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# Giants on the Plains: Grain Elevators And The Making of Enid, Oklahoma

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# GIANTS ON THE PLAINS: GRAIN ELEVATORS AND THE MAKING OF ENID, OKLAHOMA

BLAKE GUMPRECHT

Driving west from Interstate 35 on US Highway 64, the grain elevators of Enid, Oklahoma, first become visible when the town is still twenty miles away. Disappearing and reappearing behind gently rolling hills, it is initially unclear what they might be. Even when they are little more than white specks on the horizon, they are plainly too large and numerous to represent some distant farmstead. They are too long to suggest the form of a far-off skyscraper. Little by little they grow larger in the windshield, and as the stony hills begin to

give way to the wheat-covered plains of western Oklahoma a few miles east of town, an awe-inspiring spectacle reveals itself. Nine enormous grain elevators, some taller than anything between Oklahoma City and Denver and as long as five football fields placed end-to-end, form a wall of concrete on one side of Enid. There may not be a more imposing sight in rural America.

Though grain elevators dot the landscape all across the Great Plains, in no other place are there so many that are so large in so small an area. Enid has a dozen grain elevators in all, and together they can hold more than seventy million bushels of grain, nearly half the volume of wheat Oklahoma produces in a typical year. This tremendous concentration of storage helped make Enid the wheat capital of the Southwest by the 1950s and a grain center of international importance as home to the largest wheat-exporting organization in the world. At one time, Enid boasted the second largest grain storage capacity of any city in the nation. It is also home to what was once the largest grain elevator in existence. A unique grain bin design, significant not only for its efficiency but because of its distinctive

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look, was first developed there. Towering over the town and visible from such a great distance, the grain elevators of Enid came to represent the city, and at times Oklahoma, throughout the nation.

The story of Enid's development as a grain storage and marketing center can tell us much about the role of wheat in the making of the present landscape of the Great Plains. The events that marked the city's emergence as a wheat-processing location and the factors that have shaped its evolution as a grain center reflect trends that have been felt throughout the region. Enid first emerged as a terminal grain destination following World War I, when wheat replaced cotton as the most important crop on the southern Plains. The city's expansion as a wheat market paralleled the development of the cooperative agricultural movement and its greatest growth came as a result of government price support programs. Today, most of the city's large elevators sit empty, like elevators from Saskatchewan to Texas, the result of changing government farm policy and railroad deregulation. This study traces the rise of Enid as a grain center, considers the symbolic importance of its large grain facilities, and examines the circumstances that led to city's decline as an agricultural hub.

#### DEVELOPMENT AS A LOCAL MILLING CENTER

Enid's emergence as a grain center was far from immediate and at times would have appeared unlikely. The most important factor in the city's rise to prominence was its position at the intersection of three major railroads, but Enid had trouble at first even securing railroad service, despite the fact that a railroad ran through the center of town. Enid was founded as the county seat of "O" (later Garfield) County with the opening of the Cherokee Outlet to white settlement in September 1893, but the Rock Island Railroad preceded settlers to the area by four years and built its only station in the county three miles north of town. Realizing train service was es-

sential for the town's survival, citizens first tried to persuade the Rock Island to locate a station in Enid. When this was unsuccessful, they attempted to force the railroad to establish a depot in the city. Local officials appealed to Congress to pass a law requiring railroads to stop at county seats, and the City Council went so far as to enact an ordinance making it a misdemeanor for a train to pass through Enid without stopping. When those efforts also failed, residents resorted to more unscrupulous means. In July 1894 someone sawed through the supports of a trestle railroad bridge, causing a Rock Island freight to plunge into a ditch. Railroad officials vowed that they would not give in to violence, but after a boycott was organized and it spread through the territory, they finally relented. A station was established in Enid in September 1894.<sup>1</sup>

Enid's potential as a wheat market was nevertheless slow to develop. The city was not even home to the first flour mill in Garfield County, and many other towns in Oklahoma developed greater grain storage capacity and built larger elevators. The first mill in the county, in fact, was built at North Enid, the original Rock Island station stop, stirring up a rivalry between the two towns that had begun with the battle over the railroad. But as cultivation of wheat expanded in the newly settled country, demand for milling and storage facilities grew. Garfield County quickly emerged as a leader in wheat production. An estimated 150,000 acres, nearly a quarter of all land in the county, was planted to wheat in the fall of 1896, and the following August an Enid newspaper reported that the city had "shipped more wheat than any town in Oklahoma." The newspaper estimated the wheat crop in the county at 3.8 million bushels, which, if those numbers are to be believed, would mean Garfield County produced a third of all wheat harvested in Oklahoma that year.<sup>2</sup>

In anticipation of the heavy harvest, two entrepreneurs announced plans to build mills in Enid. The first to be completed was the Enid Mill & Elevator Co., built on the east side of the Rock Island tracks south of down-

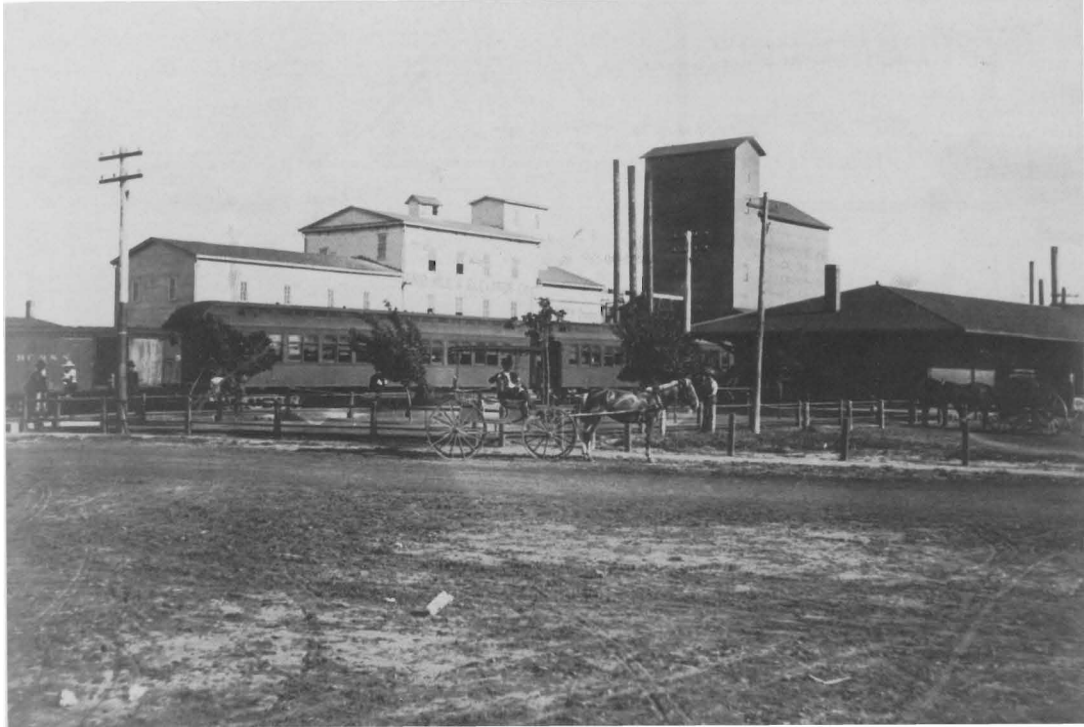


FIG. 1. *The Enid Mill & Elevator Co.*, the first grain facility built in Enid, as it appeared about 1910. Courtesy, Museum of the Cherokee Strip.

town. It purchased its first grain in August 1897 and began grinding flour the following month. With an “army of employees,” it quickly became one of the most important businesses in town. Built of wood, the mill stood three stories high. Several other buildings and three tall smokestacks gave the plant the appearance of a bustling factory (Fig. 1). Rising above the mill was a separate grain elevator, forty feet tall, with nine bins capable of storing 20,000 bushels of wheat.<sup>3</sup> Hinting at the future importance of grain elevators to Enid, a local newspaper later wrote that the elevator was “not only the pride of the company, but of the city as well.”<sup>4</sup> The second mill, built by a local grain dealer named W. Z. Smith, was completed a short time after the Enid Mill & Elevator Co.

Wheat production in the area continued to grow and by 1901 Enid was home to three mills and six elevators (Fig. 2). Still, in the first quarter of the twentieth century, the city was little more than a local milling center, no different than a half dozen other towns in the wheat country of Oklahoma. Mills at Blackwell and Newkirk were comparable in size to the Enid Milling & Elevator Co. Greater grain storage capacity existed at Perry and Ponca City. Elevators larger than any in Enid were built at Thomas and Hinton.<sup>5</sup> Despite occasional proselytizations to the contrary by promotion-minded town newspapers, Enid’s emergence as a wheat center was gradual. Oil-field developments—oil was discovered east of Enid in 1916—figured much more prominently in the news of the day.



FIG. 2. Enid's twelve existing grain elevators can hold more than seventy million bushels of grain. Map by the author.

Moreover, nearly all the early grain elevators in Enid were small, short-lived operations. Both the W. J. Stevens and Garfield County Milling Co. elevators, built within a block of one another before the turn of the century, lasted less than six years (Fig. 3). The Big 4 elevator, the largest elevator and tallest building in Enid in 1901, ceased to exist by 1904. At the time, grain elevators nationwide had an average life of only twelve to fifteen years. Because of their proximity to railroad tracks and the volatile nature of stored grain, they were susceptible to fire and explosion. Elevator builders soon learned to trim overhanging eaves to prevent sparks from trains from lodging underneath. By 1910 most elevators in Enid were also coated with a layer

of corrugated steel or asbestos tile to further reduce the risk of fire.<sup>6</sup>

But even elevators that had been protected by a flame-resistant covering were not immune to disaster. Two Enid elevators were typical. The J. H. Shaw elevator, a 25,000-bushel iron-clad structure built west of the Rock Island tracks about 1916, burned to the ground four years later. The Geis-Price Elevator Co. then built an even bigger elevator on the same site. It stood six stories tall and could hold 60,000 bushels of grain, making it the largest independent elevator in Enid. The elevator's owners covered it with asbestos, but, despite the precautions, a fire believed caused by a dust explosion or short circuit broke out inside the elevator on 28 December 1927. By the time



FIG. 3. All three grain elevators in this photograph, taken in Enid about 1901, were gone by 1904. Courtesy, Museum of the Cherokee Strip.

firefighters arrived, flames were shooting out the top of the elevator's headhouse and, as an estimated 2,000 spectators gathered to watch, the elevator's bins, holding 45,000 bushels of wheat, collapsed one by one.<sup>7</sup>

As early as 1859, elevator operators elsewhere had begun experimenting with fireproof materials in elevator construction. The most significant such innovation was the development in 1899 of the cylindrical concrete storage bin by a Minneapolis entrepreneur named Frank H. Peavey. Skeptics dubbed his experiment "Peavey's Folly" because they expected it to implode when the grain was released. It did not, and concrete soon became the preferred material in bin construction. The earliest concrete bins in Enid, though, were not

constructed until 1917, more than a decade after such facilities were built elsewhere in Oklahoma, providing further evidence that the city was not initially the locus of the state's wheat industry. The first grain elevator in Oklahoma constructed of concrete was built at Binger in 1906. Others were constructed at Ponca City in 1913 and Chickasha in 1915.<sup>8</sup>

The Enid Mill & Elevator Co., the original and for three decades the largest flour mill in the city, built the first concrete storage bins in town. The company had steadily increased its flour production capability and storage capacity. It built a second wood elevator, capable of storing 75,000 bushels of wheat, around the turn of the century and, about 1910, took over

the W. Z. Smith mill, acquiring its 25,000-bushel elevator. Then, in 1917, it built four circular concrete bins just east of its large frame elevator. Each stood ninety feet tall and together could hold 120,000 bushels of wheat. The added capacity helped the mill boost production to 1,200 barrels of flour a day by 1925. Despite its early prosperity, the Enid Mill & Elevator Co. ceased to exist by 1941, its demise likely precipitated by the arrival of the Pillsbury Milling Co. and the increasing concentration of the milling industry nationwide.<sup>9</sup>

#### THE MAKING OF A TERMINAL TOWN

The modern era in elevator construction in Enid began in 1925, but the infrastructure that would make possible the city's emergence as a grain center began to be put into place several years earlier. Most important was Enid's development as a railroad hub. Two more rail lines were built through Enid around the turn of the century, and by 1917 three railroads operated ten lines in and out of the city.<sup>10</sup> No other town in Oklahoma could claim more. Garfield County was also at the heart of the Southwest's hard red winter wheat belt and, year after year, was among the top two or three wheat-producing counties in the state. Enid's transportational advantages, combined with its proximity to the raw materials, made it a logical base of operations for millers, grain dealers, and others whose livelihood depended on wheat.

Cotton was initially the most valuable agricultural commodity in Oklahoma, but wheat became much more important following the outbreak of World War I, which increased demand for US wheat overseas, causing prices to skyrocket. The average price for a bushel of wheat in Oklahoma rose from 76 cents in 1913, the year before the war began, to \$2.54 in May 1917. Farmers responded by plowing up more of the native grasslands or switching to wheat from other crops. Between 1913 and 1919, the amount of land planted to wheat in the state grew from 1.9 to 4.7 million acres, and production tripled. A record wheat harvest of 66

million bushels in 1919 overwhelmed the state's grain elevators, which at the time had a combined capacity of just 17.5 million bushels.<sup>11</sup>

Seeking to capitalize on the expanded production of wheat, seven Enid businessmen in 1916 organized the Enid Board of Trade to promote the city as a grain storage and marketing center. Though its name is a misnomer—grain has never been bought or sold at the Enid Board of Trade—the organization nevertheless proved instrumental to Enid's development as a grain center. One of its first actions was to install a telegraph line connected to the Kansas City Board of Trade so members could monitor grain prices and crop conditions. The group's founders also visited country elevators throughout the region to try to persuade operators to ship their wheat through Enid. To that end, the Board of Trade in 1920 obtained for the city designation as a US Department of Agriculture grain weighing and inspection station. For the first time, wheat could be weighed and graded in Enid and no longer had to be shipped to markets such as Kansas City or Fort Worth en route to its final destination.<sup>12</sup>

While Enid's location at the intersection of three railroads was crucial to its growth as a wheat center, that alone was not enough to give it an advantage over other cities. An elevator operator in southwestern Oklahoma or Texas, for example, would have little incentive to ship wheat north to Enid if the ultimate destination for that wheat was a mill in the South or a Gulf Coast port. Shipping costs for such a circuitous route would be prohibitively expensive. The Enid Board of Trade, though, was successful in convincing both the railroads and the Interstate Commerce Commission to establish a favorable rate structure on shipments routed through Enid. This meant it was no more expensive, for example, to ship wheat from Altus, Oklahoma, to Houston, via Enid, than it would be to ship it directly to the Gulf of Mexico. Enid, consequently, became the funnel through which much of the wheat produced in southern Kansas, west Texas, and

all of Oklahoma passed through. As the first big terminal elevators were being built in Enid in the late 1920s, it was the city's favorable railroad rates that were mentioned again and again as a key reason those facilities were placed in Enid.<sup>13</sup>

Such developments helped draw other grain interests to the city. When the Oklahoma Wheat Growers Association was formed in 1921 by farmers in an early attempt to market their wheat cooperatively it established its headquarters in Enid. More and more grain dealers also began to open offices in the city following Enid's designation as a USDA inspection point. The number of wheat cars inspected in Enid tripled between 1921 and 1924, and by 1925 there were an estimated thirty grain dealers in the city. Later that year, the Oklahoma Grain Dealers Association announced plans to hold its convention in the city for the first time the following spring. It was the best-attended meeting in the group's history, and the annual convention began to be held in Enid exclusively.<sup>14</sup>

The announcement in November 1925 that a large terminal elevator would be built in Enid confirmed that the city was fast becoming the wheat capital of Oklahoma. A Dallas firm said it would build two 500,000-bushel storage units on a right-of-way owned by the St. Louis & San Francisco Railway north of downtown. Construction began in December 1925 (Fig. 4) and the Enid Terminal Elevator accepted its first wheat the following June.<sup>15</sup> As the first terminal facility in Oklahoma, the elevator clearly marked Enid's transition from a local milling center to a regional grain destination. It had four times as much space as all the other elevators in Enid combined. Terminal elevators differ from the smaller country variety in that they are meant to be the final stop for grain en route to processors and exporters. They have facilities for weighing, inspecting, and treating grain that most small elevators lack.

Although the developments that enabled Enid's growth as a grain center came together slowly over a quarter of a century, the trans-

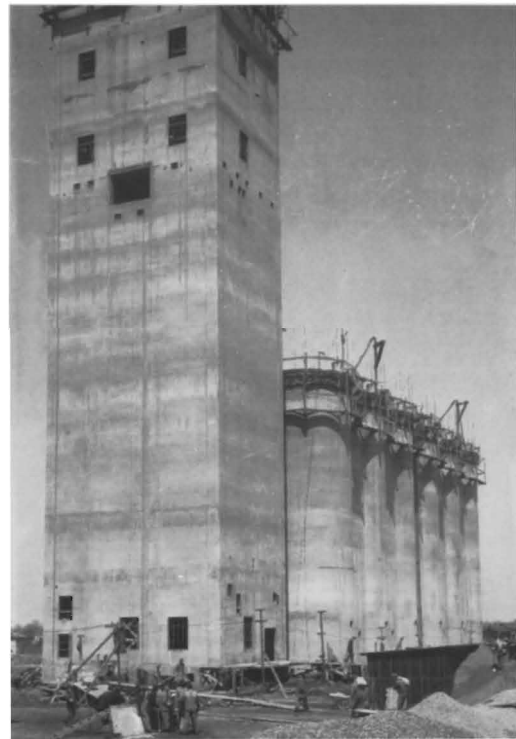


FIG. 4. Construction on Enid's first terminal storage facility, the Enid Terminal Elevator, in 1926. Photograph by Clayton Soule. Courtesy, Oklahoma Historical Society.

formation of the built landscape was comparatively sudden. The Enid Terminal Elevator became the tallest building in the city, its headhouse rising 190 feet above the ground, twice as tall as any building downtown. It stood out so boldly against the plains of western Oklahoma that pilots began to use it as a navigational aid. Local boosters claimed it was "taller than any skyscraper in Oklahoma." Seeking to take advantage of that stature, local business leaders hit upon a plan to mount a giant rotating spotlight atop its headhouse to advertise the city. The Chamber of Commerce raised \$625 to purchase the light, and the Oklahoma Gas & Electric Co. agreed to power it for free. The spotlight was turned on for the first time on 28 August 1926. "What a light!" a local newspaper exclaimed.<sup>16</sup>



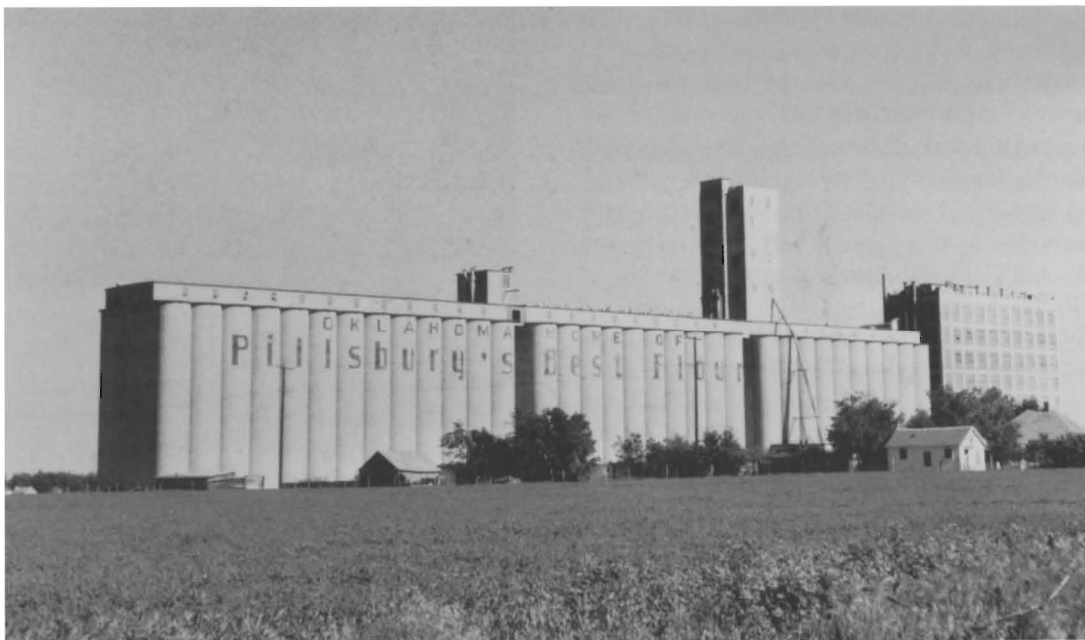


FIG. 5. The Pillsbury mill and elevator has long been a landmark in Enid. Photograph by Darrel K. Keahey.

Once construction on the first large elevator in Enid was underway, it was as if some great barrier had been lifted, and before long several other major projects were announced. Elevator construction in the city continued almost without interruption for the next thirty years. Between 1926 and 1930, total grain storage capacity in Enid grew from 248,000 bushels to eight million bushels as four other elevators with capacities of at least one million bushels were built.<sup>17</sup> Far and away the greatest boost to the city's wheat futures was the decision in March 1928 by Minnesota's Pillsbury Flour Mills Co. to build a \$1 million mill and elevator at the intersection of two rail lines north of downtown. Enid was chosen over Oklahoma City and Wichita for the plant, prompting a local newspaper to boast that the coming of Pillsbury "makes Enid the leading milling and grain center of the entire southwest."<sup>18</sup>

Upon its completion in October 1928, the Pillsbury plant became the most productive mill in Oklahoma and boasted the greatest grain storage capacity for a time as well. Stretching four city blocks, with a mill eight stories high, 132 concrete storage bins capable of holding 2.5 million bushels of wheat, and a headhouse rising 205 feet above the ground, it also became a landmark throughout the state (Fig. 5). Enid was as proud of its new mill as any city today is of a championship sports team. Merchants erected colorful window displays featuring bags of Pillsbury flour and posters welcoming the company. Hundreds of local residents, along with elected officials and grain industry leaders from Oklahoma and neighboring states, toured the plant and attended a banquet to celebrate its opening. The *Enid Morning News* published a sixteen-page special edition to commemorate the event.<sup>19</sup>

Just four days after the inaugural festivities at Pillsbury, local newspapers trumpeted in banner headlines that another mill was coming to town. Minneapolis-based General Mills announced it would build a two-million-bushel elevator a quarter mile east of the Pillsbury plant. The company said it would construct a mill on the site once the elevator was completed. Two months after the initial story, newspapers reported that General Mills would build a two-million-bushel addition to the elevator as soon as the first unit was finished. As it turned out, neither the mill nor the expanded storage space was built, but the General Mills elevator, completed in June 1929, nevertheless provided storage for 2.5 million bushels.<sup>20</sup>

The earliest large elevators in Enid were built by profit-driven corporations, but in the years following World War I, wheat farmers began to seek greater control over the marketing of their crops and, as they did, saw the need to operate their own elevators. In 1927 the Oklahoma Wheat Growers Association, the first cooperative wheat organization in the state, organized the Oklahoma Wheat Pool to give farmers an alternative to local commercial elevators. A year after its founding, the Wheat Pool was operating fifty-two country elevators in the state. But many terminal elevators refused to deal with the early cooperatives, so in 1930 the Wheat Pool built its own terminal facility on Sixteenth Street in Enid. A second unit added in 1935 gave the elevator had a capacity of 2.1 million bushels.<sup>21</sup>

#### THE RISE OF UNION EQUITY

While Enid's first big elevators were going up one by one on the outskirts of town, developments that would prove even more pivotal to the city's future were taking place in a one-room office downtown and over coffee in country cafes throughout the state. The cooperative agriculture movement transformed wheat farming in Oklahoma, as elsewhere, and the growth of the Union Equity Co-Operative Exchange helped make Enid a grain

center of international importance. The earliest cooperative in Oklahoma is believed to have been established in Logan County about 1893 and the first farmer-owned grain elevator in the state was built at Elk City in 1905. But the farmers' elevator movement did not gain its greatest momentum until World War I, when increased demand sent the price for a bushel of wheat soaring above two dollars. Claiming some elevator operators were adding a thirty-cent markup to the price of every bushel, farmers built dozens of their own elevators during and soon after the war.<sup>22</sup>

The Union Equity Co-Operative Exchange was founded not in Oklahoma but in the Texas Panhandle. On a winter day in 1925, fifteen farmers, members of four Panhandle cooperatives, met at the Perryton Equity Exchange to discuss how local co-ops might overcome the dominance of commercial terminal elevators. Cooperative elevators had given farmers greater autonomy, but they were still at the mercy of larger, privately owned terminal facilities farther down the line. R. I. Hanna, president of the Perryton exchange, had suggested a few years earlier that the cooperatives band together to gain greater marketing clout. Five years of falling wheat prices had caused the idea to ferment in farmers' minds, and on that winter day they approved creation of such an organization. The Union Equity Exchange, as it was first known, was incorporated in Texas in May 1926.<sup>23</sup>

Enid at the time was just gaining a reputation as a regional grain center, and the first major decision of the organization's founders was to open a sales office there. E. N. Puckett, manager of the Perryton exchange, was put in charge, and in June 1926 he opened an office in the Enid National Bank building with two desks, two chairs, a secretary, and \$3,260 in cash. Another group, the Farmers Co-Operative Grain Dealers Association of Oklahoma, was beginning at the same time to formulate plans for the establishment of a joint sales agency of its own. Realizing that the state had little need for two such agencies, the grain dealers' group in 1929 designated Union

Equity its official sales representative. Union Equity reorganized as an Oklahoma corporation, and within six months twenty-five cooperatives joined what became known as the Union Equity Co-Operative Exchange.<sup>24</sup>

Union Equity, consequently, needed an elevator of its own and in 1930 it built a 100,000-bushel wood elevator on North Tenth Street in Enid. It was tiny and old-fashioned compared to the other terminal facilities in town. Even so, E. N. Puckett, Union Equity's general manager for its first twenty-six years and the person most responsible for Enid's emergence as a national grain center, later recalled that "we walked the floor and worried about how we would fill (that) wooden elevator."<sup>25</sup> He need not have, because between 1929 and 1931 the amount of grain handled by the cooperative increased from 4.4 to 6 million bushels. On the very day its first elevator opened, in fact, Union Equity announced it would have to lease additional space from other elevators in town to accommodate growing demand for storage from its members.<sup>26</sup> It began building a much larger concrete elevator the next year.

The idea of a joint cooperative sales agency like Union Equity—sort of a "super co-op"—was new at the time and elevators were slow to join, but as the organization's earnings grew and dividends to its co-ops increased, membership steadily climbed. Between 1926 and 1954, membership grew from the original four cooperatives to more than ninety stockholder organizations operating 135 elevators in three states. The amount of grain handled by the organization increased tenfold during the period and its annual earnings rose 6,000 percent. But nothing was more impressive than the growth of Union Equity's physical plant. It built four massive concrete grain elevators in Enid that together could hold more than fifty million bushels of wheat. Construction rarely stopped, continuing through the Great Depression and even World War II, so long as materials could be obtained. Its stockholders approved thirteen separate construction projects in twenty-six years and the coopera-

tive added an average of two million bushels of storage annually during the period.<sup>27</sup> Union Equity almost single-handedly transformed Enid into a national grain center.

Two developments were key to Union Equity's early growth and continued expansion. The Oklahoma Wheat Growers Association, the original wheat co-op in the state, experienced financial difficulties during the 1930s brought on by the drought and depression that devastated so many Plains farmers. Many of its members switched to Union Equity-affiliated elevators as their contracts expired, and in 1938 the organization was forced to liquidate, turning over its assets, including its Enid terminal elevator, to the Farm Security Administration. Most of its country elevators, meanwhile, were sold to local cooperatives that were or became Union Equity stockholders. In the two years following the demise of the Wheat Growers Association, the amount of grain handled by Union Equity more than doubled.<sup>28</sup>

The establishment of government price supports for wheat was also critical. In 1933 newly elected President Franklin D. Roosevelt signed into law the Agricultural Adjustment Act to bail out farmers whose livelihood had been undermined by declining crop prices during the Great Depression. The average price for a bushel of wheat in Oklahoma had fallen to thirty-two cents the previous year, its lowest level in history. The act created the Commodity Credit Corp. to provide loans to farmers backed up by price guarantees. Under the program, the CCC agreed to purchase the crop of any farmer to whom it made a loan if the market price for that crop at harvest was less than a government-established minimum. As it turned out, the government-guaranteed price for wheat was so regularly higher than the market price that the CCC became the biggest purchaser of wheat in the world. It needed a place to store what it bought, which pushed demand for space at the nation's elevators steadily upward. At times, more than half the wheat stored in Union Equity's elevators was government-owned.<sup>29</sup>

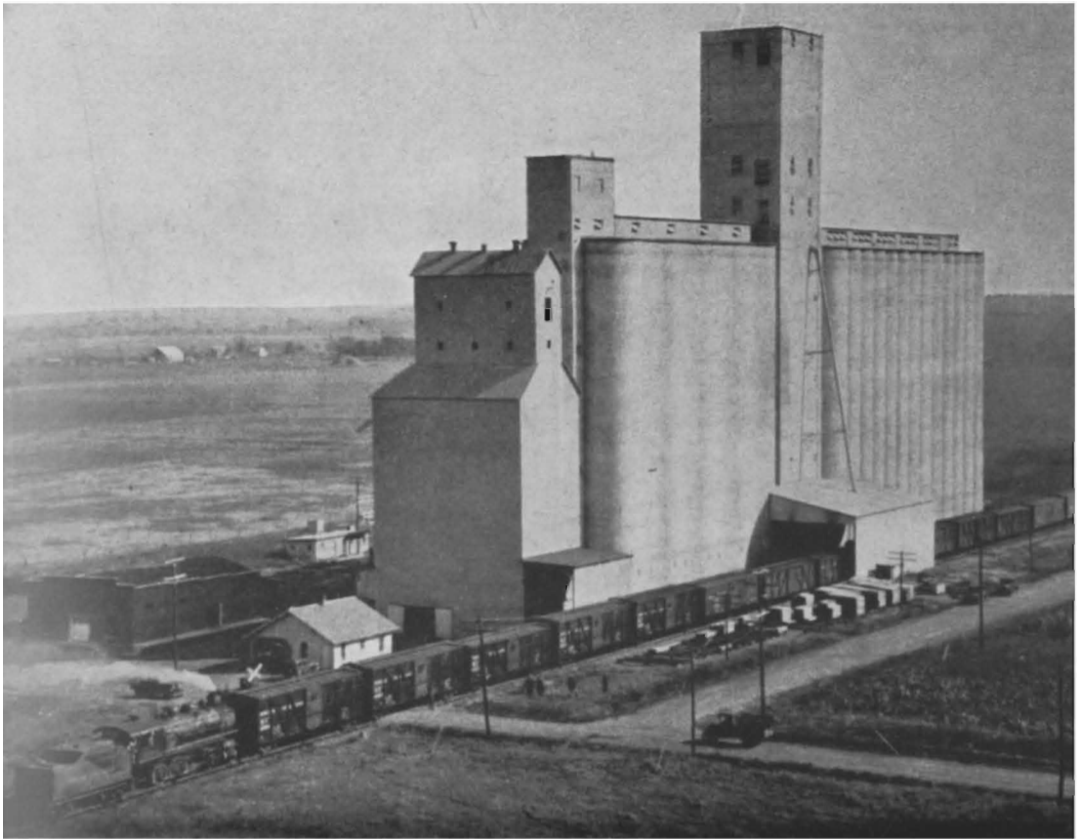


FIG. 6. *Union Equity's original 100,000-bushel frame elevator in Enid, front, beside the cooperative's first concrete storage structure, begun in 1931. Courtesy, Dean Luckenbaugh.*

Union Equity began building its first major storage complex just east of its original frame elevator in 1931 (Fig. 6). Unimpressive at first, there was little suggestion when the initial 430,000-bushel unit was built that it would eventually become part of the largest grain storage facility in Enid. But it was enlarged by 750,000 bushels in 1935, and, following the demise of the Oklahoma Wheat Growers Association, Union Equity's board of directors authorized four subsequent expansions. By the time the last unit was completed in 1942, it had grown in size to include storage for 7.5 million bushels. Union Equity Elevator A, as

it became known, was three times as large as any other elevator in town. Even so, the cooperative began planning its next major storage facility almost immediately.<sup>30</sup>

About this time, Union Equity General Manager E. N. Puckett had a revelation that would fundamentally alter the nature of grain elevator design. For years, Puckett had been trying to come up with a more economical design for the construction of elevator storage bins. Most large elevators at the time were built with circular bins because engineers believed no other shape was strong enough. But circular bins were inefficient in their use of

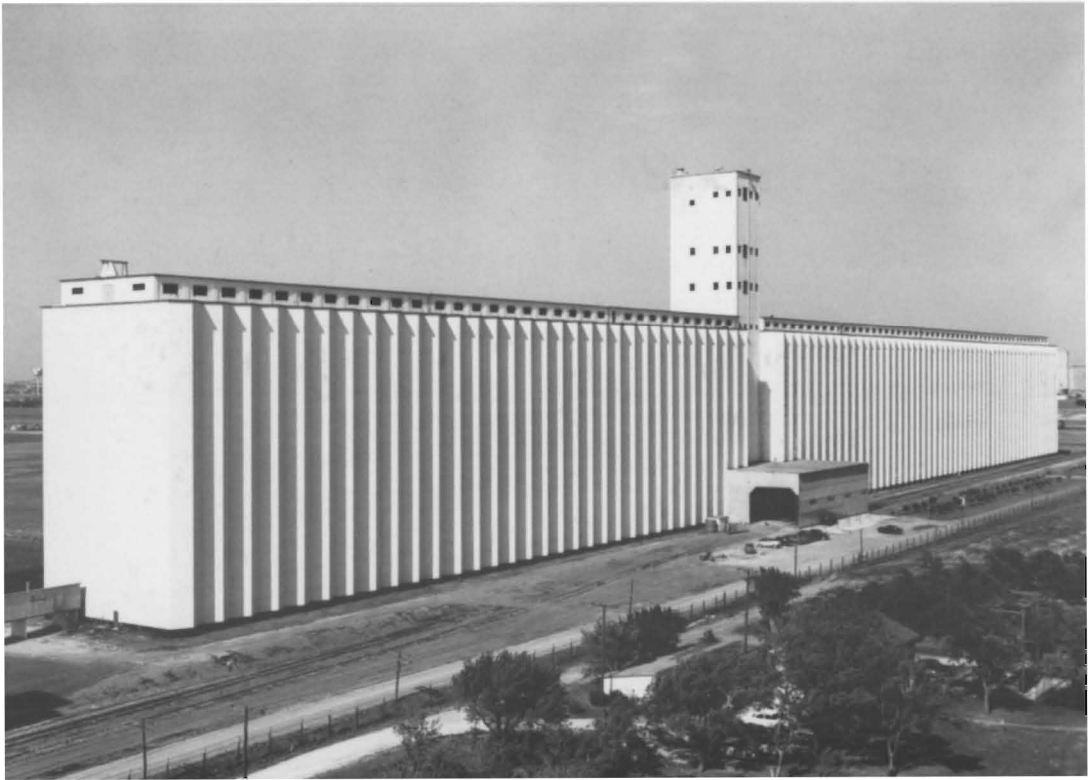


FIG. 7. *Union Equity Elevator B, completed in 1949, believed to be the first grain elevator with hexagonal bins. It provided storage for eleven million bushels of grain. Photograph by Jim Browlee. Courtesy, Farmland Industries.*

space and materials. The shape of the bins meant each had to be built independently, while the rows of adjacent cylinders left much wasted space in between. Puckett was vacationing at the mineral baths in Hot Springs, Arkansas, in 1944 when he noticed a honeycomb pattern on a tile floor that provided the inspiration for a new design.<sup>31</sup> He contacted the Chalmers Borton Co. of Hutchinson, Kansas, which had been hired to build a new storage complex for Union Equity, and told them of his idea to build an elevator composed of hexagonal bins. "They said it couldn't be done," recalled Puckett's son, Howard "Bud" Puckett. "They had built round bins for so long that they didn't think a flat wall could hold the pressure. He told them to work on it. They found out it could."<sup>32</sup>

Union Equity Elevator B, built adjacent to Elevator A, may be the first grain elevator ever built with hexagonal-shaped storage bins. Though construction was delayed because of wartime restrictions that limited the use of steel and other materials considered essential to the war effort, work began in September 1945 and the first three units of Elevator B were completed in time for the harvest in 1946 (Fig. 7). Union Equity's board of directors approved two subsequent additions to the facility, and by the time construction was completed in May 1949, Elevator B had grown to include storage for eleven million bushels, giving Union Equity a total capacity at its Enid plant of 18.5 million bushels—the largest capacity at a single plant in the world at the time.<sup>33</sup>

E. N. Puckett is widely credited with developing the hexagonal bin design that would gain much wider use, but he refused to claim it as his own, insisting he simply adopted a design that already existed in nature. A deeply religious man who built chapels in several of Union Equity's elevators and became known for handing out Bibles like candy, he preferred to call the approach "nature's storage unit" and "the divine geometry of the bees."<sup>34</sup> Many people urged Puckett to patent the design but he refused. "He felt God already 'had the patent' on the beehive-like design," said his youngest daughter, Gwen Puckett Mercer.<sup>35</sup> Though developed for their economy of materials and space, the hexagonal bins also gave Elevator B and subsequent facilities built with the design a radically different look from other elevators. The bins are positioned so one of the vertices on the hexagon points out along the long side of the elevator. Arranged in a row, these points give the elevator a jagged edge, not unlike the bellows of an accordion, that is stark and somehow more modern in its appearance than the almost classical look created by the curves of traditional circular storage bins.

Over the years, the hexagonal-shaped bins became central to Union Equity's public image. When the cooperative built a new office building in Enid in 1956, it designed the building with a hexagonal motif. The sidewalk leading to the entrance was made of hexagonal sections, while an entranceway was designed to suggest one of the vertices of a hexagon. A memorial to E. N. Puckett and a planter by the front door were also built with a hexagonal shape. In 1960 Union Equity began using a series of three interlocking hexagons for its logo, and eventually that logo could be seen on the headhouses of its elevators, the sides of railroad cars, and the fronts of baseball caps worn by farmers throughout the Great Plains.<sup>36</sup>

Union Equity Elevator B was the first of four large storage facilities built in Enid with hexagonal bins. It gave the city a total storage capacity of 35.4 million bushels, pushing Enid to seventh in the nation in grain-storage

capacity. Yet, as wheat production grew following World War II and stocks of government-owned grain filled many elevators to near capacity, demand for storage still sometimes exceeded supply. One day before the dedication of Elevator B, in fact, Union Equity declared its elevators were so full that it would be forced to limit the amount of storage available to its members during the 1949 harvest. As the shortage became critical nationwide, the federal government began offering incentives to encourage elevator construction, guaranteeing the occupancy of new elevators and providing tax breaks for their operators. Both Union Equity and another local grain dealer, the W. B. Johnston Grain Co., took advantage of these programs.<sup>37</sup>

To accommodate the seemingly limitless demand for storage, Union Equity built two more huge elevators in quick succession. Just three months after the completion of Elevator B, it began building a 15.3-million-bushel elevator one-half mile north of its original storage complex. It was named Elevator Z because E. N. Puckett naively believed it would be Union Equity's last. But government purchases of wheat continued to rise. In 1953 alone, the CCC purchased 48 percent of the US harvest, and its inventory in elevators tripled. That August, Union Equity announced plans to build an even larger facility beside Elevator Z, after entering into a contract with the CCC guaranteeing its occupancy.<sup>38</sup> Aided by the same government program, Johnston Grain, the oldest grain dealer in Enid, built its first terminal elevator about the same time. The 4.2-million-bushel facility, which like the Equity elevators was built with hexagonal bins, was completed in June 1954.<sup>39</sup> New elevator construction in Enid reflected a statewide trend. Between 1953 and 1954, thirty-five million bushels of new storage was built in Oklahoma, much of it in response to escalating government demand for space.<sup>40</sup>

Union Equity finished Elevator Y, as its latest project became known, in September 1954. Like Elevator Z, it became the largest grain elevator in the world upon its completion.

Capable of holding 16.3 million bushels of grain, it boosted total capacity at the city's eleven terminal elevators to 64.4 million bushels, enough space to store all the wheat produced in Oklahoma in a year at the time. The new facilities pushed the city to third place in storage among US grain centers, behind only Minneapolis-St. Paul and Kansas City.<sup>41</sup> No city stored more hard red winter wheat than Enid. And though Elevator Y was the last large concrete elevator built in Enid and is no longer the largest elevator in the world, Union Equity's two elevators on Willow Street still comprise what is probably the greatest storage capacity at one site in the nation.<sup>42</sup> Stretching 2,000 feet in length, their headhouses rising like the smokestacks of a giant ocean liner, it is hard to imagine a more monumental site than the twin elevators built side-by-side at the edge of a wheat field.

#### FROM CAPITAL TO CASUALTY

The image of Enid has been closely tied to its grain facilities ever since the first large storage facility in town, the Enid Terminal Elevator, was built in 1926 and its towering headhouse became a landmark for pilots. Since that time, Enid's elevators have been pictured on postcards and in grade-school textbooks. They have been written about in travel guides and popular magazines. They have played a central role in literature produced to promote both the city and the state. What the Golden Gate Bridge is to San Francisco or the Gateway Arch is to St. Louis, grain elevators are to Enid—the standard view of the town. No matter what the source, if a single image of Enid is presented, it is usually its grain facilities.

This became especially true after completion in 1928 of the Pillsbury mill. For years, the plant, with the words "Oklahoma Home of Pillsbury's Best Flour" emblazoned in huge letters across its concrete storage bins, was the most widely disseminated image of Enid. When the state of Oklahoma published a booklet to attract industry in the 1940s, for example, the

only photograph from Enid was of the Pillsbury mill and elevator. A photo of the Pillsbury plant was, likewise, the only picture of the city featured in a detailed guidebook to the state produced in 1941 by the federal Works Progress Administration. The city's grain facilities also figured prominently in efforts by the Enid Chamber of Commerce to promote the city. A typical promotional booklet published in the 1940s shows a combine at work in a wheat field on its cover, against a background of the city's skyline that is dominated by its elevators. Inside the booklet are eight different photos of grain facilities.<sup>43</sup>

As Union Equity began erecting the first of its massive storage facilities, Enid's elevators started to draw even wider attention. *National Geographic* called them "an original type of American architecture" and featured a photograph of three of them in a 1941 story about Oklahoma. "Far from wheat-gorged Enid," the magazine wrote, "you see its multiple-cylindrical grain elevators towering above the prairie, like fantastic pagan temples of Babylonian pattern."<sup>44</sup> A color photograph of the city's growing agricultural skyline was used to introduce a story on Oklahoma in a 1953 issue of *Holiday* magazine, a popular travel magazine of the day. And when the US Postal Service initiated air mail service from Enid to cities in five states in 1949, it featured Union Equity Elevator A on a commemorative seal stamped on envelopes.<sup>45</sup>

When the Pillsbury mill first opened, Enid boosters began to promote the city with the phrase "Where the wheat grows and the oil flows," but as the importance of petroleum diminished, wheat took center stage all by itself. Enid became known as "The Wheat Capital of Oklahoma," and then, as storage capacity ballooned, "The Wheat Capital of the Southwest." Eventually, Union Equity claimed for the city the title "Wheat Capital USA" (Fig. 8). Even after the novelty of the city's big elevators wore off, they continued to exert a symbolic influence. When Enid built a new library in 1964, the exterior of the building was designed to resemble the zigzag sides of



FIG. 8. Billboard promoting Enid's importance as a grain storage and marketing center in the 1970s. Union Equity began using interlocking hexagons as part of its logo in 1960. Courtesy, *Enid News & Eagle*.

Union Equity's hexagonal storage bins. In recent years, furthermore, an Oklahoma City television station has used a panorama of Enid's grain facilities as a backdrop for its nightly newscasts.<sup>46</sup>

Though Enid's giant elevators continue to stand as symbolic reminders of the lasting importance of wheat to the economy and life of the Great Plains, the city has in the last decade seen its status as a wheat center decline sharply. Many of its large elevators now sit empty, the result of changing US government agricultural policy, railroad deregulation, and the collapse of the Union Equity Co-Operative Exchange. Only five of twelve elevators in Enid are presently in use. Most of those that remain active, moreover, are well below capacity and operate with skeleton staffs. The other six were shut down between 1988 and

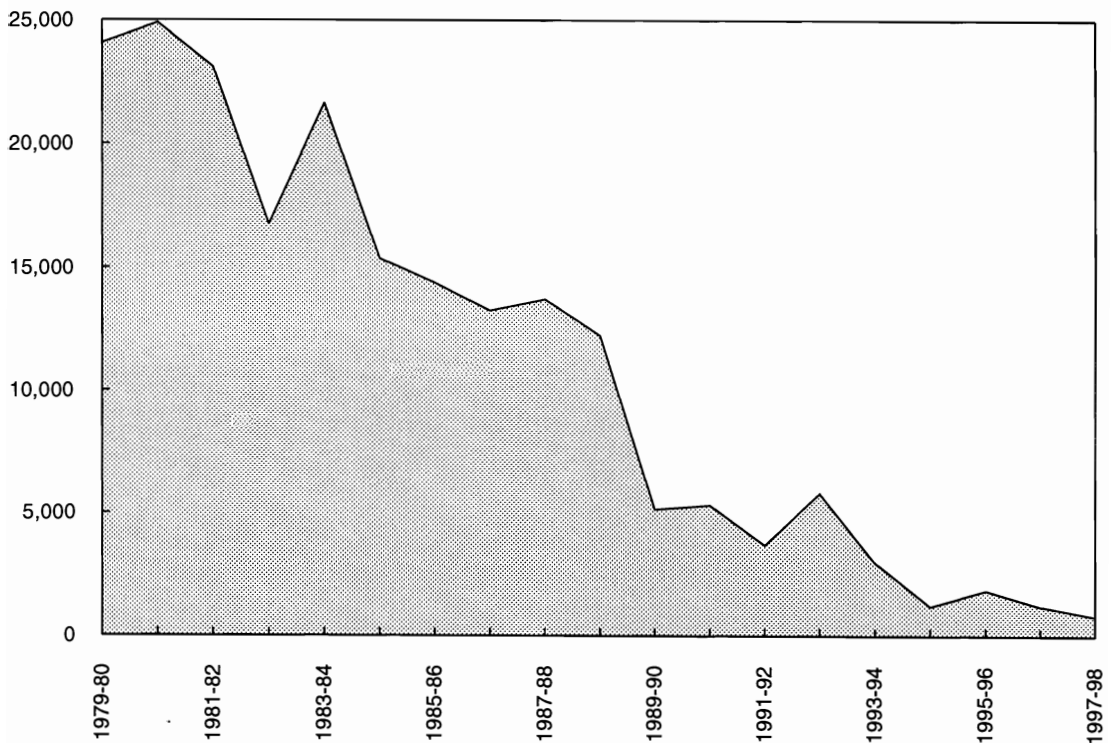
1994, as demand for storage in the nation's elevators plummeted.

Much of the diminished demand for storage can be explained by reductions in the amount of wheat owned by the US government. Purchases of wheat under federal price support programs have plummeted since implementation in 1986 of the Conservation Reserve Program, a USDA land retirement program that pays farmers to take marginal cropland out of production. As government purchases of grain diminished, the Commodity Credit Corp. sold much of the wheat it had stored in elevators. Nationwide, CCC inventories of wheat fell from 987 million bushels in 1986 to 145 million in 1990. During the same period, the volume of wheat stored in Oklahoma elevators declined 88 percent. In the 1997-98 fiscal year, six times as much



TABLE 1

## RAILROAD CARS OF WHEAT RECEIVED AT ENID, OKLAHOMA, 1979-98



wheat was shipped from Enid's elevators as was received by the city's terminals, providing further indication that the city's elevators are gradually being emptied.<sup>47</sup>

Railroad deregulation has also reduced the quantity of wheat shipped to Enid. Since passage of the Staggers Rail Act by Congress in 1980, many of the transportation advantages that helped the city become a national grain center have disappeared. Freight rates are now dictated more by the market than by the Interstate Commerce Commission. Railroads as a result have eliminated the preferential rate structure that encouraged shippers to ship wheat to terminals in Enid even when the city

was not on the most direct route to a shipper's final destination. They have also abandoned many unprofitable rural lines, forcing country elevators to ship their wheat by truck to more convenient terminals. Between 1981 and 1998, the number of railroad cars of wheat received at Enid declined 97 percent (Table 1).<sup>48</sup>

The demise of Union Equity can be explained in part by these changes, but its story is more complex. Although the cooperative built the last of its big Enid elevators in 1954, it continued to grow and eventually became the second largest grain concern in the United States (after Minnesota's Cargill), with 470 cooperatives in ten states. In 1985 it

was ranked as one of the 100 largest service companies in the nation and three years later its annual sales topped \$1 billion. Union Equity's greatest growth came during the late 1960s and early 1970s as it placed greater emphasis on overseas markets. Worldwide demand for wheat grew steadily after World War II, and in 1966 Union Equity responded to the growing demand by becoming the first US cooperative to operate its own export facility when it built a three-million-bushel elevator on the Houston Ship Channel. Its profits soared as a result, and by 1983 overseas shipments accounted for 97 percent of Union Equity's business. Its membership rose rapidly as cooperatives from as far away as Nebraska and Wyoming sought to take advantage of Union Equity's new export marketing clout.<sup>49</sup>

Eventually, however, Union Equity's appetite grew too large. Its undoing was its 1985 purchase of Far-Mar-Co, the grain marketing arm of Kansas City-based Farmland Industries. Union Equity spent \$62 million to buy its ailing competitor, acquiring eleven terminals and 92.5 million bushels of storage space in the process.<sup>50</sup> The timing of the sale could not have been worse. The impact of railroad deregulation had already reduced the volume of wheat shipped to Enid, and six months after the sale Congress passed a new farm bill, the provisions of which led to drastic reductions in government purchases of grain. "It was not a very good business decision," said Joe Hampton, general manager of the Enid Board of Trade. "This was at a time when storage was going out. Production was going down. The government was getting out of the grain business. They didn't need all these elevators. And they paid too much for them."<sup>51</sup>

With all the new elevators to maintain and less demand for storage, Union Equity's costs rose and its revenues dwindled, causing its profits to fall from \$12 million in 1987 to \$2.6 million the following year. In 1989 it lost money for the first time in twenty-one years, and was forced to close six of its terminal facilities, including Elevators A and B in Enid, and cut 17 percent of its work force. Union

Equity was not the only grain concern in Enid hard hit by changes in US transportation and agricultural policy. The Continental Grain Co., which had taken over the Oklahoma Wheat Pool terminal on Sixteenth Street, shut down the facility in July 1989. Over the next two years, two more Enid terminals were closed—the General Mills elevator, sold to the Mid-American Grain Co. about 1985, and the Feuquay elevator, purchased by Archer Daniels Midland (ADM) in the 1970s.<sup>52</sup>

The situation at Union Equity, meanwhile, grew still more desperate and as its losses mounted and layoffs continued, the cooperative began to pursue potential suitors. Company officials announced in May 1990 that they were considering a merger with Farmland Industries, the same company from which it purchased Far-Mar-Co five years before. Then, in February 1991, Union Equity announced plans to sell most of its operation to the Minnesota-based Harvest States Cooperative.<sup>53</sup> That deal fell through but nevertheless contributed to a growing feeling of doom that was spreading through the north central Oklahoma town, already devastated by downturns in the petroleum industry. "We're dancing the last dance on the Titanic," said Enid Mayor Walter Baker at the time.<sup>54</sup> Finally, in July 1992 Farmland Industries bought Union Equity for an undisclosed amount.

In the days after the sale was announced, Farmland insisted it would maintain a strong presence in Enid and said the Union Equity name would be retained as the name of its grain division, but as is so typical in the world of corporate takeovers, those promises proved hollow. Over the next twelve months, eighty of Union Equity's 135 remaining Enid employees were transferred out of the city. Union Equity's headquarters were put up for sale and by the end of 1996, just twenty-four people were employed in the Enid offices of Farmland's grain division.<sup>55</sup> At one time, Union Equity had more than 315 employees in Enid and for years the cooperative had been Garfield County's biggest taxpayer. Adding to the resentment Enid residents developed toward



FIG. 9. Broken windows at the Continental Grain Co. elevator, closed in 1989, symbolize Enid's decline as a grain center. Photograph courtesy of author.

Farmland, Union Equity's former headquarters were sold to a New York garment manufacturer and are now being used to make women's underwear.<sup>56</sup> "E. N. Puckett is probably rolling over in his grave," said the Board of Trade's Hampton.<sup>57</sup>

Union Equity's two largest elevators remain open but are so little utilized that Farmland's refusal to close one of them seems more a public relations ploy than a reflection of economic reality. In November 1996 Elevator Y was at about 35 percent of capacity and Elevator Z was less than 10 percent full. The only other grain facilities in Enid that are still in use are the former Pillsbury plant, taken over by ADM in 1992, and two elevators owned by Johnston Grain. The Enid Terminal Elevator was closed

in 1994.<sup>58</sup> The area that was the heart of Enid's grain industry for five decades, meanwhile, has been largely abandoned. Pigeons have colonized the headhouses of the five large elevators along Tenth and Sixteenth Streets, south of Willow Road, and graffiti has begun to appear on the sides of their concrete storage bins. Sheets of plywood cover entrances that have been pried open by vandals or scavengers. Windows are broken and rusting grain chutes creak in the wind (Fig. 9).

Just as Enid's rise as a wheat distribution point can tell us much about the evolution of agriculture on the Great Plains, the city's decline as a grain center also reflects larger trends and can provide valuable lessons that have resonance throughout the region. More than anything else, the case of Enid points out the risk of building an industry based on political preferences that can be swept away as moods shift, and it demonstrates the foolishness of depending too heavily on government largess. Enid would never have become a wheat center of international importance without its favorable railroad rates or the government programs that supplied it with so much wheat, and it could not retain that stature in the absence of such synthetic advantages. With its largest grain concern gone, farm price support programs unlikely to regain their previous importance, and tight regulation of transportation rates politically out of favor, the city in the future will likely be little more than a regional grain storage location of no greater significance than a dozen other cities. Enid's days as "Wheat Capital USA" are over.

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