than that of any other, is linked with that of the oil industry. The petroleum industry is one of the three or four major factors contributing to the growth and development of the state. It has necessitated the expansion of transportation and communication facilities and has opened up new avenues of whole-

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<sup>8</sup>Texas Mid-Continent Oil and Gas Association, Important Facts About Texas Oil, p. 11.

<sup>9</sup>James L. Dyer, "History of Oil Industry Is Interesting," Conservationist, October 15, 1932, p. 9.

sale and retail distribution, utilized for both luxuries and necessities. Oil has been the means of sending young people to college. It has placed their parents beyond the reach of want and raised the standards of living. It has helped farm communities. During one year oil royalties paid Texas land owners \$45,000,000, lease owners received \$25,000,000, and rentals amounted to \$8,750,000. "Petroleum is the one indispensable commodity of the machine age. It exerts on our daily lives a greater influence than any other product of the earth."<sup>10</sup>

Petroleum, like other natural resources such as coal, copper, and iron, is believed to be irreplaceable. Since oil is a hidden, migratory liquid mineral, the supply cannot be measured beyond a guess. Earlier estimated reserves have already proved erroneous, and only time will check the accuracy of the later estimates. At any rate, the future of the oil industry must be protected against possible extinction as far as it is possible to do so. What would happen to the oil business if all of the oil is used up? Furthermore, what would happen to a great nation in which oil is indispensable to its defense in war and its prosperity in peace? These and other questions have led us to a policy of conservation in the oil industry at the present time.

The migratory nature of oil has caused competitive practices which have worked against a plan of conservation. Oil and gas are not like other minerals which remain beneath the

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<sup>10</sup>Samuel B. Pettengill, Hot Oil, p. 35.

earth's surface to eternity unless removed by man. Oil is fluid, migratory, changing its location when the forces which govern its equilibrium are disturbed. When a well is drilled and production secured, the oil flows in from all sides, not just from beneath the lease of the operator upon whose land the well is located but also from the neighboring lease if the oil well is close to the line.<sup>11</sup> Consequently the guiding principle has been to steal your neighbor's oil from under his ground before he steals yours.<sup>12</sup>

The Pennsylvania Supreme Court was the first to legalize the law of capture when it declared in the case of *Westmorland Cambria Natural Gas Company v. De Witt et al*:

Water and oil and still more strongly, gas.... belong to the owner of the land and are a part of it, and are subject to his control; but when they escape and go back into other land, or come under another control, the title of the former is gone..... If an adjoining or even a distant owner drills his own land, and taps your gas so that it comes into his well and under his control, it is no longer yours but his.<sup>13</sup>

The precedent set by the Pennsylvania court in regard to the law of capture has been constantly followed by other courts.

The precedent has been thus restated in defense of "hot oil":

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<sup>11</sup>P. J. R. MacIntosh, "The Wonder Story of Texas Oil," *Texas Monthly*, III, 72.

<sup>12</sup>Harry Harter, *East Texas Oil Parade*, p. 137.

<sup>13</sup>Pettengill, *op. cit.*, p. 15.

If you don't get it, your neighbor will.....  
 "Finders keepers." If it is discovered that oil is under your ground, you must reduce it to possession or lose it forever. If you do not, your neighbor will drill a well next to your boundary line and drain your underground pool into his tank without any redress on your part. Consequently, whether the price is \$3. or ten cents a barrel, whether the market is glutted or not, and regardless of the waste of the pent-up energy of the reservoir, you must get your oil -- and as much of your neighbor's as possible, today, now.<sup>14</sup>

The law of capture occupies a strong fortress in Texas. However, on June 12, 1935, the Supreme Court of Texas in *Brown v. Humble Oil and Refining Company*, declared that when an oil field has been fairly tested and developed, it is possible to determine the amount of oil recoverable from a common pool. Thus the owners of each tract of land can determine how much oil belongs to each. If this decision stands, the law of capture will cease to be recognized.<sup>15</sup>

A remedy for the competitive practice of draining your neighbor's oil seems possible in the unit plan of operation, which has been encouraged by the United States Government. The unit plan provides for the development of the pool as a unit. When the land surface over a pool is owned by a single individual, this is no problem, but this is seldom the case. More often it is owned by several individuals. Thus voluntary agreement or statutory compulsion is necessary whereby the different owners limit the number of wells, space the wells, conserve reservoir energy, or engage in other co-operative efforts.

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<sup>14</sup>Ibid., pp. 7-8.

<sup>15</sup>Ibid., p. 89.

Sometimes the owners form a partnership, or assign each surface owner so much oil. The plan calls for an equitable division of mineral rights among the surface owners.

The difficulties of the plan are many, unless the pool is under single ownership. "There will always be a minority of 'rugged individuals' who will not agree to be bound by the rule of the majority."<sup>16</sup> Again, if the producers and lessees are willing to co-operate, there is the problem of the royalty owners, who insist on rapid production in order to get all the oil possible within the time limits of their leases.<sup>17</sup>

A good example of the successful operation of the unit plan is in the North Dome of Kettleman Hills in California. Mr. Robert Penn, chairman of the Division of Production of the American Petroleum Institute, in a speech at a meeting held in Dallas in 1931, advocated the unit plan. A part of his paper reads as follows:

The greatest failure of all, has been the failure of the industry to handle its production, particularly in the great major areas, as pools rather than as individuals and competing leases. All of us have realized fully that this was desirable from both an engineering and a production standpoint -- that immense economies could be effected, and that it was the only complete and absolutely thorough way to control production and prevent such conditions of waste as we are now suffering from. We have failed to get our laws adjusted so they will fit the true conditions of the industry. With a few exceptions, we have not looked upon our pools as units and handled them as such. As a consequence, we now have repeated examples, such as in Oklahoma City and the new east Texas rim field, of wasteful and reckless extrava-

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<sup>16</sup>Ibid., p. 96.

<sup>17</sup>Ibid.

gance and over-competition in the development of this great natural resource. In those fields we have every conceivable form of waste, not only physical but economic; and yet we should remember, as an encouraging comparison, that we have a few model developments like Yates, Hobbs, Van, and the newly organized unit operation at Kettleman Hills, where great strides have been made in preventing these wastes.<sup>18</sup>

Throughout the last several years the Texas oil industry has generally accepted the principle of slow production rates in order to prevent waste of oil, but the discovery of the great East Texas Field and the campaign of competitive drilling which followed called for more drastic action to control over-production and prevent waste. It was then that proration got its first serious application. Proration was enacted primarily as a conservation measure; however, it serves as a protection to royalty owners as well.

At first, nearly all land and royalty owners were opposed to proration, but that was before they became educated to the fact that a flooded market invariably means a cheapened market. Oil to them was synonymous to sudden riches. Established oil companies, with millions at stake, joined with the independents in a campaign of missionary work designed to convert the landowners to the idea that proration and conservation were to the best of their interests.

Under legislative authority conferred upon it, the Railroad Commission of Texas issued a series of proration orders.

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<sup>18</sup>Ibid., p. 97.



The first proration plan was adopted by the Commission in 1928. It was written by Clarence E. Gilmore, who was chairman of the Commission at that time, and C. V. Terrell. It was written without legislative authority and applied only to the Yates pool. It was enforced by umpires selected by the Commission but who were paid by the oil operators in the Yates Field.<sup>19</sup> After the discovery of the East Texas Field, the Commission issued a series of proration rulings under legislative authority, the first of which was issued in April, 1931, becoming effective the first of May following. It set the allowable from the East Texas wells at 160,000 barrels daily. The order provided that 15,000 barrels daily increase would be added each fifteen days for a period of ninety days.<sup>20</sup> At first the Commission had control over waste only, but the Legislature extended its control over market demand with the passage of the reasonable market demand statute in 1932.

No sooner had the guns of proration been discharged than the Commission was faced with forty injunctions and suits brought against it by producers who claimed that they had orders for much larger quantities of oil than the Commission would permit them to produce under its new proration rulings. The Federal courts granted temporary injunctions to these applicants, restraining the Commission from enforcing the pro-

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<sup>19</sup>Letter to the writer from Hon. C. V. Terrell, former member of the Railroad Commission, May 18, 1939.

<sup>20</sup>Harter, op. cit., p. 101.

ration orders. This was but the beginning of a controversy between the minority element in East Texas and the Commission which later flooded court dockets and held up proration enforcement.

The situation reached such a stage in August, 1931, that Governor Ross Sterling declared martial law in East Texas. On the seventh of August every well in the field was shut down by executive order. General Jacob F. Walters was called from his duties as chief counsel for the Texas Company to take charge of the military force.<sup>21</sup> The troops remained in the field until December, 1932, at which time they were removed and the Commission left alone to battle with the violators of its orders. Needless to say, the orders of the Railroad Commission were attacked in the courts, and until the outcome of these cases was determined it was impossible for the Commission to put the measures into operation.

The Court of Civil Appeals at Austin upheld the conservation statutes enacted prior to 1931. In its decision in the case of Danciger Oil and Refining Company v. the Railroad Commission of Texas, the court declared that the Railroad Commission's orders issued under statute are valid and do not violate the Federal Constitution, as had been alleged. The decision of the United States Supreme Court in the case of the Champlin Refining Company v. the Oklahoma Corporation Commission has settled once and for all the question of the right

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<sup>21</sup>Ibid., p. 110.

of states to pass laws and regulations governing the development of oil and gas and other natural resources.<sup>22</sup>

Numerous controversies developed which made it difficult to enforce proration rulings. Stolen oil was hauled from the wells at night and delivered to refineries within a radius of a hundred and twenty-five miles or more. Many of the lease owners sold some of their leases to dummy corporations in order to increase the number of wells otherwise not allowed under the spacing rules. This practice led to the enactment by the Railroad Commission of the Equidistant Offset Rule. The rule was later repealed, however.

The so-called shallow well production developed in the northern extension of the East Texas Field. Wells were drilled a few hundred feet. The casing from a producing well was tapped and the oil run from the producer to these dummy wells. Thus one producing well was allowed to furnish the allowable for several so-called shallow wells.<sup>23</sup> These are only a few of the means used to evade proration rulings.

The chief difficulty in enforcing proration lay in the fact that the Commission agents themselves were being bought off. Carroll Sullivant, an enforcement officer for the Commission at the time, says: "Bribery of Railroad Commission agents was a common practice as late as 1935 and prior to that

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<sup>22</sup>Texas Oil and Gas Conservation Association, Conservationist, June 4, 1932, p. 9.

<sup>23</sup>Harter, op. cit., pp. 117-119.

time."<sup>24</sup>

The "hot oil" runners used various tactics to prevent their being caught and brought to justice by Railroad Commission agents. A common practice was what is known as running interference. The trucks loaded with hot oil would take several passenger automobiles with them on their runs. These passenger cars were on the lookout for Commission agents. Their duty was to run in between the cars of the agents and the trucks in order to keep the agents from stopping the trucks until they could get safely across the state line or accomplish a getaway to a safe distance. Such tactics as throwing tacks in the path of the agents or blocking traffic by parking across the road were used by the interference drivers.<sup>25</sup>

It was necessary for the Railroad Commission to adopt some way of checking the oil transported in order to determine whether it was hot oil or legally produced oil. A series of forms was put into operation. These forms known as manifests showed that the possessor of the oil had the legal right to perform the operation he was trying to carry out. For instance, manifest form SW-1 authorized the pipe line companies to connect with wells. Form SW-2 showed the allowable. Form SW-3 authorized the transportation of the oil from the well to the refinery, either by truck or pipe line. All operators who

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<sup>24</sup>Authorized conversation with Carroll Sullivant, enforcement officer of the Texas Railroad Commission.

<sup>25</sup>Ibid.

could not show a properly executed form of manifest SW-3 were charged with transporting hot oil and punished. Manifest SW-4 takes care of the products of crude application based upon SW-3. SW-5 is known as the tender manifest and is issued to the refineries by the Railroad Commission in book form. The Railroad Commission keeps a careful check with all manifests coming from the East Texas Field. Carroll Sullivant helped to write these various manifests, the first of which went into effect on June 18, 1935.

Even with all these means of checking the oil on every transaction, proration could not be enforced. Hot oil runners continued to run hot oil. Then it was found by the Commission that the hot oil runners were duplicating the manifests. The Commission changed the form of the manifests in various ways and at frequent intervals, but the hot oil runners were on the alert to sense the change and continued to duplicate the new forms. The Commission finally decided that the manifests should bear the signature of a member of the Railroad Commission, the duplication of which carried a forgery charge. Some of the signatures were duplicated, but, upon the arrest and prosecution of an agent of a paper company in Louisiana, the racket was stopped.

When proration orders began to be enforced in June, 1935, ninety-eight per cent of the trucks were running hot oil. Within six months the number was cut fifty per cent. By 1938

ninety-nine per cent of the trucks were transporting legal oil.<sup>26</sup>

The question of punishment of violators was another perplexing problem. Reports of the violations poured into the office of the Railroad Commission, supported by affidavits of proof. The procedure was to turn these complaints over to the Attorney General's department with the request that the state file suits against the violators. Because of the lack of adequate laws, at first, and the large number of injunctions allowed in Federal courts, the hands of the Attorney General's department were tied. Very few of the aggressors were brought to trial at first, but, as time went on, new legislation was obtained which expedited prosecution and the situation improved.<sup>27</sup> Violations were later made a felony charge and a penitentiary offense. Some of the violators were fined as much as \$10,000.<sup>28</sup>

The executive order issued by President Roosevelt prohibiting the interstate or foreign transportation of illegally produced oil helped to prevent the breakdown of proration in East Texas. Later, as an additional aid to clearing up the situation, an amendment to the General Deficiency Act was passed by Congress. The amendment imposed a tax on all oil produced in the country. The chief object of the amendment was

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<sup>26</sup>Information furnished the writer by Carroll Sullivant.

<sup>27</sup>Harter, op. cit., p. 123.

<sup>28</sup>Information furnished the writer by Carroll Sullivant.

not the collection of the tax but to give the Federal authorities the right to inspect the books of producers and refiners and thus ascertain whether the oil they were handling was legally produced. This legislation resulted in a noticeable reduction in the amount of illegally produced oil in East Texas.<sup>29</sup> The Federal Government was instrumental in prosecuting hot oil runners for false affidavits. A number of temporary measures were also enacted by the Federal Government. The chief of these was the Conally Act, which forbids the production or transportation of oil in the excess of the amount permitted by the laws of the state. The interstate commerce clause of the act forbids the transportation of hot oil within or outside the state. The Conally Act, although emergency legislation, has been extended to the present time and is still in force. Efforts to make it a permanent law have not as yet been realized.

The merits of proration speak for themselves and need little comment here. It is certainly evident that the stabilization of the oil industry is necessary from the standpoint of conservation of a tremendously valuable natural resource. The oil produced under proration is worth more than twice the amount produced without restrictions.<sup>30</sup>

Proration is not the sole answer to the problem of overproduction. Control of drilling should have been one of the

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<sup>29</sup>Harter, op. cit., p. 128.

<sup>30</sup>Texas Oil and Gas Conservation Association, Conservationist, April 16, 1932, p. 7.

first regulatory measures, but it was not. The limitation of the number of wells drilled has come in time, however, to prevent the drilling of a large number of additional wells to flood the market even beyond its present state. Well spacing is not only desirable to control overproduction and to help control the market demand, but from the standpoint of conservation as well. Closely spaced wells have a tendency to shut off pockets of oil by underground water pressure. These pockets of oil will never be recovered. Wider spacing also conserves the reservoir energy which is an important factor in adding to the amount of oil recoverable per acre.

It has been repeatedly questioned whether estimates of oil reserves are of any practical value, as the greater number of previous estimates have proved to be grossly inaccurate. But some estimate, even though it be only an approximate one, is needed in mapping the future of the petroleum industry as well as the trend of related industries. The value of the reserve estimates hinges on the fact that they are estimates and are subject to change when the controlling forces change. A distinction should also be made between proven reserves and probable or possible reserves. The latter of these is nothing more than a mere guess; while, on the other hand, estimates of proven reserves can be made with an ever-increasing degree of accuracy.<sup>31</sup>

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<sup>31</sup>V. R. Garfias and R. V. Whetsel, Proven Oil Reserves, Report given at New York meeting of A. I. M. E., February, 1936, pp. 1-3.



A study of the various estimates of petroleum reserves of the United States, which have been made from 1908 to 1936, shows that many types of yardsticks have been used in estimating oil reserves. The growing importance of knowing the extent of oil reserves has demonstrated the need for more precise and uniform calculations. For that reason, the more recent estimates lend themselves better to comparison, one with the other, in the light of changing developments of known producing areas. Elmer H. Johnson, regional economist of the University of Texas Business Research, says:

Estimated known reserves of Texas, as of January 1, 1936, are placed at almost half those of the entire United States; California's known reserves are placed at a little more than half of those of Texas, and Oklahoma's known reserves considerably less than half those of California -- between a fourth and a fifth of those of Texas.

Of new reserves found during 1935, Texas leads easily, followed in turn by Oklahoma and Louisiana.<sup>32</sup>

The relationship of Texas proven reserves to those of the United States and of other countries is shown in the data presented in the Appendix. As a whole, the volume of proven resources is far from impressive and in individual countries like the United States is inadequately small. Hence the need for a sane policy of conservation, so that the efficiency of the modern industrial and economic system may not be impaired by the rapidly diminishing store of petroleum.

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<sup>32</sup>Elmer H. Johnson, Oil and Texas, University of Texas Free News Service, February 28, 1936, p. 1.

APPENDIX

TABLE 1

PROVEN OIL RESERVES IN THOUSANDS OF BARRELS<sup>x</sup>

Oil-producing Areas	Production to January	
	Field	State
United States.....		
Texas.....		4,188,300
East Texas.....	793,800	
Conroe.....	56,600	
Yates.....	209,600	
Van.....	87,100	
Others.....	3,041,200	
California.....		4,418,900
Kettleman Hills.....	118,200	
Midway Sunset McKit-		
trick.....	869,800	
Ventura.....	216,600	
Long Beach.....	551,800	
Others.....	2,662,500	
Oklahoma.....		3,906,100
Pennsylvania, New York..		1,002,200
Wyoming.....		400,900
Kansas.....		778,700
Louisiana.....		595,700
New Mexico.....		96,200
Others.....		2,206,200
Russia.....		
Iraq.....		
Iran.....		
Venezuela.....		
Rumania.....		
Netherlands East Indies...		
Mexico.....		
Colombia.....		
Peru.....		
British India.....		
Argentina.....		
Trinidad.....		
Others.....		
Total.....		

<sup>x</sup>Data furnished writer by C. V. Terrell, former member of Texas Railroad Commission.

TABLE 1 -- Continued

1, 1936	Proven Reserves, January 1, 1936		
Country	Field	State	Country
17,593,200	1,331,000 550,000 390,000 268,000 1,711,000 1,412,000 162,000 133,000 119,000 2,274,000	4,250,000 4,100,000 700,000 490,000 230,000 195,000 250,000 100,000 260,000	10,575,000
27,300,000			21,965,000

## BIBLIOGRAPHY

## BIBLIOGRAPHY

### Bulletins

Cranz, Albert, A Short History of Spindletop Oil Field, privately published.

"History of Texas Corporation," abstracted from World Petroleum, Dallas, Texas, The Texas Company, 1933.

Important Facts About Texas Oil, Dallas, Texas, Texas Mid-Continent Oil and Gas Association, February, 1939.

Johnson, Elmer H., Oil and Texas, Austin, Texas, University of Texas Free News Service, February 28, 1936.

Petroleum Products, Dallas, Texas, The Texas Company, 1933.

Petroleum, published by the American Petroleum Institute, 1935, and distributed by the Magnolia Company, Dallas, Texas.

Weiss, Harry C., The Banker and the Oil Man in Texas, privately published.

### Newspapers and Magazines

Amarillo Sunday News-Globe, August 14, 1938.

Boyd, W. R., "What Oil Means to Texas," Texas Weekly, June 11, 1938.

Conservationist (published by the Texas Oil and Gas Conservation Association, Fort Worth, Texas), April 16, 1932; June 4, 1932; September 17, 1932; March 4, 1933.

Dallas News, October 1, 1935; October 18, 1936.

"Deepest Hole," Time, July 4, 1938.

Deutsch, Herman B., "Taming the Wildcats," Saturday Evening Post, June 11, 1938.

Fort Worth Press, Centennial Scrapbook Edition, 1936.

MacIntosh, P. J. R., "The Wonder Story of Texas Oil," Bunker's Monthly, II (1928).

MacIntosh, P. J. R., "The Wonder Story of Texas Oil," Texas Monthly, III (1929).

Magnolia Oil News, Founder's Number, April, 1931; published by Magnolia Oil Company, Dallas, Texas.

"Petroleum -- Its Hundreds of Uses," Texas Weekly, February 15, 1936.

"Petroleum Has Many Uses," Conservationist, July 2, 1933; published by Texas Oil and Gas Conservation Association, Fort Worth, Texas.

Texas Almanac, Dallas, Texas, Dallas News Publishing Company, 1910, 1912, 1936, 1939.

Tyler Courier-Times-Telegraph, December 2, 1934.

"Where Does Oil Income Go?", Texas Weekly, June 25, 1938.

#### Books

Green, W. R., The Theory and Practice of Modern Taxation, New York, Corporation Trust Company, 1933.

Harter, Harry, East Texas Oil Parade, San Antonio, Texas, The Naylor Company, 1934.

House, Boyce, Were You in Ranger?, Dallas, Texas, Tardy Publishing Company, 1935.

Pettengill, Samuel B., Hot Oil, New York, Economic Forum Company, 1936.

#### Miscellaneous

Fogle West Company, radio program, January 19, 1939.

Garfias, V. R. and Whetsel, R. V., "Proven Oil Reserves," typewritten copy of report given at New York meeting of A. I. M. E., February, 1936.

Sullivant, Carroll, authorized conversation, May, 1939.

Terrell, C. V., typewritten table on world's oil reserves; and letter received May 18, 1939.