A History of the Cane Belt Branch of the Gulf, Colorado & Santa Fe Railway Company

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Railroading is a capital-and-horsepower-intensive industry, which may seem anachronistic in the age of the "information highway." The industry survives because there remains a need to transport heavy or bulky raw commodities with low value-to-weight ratios, a task often most efficiently accomplished by rail. The twentieth century opened in the Southwest with a network of many small independent short-line railroads that connected to the trunklines of multi-state carriers; the Railroad Commission of Texas counted seventy-two common carriers active in the state in 1900. By mid-century, ownership of these lines had been greatly consolidated by the larger multi-state carriers in a pattern of convergence that continued until 1980, when the United States Congress passed the Staggers Rail Deregulation Act. By that time there were only thirty-one railroad companies operating in Texas, including seven large ones and twenty-four smaller intrastate lines. But as the twentieth century draws to a close, the pendulum is swinging back toward a division of branch-line and trunk-line ownership as the larger carriers divest themselves of many of their smaller feeder line operations. However, many of the Texas branch lines have not survived; total statewide trackage has declined from about 15,500 miles in 1950 to about 12,700 miles in 1995.

The remaining Texas branch lines face two economic problems. The first relates to the continued use of their larger bridges. These spans were built when labor was relatively cheap, but under current economic conditions repairs are quite expensive. Bridge reconstruction cannot

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easily be recouped by the branch lines' modest business. The second problem for many of the branch lines is their dependence on a select few bulk shippers, primarily quarries, chemical plants, grain elevators, lumber mills, and the like. It is not uncommon for a Texas branch line to have but four or five shippers that originate traffic, and in many cases most of the tonnage is generated by only one or two of these. When the natural resources are depleted, plants relocated, or farming practices changed, the branch line operator is left with a stranded investment. Some Texas branches are still operated by the trunk lines, which can respond to the loss by abandoning the lines. But independent companies, the so-called "short line operators," find themselves at risk of bankruptcy when such circumstances arise.

The Cane Belt Railroad Company line from Sealy to Matagorda is a typical example of a branch that has been under both short line and trunk operation. Built as an independent short line to serve the sugar and rice industries, it was attached to a trunk line in 1904, and its original traffic base was eclipsed within twenty years when sulfur was discovered nearby. The sulfur deposit is now depleted, and the last mine along the line closed in the early 1990s. Most of the track has been abandoned and removed, save for a small portion that serves the needs of two chemical plants in Matagorda County. This traffic is of sufficient volume to have sustained the interest of the trunk line carrier, now the Burlington Northern Santa Fe Railway Company, which continues to operate the remaining portion of the branch.

As this century opened, many branch lines like the Cane Belt were promoted and constructed as revenue-generating connections with trunk lines. But most of the speculative projections for revenue-generating traffic proved to be ill-founded; the best-laid infrastructure plans of 1900 were doomed to inadequacy by revolutionary changes in the transportation industry. The industrialists of that time had a nineteenth-century perspective on the relatively slow pace of change in methods of commercial transportation and could not have foreseen the rise of the automobile and the construction of paved roads to connect every city and village in the state. As a result there are thousands of miles of abandoned railroad right-of-way across Texas, land that was once needed to accommodate the transportation of both passengers and freight but that is now slowly being reclaimed by the elements. Depots and the remains of bridges occasionally lie derelict and crumbling, mute testimony to the failed dreams of their builders. A viewer of the physical remains of these commercial endeavors can glean but little of the degree of financial and emotional investment that were necessary to construct and operate them. The story of the Cane Belt line is perhaps more dramatic than

most because of the violent deaths that surrounded its early operations, but otherwise it is representative of the struggles for survival many short lines in Texas faced. The history of the growth and later downsizing of the Cane Belt line spans the entire twentieth century.

Texas planters recognized the feasibility of sugar cane as a cash crop as early as the 1830s, when experiments indicated that the area between the San Jacinto and Guadalupe rivers, about a hundred miles inland, was promising for the production of sugar because of its favorable climate, rich soil, and abundant supplies of water.[1] By the mid-1840s, sugar cane was being planted on small tracts across the area. It was not economically efficient to transport large quantities of fresh sugar cane, a heavy and bulky commodity, a great distance, so by the end of the nineteenth century a large number of small sugar refining and manufacturing mills sprang into operation to serve growers in their immediate vicinity. These mills crushed the raw cane and refined the juice by a process of straining, evaporation, and clarification that produced granulated sugar. But economies of scale, shortages of labor, and improved transportation facilities soon favored the consolidation of sugar milling operations.

In March 1898, a group of prominent farmers and industrialists in the lower Colorado County area led by W. T. Eldridge and Capt. William Dunovant obtained a charter from the State of Texas for the construction of the Cane Belt Railroad. The railroad was authorized to run from Eagle Lake, which was then being served by the Galveston, Harrisburg & San Antonio Railway and the San Antonio and Aransas Pass Railway lines, to Bonus, a farming community ten miles to the south.[2] On June 7, 1899, this charter was amended to permit an extension of the line north from Eagle Lake to connect with the Missouri, Kansas & Texas Railway and the Gulf, Colorado & Santa Fe Railway at Sealy, and southward from Bonus to "tidewater on the Gulf of Mexico."[3] Matagorda was selected as the Gulf terminus of the line.

Captain Dunovant, one of the most prominent planters in the Eagle Lake community, was named president of the Cane Belt road, with Eldridge as vice-president and general manager. The company took its name from the farming district through which its route was projected, at that time the primary cane-producing and sugar-refining area in Texas.

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[1] Abigail Curlee, "A Study of Texas Slave Plantations, 1822 to 1865" (Ph.D. diss., University of Texas, Austin, 1932), 176, cited in "A Short History of the Sugar Industry in Texas," by William R. Johnson, *Texas Gulf Coast Historical Publications*, Volume 5 (Apr., 1961), 12 .

[2] S. G. Reed, *A History of the Texas Railroad and of Transportation Conditions under Spain and Mexico and the Republic and the State* (Houston: St. Clair Publishing, 1941), 297 .

[3] Valuation Report to the Railroad Commission of Texas, December 6, 1923, mimeographed report (Library, Railroad Commission of Texas, Austin).

Map

4 3/8 x 5 1/8”

97%

The Santa Fe Railway Company submitted this map to the Interstate Commerce Commission to illustrate the extent of the branch line when it sought to abandon the “Bonus Loop” in 1939, which the ICC permitted in 1940 under Finance Docket No. 12826. *Courtesy Texas State Library and Archives Commission.*

Rice, corn, and cotton also were planted heavily in the area, although the cotton acreage had diminished by the early 1900s thanks to the boll weevil and the cotton worm. Dunovant had some 27,000 acres in cultivation south of the Eagle Lake community, and Eldridge operated a 9,000 acre farm known as the "Bonus Plantation" further south.[4] The majority of this land was used for rice production, with the lake and the Colorado River serving as flood irrigation sources. Captain Dunovant was the first planter in the Eagle Lake area to irrigate rice from these sources, and by the turn of the century operated a significant complex of irrigation canals, pumps and flumes.[5] The Cane Belt rail line, however, was built with the sugar interests in mind, since raw sugar cane was much bulkier and thus harder to transport than rice.

At the close of the nineteenth century Dunovant began to promote the sugar industry as the economic salvation for the area and a personal road to riches. In March 1898 he delivered a glowing address to the businessmen of Wharton, where he distributed a pamphlet he had authored, *Sugar Cane and Cotton*, which claimed that:

> Jason, with his argonauts, went in search of the "Golden Fleece," enduring privation and suffering, fighting fierce battles with men and the elements. At last victorious he seized the "Golden Fleece." But you—you have only to plant the sugar cane in the bosom of old Caney and reap a golden reward that will not only repay you, but thousands will feel the beneficence of the act . . . This great sugar industry will transform your land. Where there is now chaos there will be order. It will be to you, and to everyone who comes within the sphere of its influence, a new gulf stream, scattering its blessings and prosperity along its course.[6]

By 1901 Dunovant had about two thousand acres of sugar cane in cultivation, and in 1902 Eldridge reported the harvest of one thousand acres.[7] The cultivation, harvest, and transportation of sugar cane was extremely labor-intensive. At that time, a good crop averaged about twenty tons to the acre, all of which had to be cut and loaded into wagons by hand.[8] Local labor could not meet the demand in the years after the Civil War, and planters resorted to leasing convicts from the state

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[4] Weimar *Mercury*, May 12, 1900; Apr. 29, 1904.

[5] T. U. Taylor, Irrigation Systems of Texas, U.S.G.S. Water Supply and Irrigation Paper No. 71 (Washington, D.C.: Government Printing Office, 1902), 107. For a history of the canal system, see the discussion in T. Lindsay Baker, *Building the Lone Star: An Illustrated Guide to Historic Sites*, (College Station: Texas A&M University Press, 1986), 69–71.

[6] William Dunovant, *Sugar Cane and Cotton* (Columbus, Tex.: Citizen Print, 1898). Cited in Johnson, "A Short History of the Sugar Industry in Texas," 7. Address reported in Mar. 31, 1898, edition of the Colorado *Citizen* (Columbus, Tex.).

[7] Weimar *Mercury*, Dec. 28, 1901 and Feb. 7, 1903.

[8] Ibid., Oct. 4, 1902.

penitentiary system beginning in the 1870s.[9] In 1898, the year in which the Cane Belt was chartered, the Texas Penitentiary Board reported that 1,412 convicts were leased for use on farms, more than half of whom were used in the sugar-producing areas.[10] Working conditions were brutal and there were occasional mutinies by entire camps of convicts; lashes were administered and rations withheld to restore order.[11]

Captain Dunovant constructed what was then the state's largest sugar mill at the Cane Belt station of Lakeside, one and a half miles south of Eagle Lake. The plant, built in 1901 at a cost of $650,000, was designed to consume one thousand tons of cane and produce one hundred tons of yellow sugar a day. It was estimated the plant would require about one hundred days of around-the-clock operation to grind the annual cane production from some 35,000 acres in in the surrounding area.[12] All of this cane was, of course, conveniently delivered to the mill for processing and subsequently shipped from the refinery on the Cane Belt Line.

By June 30, 1899 the Cane Belt reached Wharton, and by the following summer Bay City became the intended terminus. Col. A. H. "Shanghai" Pierce offerred a $20,000 bonus to the builders of the line on the condition that the road cross the town site line by July 1, 1901. Spurred by that bonus, the builders reached Bay City just six and a half hours before the deadline expired.[13] The tracks finally reached Matagorda and the full line was placed in service by June 30, 1904, but the road was soon changed from an independent short line to an extension of a trunk line. In its annual report for 1904, the Atchison, Topeka and Santa Fe Railway Co. reported to its stockholders the purchase of all stock in the Cane Belt line for the sum of $850,000.[14]

The main Santa Fe line across Texas to Galveston went through Sealy, the northern terminus of the Cane Belt line, so the purchase was a logical match for both companies. Although the transaction ended the life of the Cane Belt as an independent company, Santa Fe's infusion of capital brought stability and prosperity to the short line, which Santa Fe's Texas subsidiary, the Gulf, Colorado and Santa Fe Railway Company, aggressively promoted.

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[9] Johnson, "A Short History of the Sugar Industry in Texas," 8.

[10] Biennial Report of the Penitentiary Board and Superintendent of the Texas State Penitentiary (Austin, 1898), 12, Johnson, "A Short History of the Sugar Industry in Texas," 46.

[11] Weimar *Mercury*, Jan. 3, 1903.

[12] Ibid., Mar. 23, 1901, Oct. 4, 1902; Houston *Post*, Oct. 18, 1901.

[13] Weimar *Mercury*, July 6, 1901. Unfortunately, Pierce did not live to see the arrival of the road—his estate paid the bonus.

[14] *9th Annual Report to the Railroad Commission of Texas, For the Year Ending June 30, 1904* (Chicago: Atchison, Topeka & Santa Fe Railway Company, 1904), 17.

Sugar

4 3/8 x 3 7/16”

76%

Convicts chopped sugar cane on W. T. Eldridge’s Bonus plantation under the supervision of a mounted overseer. First the leaves were stripped, then the unripe joints cut off, and finally the stalk severed from its roots, which would regenerate a new stalk for three or four years. *Photograph courtesy James G. Hopkins, Columbus, Texas.*

As the line stretched to the Gulf Coast, the tonnage of rice shipped increased dramatically and soon outweighed sugar cane loadings. The G.C.&S.F. Colonization Department praised the cultivation of both sugar and rice in the area the Cane Belt served as attractive alternatives for farmers in northern and eastern states. In its January 1911 pamphlet, “Gulf Coastings,” the company wrote about the wonderful opportunities awaiting the farmer who could come to the Coast and plant sugar cane, and spoke of the climate of the country as if it were Eden:

> Owing to the wonderful increase in the consumption of sugar, the duty in favor of the home-made product, the less freight rate it has to pay to reach our market, the fact that cane has no enemies, has only to be planted every three or four years, also the limited territory in which it can be grown and the increase of large sugar mills, making a better chance for the small grower to more largely participate in the profits, the future outlook of the sugar-cane grower is exceptionally bright.
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> The Texas Gulf Coast Country practically has no winter. Outdoor work goes on throughout the year. Overcoats and heavy clothing are not required, even in the brief winter season. A heating stove is considered almost unnecessary. Fuel is

exceedingly cheap and very little of it is required. Frosts rarely occur. When they do, they are seldom heavy enough to nip the most sensitive plants. The autumns are long and sunny. The summer heat is not oppressive, owing to the Gulf breezes, which are cool, bracing and constant. The nights are invariably cool.[15]

Very soon, however, the sugar cane empires of Dunovant, Eldridge and other local planters crumbled. Competition from sugar imported in the form of molasses from Cuba, Hawaii, the Philippines, and Puerto Rico, as well as sugar domestically refined from the more economically produced sugar beet, increased rapidly in the early 1900s.[16] Moreover, in 1910, responding to assertions of inhumane treatment, the Texas Legislature outlawed convict leasing, removing what had been a reliable source of temporary labor for the growers.[17] Notwithstanding the assurances of the G.C.&S.F. Colonization Department, a devastating freeze in December 1911 decimated sugar cane production, resulting in the loss of about 50 percent of that year's crop.[18] There would be subsequent freezes as well. By the mid-1920s, the combined effect of competition, bad weather, and expensive labor had reduced cane production substantially and virtually halted the manufacture of sugar in the Cane Belt territory.[19] The Lakeside Sugar refinery ceased operation after processing a small amount of the 1911 crop. It was dismantled in 1918 and shipped to Jamaica for reassembly by the purchaser.[20]

Captain Dunovant did not live to witness the decline of his beloved sugar industry, as a disagreement with Eldridge over the operation and management of the Cane Belt Road blossomed into a fatal meeting between the two on August 11, 1902. According to the Houston *Post*:

> At 5:30 yesterday (Monday) evening Captain William Dunovant, one of the most prominent planters in Texas, was shot and fatally wounded by W.T. Eldridge, Vice-President of the Cane Belt Railroad. . . . The tragedy occurred on board Train Number 2 of the San Antonio and Aransas Pass Railroad at Simonton, a small station east of Eagle Lake . . .

After inspecting a sugar cane crop, Dunovant boarded the train at Simonton Switch. Eldridge, already aboard, "opened fire with a

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[15] Collection of the author.

[16] J. Carlyle Sitterson, *Sugar Country* (Lexington: University of Kentucky Press, 1953), 341, cited in Johnson, "A Short History of the Sugar Industry in Texas," 50.

[17] Texas State Legislature, *Journal of the Senate*, Third and Fourth called sessions of the 31st Legislature, July 19, 1910 and Aug. 18, 1910 (Austin: Von Boeckman-Jones Company, 1910), 228. Eagle Lake *Headlight*, Oct. 23, 1909, Jan. 13, 1912. All convicts were transferred out of private camps by the end of 1911.

[18] Eagle Lake *Headlight*, Dec. 23, 1911.

[19] *Texas Almanac* for 1926 (Dallas: A. H. Belo, 1926), 148; Johnson, "A Short History of the Sugar Industry in Texas," 60.

[20] Eagle Lake *Headlight*, Dec. 23, 1911, Mar. 9, 1918.

revolver" as soon as he saw Dunovant. Although one bullet later proved fatal, Eldridge was not willing to chance Dunovant's escape.

> After exhausting the chambers of his weapon, Mr. Eldridge leaped forwarded and aimed a terrific blow at the captain's head. A bystander parried the blow, but it fell with sufficient force to lacerate Captain Dunovant's scalp. The latter then sank into the arms of the bystanders. . . .
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> Both of the principals in the tragedy are well known throughout Texas and the causes which led up to the tragedy are familiar to the entire community. Differences which arose in the management of the Cane Belt Railroad, it is said, engendered a feud between Mr. Eldridge and Captain Dunovant.[21]

The Eagle Lake community was shocked but not surprised by the murder. The local press commented that Dunovant was "peculiar in some respects, being very outspoken in his opinions of men and measures."[22] At a *habeus corpus* hearing held to consider bond for Eldridge after he was charged with Dunovant's murder, the judge fixed bail at $25,000, stating that "[t]here is no doubt in my mind but the deceased made threats."[23] Testimony from the trial indicated that Dunovant had publicly threatened to kill Eldridge on several occasions, asserting him to be a liar, a cheat, and a "dog-faced s.o.b."[24] Dunovant believed that Eldridge had defrauded him of his share of their joint interests in the Cane Belt line and in their farming partnership. Ensuing events demonstrated that there also were deep hard feelings between supporters of Dunovant and Eldridge. Within weeks the first attempt at revenge occurred. On October 4, 1902 at 10:30 p.m., a shotgun was fired at Eldridge as he climbed the steps to his front porch,[25] but the blast missed its intended target. W. T. Cobb was promptly arrested and charged with assault with intent to murder. Cobb was indicted on March 10, 1903, and his case went to trial that September, before Eldridge's trial for the Dunovant murder. The press reported that "interest in the case has been unabated, and the testimony . . . has been to a certain extent sensational."[26] On September 26, 1903 a jury found Cobb not guilty.[27]

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[21] Weimar *Mercury*, Aug. 16, 1902 (Reprint of a Houston *Post* dispatch). Captain Dunovant, a veteran of the Confederate Army, was severely wounded in the right arm at the second battle of Manassas and lost his left arm in the battle of the crater on the Petersburg lines on July 30, 1864.

[22] Weimar *Mercury*, Aug. 16, 1902.

[23] Ibid., Aug. 23, 1902.

[24] A thorough summary of the trial evidence is presented in a company history of the Imperial Sugar Company published by Director R. M. Armstrong. *Sugar Land, Texas and the Imperial Sugar Company* (Sugar Land, Tex.: R. M. Armstrong, 1991), 53.

[25] Ibid., Oct. 11 , 1902.

[26] Ibid., Sept. 23, 1902.

[27] Ibid., Oct. 3, 1903.

Counsel for Eldridge succeeded in delaying his client's trial throughout 1903 and for part of 1904. The effort bought time, but not peace. On June 6, 1904 a second and more serious attempt was made on Eldridge's life by W. E. Calhoun, one of Dunovant's brothers-in-law. By this time the Houston *Post*'s 1902 assessment of the matter as a "feud of long-standing" appeared prophetic. The local press reported that Eldridge was "shot from ambush" out of a second-story window with a 30.30 Winchester rifle; the slug passed through his right lung, above his heart and through his left hand, and finally lodged in a six-inch wooden sill under the Southern Pacific depot.[28] Eldridge recovered from his wounds, and on July 4, 1904 announced that he would retire from his position as vice-president and general manager of the Cane Belt and move to Houston.[29] On July 6, 1904 Calhoun was released from custody, with the press reporting that although he was arrested "at or on the stairway leading to the building from which the shot was fired . . . [n]o witnesses appeared against (him)." The case was referred to a grand jury.

Eldridge was finally brought to trial for Dunovant's murder in November 1904 and was acquitted.[30] In March 1905 a Colorado County grand jury failed to return an indictment against Calhoun for the July 1904 attempt on Eldridge's life and that case was dismissed.[31] Within weeks, Eldridge again took matters into his own hands and fatally shot Calhoun upon discovering him to be a fellow passenger on board a train bound from San Antonio to Houston. Eldridge, who boarded the train first, fired three shots before Calhoun could unholster the pistol he was carrying.[32] Eldridge's trial for the shooting of Calhoun began in Bellville on January 16, 1906 amid a fevered pitch of community emotion. The district judge ordered that all persons entering the courtroom be searched for weapons.[33] A motion for continuance was granted, and the trial was reset to January 1907, when Eldridge was again acquitted.[34] Eldridge pled self-defense at both trials. The juries were so persuaded, but he obviously had revenge on his mind. A cryptic epitaph on Dunovant's tombstone reading "I will be avenged" notes that the enmity carried to the grave.[35]

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[28] Ibid., June 11, 1904.
[29] Ibid., July 9, 1904.
[30] Ibid., Nov. 26, 1904.
[31] Ibid., Mar. 18, 1905
[32] Ibid., May 13, 1905.
[33] Ibid., Jan. 20, 1906.
[34] Eagle Lake *Headlight*, Jan. 19, 1907.
[35] Ibid., 56

Eldridge spent the remainder of his days looking over his shoulder for another bullet whenever his business took him close to the Eagle Lake community, as there was clearly strong local sympathy for Dunovant.[36] Though effectively exiled from the town, Eldridge enjoyed a sweet revenge, for he had invested his profits from the sale of the Cane Belt line to buy a substantial interest in what became the Imperial Sugar Company plant at Sugar Land, Texas. This lucrative investment placed him in partnership with the Kempner family of Galveston. The Kempners were well aware of Eldridge's violent background but recognized his managerial talent. Eldridge served as general manager of the company from 1907 until his death, which came peacefully in Houston's Hermann Hospital in 1932,[37] when Eldridge was sixty-nine years old. When asked for an assessment of his partner's life, Ike Kempner stated that Eldridge was "a self-made man with considerable vision, though at times his ambitions triumphed over his judgment."[38]

By the time of Eldridge's death there had been a dramatic decline in the volume of agricultural commodities shipped on the Cane Belt. In October 1936 the Railroad Commission voted to close down the agency at Eldridge.[39] The volume of traffic in the 1930s did not justify maintaining the portion of the line between Bonus and the station at the former Eldridge plantation, and in 1939 the A.T.&S.F. applied to the Interstate Commerce Commission on behalf of the G.C.&S.F. to abandon that portion of the line.[40] The railroad's lawyers stated in the application that there were only two occasions during the entire year of 1939 when it was necessary to operate train service over the route, and estimated that the territory served had a population of only about 250 people. The primary commodity carried along this section of the line in the 1930s was potatoes. Some thirty-two carloads were shipped in 1937, but none were shipped in 1938 and only two cars were shipped in 1939. The Cane Belt's business had almost dissolved entirely from an annual level of about three hundred carloads in the mid-1920s due both to the construction of paved roads

[36] James G. Hopkins, personal communication to the author, Nov. 17, 1993. Mr. Hopkins, a retired rice-buyer formerly active in Garwood, was eighty-five years old at the time of the interview, and had a clear memory of community sentiment as to the affair. Recording in author's possession.

[37] Eagle Lake *Headlight*, Aug. 27, 1932.

[38] Harold M. Hyman, *Oleander Odyssey: The Kempners of Galveston, Texas 1854–1980* (College Station: Texas A&M University Press, 1990), 342.

[39] Final Order, Docket 3456R, Railroad Commission of Texas, Oct. 21, 1936 (Retired Railroad Docket Register, Library, Railroad Commission of Texas, Austin).

[40] ICC Finance Docket Number 12826. Tabulated in G.C.&S.F. Railway Co. Assistant Valuation Engineer File No. 24–1, Series 5 (1916–1962), copy in author's possession.

that enabled transportation by trucks and to changes in farming patterns.[41] The cost of replacing the forty-pound rail laid in 1904 with the heavier rail necessary for modern (larger) rolling stock could not be justified by the revenue from the traffic then being generated on the line, which reported a net profit of only $57 in 1939. The ICC granted the application for abandonment on July 19, 1940 and the company discontinued service over the Bonus Loop on September 16, 1940.[42] On April 30, 1942 the United States Post Office at Eldridge was closed.[43]

Revenue from other portions of the line, primarily outbound shipments of livestock, rice, and other agricultural commodities also began to prove disappointing. The remaining freight movements, which consisted of an occasional tank car load of gasoline, mud shell shipments from Matagorda (used for road topping), and miscellaneous freight, would not have justified continued operation of the branch line, but the 1917 discovery of a large sulfur deposit at Gulf Hill near Matagorda did achieve that result. The Texas Gulf Sulphur Company conducted the mining operations at this site, which quickly became the primary source of traffic for the branch line.

Texas Gulf Sulphur opened its Gulf Hill mine along the Cane Belt line in 1919. Sulfur had been mined in Texas since 1912, and the state's production in the twentieth century has represented about two-thirds of the national supply and one-third of the world supply.[44] Sulfur is an important part of a modern industrial economy, as it is used to manufacture fertilizers, and to a lesser extent to produce rubber, paint, plastics, and various petroleum-based products. By 1928 Texas Gulf was producing more than one-half of the world's sulfur supply.

Raw elemental sulfur in large quantities is associated with about a dozen salt dome formations in the United States, more than half of which are at or near points that were served by the G.C.&S.F. Railroad. The development of this resource yielded a major source of rail traffic, which was totally unanticipated when the rail lines were first built. The Boling Dome mine near the original Gulf Hill mine has proved to be

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[41] *The Earth*, Nov., 1926.

[42] A.T.&S.F. Office of Valuation Engineer—System, Abandonment Report, Jan. 10, 1962 Tabulated in G.C.&S.F. Railway Co. Assistant Valuation Engineer File No. 24–1, Series 5 (1916–1962), copy in author's possession.

[43] Colorado County Sesquicentennial Book (La Grange, Tex.: Hengst Printing, 1986), 26.

[44] Samuel P. Ellison Jr., *Sulfur in Texas*, Handbook Number 2, Bureau of Economic Geology (Austin: University of Texas, 1971), 1. See also Texas Gulf Sulphur Company, Inc., *Mining of Sulfur by the Hot Water Process* (Pamphlet), 1924; Kirk-Othemer *Encyclopedia of Chemical Technology*, (3rd ed.; New York: J. Wiley & Sons, 1983, vol. 22.

the largest single point of sulfur production in the world, in the twentieth century with a total production of more than sixty million long tons by the mid-1960s.[45]

These sulfur deposits were recovered using a method first proved commercially feasible by Dr. Herman Frasch at a mine in Calcasieu Parish, Louisiana in 1895. The process was named after its inventor, and with refinements formed the foundation of a highly successful method of development and production of sulfur reserves without the necessity of open pit mining. Under the Frasch method, a cased hole is drilled to the mineral-bearing zone and equipped for the injection of water. The water is heated to a temperature of about 325°F and is injected at a pressure of up to 200 psi into the annular space between the casing and tubing, where it travels down to and enters the sulfur-bearing zone. The water liquefies the elemental sulfur present in the formation (sulfur melts at a temperature just a few degrees above that of boiling water), and the resulting liquid slurry is forced up through the production tubing of the well by compressed air. The result of the process is the production of liquid sulfur, usually at least 99 percent pure, at the surface of the well. When the Gulf Hill and Boling Dome mines were first opened, this liquid was allowed to cool and solidify on site. After cooling and solidifying, the raw sulfur was loaded onto specially designed railroad hopper cars for shipment.[46]

On February 10, 1928, the Cane Belt Railroad Company asked the Interstate Commerce Commission (ICC) for permission to construct a thirty-five mile branch east from Lane City to Thompsons on the main line of the G.C.&S.F.[47] Within two weeks a competing application was filed by the St. Louis, Brownsville and Mexico Railway Company (St.L,B&M), a Texas subsidiary of the Missouri Pacific. The occasion for both applications was the anticipated development of the new Boling Salt Dome sulfur mine, located halfway between the Cane Belt Line and the G.C.&S.F. main line and then served only by a Texas & New Orleans Railroad Company spur. The mine owners wanted service to be available from more than one line in order to provide competition and ease traffic flow.

All G.C.&S.F. sulfur traffic moved some fifty-six miles due north on the Cane Belt line to Sealy, and most of it was then moved ninety-four miles back south to Galveston. Construction of the proposed cutoff

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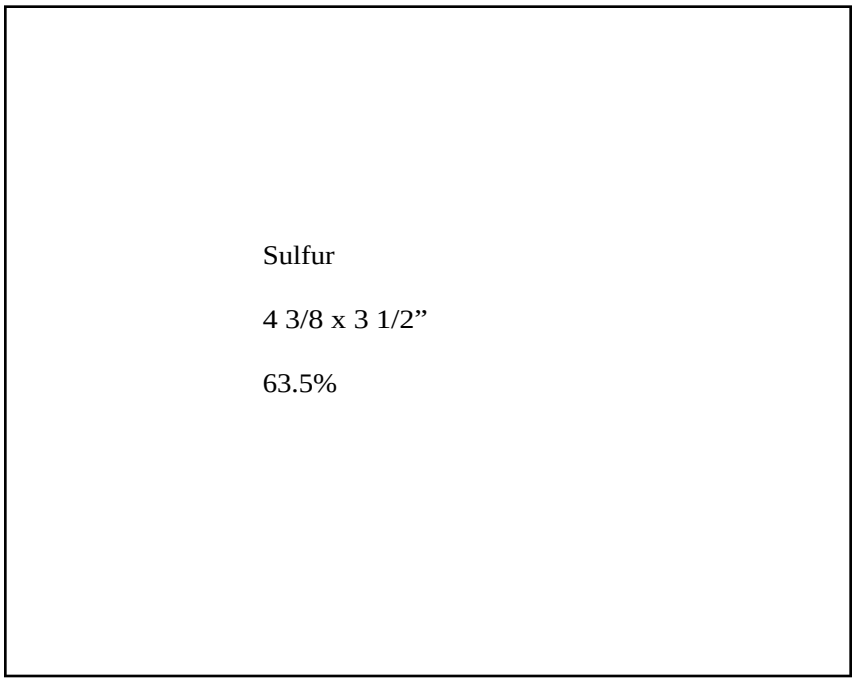
[45] Ellison, *Sulfur in Texas*, 8.

[46] Sulfur is now generally shipped in molten form in specially designed tank cars.

[47] ICC Finance Docket 6734, Report of the Commission, Dec. 15, 1928 (Texas State Archives, Austin). The ICC staff report is an excellent source for information on the early development of the Boling Dome sulfur deposits.



The Texas Gulf Sulphur Company operated extensive facilities for the solidification of molten sulfur and its loading on Santa Fe railroad cars near its mines. In this February 8, 1924 photograph by Frank J. Schlueter of Houston, cars are being loaded to be shipped to Galveston. *Photograph courtesy Houston Metropolitan Research Center, Houston Public Library.*

would enable these shipments to travel thirty-five miles east to Thompsons and then fifty miles south to Galveston, representing a savings of some sixty-five miles and therefore a reduction in shipping costs. This shorter route to the Gulf would enable the G.C.&S.F. to compete more effectively with the Texas & New Orleans line, a subsidiary of the Southern Pacific. The prospective development of other sulfur deposits along the proposed cutoff provided additional incentive for the two ICC applications.

The Texas & New Orleans (T&NO) opposed the St.L,B&M application to the ICC in whole, and the G.C.&S.F. application in part. The T&N.O. claimed that it was able to handle traffic from the Boling Dome area by movement northward on its spur from Rosenberg, but the distance to Galveston along its route was 123.4 miles, as compared with 73.4 miles by the G.C.&S.F.'s proposed route, and ninety miles by the St.L,B&M route. As intrastate traffic, the rates for these shipments would be regulated by the Railroad Commission of Texas, which then prescribed largely mileage-based tariffs. Texas Gulf therefore favored

the G.C.&S.F. application, which provided the shortest haul and thus the lowest mileage-based tariff, but also supported the Missouri Pacific application. When pressed at the ICC hearing, however, Texas Gulf's traffic manager conceded that if obliged to choose, he would prefer the G.C.&S.F. line, because it alone would serve both of the company's mines. The ICC sided with the G.C.&S.F. in this matter, stating that the construction of the St.L,B&M line would be "mere wasteful competition." A certificate of convenience and necessity was issued on December 15, 1928, which required the Cane Belt Railroad to construct and complete the proposed line by June 30, 1931. The line was promptly built and placed in operation. The Gulf Hill sulfur mine closed in 1937, but the Boling Dome operations proved even more prolific. For many years thereafter sulfur traffic was the salvation of the Cane Belt line. For example, a 1945 company summary of carloadings on the branch line counted just 1,122 cars of oil and gasoline products, 354 cars of rice, 1,613 cars of oyster shell and 82 cars of fruits and vegetables, but 17,789 cars of sulfur. In addition, the company reported the origination of 3,824 bales of cotton along the line for that year.[48] The sulfur traffic would be a mainstay of the Cane Belt branch for decades to come.

There are a few G.C.&S.F. retirees still living who worked on the Cane Belt branch during the 1940s and 1950s. The memories of one provide some insight into the post-war operation of the line. Edgar Muesse began work as a brakeman on the Cane Belt during World War II. His typical work day began in Sealy with a 6:45 a.m. departure for Matagorda, picking up cars along the way, and hauling one passenger car at the end for those riders who could tolerate the slow schedule. The day concluded with a 10:45 p.m. arrival at Matagorda, where the train crew bedded down in bunk cars the company provided free of charge. There was no electricity in these cars until the early 1950s, when the company installed wiring, but then charged its employees for the electrical service. In any event the crews were not that concerned about the lack of such amenities, since they were exhausted when they reached Matagorda and cared only for a place to sleep. Federal regulations at the time limited employees to sixteen hours per shift and the crews would sometimes "scratch" or run out of time before they arrived. They had to rise early the next morning for a return trip to Sealy. Work on the Cane Belt in those days was viewed as unpleasant because of the long hours

[48] Santa Fe Railroad, "Construction, Characteristics and Traffic," Chicago: A.T.&S.F. Railway Co., Apr., 1946, Company Report, Santa Fe Railway Archives (Kansas State Historical Center, Topeka).

and the inability to get home every night. The men filling these positions were usually at the bottom of the G.C.&S.F. seniority ladder and had no other options. When sufficient company service time was accumulated, brakemen and conductors usually bid for service on the shorter round trips over the Galveston main line, which enabled them to return to their families every evening.

Edgar Muesse recalls that during the war years he was paid eighty-two cents an hour for his time on the Cane Belt. He was one of five crew members on the daily train, which also was manned by another brakeman, a conductor, an engineer, and a fireman. During the summer and fall harvest seasons, a third brakeman was added. A large amount of sulfur was moved over the line to meet military demands. The work was done at a slow pace and monotonous pace, but could be unexpectedly dangerous. During the war years there was one fatal accident on the line, which was thought to have been the result of running through an open switch. Two brakemen, Alvin Shavador and Dewey Bernie, who were riding in the locomotive, died in the accident.[49]

Except for sulfur and chemical shipments over the newly-constructed Thompsons cutoff, the post-war years were not kind to the Cane Belt. Prominent communities along the branch also were served by two competing rail lines, both of which had much better connections to Houston, the area's trade center. Local passenger traffic, an important contributor to the economic success of the line between Sealy and Matagorda in the early 1900s, decreased as roads and automobiles improved. Additionally, freight traffic was lost to increasing truck competition. The Railroad Commission authorized discontinuance of trains 115 and 116 between Sealy and Matagorda on March 12, 1956, which ended passenger service forever on the Cane Belt line.[50] The line survived intact for a few more years, but in 1967 the commission authorized abandonment of the station at Matagorda at the end of the branch. The G.C.&S.F. subsequently removed this track and the line thereby lost the "tidewater terminus" that Dunovant and Eldridge had envisioned. Matagorda never became the prominent port city that was foreseen by many at the turn of the century.

As the twentieth century closes, the dreams of the Cane Belt founders hang by a somewhat resilient thread. There remain two fairly active shippers on the line, both chemical plants in Matagorda County. These plants are operated by Hoescht Celanese Corporation

[49] Edgar Muesse to the author, interview, Jan. 12, 1995 . Recording in author's possession.

[50] RRC Docket 1313RO, Retired Railroad Docket Register, Library, Railroad Commission of Texas, Austin.

and Lyondell Petrochemical Company for the purpose of manufacturing chemicals from oil and natural gas and their components, such as propylene and ethylene. The two companies produce and ship by rail liquids such as vinyl acetate and pellets of high density polyethylene, in turn used by other companies for the manufacture of various types of plastic products.[51] Hoescht and Lyondell together ship about 10,000 railcars a year over the Cane Belt branch, with outgoing shipments every working day. These two plants are economically dependent on abundant inexpensive supplies of oil and natural gas, which reliable forecasts indicate may be expected to continue to be available in Texas for the next fifty years. Ultimate exhaustion of this supply will, however, most likely result in the plants' closure and the end of the Cane Belt line. But it will be an ending nothing like that which might have been imagined by its founders a century ago. That the line survived at all is a circumstance of good fortune in the natural resource base of the area more than an indication of its builders' intuition. Many Texas branch lines did not have similar good fortune; a number of the surviving branches face uncertain futures unless economic conditions change unexpectedly in their favor. That result is presently a doubtful proposition, but one lesson painfully learned in the short line rail business is that current conditions are often poor predictors of the future.

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[51] John Runnells II to the author, Nov. 27, 1996. Runnels served on the Board of Directors of the A.T.&S.F. Railway Company for twenty-five years, retiring in 1996, and ranches along the Cane Belt line in Matagorda County. Written communication to the author from R. David Damron, Hoechst Celanese Corp., Jan. 20, 1997. Telephone conversation with Jackie Wilson, Lyondell Petrochemical Corporation, Feb. 4, 1997.