

FROM WASTELAND TO WEALTH: A HISTORICAL TIMELINE OF THE STATE OF TEXAS PERMANENT UNIVERSITY FUND

by W. Bruce Cook, Ph.D.

Research Coordinator, The University of Texas Investment Management Company,
Austin, Texas, August 1998

Abstract

Texas alone of all the states in the U.S. has a state endowment reserved entirely for higher education. The incredible story of the Permanent University Fund thus provides a case study in higher education finance and governance, public policy, and state politics.

When Texas won independence from Mexico at the Battle of San Jacinto on April 21, 1836, the new republic found itself short on capital but rich in land, with a total area of nearly 238 million acres, most of which was unencumbered. The Constitution of 1836 did recognize land grants made under Spanish and Mexican rule, and later the Legislature awarded land grants to those who served in the Army of the Republic. But most of this vast domain was unclaimed and unsettled public land [25, 47].

Following the inaugural presidency of General Sam Houston, Mirabeau B. Lamar, cavalry commander at San Jacinto, was elected to lead the republic and it is here that the incredible story of the Permanent University Fund begins. President Lamar, in his stirring address to the Third Congress on Dec. 20, 1838, eloquently explained the need for and benefits of an educated citizenry, stating, “[C]ultivated mind is the guardian genius of democracy, and while guided and controlled by virtue, is the noblest attribute of man. It is the only dictator that free men acknowledge, and the only security that free men desire.”

He then concluded:

The present is a propitious moment to lay the foundations of a great moral and intellectual edifice, which will in after ages be hailed as the chief ornament and blessing of Texas. A suitable appropriation of lands to the purpose of general education, can be made at this time without inconvenience to the Government or the people; but defer it until the public domain shall have passed from our hands, and the uneducated youths of Texas will constitute the living monuments of our neglect and remissness. To commence a liberal system of education a few years hence may be attended with many difficulties. The imposition of taxes will be necessary. Sectional jealousies will spring up;

and the whole plan may be defeated in the conflict of selfishness; a liberal endowment which will be adequate to the general diffusion of a good rudimental education in every district of the Republic, and to the establishment of a university [in] which the highest branches of science may be taught, can now be effected without the expenditure of a single dollar. Postpone it a few years and millions will be necessary to accomplish the great design [14, pp. 1-3].

Apparently Lamar's speech had the desired effect, as an Act of Jan. 26, 1839, approved by the Third Congress and signed by him, sought to meet the educational needs of Texans by providing for the creation of institutions of primary and higher education. Section 4 of the Act directed the President to appoint a surveyor and have surveyed from any of the vacant lands of the Republic, fifty leagues of land [221,420 acres], to be set apart and appropriated for the establishment and endowment of two colleges or universities. The reference to two institutions of higher learning is because the founders of the Republic originally envisioned one in the eastern part of the state and one in the western part [3, 14, 15, 21, 25].

Although well-intentioned, the dream of higher education in Texas was to remain out of reach for another 35 years, however. Following years of discussion and negotiation, Texas was admitted to statehood on December, 29, 1845 as a slave state after annexation was approved by both the U.S. and Texas Congresses. However, Texas, as a sovereign republic, was allowed to retain ownership of all of its public lands--the only state west of the Mississippi permitted to do so [25]. A new Texas constitution ratified earlier that year as a condition of statehood failed to make mention of the Fifty Leagues or higher education [24]. A few years later, Texas ceded 67 million acres of land to the federal government as part of the Compromise of 1850 in order to settle a boundary dispute regarding territory along its northwestern border. In exchange, Texas received \$10 million in U.S. bonds to absolve its public debts [3, 14, 25].

On Jan. 30, 1854 the Railroad Grant Act was signed into law by the Legislature. This act stipulated that each railroad company constructing and operating a minimum of

25 miles of railway in the State of Texas would be entitled to receive from the State a grant of sixteen sections of land for every mile of railroad constructed and put in running order. The railroads were required to survey these lands and were granted alternate sections so that the State would receive the benefit of “free” surveying [3, 14, 25].

On Nov. 6, 1855 Governor Elisha M. Pease addressed the Sixth Legislature and requested funds for surveying the remainder of the Fifty Leagues as well as a \$300,000 appropriation of U.S. bonds from the State Treasury for the University Fund. The Legislature acceded to the first request but not the second, and on Aug. 30, 1856 Governor Pease signed a bill (O.B. 119) directing that the balance of the Fifty Leagues be surveyed into 160-acre tracts [14].

A companion bill (H.B. 27) directed the governor rather than the state land commissioner to cause to be surveyed, as soon as possible, 22,250 acres on any vacant or unappropriated lands belonging to the State, (i.e., the unlocated balance previously donated and set apart for the endowment and establishment of two state universities). O.B. 119 further instructed the governor to cause each alternate section of 640 acres to be sold in lots of 160 acres each, at public auction to the highest bidder, at the county seat of the county in which the land was located. The minimum price was set at \$3 per acre but the price was considered high and sales were few. Tracts were to be sold with 20-year credit at 8% interest, with 5% of the original purchase price and the accrued interest to be paid annually. The first sale of lands was held in Dec., 1856 and by Nov., 1881, only 32,335.5 acres remained unsold. Twenty years later, State Land Commissioner Charles Rogan reported in 1902 that 216,805 acres had been sold (leaving 4,615 acres unsold) in nine counties for an average price of just over \$3 per acre [3, 14, 25, 32].

Nov 2, 1857 Governor Pease addressed the Joint Session of the Seventh Legislature and stated in part: “On former occasions, I have called the attention of the Legislature, to the importance of establishing a State University, where all the facilities can be furnished for obtaining a thorough education, that are to be found in other states...The

necessity for such an institution is felt and acknowledged by every one; and I trust that you will not let this session pass, without adopting measures for its establishment at an early date [14, p. 11].”

Opinion in the House was divided on whether to have one university, two universities, or no university, but on Jan. 21, 1858 the Senate Committee on State Affairs, chaired by Louis T. Wigfall, introduced a bill entitled an Act to Establish The University of Texas. The model for the university envisioned by the Committee was The University of Virginia. The House adopted the Senate bill, which was approved by the Legislature Feb. 8, 1858, but only after the Speaker of the House threatened to record the names of those refusing to vote and one additional legislator cast a negative vote to provide a quorum [14].

Governor Pease signed the bill (O.B. 102) into law Feb. 11, 1858. This Act provided for the establishment of “an institution of learning, to be styled ‘The University of Texas,’ to be located at such place in such manner as may be determined by law.” The Act further granted The University of Texas \$100,000 in U.S. bonds from the State Treasury [part of the \$10 million received from the federal government in 1850] as well as the original Fifty Leagues. In addition, the Act granted to the University 10% of the land [one section of every ten] reserved for the State under the Railroad Grant Act of 1854. This one-in-ten provision was also extended to include lands granted to the Galveston and Brazos Navigation Co. under a companion act of Feb. 11, 1854. Section 3 placed the control, management and supervision of the University and its property in a 10-member Board of Administrators consisting of the Governor, Chief Justice of the Supreme Court, and eight persons appointed by the Governor with the consent of the Senate [14, p. 14; 25].

In 1859 the first oil well in America was drilled near Titusville, Pa. by the Pennsylvania Rock Oil Co. after Yale science professor Benjamin Silliman, Jr. assured New York attorney George Bissell that samples from Oil Creek had commercial

possibilities. The discovery of oil at the Drake Well on Aug. 28 of that year came at a time when the world's supply of whale oil was rapidly diminishing and the Industrial Revolution was requiring more and different types of fuels. Subsequent developments ushered in the oil and gas industry and made possible prosperity and occasionally fortunes for thousands of Americans and eventually, countless others around the world [18, 19].

In a message to the Eighth Legislature on Jan. 13, 1860, Governor Sam Houston asked that the University Fund be allocated for frontier defense in an effort to prevent a tax increase. The Legislature, on Jan. 31, 1860 approved an Act which directed that the Fund might be used at any time during the next two years to meet any appropriation made by law for frontier defense. Texas seceded from the Union effective March 2, 1861 but Gov. Houston refused to take the oath of allegiance to the Confederacy and was removed from office. By Jan., 1862 the Fund balance, including an ancillary account accumulated from deceased estates, had been reduced from approximately \$145,000 to less than one dollar [14]. Later that year, the Morrill (Land Grant) Act of 1862 was signed into law July 2 by President Abraham Lincoln, but Confederate states were not eligible to apply for federal aid under the terms of its provisions [14].

In 1865 the first oil well was drilled in Texas by John F. Cotton and Edward von Hartin. Located in the heart of the Big Thicket area near Nacogdoches, the well was near the site of a tar pit but the primitive tools used for drilling were unable to penetrate deep enough to strike oil [13, 19, 37]. Following the end of the Civil War that same year, a period of federal Reconstruction began in the South, ending in 1877 with the inauguration of President Rutherford B. Hayes following eight years under the U.S. Grant administration. Federal troops were withdrawn from the Southern states later that year, ending a decade of military rule [14, 32].

In Texas, Reconstruction began with the appointment of Provisional Governor A. J. Hamilton on June 17, 1865. His first task was to organize a constitutional convention to replace the 1861 constitution. The resulting 1866 constitution provided for the

maintenance of the University Fund and directed that at an “early day” the Legislature make provisions, by law, for the organization and operation of a university.

On July 23, 1866 the Morrill Act was extended by Congress for five years to allow the former Confederate states an opportunity to enact enabling legislation to meet the conditions of its terms. Nov. 1, 1866 the Texas Legislature accepted the terms of the Morrill Act and in doing so received 180,000 acres of federal land to form the basis of a permanent fund for “the endowment, support, and maintenance of at least one college where the leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts...in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life” [14].

On April 17, 1871 the Texas Legislature established the Agricultural and Mechanical College of Texas and declared that it should be constituted, controlled, managed, and supervised as a branch of The University of Texas. This act also specified that the A&M College should own at least 1,280 acres of good land (two sections) and that the Legislature would provide \$75,000 (or less if possible) from the "school fund" (PUF) to build the college. The federal lands granted under the Morrill Act were sold for less than a dollar an acre, yielding a capital fund of \$176,000. This amount was invested in seven percent frontier bonds, yielding an annual return of around \$15,000 [4, 8, 9, 14, 22].

The Legislature, by an Act of March 9, 1875, authorized a 9-member Board of Directors for the A&M College of Texas and the first meeting of the Board took place June 1, 1875 in Bryan, with Governor Richard Coke presiding. An Act of June 4, 1876 appropriated \$40,000 for the completion of buildings and purchase of furniture at the A&M campus so that it might open in the fall as planned. This was necessary because a large part of the original \$75,000 appropriation had been carelessly dissipated through a combination of poor oversight and unscrupulous contractors, and the Legislature came

within one vote of closing the College before it ever opened. The original campus consisted of a main college building, steward's (mess) hall, dwellings for the president and five professors, and dormitories, at a cost of \$187,000 [4, 8, 9, 14, 22].

Classes were begun at Texas A&M Oct. 4, 1876 with an enrollment of 6 students. Thomas S. Gathright served as first president. Governor Richard Coke dedicated the new College with these words: "Henceforward these halls are dedicated to the cause of liberal, scientific and practical education." By the time the first year ended there were 106 students enrolled. Included in this inaugural class of cadets was Temple Lea Houston, son of Sam Houston, who later became a state senator and delivered the dedication address for the opening of the state capitol building [4, 8, 9, 14, 22].

The 1876 constitution, which still governs Texas today, established a "Permanent University Fund," consisting of all lands, income thereof, and grants which had been set aside, appropriated, or otherwise accrued for the establishment and maintenance of a state university, and called for the creation of The University of Texas--which had yet to be located and organized--while mandating that the A&M College of Texas was to be a branch of The University of Texas. This last provision was drafted and introduced by A&M Director B. H. Davis of Brazos, who to his credit, also drafted and helped win approval of a provision for Legislative appropriations for the maintenance and support of colleges and universities established by the State. The constitution expressly prohibited the levying of a tax or appropriation from the General Revenue Fund for construction of buildings at The University of Texas, and directed that the PUF be invested in State of Texas bonds, or if these were unavailable, United States bonds. In addition, the constitution took away the prime lands bordering the railroads (one section for every ten) granted but never conveyed by the Act of 1858 and gave in lieu thereof 1,000,000 acres in West Texas. It was estimated at the time by the State Land Commissioner that the 1,750,00 acres taken away was worth an average of \$5 per acre, while the 1,000,000 acres of West Texas land was worth at most 50 cents per acre. This amounted to a forfeiture

for the PUF of \$8,125,000. By 1882, as railroad development in the State grew, this difference had increased to 3.2 million acres, or \$14,647,000. After 1882 land grants to the railroads were suspended as the State had no more lands left to give away in habitable areas [3, 14, 25, 32].

On March 30, 1881 the Texas Legislature ordered an election for the purpose of choosing a location for The University of Texas. By this same enabling act, a governing board of eight regents was authorized to set policy and oversee the affairs of the University, and on April 1, 1881 the first UT Board of Regents was nominated by Governor O. M. Roberts and approved by the Senate. By popular election on Sept. 6, 1881, Austin was selected as the location for The University of Texas and Galveston was selected as the site for the UT Medical Branch. The UT Board of Regents held its first meeting Nov. 15, 1881 and Dr. Ashbel Smith was elected President. Smith, a Yale graduate who had served as Surgeon General of the Republic of Texas Army, sought to create a university modeled after The University of Virginia. Nov. 17, 1882 the cornerstone for the Main Building at The University of Texas was laid and Smith proved prophetic in the following remarks he made for the occasion: "Texas holds embedded in its earth rocks and minerals which now lie idle because unknown, resources of incalculable industrial utility, of wealth and power. Smite the earth, smite the rocks with the rod of knowledge and fountains of unstinted wealth will gush forth." Although he died Jan. 21, 1886, Smith's herculean efforts on behalf of UT earned him the honorary title "Father of The University of Texas" by later historians [3, 4, 6, 7, 21, 32, 41].

The Legislature added 1,000,000 acres of land in West Texas to the PUF in an Act of April 10, 1883. This came from two million acres which the Texas & Pacific Railroad had returned to the State as being too worthless to survey. The Legislature reserved the other million acres for the Permanent School Fund. The Legislature also appropriated \$134,472.26 to repay the PUF for assets diverted by the State for other purposes during the Civil War. April 14, 1883 the Legislature passed an act stating that "...all minerals in

the Public School, University, Asylum and public lands of the State of Texas...shall be used and disposed of for the benefit of the respective funds for which said lands are now set apart as hereinafter prescribed” [3, p. 11; 4, 6, 7, 21, 32].

Classes were begun at The University of Texas on Sept. 15, 1883, with an enrollment of 221 (166 traditional students and 52 law students) and 13 faculty members, including eight professors, four assistants, and a provost. Classes were held in the temporary Capitol at 11th & Congress since construction was not yet complete on the Main Building (opened for classes in Jan., 1884). There was no president for the first 12 years, and during this period administration was coordinated by a faculty chairman. Leslie Waggener, professor of English, served in this capacity for 10 of those years [3, 4, 6, 7, 21, 32].

State Senator George Pfeuffer, chairman of the A&M Board of Directors and popularly known as the “Bull of New Braunfels” for his advocacy of technical education and his criticism of UT, introduced a bill in 1885 to “Perfect the University of Texas” by cutting professors’ salaries in half and shortening the tenure of regents, among other things. He also recommended that A&M should receive one-third of the University Lands income. The bill was defeated [4, 15].

On March 2, 1887 Congress approved the Hatch Act, which provided for the creation and funding of agricultural experiment stations at A&M colleges (this was increased in 1906 under the Adams Act), and the following year graduate instruction was begun at Texas A&M. On Aug. 30, 1890, an Act for the Further Endowment of Land-Grant Colleges (2nd Morrill Act) was approved by Congress “for the more complete endowment and maintenance” of colleges promoting the study of agricultural and mechanical sciences. This provided additional annual funding for Texas A&M [9, 15].

In 1892 Patillo Higgins of Beaumont convinced local businessmen to finance three shallow wells on nearby Big Hill, a low circular mound with sulfurous gas escaping from its crest. Using cable tools, the wells could only be drilled to a depth of 400 feet and no

oil was found. Two years later, the first commercial production of oil in Texas occurred at Corsicana, when a well drilled for water struck oil in 1894. In a few years it was the first commercial oil field in Texas, producing 1,000 barrels a day. Corsicana also saw the first successful use of rotary drilling for oil [13, 18, 19, 35, 37].

In 1899, after seven years of trying unsuccessfully to find further backers for a well on Big Hill (which he renamed Spindletop Heights), Patillo Higgins of Beaumont advertised in a manufacturing journal and received one reply, from Capt. Anthony Lucas, an Austrian mining engineer. After drilling 575 feet, gas pressure collapsed the pipe. Having exhausted his resources and equipment, Lucas sought other financing but was unsuccessful until UT geology professor William Battle Phillips provided a letter of introduction to John H. Galey of Pittsburgh, part of the successful Guffey & Galey oil prospecting team. On Galey's recommendation they agreed to invest \$300,000 if Lucas would lease all the acreage around the well site. He did so and Guffey borrowed \$300,000 from his friend Andrew W. Mellon, a Pittsburgh banker. Al and Curt Hamill, Corsicana drillers, were brought in to direct the work and on Jan. 10, 1901 the discovery of oil at Spindletop ushered in drilling along the Texas Gulf Coast and marked the birth of the modern oil industry and several major corporations, including Gulf Oil. Flowing at a rate of 100,000 barrels a day, Spindletop was the first well to prove conclusively that the earth contained vast quantities of oil which could be successfully harvested [13, 18, 19, 35, 37].

In 1901 the Legislature approved funding for The University of Texas Mineral Survey to "provide for a mineral survey of the lands belonging to the public schools, University and asylum lands of the state." Dr. William Battle Phillips, based on his Spindletop success, was promoted to professor of geology and appointed director of the Survey. Although the Mineral Survey was discontinued in 1905 due to a lack of further Legislative funding, in 1909 the Legislature created the Bureau of Economic Geology at

The University of Texas, which became a permanent division of the University. William Battle Phillips was appointed director [11, 12, 14, 19, 25, 37, 48].

In 1911 Dr. Johan August Udden, professor of natural history and geology at Augustana College, Rock Island, Ill. since 1888, came to work full-time at UT. Udden had assisted with the Texas Mineral Survey in the summer of 1904, and also had spent summers with the Iowa Geological Survey, the Illinois Survey, and the U.S. Geological Survey. Around 1911 UT officials also began to construct wooden shacks for classrooms and laboratories. Two dozen of these unsightly, one-story buildings were constructed, and it is claimed that they were left unpainted and unpapered by order of President S. E. Mezes so that Texans would be ashamed and embarrassed by their appearance and demand more suitable accommodations from the Legislature. Classes often had to be let out in cold weather because there was no heating in these primitive facilities [1, 6, 7, 12, 14, 19, 25, 48].

In 1914 William Battle Phillips resigned as director of the UT Bureau of Economic Geology to become President of the Colorado School of Mines and J. A. Udden was appointed to succeed him. The following year the Texas Agricultural Extension Service was established at A&M by the Smith-Lever Act and today serves all 254 Texas counties [9, 12, 14, 48].

Following a UT Board of Regents meeting Oct. 16, 1915 at which the possible sale of University lands in Reagan and Crockett Counties was discussed, Dr. J. A. Udden requested to meet with the Regents. At a subsequent Board meeting on April 25, 1916, Will C. Hogg made a motion that Dr. Udden furnish to Major George W. Littlefield, Chairman of the Land Committee, information concerning existing surveys of University lands, what supplementary surveys for oil or other mineral developments should be made, with their cost; and if the Bureau [of Economic Geology] could make these surveys with additional money for expenses, and if so, how much. Littlefield requested the report in time for the June meeting of the Board [14, 32].

On June 12, 1916 Dr. Udden submitted to the Land Committee of the UT Board of Regents a photograph of a map he had constructed indicating the possible location of mineral deposits on the University lands in West Texas along with a report on the potential mineral resources of the University lands. These materials were in turn submitted to the Board of Regents June 21, 1916. In his report Udden cautiously reported, “[I]t does not appear unreasonable to regard it as suggesting the possibility of the existence of buried structures in which oil may have accumulated...He further hedged his conclusions by adding, “Drilling should not be undertaken, however, before a thorough geological examination has been made whereby the exceedingly small chance of making the right location for a test may be materially increased.” Later that year Udden and two colleagues--C. L. Baker and Emil Bose--published these findings after receiving Board approval. Nov. 15, 1916 the UT Board of Regents, on a motion by Major George W. Littlefield, approved a policy expressly forbidding the sale of any of the University Lands [14; 17, p.5; 32, 43, 44].

On June 28, 1914 the Archbishop and Archduchess of Austria were assassinated, launching Europe and eventually 32 nations into World War I. The U.S. delayed entry until April 7, 1917, immediately following the sinking of the Lusitania by a German submarine. The Armistice ending the war was signed Nov. 11, 1918.

After the war ended, Rupert Paul Ricker, a 1915 UT law graduate who as a teenager had moved in a covered wagon to Reagan County from Corsicana with his parents and sister to homestead a ranch, determined to make his fortune in oil. During the war, while Ricker was a captain in an Army intelligence unit at Fort Sam Houston in San Antonio, he had become intrigued by the 1917 discovery of oil in Ranger and the 1918 discoveries in Desdemona and Breckenridge. Upon discharge, Ricker came to Austin and met with Dr. E. D. Shurter, professor of public speaking and director of the Extension Division at UT, who called Ricker’s attention to studies published by the Bureau of Economic Geology and Technology, and arranged a meeting with Dr. J. A. Udden. After

reading the studies' mention of possible oil deposits on University lands in West Texas, Ricker, with the assistance of several associates including Shurter, P. G. Stokes, George Walling, Jr., Tom Walling and Hugh Heflin, set about applying for drilling permits on University lands. In February, 1919, he blocked up 674 square miles totaling 431,360 acres (640 acres is equal to one square mile). His group's 171 applications for exploration permits were located in Upton, Crockett, Reagan, and Irion counties, and encompassed all the University lands in those four counties. The reason for so many applications is that State law limited the amount of land one person could file on to four contiguous sections, with a gap of at least four sections required for additional filings by the same person [3, 13, 14; 16, 17, 18, 26, 31, 32, 33, 34, 35, 39, 40, 43, 44, 45, 46].

By law Ricker had 30 days to pay a filing fee of ten cents per acre to the General Land Office. Three days before the applications expired, while trying to come up with the \$43,136 filing fee, Ricker traveled to Fort Worth, then the oil mecca of the world. At a chance meeting in the Fort Worth railway station, Ricker ran into Frank T. Pickrell and Haymon Krupp of El Paso, who were traveling from Burkburnett to Ranger. Pickrell, orphaned at 15, had moved to El Paso and worked in his uncle's Elite Confectionary Store--at the time the largest confectionary in the U.S.--before landing a job in a local bank for a time and then rejoining the Elite as a partner. Pickrell had invested part of his earnings in a copper mine and accumulated a fortune of \$250,000 before the War. After enlisting in the Army, he served as a sergeant in Ricker's intelligence unit but returned home to find his fortune greatly reduced and his interests turned to oil. After boarding a train for Ranger, he encountered Krupp bound for Burkburnett on a similar mission to profit from oil. Krupp, a successful wholesale clothier with money to invest, was familiar with Pickrell's background and reputation, and while enroute the two men had decided to join forces. Ricker invited the two men to his hotel room where he explained the opportunity and offered to sell all the applications for \$50,000. When Pickrell and Krupp countered with an offer to pay the filing fees and cut Ricker in for a share of future

royalties if he would help handle the leg work, Ricker declined to become further involved and requested a cash settlement. After mulling the situation over for several hours, Pickrell and Krupp offered Ricker \$2,500 for a quitclaim, and he reluctantly accepted in order to recoup expenses, thus exiting the scene with his share of the sale price (\$500) and no stake in the potential royalties. Krupp then paid the General Land Office the \$43,136 filing fee and the pair returned to El Paso to begin preparing and filing the required forms to assign and transfer prospecting rights to themselves and several associates. When the 171 permits were granted on July 9, 1919, they were assigned to four El Paso residents in the following proportions: Haymon Krupp, 44; Elias G. Krupp, 41; Frank T. Pickrell, 44; and Frank Gordon, 42. Most of these permits were forfeited after one or two years for failure to provide evidence of production development and to pay subsequent annual land rental fees of ten cents an acre (\$2 an acre for permits on which commercial production of significant mineral deposits was underway) [3, 13, 14, 16, 17, 18, 20, 26, 29, 30, 31, 32, 33, 34, 35, 39, 40].

In April, 1919 the Texon Oil and Land Company was organized under the laws of Delaware by Krupp, his brother Elias, New York lawyer Nathan Sachs, and three New York financiers. The capital source was one million shares of common stock with a par value of \$1.00. There were no takers, however, and all of the officers except Sachs and Krupp resigned. The company was then reorganized with Krupp as president and Pickrell as vice president and general manager. After struggling to sell stock for as low as 40 cents a share in New York and 12 cents a share in San Angelo, Pickrell conceived a better approach to financing. Two subsidiary corporations known as Group No. 1 and Group No. 2 were each assigned one 16-section permit. Instead of issuing stock, each of the subsidiaries issued 2,040 participating 5-acre certificates of interest at \$200 per certificate. In this manner, by the end of 1920 Pickrell managed to sell 685 Certificates of Interest in Group No. 1 for a total of \$137,000 [3, 13, 14; 16, 18, 20, 26, 29, 30, 31, 32, 35, 39, 40].

July 31, 1919 S.B. 51 was approved by the Legislature. This amendment to the mineral exploration laws was passed primarily to assist the Texon Oil and Land Company at the recommendation of State Land Commissioner J. T. Robinson. Two key provisions were the extension of exploration commencement time to 18 months (from 1 year), and allowing owners of four 4-section permits to combine their holdings into a single 16-section permit unit [14, 36].

The T. & P. Abrams No. 1, spudded Feb. 8, 1920 and located near Westbrook in Mitchell County, became the first commercially-producing well in the Permian Basin on July 16, 1920, but daily flow was 20-30 barrels, and the small volume and geographic isolation of the well did little to spark interest in further West Texas exploration among the investment community. At the time, West Texas was known as the “graveyard” of oil wildcatters [3, 13, 14; 16, 18, 26, 31, 32, 35, 39, 40].

Under terms of the Texon leases, and in accordance with S.B. 51, drilling had to begin before midnight Jan. 8, 1921, or the permits would be invalidated. Pickrell, still in New York trying to raise money, nearly forgot about the deadline and wired Land Commissioner J. T. Robison for an extension of time, then hurriedly departed for San Angelo, arriving on Jan. 6. Upon arrival, he found a negative response from the Land Office waiting for him, but his second query got better results. Pickrell asked if drilling a water well would satisfy the letter of the law, and was assured it would. He quickly located a rattletrap water drilling rig 40 miles north of town and had it hauled into town by a muleteam. Pickrell persuaded the superintendent of the Orient Railroad to delay departure of its westbound freight, and around noon on the 8th, the equipment was shipped, along with a team of horses, by flatcar to Reagan County, near the site that geologist Hugh Tucker had staked for drilling. Around 7 p.m. Pickrell and a small crew unloaded their equipment at a rail siding named Best. After traveling four miles to the intended site, they began drilling a water well 87 feet north of the tracks around 11 p.m. in order to validate the permits. As a precaution, Pickrell reportedly stopped a passing car

and had the two startled motorists drive him to San Angelo and sign an affidavit of the activity underway at the site [3, 13, 14; 16, 18, 20, 26, 29, 30, 31, 32, 35, 39, 40]..

Once the water well was completed in May 1921, Pickrell hired Carl G. Cromwell to drill the oil well, and the two men went to Ranger, where they purchased drilling equipment for a nominal fee since the boom there was on the downturn. The Santa Rita No. 1 was spudded Aug. 17, 1921 and erupted on May 28, 1923 at a depth of 3,055 feet. Initially the well flowed 100 barrels a day but when pumping operations were begun, this doubled. The name for this and subsequent wells was provided by a group of Catholic nuns from New York who, due to their concern over the riskiness of the venture, foresaw the need for divine intervention and required as a condition of their investment in Texon Oil Co. that Pickrell agree to sprinkle a handful of specially-blessed rose petals from the crown block (top of the derrick) before drilling started and proclaim, "I christen thee Santa Rita No. 1." This name was derived from Saint Rita, the patron saint of the impossible. Pickrell, who admitted later that he felt a bit foolish at the time, kept his end of the bargain [3, 13, 14; 16, 18, 20, 26, 29, 30, 31, 32, 35, 39, 40].

On June 10, 1923 the Orient Express made a special run to the Santa Rita well site, located approximately 175 feet north of the Kansas City, Mexico, and Orient Railroad line. Several thousand people gathered to witness the sight of oil gushing in West Texas. After waiting for several hours, the crowd was not disappointed. Among the visitors was Dr. J. A. Udden from The University of Texas. The following month, on July 28, the first oil marketed from the Santa Rita--totaling 1,672.54 barrels-- was shipped by train. The first royalty payment credited to the PUF totaled \$516.53 and was paid through the General Land Office on Aug. 24, 1923--the first trickle in what was soon to become a flood of oil revenues [3, 13, 14; 16, 18, 26, 31, 32, 35, 39, 40]..

When the Santa Rita No. 1 came in there were no storage tanks and earthen pits had to be dug. However, Pickrell realized that he needed to build permanent storage tanks and negotiate contracts for pipeline construction and transportation. Lacking the

funds to do so, he traveled to Pittsburgh and tried to interest wildcatters Michael L. Benedum and Joseph C. Trees of Benedum-Trees in financing a joint venture to test and develop the field. Benedum was at first skeptical, and Trees declined, but after their associate Levi Smith traveled to West Texas and returned with a favorable report, Benedum formed Plymouth Oil Co. in 1923, selling 300,000 shares at \$1.50 per share. Plymouth served as a holding company for the Big Lake Oil Company, which was capitalized with \$4 million, of which three-fourths was assigned to Plymouth and one-fourth to Texon and its Group No. 1 subsidiary. With this capital, Benedum drilled eight new wells to test the field. In return, he received the 16-section unit assigned to Group No. 1, including the Santa Rita No. 1 acreage. Santa Rita No. 2 was weak, not producing over 15 barrels a day at best. No. 3 was a dry hole, and Nos. 4, 6, 7, and 8 continued this pattern--two dry holes and two weak wells. All were south and west of No. 1. No. 5, however, was drilled north of the discovery well, and finally came in at 300 barrels a day--enough to convince Benedum to invest another \$800,000 in the project. No. 9 was the first easterly well, and came in at 5,000 barrels a day. No. 11, completed next and farther east, roared in at 8,000 barrels. Benedum realized that the Santa Rita No. 1 sat on the western edge of a vast field. Accordingly, he purchased a 16-section interest in the holdings of Texon Oil & Land Co. and organized Big Lake Oil Company, with Smith as president and Pickrell as vice president. The University of Texas began receiving a standard one-eighth oil royalty from these and subsequent wells drilled on University lands. Within a decade, the interest from this income would transform the University from a campus of pine shacks to a university of the first class [3, 5, 13, 14, 16, 18, 20, 26, 29, 30, 31, 32, 35, 39, 40, 42].

The Thirty-ninth Legislature, in the spring of 1925, enacted a law providing that oil royalties from PUF lands would be placed in the AUF. The State Treasurer and Attorney General declared the measure unconstitutional and refused to comply with it, prompting an appeal to the Texas Supreme Court. Governor Miriam A. "Ma" Ferguson

claimed that she signed the bill, despite reservations regarding its constitutionality, because “to the average man who sees the miserable-looking buildings at the University [of Texas] it would appear that the state is making an effort to store up hay instead of to store up knowledge.” On March 10, 1926 the Texas Supreme Court ruled in *State v. Hatcher* that proceeds from the sale of oil derived from the PUF lands should be considered proceeds from the sale of part of the corpus of the estate and could not be regarded as income. Oil royalties were thus part of the fund itself and as such were required to be invested rather than expended [3; 14; 32, p. 287].

On Oct. 29, 1926 the Mid-Kansas Transcontinental No. 1-A Yates--dubbed the “Queen of the Pecos” for its prolific production--blew in in Pecos County. The Yates field--one of the greatest ever discovered in the U.S.-- was partially financed by Levi Smith and Mike Benedum and came in on rancher Ira Yates’ birthday. One of the wells produced more than 200,000 barrels a day--at the time the most prolific well ever discovered. The PUF also benefitted since a portion of University Lands are in Pecos County [3, 13, 14, 16, 18, 26, 31, 32, 35, 39, 40].

In 1928 Texas Attorney General Claude Pollard issued an opinion stating that the UT Board of Regents could issue bonds against the annual income from the PUF (the AUF) [3, 14, 32]. This began a practice that continues today and permitted UT at long last to begin developing a campus worthy of a "university of the first class" [32]. Later that year the Texon Oil & Land Company’s University 1-B came in as the first well to be drilled in the Ordovician strata in the Permian Basin. Depth was 8,525 feet. Initial production of 66 barrels of oil and 1,040,000 cubic feet of gas per day increased to 2,912.5 barrels and 26,500,000 cubic feet of gas per day within one year.

During the spring of 1929, the Legislature created the Board for Lease of University Lands, transferring oversight from the General Land Office for oil and gas leasing of the PUF lands. The Board consisted of two members of the UT Board of Regents and the State Land Commissioner. Chapter 282 of the Acts of 1929 authorized

the appointment of a geologist-mineralogist for the Board of Lease and thus began the University Lands-Geology division. The Legislature also ordered a resurvey of University lands to settle a number of boundary disputes between the University, oil companies, and oil speculators. Fred Friendly was hired as University surveyor for a salary of \$6,000 per year [14].

In April, 1929, the Texas A&M Board of Directors formally notified the UT Board of Regents that A&M claimed a legal interest in the University Land Funds (the PUF and AUF). After a period of several months in which no agreement was forthcoming, the A&M Directors in August requested a legal opinion from the State Attorney General regarding A&M's claims to a share of the PUF income [3, 9, 14, 15, 32].

That same year Pickrell, Krupp and other Texon investors sold their equity in the Big Lake field for \$29 million, with Pickrell receiving \$4.5 million and Krupp much of the remainder. Pickrell moved to New York, where he invested in the stock market and lost his fortune when cotton prices plummeted during the Great Depression. Krupp became noted for local philanthropic efforts and civic involvement in addition to financial acumen [14, 20, 29, 30, 32].

On Oct. 24, 1929 the stock market fell dramatically and sparked a wave of panic as investors began a spree of selling that quickly escalated over the next few days and ushered in the Great Depression, which was finally ended with the beginning of World War II.

In 1930, due to the growth of the PUF from oil revenues, Section 11 of Article 7 of the constitution was amended to broaden the range of bonds in which the PUF could be invested to include "bonds of the United States, the State of Texas or counties of said State, or in school bonds of municipalities, or in bonds of any city of this state, or in University of Texas obligations and pledges issued by the Board of Regents or secured by such obligations or pledges for the construction of The University of Texas dormitories and buildings, or bonds issued under the Federal Farm Loan Act of 1916."

On Oct. 2, 1930 the Daisy Bradford No. 3 ushered in the giant East Texas oil field, which covered 211 square miles with the capability of producing 100 million barrels of oil a day. The Della Crim No. 1 came in in December near Kilgore, while the Farrel-Moncrief No. 1 Lathrop came in in early 1931 near Longview. The resulting boom led to a state of anarchy and martial law was declared, with 4,000 National Guard troops enforcing a State-ordered shutdown of the field for several months. The price of crude oil reached its lowest ebb at ten cents a barrel in August, and Sept. 2, 1931 the Texas Railroad Commission issued a statewide order limiting oil production to 400,000 barrels daily [3, 13, 18, 19, 23, 27, 32, 35, 37, 38].

In Jan., 1931 the UT Board of Regents and Texas A&M Board of Directors approved a joint proposal regarding the division of future PUF interest and dividend income and submitted it to the Legislature. April 8, 1931 the Legislature approved a bill whereby A&M would receive \$200,000 per annum for three years and beginning Sept. 1, 1934 would receive a one-third net share of interest and dividend income generated by the PUF (i.e., the AUF), while UT would receive a two-thirds net share of PUF income, plus the income from grazing lease fees and from State bonds derived from the sale of the original Fifty Leagues. In addition, the law was changed to allow PUF income to be used for building construction and equipment purchases. This ended A&M's access to General Revenue funds for building acquisition and construction. The Legislature also authorized the issuance of \$6,000,000 in PUF bonds by the two universities over a three-year period (1932-35) for improvements and construction, with UT issuing \$4 million and A&M \$2 million [4, 9, 14, 15, 32].

In 1933 nine buildings were dedicated on the campus of the University of Texas as part of its 50th anniversary celebration. Consulting architect Paul Cret (1930-45) created a campus master plan that same year and continued the Spanish Renaissance design used by his predecessors. Included were the Geology Building, Home Economics Building, Taylor Hall, Hogg Auditorium, Texas Union, Physics Building, Chemistry Building,

Architecture Building, and Waggener Hall (Business Building). The Littlefield Fountain was also completed that year. Eighteen buildings were constructed under Cret's supervision. During this same period Texas A&M was also in a rapid building phase [1, 2, 6, 7, 9, 10, 22].

June 16, 1933 the National Industrial Recovery Act was approved by Congress. This Act extended the right of state agencies to limit oil production and set quotas and prices. However, the U.S. Supreme Court invalidated this Act in the Panama decision Jan. 7, 1935. In response, Congress passed the Connally Hot Oil Act in Feb., 1935, making it illegal to transport oil produced in violation of state law across state lines. That same year the Interstate Oil Compact Commission was organized by the leading oil-producing states and chartered by Congress Aug. 27 with the mission of preventing waste [13, 23, 27].

In 1937 the Legislature passed SB 343, which made open auctions mandatory for the bidding and awarding of oil and gas leases on University lands, and required companies to submit all information gathered about University Lands to the General Land Office, where it would be publicly available. That same year the University Lands office was moved to Midland from San Angelo [14].

The Natural Gas Act of 1938 granted the Federal Power Commission (created in 1935) authority to regulate the interstate transportation and sale of natural gas for resale. The FPC was also authorized to set the price of interstate gas [27].

The original wooden derrick and pumping rig at the Santa Rita No. 1 were dismantled in Jan., 1940 and shipped to The University of Texas courtesy of Big Lake Oil Co. following a request from UT history professor Dr. Walter Prescott Webb. A steel derrick and more modern equipment replaced the originals [1, 3, 14, 16, 31, 32, 39, 40].

On Dec. 7, 1941 the Japanese bombing of Pearl Harbor launched the United States into World War II. In June, 1944 Congress passed the Serviceman's Readjustment Act, popularly known as the "G.I. Bill of Rights." The war ended on Sept. 2, 1945 with the surrender of Japan and U.S. college enrollments soared as the military was reduced from

approximately 12 million men and women to a force of 1.5 million. Because of the success of the Manhattan Project, Congress in 1946 created the Office of Naval Research, Atomic Energy Commission, and National Institute of Mental Health. These and other agencies began pouring vast sums into applied research at the nation's leading universities.

In 1947 Section 18 was added by constitutional amendment due to the accelerated enrollments at both UT and A&M and the resulting need for new buildings on the campuses. This amendment authorized a bond issue backed by the AUF of \$5 million for A&M and \$10 million for The University of Texas, \$2 million of which was allotted to the UT Medical Branch at Galveston. The amendment also permitted the PUF to invest in the bonds or notes issued under Section 18. This amendment further established Section 17 of Article 7, providing for a special fund to finance construction at state teachers' colleges and technical institutions which had previously received funds for building construction through biennial legislative appropriations [3].

The community college movement was given a boost in 1948 when the President's Commission on Higher Education, chaired by Dr. George Zook, issued a 6-volume report and concluded that 49% of the U.S. population had the mental ability to complete 14 years of education and that 32% had the mental ability to complete an advanced degree. The number of community colleges grew by an average of one every two weeks during the next two decades.

On June 25, 1950 North Korean forces launched an attack inside the Demilitarized Zone (38th Parallel) against South Korea. Two days later, on June 27, President Truman ordered American forces to Korea in support of a United Nations resolution calling for a multinational force to resist the aggression. The Korean War ended with the signing of an armistice July 27, 1953.

In 1956, the bonding authority of the governing boards of the Texas A&M and University of Texas Systems was expanded through a constitutional amendment allowing the boards to issue negotiable bonds or notes known as PUF bonds not to exceed 20% of

the value of the PUF, exclusive of real estate. Investment in corporate stocks and bonds was also made possible under this amendment [3].

The launching of Sputnik I--a Soviet satellite--on Oct. 4, 1957 and Sputnik II a month later galvanized public support in the U.S. for a program of space research, and in 1958 both the National Aeronautics and Space Administration Act and the National Defense Education Act were passed by Congress. The scope and pace of federal research programs were greatly expanded as a result, and competition among universities for research labs and star faculty members accelerated. That same year the original Santa Rita No. 1 rig was erected on the campus of UT-Austin and formally dedicated prior to the Thanksgiving Day football game between UT and A&M on Nov. 27, 1958 [3, 14, 16, 32, 39, 40].

In Sept., 1960 the Organization of Petroleum Exporting Countries was founded with eight members and the organization was formally constituted in Jan., 1961. At first the headquarters was in Switzerland but soon moved to Vienna, Austria. Other nations later joined, bringing the total to 13 members [27].

Aug. 23, 1963 the Legislature authorized a change in name from the A&M College of Texas to Texas A&M University [9]. This paved the way for the admission of women and the conversion to a coeducational institution several years later. The Higher Education Facilities Act was also passed by Congress in 1963 and non-military student financial aid assistance was implemented that year in the form of Perkins Loans.

In 1965 the Legislature authorized the creation of the Texas Higher Education Coordinating Board. That same year the Higher Education Act was passed by Congress, and greatly expanded federal student financial aid programs.

Nov. 5, 1968 Section 11a of Article 7 was amended to include additional types of investments for the PUF and guidelines for their selection and on July 20, 1969 UT alumnus Neil Armstrong became the first person to set foot on the moon [3].

In Oct., 1973, OPEC, in retaliation for U.S. and British support for Israel during the Yom Kippur War, began an oil embargo against certain Western nations, including the U.S. The price of crude oil jumped from approximately \$2 a barrel in September to \$12 a barrel in December of that year. By the early 1980s, shortages caused by the Iran-Iraq War had caused the price of oil to exceed \$30 a barrel. OPEC influence began to wane after 1986 as Western nations undertook new initiatives and enacted alternative measures designed to lessen their dependence on foreign oil. In response, OPEC members lowered their prices and decreased production levels [3, 13, 19].

In 1978 the Texas Attorney General, in a formal opinion, advised that interest accruing from the PUF under Sections 17 and 18 of Article 7 must be used to retire outstanding bond obligations and to finance permanent improvements [3].

In 1984, a constitutional amendment to Section 18 enlarged the overall bonding capacity of the UT and A&M Systems to 30% of the PUF's cost value and made all UT and A&M component institutions eligible to benefit from PUF bond proceeds. The use of bond funds was expanded to include major repair or rehabilitation of buildings or other permanent improvements and acquisition of capital equipment and library materials. The amendment also formally defined the AUF as the income from the PUF, and specified that the first call on the AUF is for payment of principal and interest on PUF bonds. The AUF was also made available for the promotion of academic excellence at Texas A&M University. Prairie View A&M University, also chartered in the 1876 constitution, was granted an "equitable portion" of the AUF income received by the Texas A&M System plus \$10 million a year for 10 years from the AUF funds received by The University of Texas System. This amendment became effective in 1986.

Also in 1984, voters ratified a proposal to create a constitutionally-dedicated Higher Education Assistance Fund (HEAF) similar to the PUF for 26 senior institutions of higher education in Texas which do not benefit from the PUF (Article VII, Section 17). Prior to this time, these institutions benefited from a state property tax dedicated for their

use. Begun with a \$100 million annual Legislative appropriation in 1985, the HEAF appropriation was increased by the Legislature in 1993 to \$175 million annually plus an additional \$50 million per year allocated to a sinking fund for the future creation of a permanent Higher Education Fund endowment.

On Black Monday (Oct. 17, 1987) the Dow Jones Industrial Average fell more than 500 points, sparking fears of a recession.

In 1988 Section 11 b was added to the constitution. This amendment adopted the the “prudent person” investment standard for the UT Board of Regents and eliminated all other investment restrictions for the PUF. The amendment also authorized investment in the Texas Growth Fund.

The 1990 U.S. Census showed Texas with a population of 16,987,000. Compared to the 1890 Census, when Texas had a population of 2,236,000, the State grew by 14,751,000 people over this century. This nearly seven-fold increase was also reflected in increased enrollment figures at UT and A&M System components. Nationally, college attendance rose from 14% of the college-age cohort to more than 50% following World War II.

Many analysts cite Oct., 1990 as the beginning of the current bull market in which the Dow Jones Industrial Average has surged from 2,500 to more than 8,000.

Section 6608 of the Texas Education Code was amended in 1995 by the Legislature to permit the UT Board of Regents to delegate the management of the PUF to an independent, nonprofit investment management company. Accordingly, the University of Texas Investment Management Company (UTIMCO) was incorporated Nov. 15, 1995 under the Texas NonProfit Corporation Act for purposes which are exclusively educational and charitable in nature, as defined by the IRS Code, Section 501(c)(3).

After more than a year of transitional preparation, on March 1, 1996, the UT System Office of Asset Management was dissolved and the UT System Board of Regents

contracted with UTIMCO to manage and invest all funds under its fiduciary control in order to enhance the process by which PUF investments are governed and managed.

Error! No AutoText entry specified.oday the PUF serves more than 190,000 students at 17 institutions in The University of Texas and Texas A&M University Systems. In addition, the PUF lands total 2,109,190.87 acres in 24 counties (19 are in West Texas) and include more than 8,100 oil wells, 500 gas wells, and 2,000 easements. As of 8/31/97, the PUF market value was approximately \$6.7 billion. However, PUF royalties from oil and gas operations have declined steadily in recent years--from \$261.9 million in 1981 to \$57 million in 1995--and the PUF has changed from a fund based primarily on surface and mineral income to a securities-based investment fund. Moreover, in one critical measure of endowment effectiveness--endowment per student--the PUF lags far behind the endowments at many comparable institutions [28].

The PUF, like many educational endowments, is constrained by two conflicting needs: the need for a dependable stream of income with which to fund endowed chairs, educational excellence initiatives, and other fixed costs, and the need for growth that outpaces inflation and outperforms the S&P 500. In recent years the PUF portfolio mix has shifted to include a larger percentage of equity investments in stocks and alternative (private) markets as opposed to bonds and other fixed income assets. The challenge, as always, however, is to maximize growth while preserving payout. With a 9-member Board of Directors and a staff of 35 investment professionals, UTIMCO is prepared to meet this challenge. But regardless of the future, the PUF has already earned a place of honor and distinction in the annals of higher education history.

[Author's Endnote: UTIMCO currently manages assets totaling approximately \$14.0 billion.]

BIBLIOGRAPHY

1. Battle, William J. A concise history of the University of Texas, 1883-1950. *Southwestern Historical Quarterly*, Vol. 54, No. 4, pp. 391-415, April, 1951.
2. Battle, William J., & Benedict, H. Y. The construction program of the University of Texas, 1925-35. *The American School & University*, pp. 55-61, 1935.
3. Beckham, John L. *The Permanent University Fund: Land, oil, and politics*. Austin: Unpublished manuscript on file at the Center for American History, The University of Texas at Austin, 1981.
4. Benedict, H. Y. *A source book relating to the history of the University of Texas: Legislative, legal, biographical, and statistical*. Austin: University of Texas Bulletin No. 1757, 1917.
5. Benedum, Michael L., Biographical Sketch. Midland: Permian Basin Petroleum Museum.
6. Berry, Margaret Catherine. *The University of Texas: A pictorial account of its first century*. Austin: The University of Texas Press, 1980.
7. Berry, Margaret Catherine. *Brick by golden brick: A history of campus buildings at the University of Texas at Austin, 1883-1993*. Austin: The University of Texas Press, 1993.
8. Cofer, David Brooks. *Early history of Texas A. and M. College through letters and papers*. College Station: Texas A&M University Press, 1952.
9. Dethloff, Henry C. *A centennial history of Texas A&M University, 1876-1976, Vols. I-II*. College Station: Texas A&M University Press, 1975.
10. Dethloff, Henry C. *Texas A&M University: A pictorial history, 1876-1996*. College Station: Texas A&M University Press, 1996.
11. Ferguson, W. K. L. *Geology and politics in frontier Texas, 1845-1909*. Austin: The University of Texas Press.
12. Ferguson, W. K. L. *History of the Bureau of Economic Geology*. Austin: The University of Texas Press, 1977.
13. Goodwyn, Lawrence. *Texas oil, American dreams*. Austin: Texas State Historical Association, 1996.
14. Haigh, Berte R. *Land, oil and education*. El Paso: Texas Western Press, 1986.
15. Hildebrand, Ira P., Papers. Austin: Rare Books Collection, Jamail Legal Research Center, The University of Texas School of Law.
16. Hill, George A., Jr. The spirit of Santa Rita. *Southwestern Historical Quarterly*, Vol. 48, pp. 78-84, July, 1944.
17. King, Winter. *Acknowledging a debt of gratitude*. Midland: Permian Basin Petroleum Museum.
18. Knowles, Ruth Sheldon. *The greatest gamblers: The epic of American oil exploration*. New York: McGraw-Hill, 1959.
19. Knowles, Ruth Sheldon. *The first pictorial history of the American oil and gas industry*. Athens: Ohio University Press, 1983.
20. Krupp, Haymon, Biographical Sketch. Midland: Permian Basin Petroleum Museum.
21. Lane, J. J. *History of the University of Texas*. Austin: Henry Hutchings, State Printer, 1891.

22. Langford, Ernest. *Here we'll build a college*. College Station: Unpublished manuscript on file at Texas A&M University Archives, 1953.
23. Malavis, Nicholas G. *Bless the pure and humble: Texas lawyers and oil regulation, 1919-1936*. College Station: Texas A&M University Press, 1996.
24. May, Janice C. *The Texas state constitution: A reference guide*. Westport, CT: Greenwood Press, 1996.
25. Miller, Thomas Lloyd. *The public lands of Texas, 1519-1970*. Norman: University of Oklahoma Press, 1972.
26. Myres, Samuel Dale. *The Permian Basin: Petroleum empire of the southwest*. El Paso: Permian Press, 1973.
27. Nash, Gerald D. *United States oil policy, 1890-1964*. Pittsburgh: University of Pittsburgh Press, 1968.
28. *Permanent University Fund Lands*. Midland: University Lands Office, West Texas Operations, 1997.
29. Pickrell, Frank T., Biographical Sketch. Midland: Permian Basin Petroleum Museum.
30. Pickrell, Frank T., Clipping File. *San Angelo Standard-Times*.
31. Pope, Clarence C. *An oil scout in the Permian Basin, 1924-1960*. El Paso: Permian Press., 1972.
32. Prindle, David F. Oil and the Permanent University Fund: The early years. *Southwestern Historical Quarterly*, Vol. LXXXVI, No. 2, pp. 277-98, October, 1992.
33. Ricker, Rupert Paul, Biographical Sketch. Midland: Permian Basin Petroleum Museum.
34. Ricker, Rupert Paul, Clipping File. *San Angelo Standard-Times*.
35. Rister, Carl C. *Oil!: Titan of the Southwest*. Norman: The University of Oklahoma Press, 1949.
36. Robison, J. T., Biographical Sketch. Midland: Permian Basin Petroleum Museum.
37. Rundell, Walter, Jr. *Early Texas oil: A photographic history, 1866-1935*. College Station: Texas A&M University Press, 1977.
38. Rundell, Walter, Jr. *Oil in West Texas and New Mexico: A pictorial history of the Permian Basin*. College Station: Texas A&M University Press, 1982.
39. *Santa Rita No. 1: Where it all began*. Midland: Permian Basin Petroleum Association, 1973.
40. Schwettman, Martin W. *Santa Rita*. Austin: Texas State Historical Association, 1943.
41. Silverthorne, Elizabeth. *Ashbel Smith of Texas: Pioneer, patriot, statesman, 1805-1886*. College Station: Texas A&M University Press, 1982.
42. Smith, Levi, Biographical Sketch. Midland: Permian Basin Petroleum Museum.
43. Udden, Johan August; Baker, C. L., & Bose, Emil. *Geological map of Texas*. Austin: Bureau of Economic Geology and Technology, University of Texas, 1916.
44. Udden, Johan August; Baker, C. L., & Bose, Emil. *Review of the geology of Texas*. Austin: Bureau of Economic Geology and Technology, University of Texas, 1916.
45. Udden, Johan August; Baker, C. L., & Bose, Emil. *Geological map of Texas, Rev. Ed.* Austin: Bureau of Economic Geology and Technology, University of Texas, 1919.

46. Udden, Johan August; Baker, C. L., & Bose, Emil. *Review of the geology of Texas, Rev. Ed.* Austin: Bureau of Economic Geology and Technology, University of Texas, 1919.
47. Webb, Walter P. & Bailey Carroll. *The handbook of Texas, Vols. 1-2.* Austin: Texas State Historical Association, 1952.
48. Young, Keith. History of geology at the University of Texas. *Bureau of Economic Geology Geological Circular 67-3*, 1967.