



Losing the Tractor Wars: The Role of J.I. Case in the Decline of Tenneco, 1978-1994

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Founded as a regulated gas pipeline company during the 1940s, Tenneco diversified after World War II to minimize federal regulation. This eventually included J.I. Case, a farm and construction equipment manufacturer whose president, James Ketelsen, became Tenneco's CEO in 1978.

Case faced disastrous sales declines in the late 1970s and 1980s due to a recession and the embargo on grain sales to the Soviet Union. Rather than selling Case, Ketelsen poured billions into the company, notably buying International Harvester in 1984 in an ill-conceived attempt to compete with John Deere.

This diverted resources and leadership talent at a time when Tenneco faced the difficulties of deregulation, which had resulted in a very uncertain business climate for Tenneco's gas pipelines. The efforts to save Case ultimately failed, leaving Tenneco heavily in debt, and forcing the sale of Tenneco's lucrative oil company in 1988. After further losses, Case was finally sold in 1994 and followed shortly thereafter with the dismemberment of Tenneco.

Introduction

Tenneco's origins lay in a 1930s proposal to bring southwestern gas to northeastern markets where natural gas shortages loomed. This pipeline project became a reality during World War II when critical gas shortages in the Appalachian region threatened war production, leading to regulatory approval, federal loans, and hurried construction during 1943 and 1944. The Federal Power Commission (FPC), the federal natural gas regulatory agency, cleared away obstacles for the young company, creating an atmosphere in which Tennessee Gas Pipeline Co. (later Tenneco) could become established and

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successful. The Tennessee Pipeline was completed in late 1944, bringing natural gas to the war plants of the northeastern states during the final months of World War II.

The relationship between Tenneco and the FPC deteriorated following the completion of the pipeline. The FPC investigated Tenneco for overcharging its customers from 1944 to 1947, ultimately resulting in forced rebates and fines. This event, coupled with Tenneco's failed attempt to purchase the mothballed War Emergency Pipelines (the "Big Inch" and "Little Big Inch" pipelines) in the face of hostile FPC interference in 1947 led the company to embark on a program of diversification into unregulated businesses. It was hoped that diversification could shield the company from the capricious and often politically-motivated whims of the FPC.

Tenneco retained and even expanded its pipeline system, even as the business environment grew more challenging. Federal natural gas regulation and deregulation passed through seven distinct phases from the 1930s to the 1990s, each affecting the managerial and strategic decisions of Tenneco and of its competitors. While the original intent of regulation was to reform an industry stagnating because of the Depression, regulation soon evolved into a public-private partnership to win World War II, then into a framework for the creation and management of a nationwide natural gas grid in the prosperous post-war years, and finally into a confused and chaotic system of wellhead price regulation which produced shortages and discouraged new production during the 1950s and 1960s. By the 1970s, regulation had become ineffective, leading to shortages and spurring calls for deregulation. Deregulation began in the 1970s and was largely completed by 1992.

As the nature and goals of federal regulation changed, Tenneco reduced its dependence on natural gas through diversification. From the early 1950s to the late 1970s, Tenneco invested in oil and gas exploration, refining and marketing, petrochemicals, packaging, shipbuilding, insurance, and manufacturing. The acquisition of Kern County Land Co. in 1967 made Tenneco the owner of J.I. Case, a leading farm and construction equipment manufacturer. Mismanagement, poor leadership, and a crippling downturn in the farm economy would play an important role in the decline of Case and Tenneco in the 1980s.

Energy in Crisis

The energy crises of the 1970s disrupted the lives of Americans and helped to bring to an end to the long period of post-World War II expansion. A number of federal efforts addressed the increasing prices, shortages, and foreign imports of energy resources. While Americans faced shortages of both natural gas and petroleum, government responses to the two shortages differed markedly. The federal government moved toward price and export controls to address petroleum shortages, while in natural gas the overall trend was toward deregulation in hopes of increasing supplies through higher prices.

Oil regulation had begun in 1971 when President Richard Nixon imposed price controls in an attempt to combat inflation, to little avail. The world price of crude continued to increase and spiked following the 1973 Arab oil embargo and again in 1979 following the Iranian revolution. Americans paid for their growing dependence on foreign oil through escalating fuel prices and long wait times to fill up their gas-guzzlers. Congress attempted to prevent further oil shortages through the passage of The Energy Policy and Conservation Act of 1975, which among other measures established the Strategic

Petroleum Reserve and all but outlawed the export of American oil.¹ Further measures imposed a “windfall” profits tax on domestic oil producers in an attempt to curb demand and increase government revenue.² These and other laws increased fuel costs, discouraged domestic oil exploration, and resulted in more and growing dependence on foreign oil imports.³

The efforts of Tenneco and other major gas companies to find supplemental sources of natural gas and other forms of energy in the 1970s failed to end the chronic and growing natural gas shortages, which led to increased support for deregulation among consumers, politicians, producers, and transmission companies. Proponents believed that deregulation would result in higher gas prices, which would, in turn, spur exploration and production, bringing new supplies to market and easing the shortages.

Deregulation did in fact lead to higher prices and helped to equalize the inter- and intrastate gas market rates, leading to more gas sold in interstate commerce. While the shortages disappeared by the 1980s, deregulation also resulted in price spikes and the loss of price stability which the industry and consumers had enjoyed for forty years. Perhaps most importantly for Tenneco, however, was the end of guaranteed rates of return. No longer could Tenneco and its competitors rely on the steady profits of the pipelines to fund unregulated business ventures. Deregulation created an entirely new business environment, one in which Tenneco had little experience. Deregulation proceeded in phases, through both legislation and regulatory fiat, and was generally complete by 1992. Each new regulatory change reshaped the business environment of natural gas, providing new challenges and opportunities.⁴

Unofficially, deregulation had begun in the early 1970s through FPC efforts to relax licensing requirements and end consumer-friendly price policies in response to increasing demand, growing (and unregulated) intrastate gas sales, severe shortages, and curtailments of gas deliveries. The FPC raised interstate gas rates between 30 and 50 percent in 1971 and 1972, while at the same time exempting thousands of small

I would like to thank Dr. Joseph Pratt for his ongoing guidance and support.

¹ The Energy Policy and Conservation Act, Public Law 94-163, 94th Congress (22 December, 1975). The law was in response to the Arab Oil Embargo of 1973, which resulted in quadrupled gasoline prices in the United States and a recessionary economy. The intent of the law was to cushion the United States from future embargoes or other shocks associated with the volatile global oil market. In addition to the Strategic Petroleum Reserve (which established a 3-month emergency oil stockpile), the law created Corporate Average Fuel Economy Standards (CAFE Standards, which set minimum fuel efficiency standards for new automobiles), energy conservation programs, and encouraged increased production of coal. The law also required the president to ban exports of US petroleum (but not refinery products like gasoline or diesel). Exemptions to the export ban later allowed some American oil to be sold abroad.

² Crude Oil Windfall Profit Tax Act, Public Law 96-223, 96th Congress (2 April, 1980).

³ Richard H.K. Vietor, *Energy Policy in America since 1945: A Study of Business-Government Relations* (Cambridge, 1984), 270-271. The “fracking” boom of the 2010s partially reversed this trend.

⁴ Christopher J. Castañeda, *Invisible Fuel: Manufactured and Natural Gas in America, 1800-2000* (New York, 1999), 185-191.

independent gas producers from rate and certificate requirements. These actions effectively deregulated a large segment of the industry without congressional sanction. The removal of this regulatory burden brought some new supplies into the market, and increased prices helped this gas find its way into the interstate markets.

In 1973 and 1974, the commission authorized temporary short-term gas sales on the “spot” market at unregulated prices to combat further shortages. The FPC increased the gas price ceiling from \$.42 per thousand cubic-feet (mcf) in 1974 to \$1.42 by 1976.⁵ While not true deregulation, these FPC actions were based on the assumption that higher prices and less oversight would translate into increased gas supplies and ease the shortages. In effect, the FPC was looking to market forces to correct the supply imbalance in natural gas markets prior to deregulation. These basic assumptions were fundamental in the efforts by the Congress and the Carter administration to deregulate natural gas beginning in 1978.

President Carter was an important supporter of natural gas deregulation, promising during his 1976 election campaign to make energy policy a priority of his administration, or as he put it, the “moral equivalent of war.” Following his election, Carter created the Department of Energy to direct efforts to find and promote new sources of energy and to oversee a comprehensive national energy policy to combat energy shortages. The Carter administration unveiled the comprehensive National Energy Plan (NEP) just eight weeks after taking office. The proposed NEP addressed the nation's energy woes in several ways, including the deregulation of natural gas.⁶ These proposals, aside from deregulation, had few lasting effects on the nation's energy supply.

Gas deregulation was one of five laws passed in late 1978 collectively known as the National Energy Act (NEA). Gas deregulation came through the Natural Gas Policy Act (NGPA), which established a gradual deregulation process for new gas produced onshore after 1978. Initially, new gas would be priced at \$1.75 per thousand cubic feet (mcf), with annual adjustments for inflation until January 1, 1985. Thereafter, all new onshore gas would be deregulated and allowed to “float” according to market forces. “Vintage” gas in production prior to 1978 was to be priced in three tiers from \$.29 to \$1.45 per mcf, and remain regulated after 1985.⁷ These provisions represented a compromise intended to placate deregulation opponents in Congress who feared price spikes associated with decontrol and those favoring immediate deregulation to address the shortages. The NEA also created a new regulatory body responsible for overseeing gas deregulation, the Federal Energy Regulatory Commission (FERC), which assumed most of the duties of the old FPC.⁸

To ensure that new supplies of natural gas would be used chiefly for consumer and commercial use, not power generation, congress also passed the Powerplant and Industrial Fuel Use Act of 1978, which restricted the construction of new power plants which used natural gas or oil for fuel. This law, in effect, encouraged the building of new

⁵ M. Elizabeth Sanders, *The Regulation of Natural Gas: Policy and Politics, 1938-1978* (Philadelphia, 1981), 144-145. Most of these administrative efforts to deregulate resulted in court challenges and in some cases, reversals.

⁶ Executive Office of the President, *The National Energy Plan* (Washington, D.C., 1977), passim. Most of the NEP was never enacted by Congress.

⁷ Natural Gas Policy Act, Public Law 95-621, 95th Congress (9 November 1978).

⁸ Castañeda, *Invisible Fuel*, 185.

coal-fired plants, a source of energy the US possessed in abundance. Ironically, Congress looked to market forces to correct supply problems even while imposing new restrictions on gas use.⁹

Tenneco in the Era of Deregulation

Tenneco entered the transition to deregulation with new leadership. After the death of Gardiner Symonds in 1971, Tenneco's leadership passed to Dick Freeman, who retired in 1975. Wilton Scott, the long-serving president of Tenneco Exploration and Production (1955 to 1975) became the next chairman and CEO. Scott had worked closely with Symonds and Freeman for many years¹⁰ and continued the policies of his predecessors, including some minor diversification away from Tenneco's gas business.¹¹ Scott retired in 1978, clearing the way for a new generation of leadership with few ties to oil or natural gas.

The Tenneco board of directors appointed Tenneco president James Ketelsen to replace Scott as new chairman and CEO in the summer of 1978.¹² An accountant by training, Ketelsen was the first to have no experience in energy or gas transmission. He had joined J.I. Case as assistant controller in 1959 and became president in 1967, just after Tenneco's acquisition of the company. Ketelsen led Case through the prosperous 1970s, advancing to the Tenneco chairmanship when Case was near the peak of its success in the farm and construction manufacturing business.¹³

As the new CEO, Ketelsen promoted a new vision for the Tenneco conglomerate, initially including five stated goals for the company. These were (not surprisingly) improved financial performance, an emphasis on employee participation and advancement, increased environmental standards, and a high standard of business ethics. While none of these represented a major departure from Tenneco's past, Ketelsen's fifth goal was one of greatly increased corporate citizenship, which would become a major component of Tenneco's corporate culture and public image during the turbulent and transitional 1980s.¹⁴ A sixth, unofficial goal, was to "save" the faltering Tenneco-owned J.I. Case division and to build the company into a viable competitor with industry-leader John Deere. Ketelsen would eventually spend more than \$2 billion on Case, to little avail.¹⁵

Ketelsen's tenure also saw the end of Tenneco's diversification and the beginnings of divestiture. Continuing development of existing companies within Tenneco, rather than acquisitions, was to be general policy going forward, along with maintaining Tenneco's

⁹ Powerplant and Industrial Fuel Use Act, Public Law 95-620, 95th Congress (9 November 1978). This law was repealed in 1987.

¹⁰ "Newsbriefs," *Tenneco Magazine* (Autumn 1975), 11.

¹¹ Tenneco, *Annual Report 1978* (Houston, 1979), 4. Scott oversaw the expansion of Tenneco's insurance businesses, with the purchase of Philadelphia Life.

¹² *Ibid.* Ketelsen had been elected president of Tenneco in 1977, replacing Scott, who was president, CEO, and board chairman from 1975 to 1977.

¹³ "Ketelsen Becomes Board Chairman as Scott Retires," *Tenneco Magazine* (Autumn 1978), 4.

¹⁴ *Ibid.*, 3.

¹⁵ Mark Ivey, "Can Tenneco Pull Case Out of the Mud?," *Business Week* (9 January 1989), 46F.

traditionally high eight-percent dividend.¹⁶ In an interview in *Tenneco* magazine, Ketelsen remarked “I don’t look for us to embark on any completely new areas of business. I feel the diversity we’ve achieved is sufficient. Our expansion will be related to businesses we’re in now.”¹⁷ The Ketelsen era would be one of retrenchment. And so it proved.

Tough Times at Case

J.I. Case, Tenneco’s tractor and construction equipment maker, prospered under Ketelsen’s leadership (1967 to 1978). In 1979 the company passed the \$2 billion in sales mark for the first time, contributing about one-fifth of Tenneco’s overall revenue and 10 percent of its pre-tax income. This performance capped a decade of remarkable growth driven by increasing demand for both farm and construction equipment in the US and international markets.¹⁸

Revenues continued to grow through 1980, but Case’s profitability tumbled; income dropped by more than half, to \$65 million (from \$131 million in 1979), and Case’s total contribution to Tenneco’s bottom line fell from 10 percent in 1979 to just four percent the next year. Construction unit sales dropped by a fifth, although this was a less severe decline on average than in the rest of the industry.¹⁹ These declines resulted from the severe recession that gripped the US in the early 1980s. Declining housing starts, a strong dollar (which hampered exports), and exceptionally high interest rates further crippled Case’s business.²⁰ Most devastating, however, was the 1980 US embargo on grain sales to the Soviet Union. This created a massive grain surpluses, since farmers could no longer export nearly twenty million tons of grain each year, and depressed prices.²¹ The embargo bankrupted many American farmers who had expanded their operations to meet Soviet demand.

Despite the lifting of the embargo in early 1981, the situation for Case and its competitors continued to deteriorate. Case’s sales declined a further 20 percent in 1981,²² 17 percent in 1982, and continued to fall in 1983.²³ By 1983, worldwide demand for Case’s products had declined nearly 50 percent from that of 1978; Case reported a loss of \$68 million that year.²⁴ The industry as a whole was in dire straits, even as the general US economy rebounded after the early 1980s recession.

¹⁶ Jo Ellen Davis, “Does Tenneco Have Too Much Riding on Tractors?,” *Business Week* (1 December 1986). In 1986, Ketelsen remarked that he was determined to maintain the dividend and would even sell a division to keep it at a traditionally high level.

¹⁷ *Ibid.*, 4.

¹⁸ Tenneco, *Annual Report 1979* (Houston, 1980), 15.

¹⁹ Tenneco, *Annual Report 1980* (Houston, 1981), 21.

²⁰ *Ibid.*

²¹ Steven Greenhouse, “Farm Equipment Hits a Trough,” *New York Times*, 11 November 1984, p. 4. The embargo was initiated by the Carter administration in January 1980 in response to the Soviet invasion of Afghanistan in 1979. It had no serious impact on the Soviet Union, which purchased grain from Argentina and Australia in lieu of American grain. The embargo was lifted by the Reagan administration in April 1981, but American farmers were not able to fully reclaim the Soviet market.

²² Tenneco, *Annual Report 1981* (Houston, 1982), 23.

²³ Tenneco, *Annual Report 1982* (Houston, 1983), 21.

²⁴ Tenneco, *Annual Report 1983* (Houston, 1984), 22-23.

One of Case's major problems, and indeed whole industry's in general, was excess manufacturing capacity. Farm equipment makers like Case had added manufacturing capacity in response to growing demand during World War II and in the postwar era. Another boom fueled by Soviet grain sales in the 1970s saw large increases in land under cultivation, from around 290 million acres in 1970 to more than 350 million acres by 1980, a more than 20-percent increase in acreage. Not surprisingly, farm equipment sales were strong during this period, topping out at 32,250 combines sold in 1979, along with a similar number of tractors.²⁵ Under Ketelsen's leadership, Case had increased its presence (and exposure) in both farm and construction equipment during this boom period, acquiring the German firm Vibromax in 1970,²⁶ David Brown Tractors of the United Kingdom in 1972,²⁷ and a 40-percent stake in heavy equipment maker Poclain S.A. of France in 1977.²⁸ Case also expanded its US manufacturing capacity and introduced a dizzying array of new models and types of equipment during the 1970s and early 1980s as it tried to grab market share and leap ahead of its many competitors.²⁹

By 1984 both the construction and farm equipment industries faced an existential crisis with no end in sight. Combine sales collapsed to 8,800, barely a quarter the number sold in 1979. Farm bankruptcies flooded the market with good used equipment, while manufacturing across the industry contracted to less than 40 percent of capacity. There was a corresponding drop in industry employment, from 160,000 in 1979 to just 90,000 five years later. Donald D. Lennox, chairman and CEO of Case's competitor, International Harvester, noted in 1984 that his company's Farmall plant in Rock Island, Illinois, could supply all projected American demand that year for 100 or more horsepower tractors with the factory operating at just 80 percent of capacity.³⁰ Tenneco's J.I. Case, John Deere, International Harvester, Massey-Ferguson, Allis-Chalmers, Ford, and New Holland all produced tractors in this segment. John Deere had an even greater manufacturing capacity than International Harvester. With too many manufacturers chasing too few sales, something would have to give. As Lennox ominously put it, "there's going to have to be some marriages, or there's going to have to be some deaths."³¹

Industry insiders speculated that Case along with some of the weaker players in farm equipment, like International Harvester, would exit the market in the near future.³² However prudent that might have been, Ketelsen was determined to save the company that he had so long been associated with. Much of Ketelsen's attention, and Tenneco's

²⁵ Steven Greenhouse, "Farm Equipment Hits a Trough," *New York Times*, 11 November 1984, p. 4. In terms of farm equipment, Case only produced tractors until the purchase of International Harvester in 1984.

²⁶ Tenneco, *Annual Report 1971* (Houston, 1972), 15. Vibromax was the trade name for Losenhausen Maschinenbau AG of Dusseldorf, West Germany.

²⁷ Tenneco, *Annual Report 1972* (Houston, 1973), 14.

²⁸ Tenneco, *Annual Report 1977* (Houston, 1978), 12-13.

²⁹ See Tenneco annual reports for 1970 to 1983 for descriptions of new equipment introduced (*passim*). Case and its subsidiaries typically introduced several new models yearly during this period.

³⁰ Steven Greenhouse, "Farm Equipment Hits a Trough," *New York Times*, 11 November 1984, p. 3.

³¹ *Ibid.*, 5.

³² *Ibid.*

money, would be funneled into a misguided attempt at saving J.I. Case during the 1980s and early 1990s.

A Case-Harvester Merger

Ketelsen took drastic measures to keep Case in business. More than 3,000 workers, 11 percent of its workforce, were laid off in 1980 and cost-control measures were introduced throughout the company. Tenneco's management was guardedly optimistic, and projected a modest recovery in 1981.³³ The hoped-for recovery did not materialize, and six hundred salaried employees lost their jobs in 1981 while production was scaled back by \$100 million. Layoffs and cutbacks also hammered David Brown Tractors, Case's UK subsidiary.³⁴ In October 1981, Case announced a four-week shutdown of plants in six states affecting 8,500 workers.³⁵ In 1982, a further 4,400 workers were laid off (18 percent of its workforce). Several overseas plants in Brazil, the United Kingdom, and Australia were closed or consolidated. Administrative, marketing, and manufacturing functions were trimmed, reduced, and reorganized as Case's troubles deepened.³⁶ In late 1982, Case announced a round of nine-week plant closings in five states.³⁷

International Harvester was in a worse situation than Case. The farm equipment and heavy truck manufacturer had no large conglomerate to back it up and was much more dependent on slumping farm equipment sales than Case, which only made tractors in that market. Harvester faced a catastrophic \$1.74 billion loss in 1982 and \$485 million in losses in 1983, mostly stemming from its farm business, which brought in 40 percent of its revenue but was deeply in the red because of poor sales and a heavy debt load. After restructuring its debt three times and narrowly avoiding bankruptcy, the company was widely seen in the industry as a prime candidate for a buy-out, joint venture, or insolvency.³⁸

Tenneco moved in on Harvester in late 1984, offering \$430 million for its farm equipment business in North America and Britain. With no other viable options, Harvester quickly agreed to the buyout.³⁹ The merger created the second-largest farm equipment maker, Case IH, with a full line of farm equipment and a much larger dealer network than Case had had previously.⁴⁰ The acquisition surprised many analysts who had expected Tenneco to quit the farm equipment business entirely, given the gloomy farm economy.⁴¹

³³ Tenneco, *Annual Report 1980* (Houston, 1981), 21-22.

³⁴ "J I Case Laying Off 600 Employees," *New York Times*, 28 February 1981.

³⁵ "Case to Extend Plant Shutdowns," *New York Times*, 9 October 1981.

³⁶ Tenneco, *Annual Report 1982* (Houston, 1983), 21.

³⁷ "Tenneco Closings," *New York Times*, 13 October 1982.

³⁸ Stephen Greenhouse, "A Harvester-Tenneco Deal?," *New York Times*, 22 November 1984.

³⁹ Christopher Drew, "What Case Plans for Ex-Harvester Unit," *Chicago Tribune*, 27 January 1985. After the sale, International refocused on its heavy truck manufacturing operations and renamed itself Navistar International (the Harvester name was acquired by Case).

⁴⁰ *Ibid.*

⁴¹ Stephen Greenhouse, "Farm Equipment Hits a Trough," *New York Times*, 11 November 1984.

Ketelsen defended his seemingly unorthodox decision in several ways, noting that Case was required by law to provide parts and service for its tractors for ten or more years, making quitting the business costly and drawn-out. Case also had hundreds of millions of dollars' worth of unsold equipment in dealer hands that would lose up to 90 percent of its value, along with more than one billion dollars tied up in financing equipment sales.⁴² Rather than quit, staying in the market and taking over Harvester would put Case in a position to compete with John Deere when (and if) the farm equipment market began to recover. For what Ketelsen characterized as a “small incremental cost of adding International Harvester to Case in order to achieve future profitability,” Tenneco had in fact more deeply committed itself to a highly volatile business with an uncertain future.⁴³

Tenneco's largely positive financial picture in the early 1980s encouraged these expansion plans. Tenneco's Exploration and Production division had grown from a \$35 million pre-tax profit in 1972 to more than one billion dollars in profits by 1981.⁴⁴ Despite declines in earnings in 1982 and 1983, as well as severe problems in its natural gas business, most of Tenneco's other divisions including Newport News Shipbuilding, auto parts, and insurance were still profitable. Tenneco earned \$716 million in 1983, with more than 70 percent coming from its oil and gas operations.⁴⁵ As it had done in the past, Tenneco would continue to rely on its energy businesses to fund its diversification. This strategy would work as long as energy continued to return record profits, but would be endangered if there were serious price declines in oil or gas.

A \$2 Billion Hobbyhorse: Case IH, 1985-1988

Ketelsen noted in 1985 that Case IH commanded about 35 percent of US 100 or more horsepower tractor sales (one of the most lucrative segments) and now offered a full farm equipment line through a network of about 1,800 dealerships.⁴⁶ Ketelsen committed the new company to be “first in quality and cost-value,” as he set out to compete with industry leader John Deere. Later that year, Tenneco exercised its option to purchase Harvester's European operations outside of the United Kingdom,⁴⁷ and acquired the bankrupt firm, Steiger Tractor, for \$75 million in 1986.⁴⁸

⁴² James L. Ketelsen, “*Diversification, Acquisitions, and Growth—A Tenneco Perspective*,” speech given to the Houston Rotary Club, Shamrock Hilton Hotel, Houston, Texas, February 21, 1985, 2.

⁴³ *Ibid.* One of the ironies of the Case IH deal was that it more fully exposed Case to the volatility of the farm equipment business. Prior to the merger, Case had avoided the worst of the downturn because a majority of its earnings had come from construction equipment sales.

⁴⁴ *Ibid.*, 3.

⁴⁵ Tenneco, *Annual Report 1983* (Houston, 1984), 2.

⁴⁶ Stephen Greenhouse, “A Harvester-Tenneco Deal?,” *New York Times*, 22 November 1984). Case commanded about 15 percent of the US large tractor market prior to the merger.

⁴⁷ Christopher Drew, “Tenneco to Buy More IH Units,” *Chicago Tribune*, 15 March 1985. Harvester's UK operations had been included in the original Case-Harvester deal.

⁴⁸ “Tenneco to Buy Steiger Tractor,” *New York Times*, 25 September 1986. Fargo, North Dakota-based Steiger produced large four-wheel drive farm tractors.

The Case-Harvester merger led to mass layoffs in the already troubled industry.⁴⁹ Harvester's huge Farmall tractor plant in Rock Island was permanently closed, costing the area 1,600 jobs. Case IH shuttered another plant in Memphis, reduced its workforce, and consolidated production to Case's flagship plant in Racine and other facilities.⁵⁰ Tenneco also cancelled dealership agreements with more than 500 dealers, mostly firms selling Case in smaller markets. This eliminated thousands of jobs across the country⁵¹ and led to hundreds of costly lawsuits against the new company.⁵²

Despite cost-cutting measures, plant closings, and new offerings, Case's market share eroded and losses mounted. John Deere's share of the 100 or more horsepower tractor market jumped from 45 percent in 1987 to 49 percent in 1988, while Case's share slipped to 32 percent, despite a new line of "Magnum" tractors that promised greater efficiency and value. Heavy discounting of older models diverted sales away from the new tractors, hammering Case with a 1987 loss of \$259 million, leading to the resignation of Case IH president Jerome K. Green. These problems contributed to Case IH's loss of at least \$570 million between 1985 and 1988.⁵³

Ketelsen continued to pump cash into Case IH despite declining income at Tenneco and slipping market share at Case. He also maintained Tenneco's dividend (which had not been earned since 1984) to keep stock prices high. These outlays amounted to nearly one-third of Tenneco's total cash flow by 1988. As income dried up, Tenneco's debt burden rose, reaching a crippling \$6.6 billion, much of it subject to higher floating interest rates.⁵⁴ In an attempt to pay down this debt, Ketelsen controversially authorized the sale of Tenneco assets, including real estate and gold mines, which brought in \$120 million, as well as Tenneco's profitable insurance companies, whose sale fetched a further \$1.4 billion.⁵⁵ In the prophetic words of one former Tenneco executive, "he's willing to sacrifice one of America's largest corporations to be No. 1 in tractors."⁵⁶

The Gas Bubble and Take-or-Pay

As Case IH struggled in the poor farm economy of the mid-1980s, Tenneco also faced serious challenges in its core gas transmission business. Deregulation reshaped the industry in the 1980s. The natural gas shortages of the 1970s eased after the passage of the NGPA in 1978, which increased natural gas prices and eliminated the competing inter-

⁴⁹ James L. Ketelsen, "Diversification, Acquisitions, and Growth—A Tenneco Perspective," 2.

⁵⁰ Stephen Greenhouse, "Bitter Time for Quad Cities," *New York Times*, 25 December 1984 and "Tenneco Buyout of Harvester Farm Equipment Operations Approved," *Associated Press*, 31 January 1985.

⁵¹ Christopher Drew, "What Case Plans for Ex-Harvester Unit," *Chicago Tribune*, 27 January 1985.

⁵² Davis, "Does Tenneco Have Too Much Riding on Tractors?," 120.

⁵³ Mark Ivey, "Can Tenneco Pull Case Out of the Mud?," *Business Week* (9 January 1989), 46F-46G. Case IH lost \$213 million in 1985, \$1 million in 1986, \$259 million in 1987, and \$100 million in 1988. Some estimates put the losses at around \$613 million over the same period.

⁵⁴ "Tenneco Debt Under Review," *New York Times*, 25 March 1986.

⁵⁵ Davis, "Does Tenneco Have Too Much Riding on Tractors?," 120.

⁵⁶ *Ibid.*, 119.

and intrastate markets. However, Tenneco assumed the future would be characterized by increasing demand for dwindling gas supplies. Tenneco and virtually the entire gas industry were profoundly wrong on both assumptions. Supplies *grew* while demand *fell* during the 1980s.

Tenneco's response to the shortages was to expand both its onshore and offshore operations in the Gulf of Mexico, as well as building several new gathering systems to collect offshore gas.⁵⁷ The company also paid premium prices for Canadian and Mexican gas and explored even costlier LNG projects in Colombia, Algeria, Trinidad and Tobago, and the Soviet Union.⁵⁸ Tenneco invested heavily in speculative gas projects, including coal-based synthetic gas,⁵⁹ gas from the Canadian high arctic,⁶⁰ as well as signing dozens of questionable long-term "take-or-pay" contracts with domestic gas producers.⁶¹ Most of these efforts proved to be expensive failures that demonstrated Tenneco's desperation in its search for new gas supplies.

The shortages of the 1970s also had a lasting impact on commercial and individual gas consumers. Forced curtailments resulted in businesses and utilities switching to alternate fuels when possible, reducing demand for gas. The Powerplant and Industrial Fuel Use Act of 1978 encouraged the building of new coal-fired power plants in preference to natural gas. Household gas use also dropped as homebuilders and homeowners replaced natural gas appliances with electric and heeded calls to conserve energy. Manufacturers responded by producing more energy-efficient appliances. These cumulative efforts resulted in an unexpected surplus of gas in the early 1980s, a "gas bubble" that would persist for much of the decade.⁶²

However, Tenneco and other companies were slow to respond to the changing conditions brought about by deregulation. The gas bubble was largely ignored or downplayed by pipelines who believed gas scarcity was the "new normal" and the bubble merely a temporary anomaly. Pipeline companies locked up gas supplies as quickly as possible through long-term contracts (often twenty years) at much higher than market prices in anticipation of future shortages and increasing prices.

Some pipelines were so certain that high prices and scarcity would return that they agreed to purchase unregulated deep-well gas at nine dollars or more per thousand cubic feet at the wellhead, nearly double the price paid by consumers in their homes in 1984.⁶³

⁵⁷ Al Smith, ed., "The Blue Water Project," *Tenneco*, (Winter 1971), 4-6.

⁵⁸ Christopher Castañeda and Joseph Pratt, *From Texas to the East: A Strategic History of the Texas Eastern Corporation* (College Station, Texas, 1993), 207 and Tenneco, *Annual Report 1974, 1975, 1976, 1977*, passim. None of these projects advanced past the planning stages.

⁵⁹ Tenneco, *Annual Report 1973* (Houston, 1974), 7.

⁶⁰ Al Smith, ed., "Challenge of a Frozen Frontier," *Tenneco*, (Winter 1972), 3.

⁶¹ Robert R. Gardner, *Tennessee Gas Pipeline Company* (Maguire Oil and Gas Institute, Southern Methodist University, 1984), 6.

⁶² Castañeda, *Invisible Fuel*, 186-7.

⁶³ Gardner, *Tennessee Gas Pipeline Company*, 3-4. For a listing of gas prices before and after deregulation, see American Gas Association, *Gas Facts* (Arlington, Virginia, 1988), 112. The regulated wellhead rate in 1984 peaked at \$2.655 per mcf, with some consumers paying \$5.128 per mcf in their homes, nowhere near the rates that some producers charged for their gas. Both wellhead and consumer gas prices dropped after most price

Since onshore prices remained regulated until January 1, 1985, pipelines were not able to outbid their competitors on price. This forced them to offer generous terms to purchase increasing volumes of gas from producers, including all production from any new wells drilled. Other clauses included “take-or-pay” provisions in which pipelines committed to a minimum daily purchase of gas, or an agreement to pay the producers for gas not taken. Some pipelines were also committed to taking gas on a percentage basis, up to ninety-five percent of a producer’s total capacity. Others included inflation escalators or price increases tied to OPEC oil prices.⁶⁴

As the gas bubble grew, it created serious problems for Tenneco and its competitors. By 1983, the “bubble” was between 1.4 and three trillion cubic feet and increasing. Industry analysts concluded that year that there was little or no growth potential for natural gas markets in the United States.⁶⁵ These problems notwithstanding, Tenneco had signed more than 1000 take-or-pay contracts which put the company in an untenable situation. As demand dropped, Tenneco could not profitably sell the gas it was contractually obligated to take, nor could it afford the escalating cost of the “pay” provisions in its contracts. By 1983, Tenneco had a non-sellable surplus of two billion cubic feet per day, potentially leading to a take-or-pay liability of \$2 billion by 1985.⁶⁶

Tenneco responded by shutting in much of its “vintage” gas and delivering more of the expensive “new” gas to its customers. This increased its average costs from two dollars per thousand cubic feet to \$3.30 by 1983. Tenneco also ended its purchase of new gas supplies, but this was largely thwarted by existing take-or-pay producers who drilled new wells and produced more gas. Tenneco was contractually obligated to accept this gas and pay for it regardless of demand or marketability. Some attempts were made to renegotiate contracts with producers, but only fourteen of 1,400 contracts were successfully renegotiated.⁶⁷

Facing financial ruin, Tenneco announced on April 29, 1983 the creation of the Emergency Gas Purchasing Program (EGPP). The EGPP was a unilateral attempt to rewrite the take-or-pay provisions in the company’s purchase contracts by creating new guidelines under which Tenneco would accept gas from producers. This included a strong bias in favor of the lowest-cost tiers of gas as specified in the Natural Gas Policy Act. Tenneco exercised “market-out” clauses to escape some purchase contracts. For offshore take-or-pay contracts without such clauses, Tenneco also dictated that it would henceforth only pay the equivalent of 110 percent the price of No. 2 fuel oil as sold at New York, not the rates previous contracted for. Producers who did not agree to these terms in writing would be cut off immediately.⁶⁸

controls were lifted in 1985, making the situation worse for the pipelines.

⁶⁴ Gardner, *Tennessee Gas Pipeline Company*, 4. Producers often drilled new wells to raise production and the volume of gas which could be delivered under the contracts, exacerbating the plight of the pipelines.

⁶⁵ “Deliverability Surplus Keeps US Natural Gas Industry in Quandary,” *Oil and Gas Journal* (6 June 1983), 25.

⁶⁶ Gardner, *Tennessee Gas Pipeline Company*, 6.

⁶⁷ *Ibid.*, 6-7.

⁶⁸ “Tenneco Unit Suspends Pacts to Purchase Gas,” *Wall Street Journal*, 2 May 1983, p. 4.

The EGPP left the company wide open to costly litigation. Within two weeks, Amoco filed a breach-of-contract lawsuit against Tenneco. Bryan C. Edwards, Amoco vice president for gas sales, remarked at the time that “we cannot stand idly by and allow one party to a contract to state that because it no longer likes the terms it agreed to, it will simply dictate new conditions of its choosing.”⁶⁹ Superior Oil soon joined Amoco, which petitioned the court for a declaratory judgment upholding take-or-pay language in five contracts with Tenneco. Superior also demanded nearly seven million dollars in damages, plus interest, from Tenneco.⁷⁰ However, the majority of Tenneco’s gas suppliers did not sue, and about half eventually signed the EGPP. Most of these were individuals or small companies with few other options to sell their gas, as well as limited financial means to fight Tenneco and its legion of attorneys in court. As one small producer put it, “they have a gun to our heads.”⁷¹

While FERC eventually issued new guidelines that eased the take-or-pay fiasco, much of the damage was done. Seventeen companies filed suit against Tenneco, including Exxon, Texaco, Gulf, Chevron, Kerr-McGee, as well as a number of smaller producers. Most of these suits were quietly settled out of court, and by the end of 1987, Tenneco had paid out more than \$300 million against the take-or-pay lawsuits. However, one small Ohio producer, family-owned Red Hill Development, refused to sign or settle, and sued Tenneco in 1985.⁷²

The case took three years to wend its way through the legal system. The litigants, Floyd and Doris Kimble, hired a Houston personal injury attorney, John M. O’Quinn, to represent them. O’Quinn cleverly portrayed them as “hard-working, honest Christian people—your basic small-town Americans” unjustly abused by a large and powerful corporation that put money above the law.⁷³ The case was heard in Wharton, Texas, a small, rural, and working-class community outside of the Houston metro area. O’Quinn contended that the Kimbles were cheated not only of revenue from existing gas wells, but were also losing income from potentially hundreds of new wells they would have drilled according to the terms of their contracts with Tenneco. O’Quinn built his case around a statement made to the court by Tenneco CEO Ketelsen that “business thinking, not the law, should guide our decisions.”⁷⁴ Ketelsen also revealed in court that Tenneco had knowingly broken its contract with Red Hill, and would do so again under similar circumstances.⁷⁵

⁶⁹ “Firms Ask Court to Enforce Gas Sales Contracts,” *Oil & Gas Journal* (23 May 1983), 30.

⁷⁰ Gardner, *Tennessee Gas Pipeline Company*, 9.

⁷¹ “Natural Gas Industry in a ‘State of Flux’ as Pipelines Seek Cheaper Supplier Pacts,” *Wall Street Journal*, 14 June 1983, p. 56.

⁷² Sam Fletcher, “Tenneco Hit with ‘Take-or-Pay’ Judgment,” *Houston Post*, 15 December 1988, c-1.

⁷³ Dianna Solis, “O’Quinn Defeats Tenneco with Emotion,” *Wall Street Journal*, 16 December 1988.

⁷⁴ Diana Solis and Caleb Solomon, “Tiny Firm Wins a Huge Award From Tenneco,” *Wall Street Journal*, 15 December 1988.

⁷⁵ Dianna Solis, “O’Quinn Defeats Tenneco with Emotion,” *Wall Street Journal*, 16 December 1988.

Unsurprisingly, the jury slapped Tenneco with a \$600 million judgment, including \$250 million in actual damages and \$350 million in punitive damages. Tenneco executives met this judgment with shock and disbelief, immediately announcing they would appeal and seek a new trial. In spite of these promises, Tenneco settled the case barely a month later. The terms were not made public, but Tenneco set aside a further \$190 million to settle about fifty take-or-pay claims in early 1989, with the lion's share probably going to Red Hill Development.⁷⁶

The Tenneco E&P Crisis

As the gas bubble and litigation crippled Tenneco's transmission business, various crises also arose in Tenneco's other businesses, undermining Ketelsen's strategy of relying on healthy divisions to make up for shortfalls in the weaker ones. One of these previously "strong" divisions, Tenneco Exploration and Production (Tenneco E&P), was hit hard by take-or-pay and falling oil prices during the 1980s.

Tenneco's oil and gas production unit had prospered while Case and natural gas transmission struggled. In 1981, Tenneco E&P brought in more than \$1 billion, some 54 percent of Tenneco's overall income, up nearly one-third from 1980.⁷⁷ Tenneco invested heavily in new exploration, with \$1.5 billion spent on drilling, leases, and infrastructure in 1981 alone.⁷⁸ Income grew marginally in 1982, but by 1983, Tenneco E&P's overall performance had significantly deteriorated, with income tumbling nearly 20 percent.⁷⁹ The problems continued in 1984 and 1985. By then, all of Tenneco's energy earnings amounted to only \$428 million, a drop of nearly a third from 1985 and less than half the amount earned just by Tenneco E&P in 1981 and 1982.⁸⁰

Oil prices had remained high during much of this period, spurring Tenneco's investment in new exploration and drilling. As oil prices rose, non-OPEC production increasingly took market share away from the oil cartel, especially as OPEC members cut production to maintain prices. By November 1985, as oil prices reached a peak of \$31.75 a barrel, OPEC member Saudi Arabia signaled that it would no longer cut production to keep prices high. The resulting oil shock brought prices down to \$10 by early 1986 and stripped away much of Tenneco E&P's earnings potential.⁸¹

Tenneco E&P's other major source of revenue, natural gas production, was hit hard by the gas bubble. Just as Tennessee Gas had reneged on its purchase contracts, so too did eight of Tenneco E&P's major customers refuse to take or pay for their gas. By 1983, this had cost Tenneco E&P nearly \$200 million, with projections for the following year

⁷⁶ Michael Arndt, "Tenneco Settles Suit with Small Ohio Firm," *Chicago Tribune*, 18 January 1989).

⁷⁷ Tenneco, *Annual Report 1981* (Houston, 1982), 1.

⁷⁸ *Ibid.*, 2.

⁷⁹ Tenneco, *Annual Report 1983* (Houston, 1984), 1.

⁸⁰ Jo Ellen Davis, "Does Tenneco Have Too Much Riding on Tractors?," *Business Week* (1 December 1986), 119.

⁸¹ Daniel Yergin, *The Prize: The Epic Quest for Oil, Money, & Power* (New York, 1992) 750-751. Oil prices had reached a high of \$35 per barrel in 1980, but by 1986 some Persian Gulf oil sold for as little as \$6 a barrel. Oil prices generally remained low (\$15-\$25) until the early 2000s.

running to \$400 million in lost revenue. In 1985, Tenneco slashed capital spending by nearly 40 percent, including a cut of \$200 million to its gas drilling program.⁸²

The Tenneco Oil Company Sale, 1988

Hammered by increasing debt, declining revenues, and the apparent failure of the Case-Harvester merger, analysts predicted that a radical restructuring was in the works by 1988.⁸³ On May 25, 1988, Tenneco dropped a bombshell on the energy business: it was selling its vast oil and gas reserves, as well as its refining and marketing operations. Tenneco had among the largest oil and gas reserves in the United States, with more than four-hundred million proven barrels of oil and nearly three trillion cubic feet of natural gas⁸⁴ spread across the Gulf of Mexico, the Rocky Mountain region, the Midcontinent, California, as well as the North Sea. Tenneco also owned a modern refinery in Chalmette, Louisiana and a profitable retail marketing operation.⁸⁵ These assets were conservatively valued at more than \$5 billion.

While a restructuring had long been anticipated, the sale of the valuable oil company caught virtually everyone by surprise. In the months leading up to the announcement, analysts had speculated about everything from spinning off several divisions to a corporate takeover. In general, there was agreement that change was coming to Tenneco one way or another; the conglomerate business model of the 1960s was as outdated as the buggy whip. According to one stock analyst at the time, “Ketelsen is the last prophet of conglomeration without synergy and without profits.”⁸⁶

Even before the buyers lined up, Ketelsen felt compelled to explain the sale of Tenneco’s “crown jewel.” He assured investors and management that the proceeds of the sale would pay down Tenneco’s massive debt and repurchase stock to fend off threats from corporate raiders.⁸⁷ Tenneco also hoped to save more than \$330 million a year in interest payments while allowing new investment in Tenneco’s more-profitable packaging and auto-parts businesses.⁸⁸ The money would *not* be used for further diversification. In the words of one analyst, “it was reassuring to hear him say he wasn’t going to buy another farm-equipment company.”⁸⁹ Many investors and Tenneco employees undoubtedly shared this view.

Tenneco offered its properties in eight large segments grouped geographically and by upstream or downstream designation, an arrangement designed to attract the highest prices. This strategy paid off when the bids were unsealed later that year. The winners

⁸² Gardner, *Tennessee Gas Pipeline Company*, 7.

⁸³ Edward F. Cone, “Breaking Up is Hard to Do,” *Forbes* (8 February 1988), 41.

⁸⁴ Tenneco Inc., Corporate Communications, “Tenneco to Sell Oil and Gas Business,” 25 May 1988, p. 1.

⁸⁵ Caleb Solomon, “Tenneco’s Oil-and-Gas Asset Sales Draw Winning Bids of \$7.3 Billion,” *Wall Street Journal*, 13 October 1988, A1.

⁸⁶ Edward F. Cone, “Breaking Up is Hard to Do,” *Forbes* (8 February 1988), 41.

⁸⁷ Caleb Solomon and Diana Solis, “Tenneco Wants Oil, Gas Unit Sold in Pieces,” *Wall Street Journal*, 27 May 1988, p. 22.

⁸⁸ Todd Vogel, “Why the Street Isn’t Moved by Tenneco’s Big Move,” *Business Week* (26 September 1988), 130.

⁸⁹ David Fleisher, quoted in Caleb Solomon and Diana Solis, “Tenneco Wants Oil, Gas Unit Sold in Pieces,” *Wall Street Journal*, 27 May 1988, p. 22.

agreed to pay more than \$7.3 billion for Tenneco's energy properties, more than even the most optimistic estimates had predicted.⁹⁰ The largest purchaser was Chevron, which bought Tenneco's vast Gulf of Mexico reserves for \$2.6 billion. Other buyers included Amoco, Mesa L.P., Arco, American Petrofina, Mobil, Conoco, and several smaller companies for prices ranging from \$16 million to \$900 million.⁹¹ The sale elicited a variety of reactions, from "nutty" to "inspired;"⁹² one observer even suggested that Jim Ketelsen had a "screw loose" for selling the most valuable division of Tenneco.⁹³

The sale failed to quash rumors and speculation about the company's future. Observers noted that money-losing Case IH was now the biggest Tenneco division,⁹⁴ which did little for Tenneco's stock value; it hovered around \$48 per share despite a buyback later that year. By some estimates, Tenneco would be worth \$4 billion *more* if it were to be broken up than as a conglomerate.⁹⁵ As long the stock prices remained low and Case IH continued to bleed red ink, this speculation about Tenneco's future would continue.

Epilogue: Case's Long Goodbye

By the end of 1988, Ketelsen finally admitted the possibility that Case "could be sold" if it failed to turn a profit, but noted that he had expected the benefits of the Case IH merger to take five years (i.e. until 1990).⁹⁶ This remarkable support was in spite of repeated missed profit forecasts and growing stockholder pressure to unload Case. The consensus among Tenneco executives and on Wall Street was that Ketelsen was personally attached to Case, and was hanging onto the company because of his long tenure dating back to the 1950s.⁹⁷ In a 1988 *Wall Street Journal* interview, Ketelsen finally publicly acknowledged this emotional attachment to Case, but tried to clarify its extent. "I would like to prove [that Case IH is now a strong player in the farm equipment business]. So there is a hell of a lot of ego wrapped up in that, but that is a different ego than hanging on to [Case] because I came out of it."⁹⁸

⁹⁰ Sam Fletcher, "Tenneco to get \$7.3 billion for its Oil, Gas Operations," *Houston Post*, 11 October 1988, A1 and Todd Vogel and Mimi Bluestone, "Gas is Cooking Now," *Business Week* (24 October 1988), 24.

⁹¹ Caleb Solomon, "Tenneco's Oil-and-Gas Asset Sales Draw Winning Bids of \$7.3 Billion," *Wall Street Journal*, 13 October 1988, A1.

⁹² Todd Vogel and Mimi Bluestone, "A Shocker in the Oil Patch," *Business Week* (6 June 1988), 35.

⁹³ Todd Vogel and Mimi Bluestone, "Gas is Cooking Now," *Business Week* (24 October 1988), 24.

⁹⁴ Caleb Solomon and Diana Solis, "Tenneco Wants Oil, Gas Unit Sold in Pieces," *Wall Street Journal*, 27 May 1988, p. 22.

⁹⁵ Todd Vogel, "Why the Street Isn't Moved by Tenneco's Big Move," *Business Week* (26 September 1988), 130.

⁹⁶ Diana Solis and Caleb Solomon, "Tenneco Says Farm-Tool Unit Could be Sold," *Wall Street Journal*, 12 December 1988.

⁹⁷ Davis, "Does Tenneco Have Too Much Riding on Tractors?," 120; Ivey, "Can Tenneco Pull Case Out of the Mud?," 46F-46G; Diana Solis and Caleb Solomon, "Tenneco Says Farm-Tool Unit Could be Sold."

⁹⁸ Quoted in Solis and Solomon, "Tenneco Says Farm-Tool Unit Could be Sold," *Wall*

Despite Ketelsen's weak assurances that a "different ego" was feeding his preternatural faith in Case, it was becoming harder and harder to explain the situation in any other terms. Following the resignation of Jerome Green in 1987, Ketelsen brought in James K. Ashford, who had engineered a turnaround at Tenneco's auto parts business. Ashford slashed the Case workforce by 3,000 jobs, closed four more plants, streamlined the supply chain, and introduced electronics-heavy models to woo customers.⁹⁹ Case's losses narrowed to \$100 million in 1988, but profitability seemed far out of reach.¹⁰⁰ Then, just as the wolves were at the door, the long farm recession finally lifted.

Several factors contributed to the improving farm economy. Federal programs helped to reduce grain surpluses, leading to a rise in prices. This translated into growing farm income, which increased by more than 50 percent to \$57 billion between 1983 and 1988. Indebtedness fell from \$193 billion to \$128 billion over the same period. Much of the farm equipment purchased during the 1970s was wearing out by the late 1980s. These conditions meant that farmers were finally in a position to buy new equipment after nearly a decade of hardship.¹⁰¹

Case IH was able to take advantage of this improving business climate. The large Case IH dealer network and newer, more efficient models led to increasing market share taken from its smaller competitors (but not from John Deere). By 1989, Case IH commanded about 37 percent of the North American tractor market, behind John Deere's 42 percent.¹⁰² Case IH reported a profit of \$228 million in 1989, the first in the history of the company (post-merger), and right in line with Ketelsen's predictions. It appeared that Ketelsen's big gamble on tractors had finally paid off.¹⁰³

However, Case's success was fleeting and largely illusory. Case ramped up manufacturing in 1990 and booked sales as equipment was delivered to its dealers. While this was standard industry practice, most of Case's competitors discounted these "sales" by 20 percent or more, counting on the dealers to sell well below list price. However, Case discounted its "sales" by a smaller margin. By the beginning of 1991, Case had more than 11 months of inventory sitting on dealer lots, leaving the company particularly vulnerable to downturns. Deere maintained only a three or four month surplus on hand.¹⁰⁴

Tractor sales collapsed following the invasion of Kuwait by Iraq in August 1990. John Deere cut back production by 21 percent during the final months of 1991. Case however, continued to produce equipment and dump it on dealer lots. Each time it did so, it booked another sale, even though there was no real demand for this equipment. By March 1991, cracks appeared in the façade of success at Case. Case president James Ashford abruptly resigned for "personal reasons," just months after becoming a Tenneco director.¹⁰⁵

Street Journal, 12 December 1988.

⁹⁹ Ibid. and Mark Ivey and Kevin Kelly, "As J.I. Case Sowed, So Shall it Reap," *Business Week* (22 July 1991), 27.

¹⁰⁰ Ivey, "Can Tenneco Pull Case Out of the Mud?," 46F-46G.

¹⁰¹ John Holusha, "Tractor Sales are Rolling Again," *New York Times*, 4 May 1988.

¹⁰² Rick Reiff, "Case Study in Determination," *Forbes* (30 October 1989), 127.

¹⁰³ Mark Ivey and Kevin Kelly, "As J.I. Case Sowed, So Shall it Reap," 27.

¹⁰⁴ Ibid., 30.

¹⁰⁵ Ibid.

This left Ketelsen to clean up the mess. Another 4,000 Case IH workers lost their jobs, production was scaled back by a quarter, and prices on some models were cut by more than one-third to liquidate inventory.¹⁰⁶ Ketelsen brought in a new president with extensive industry experience, Robert J. Carlson, to staunch the flow of red ink.¹⁰⁷ Even so, Case IH reported another massive loss—\$303 million—in the first half of 1991.¹⁰⁸

This renewed crisis at Case finally spurred the Tenneco board to action. On August 8, 1991, they named former Union Pacific Railroad chairman Michael W. Walsh to replace Ketelsen as president of Tenneco, and after a transition period, Walsh would become chief executive and chairman as well. While Tenneco denied it, it was widely believed that Ketelsen was finally forced out due to the long-running problems at Case.¹⁰⁹

The following month, Walsh and Ketelsen announced a two billion dollar “action plan” to deal with the ongoing losses at Case. Tenneco’s hallowed dividend was cut in half (saving \$200 million), and more than one billion dollars in non-core assets were put up for sale. An additional one billion dollars in savings was achieved by reducing capital expenditures, cost reductions, plant closures, and through 5,000 more layoffs.¹¹⁰ But the action plan was not enough to turn Case around. After losing more than \$800 million in 1991 and 1992, Case went through a second restructuring in 1993, costing Tenneco another \$920 million, mostly through further plant closures, abandoning unprofitable businesses, and massive layoffs.¹¹¹

In February 1994, Case IH president Dana Mead succeeded Walsh as president and CEO of Tenneco.¹¹² He let it be known in no uncertain terms that Case IH would be sold or spun-off as soon as possible.¹¹³ He offered Case IH for one dollar to “anyone who would take it off his hands,” without success. Failing to find a buyer, Mead began a third radical restructuring,¹¹⁴ and announced that more than one-third of Case stock would be sold in an IPO.¹¹⁵ Within weeks, it was reported that Tenneco would sell more than half of Case by the end of 1994 if market conditions permitted.¹¹⁶

¹⁰⁶ Ibid.

¹⁰⁷ Claudia A. Deutsch, “Former BMC Chairman Assumes Post at Case,” *New York Times*, 23 July 1991. Carlson had spent 29 years at John Deere.

¹⁰⁸ Harris Collingwood, “Tenneco’s Chief Takes a Powder,” *Business Week* (18 August 1991).

¹⁰⁹ Ibid.

¹¹⁰ Tenneco Inc., Public Relations, “Tenneco Board Announces \$2 Billion-Plus Action Plan,” 11 September 11, 1991, p. 1-2. See also Thomas C. Hayes, “Tenneco Plans Asset Sales and Cuts Dividend in Half,” *New York Times*, 12 September 1991.

¹¹¹ Kathryn Jones, “Tenneco Revises Its Results to Show a \$1.3 Billion Loss,” *New York Times*, 23 March 1993.

¹¹² Tenneco Inc., Public Relations, “Tenneco CEO Post Passed from Walsh to Mead,” 24 February 1994. Mike Walsh had been diagnosed with a brain tumor in 1993, and stepped down to focus on his medical treatment. He passed away on May 6, 1994.

¹¹³ Kenneth N. Gilpin, “Chief at Troubled J.I. Case Stepping Down,” *New York Times*, 16 September 1992.

¹¹⁴ Kevin Kelly, “Case Digs Out from Way Under,” *Business Week* (13 August 1995).

¹¹⁵ Kathryn Jones, “Tenneco to Offer 35% of J.I. Case,” *New York Times*, 27 April 1994.

¹¹⁶ “Tenneco May Sell Majority of Case by End of Year,” *New York Times*, 11 May 1994.

Tenneco gradually reduced its ownership in Case over the next two years. By mid-1995, Tenneco had unloaded 56 percent of Case.¹¹⁷ Over the next months, further sales reduced Tenneco's stake to just 21 percent. In February 1996, as part of a broader restructuring which would see the effective end of the Tenneco conglomerate, Tenneco quietly divested its remaining shares of Case.¹¹⁸ After years of struggle and billions of dollars wasted, Tenneco was finally out of the tractor business.

Conclusion

The systemic and perennial problems at Case were symptoms of poor leadership, not only on the part of Tenneco CEO Ketelsen, but also within Case (notably James Ashford), and by the Tenneco board of directors. Emotion and ego were wrapped up in Ketelsen's efforts to save Case, efforts that ultimately cost Tenneco's shareholders and employees dearly. It took new leadership—without emotional ties to Case—to see that Case was a losing proposition.

The Case saga also undermined Tenneco's overall stability. During the 1980s, much of Tenneco's managerial talent was focused on the problems at Case at the expense of Tenneco's core energy businesses. Deregulation, Take-or-Pay, and downturns in the oil business required expert and focused leadership—leadership distracted by the ongoing debacle at Case.

¹¹⁷ Kevin Kelly, "Case Digs Out from Way Under," *Business Week* (13 August 1995).

¹¹⁸ Hillary Durgin, "Tenneco's Sale of Case Just the Beginning," *Houston Chronicle*, 23 February 1996, 1C.