THE BIRTH OF THE MEXICAN OIL INDUSTRY, 1900–1910

During the 1890s and early 1900s American business saw some of its best opportunities in the development of foreign industry. Aptly characterized as a “spillover” into undeveloped areas, this process involved heavy investments in mining, agriculture, and railroad construction to secure raw materials for burgeoning American factories. Creating foreign markets for American products was an inherent but less important element of this activity. Because of its proximity and seemingly stable government under President Porfirio Díaz, Mexico received an unprecedented share of this new American business, and investors operated as though there were no firm border between the two countries.

Doheny began exploring for oil in Mexico just as this process reached its height at the turn of the century, and his efforts have been interpreted as an extension of his California activities. However, even the proponents of the spillover analogy question whether it is anything more than a general definition, and Doheny’s experience in Mexico challenges some of the basic elements of the model and reflects the idiosyncrasies of this type of entrepreneurial activity. Since Doheny became involved in Mexico while he was still operating in California, he might have been planning to link the two sides of the business. Certainly, his intention to supply oil for the Mexican Central Railroad, one of the largest and most important American investments in the country, seems to fit the phenomenon described above, but once in Mexico Doheny operated altogether differently.¹

First of all, Doheny sold out his California properties in 1902 in order to concentrate solely on Mexico. Thus, his move was not the result of excess capital and did not stem from the need for additional oil to supplement
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his California supply; quite the opposite was true. Considering his recent success in opening up prolific oil fields in Southern California just as the industry was taking off, Doheny's decision to leave is an anomaly. He should have taken advantage of his position to dominate the next phase of development; instead, he gambled on Mexico. Thereafter, Doheny tried to create a Mexican market for fuel oil and did not reenter the American market until massive overproduction forced a spillover back into the United States a decade later. Even when he returned in 1908 to oil exploration in California, after establishing his Mexican business, there was no connection between the two enterprises. Thus, Doheny's venture in Mexico was the inverse of what would normally happen and reflected his desire to build a new, large-scale industry virtually free from direct competition.

The highlights of Doheny's first years in Mexico have been portrayed as a relatively straightforward progression. First, he went to furnish oil for the Mexican Central Railroad. Then, at a crucial moment, the railroad reneged on its contract and left him without a market. Ultimately, he survived by selling asphalt for street paving until he brought in several large gushers in 1910 and began selling oil abroad. Missing from standard accounts is a sense of the dynamic conditions of the Mexican oil industry at its inception and the complex work Doheny performed in financing his companies, building a market, and defining his long-term goals. Like California, Mexico had been the scene of periodic attempts to establish an oil industry for almost forty years before Doheny arrived. One of the earliest reports from the 1860s noted that prospectors were already locating oil springs on both coasts as well as in the valley of Mexico. In May 1865, for example, several American residents of Mexico, along with a number of New York capitalists, obtained oil lands and exclusive refining rights from the government and were convinced of the "inconceivable value" of Mexican oil. A few years later, a Pennsylvania oilman exclaimed that the surface indications of oil around Juan Felipe, situated along the Gulf Coast in an area Doheny would eventually control, were a virtual Niagara Falls compared to anything back home and "must be seen to be believed." An official report on the resources of Mexico in 1891 noted the abundant "deposits of asphaltum, liquid petroleum, and bituminous coal." What no one realized, though, was how challenging the physical conditions of working in Mexico could be, where the long distances, hostile climate, and lack of infrastructure had left the petroleum wealth of the nation relatively untouched.

By the early 1890s, however, economic activity of all kinds increased dramatically under President Porfirio Díaz, as his tight political rein and desire to modernize the country opened the floodgates of capital
investment. The foreign business community, aided by a few Mexican investors, spurred a desire for internal improvements similar to those in the United States, including a dramatic increase in the demand for heating and illuminating oil. When available, these petroleum products came from the United States at a prohibitive cost. But the rising demand for oil, coupled with the reports of the prodigious number of petroleum exudes, inspired new attempts to exploit the resources of the country. When Doheny and Canfield made their first prospecting trip to Mexico in May 1900, there were several petroleum companies already hard at work. The largest and most well established was the Waters-Pierce Oil Company, which did not produce oil but sold refined products on the local market. Under the aggressive leadership of Henry Clay Pierce, the company had been supplying processed oil to Mexico for over twenty years through its ties to the Standard Oil Company in the United States. In this way, at least, by implanting a desire for petroleum products, Pierce was perhaps the true pioneer of the industry.\(^3\)

Eventually, Pierce also turned to importing crude oil from the United States and refining it in Mexico to escape the import duties on refined products. At this time, using native crude was still considered impractical, but Pierce was well aware of the various efforts to discover a suitable supply of Mexican oil. In March 1900, for instance, a Waters-Pierce official reported on the progress of two well-funded English companies that were exploring the oil deposits in Papantla, Veracruz, as well as a third group of investors hard at work in Oaxaca. There were also reports in the *Mexican Herald*, the advocate of American business interests, claiming that the fuel question in Mexico was being answered by a “strong combination of leading Mexican gentlemen,” who had acquired a large tract of land on the Pacific coast. After receiving a barrage of “bogus reports regarding oil finds,” however, the paper stopped printing them indiscriminately but maintained that the oil supply in Mexico was no longer in doubt.\(^4\)

Doheny and Canfield arrived in the midst of this activity in the spring of 1900, having been persuaded to examine the oil prospects of the country by A. A. Robinson, the president of the Mexican Central Railroad. Robinson had headed up the engineering department of the Santa Fe, then became a vice president and general manager of the railroad. In 1893, Robinson had resigned from the Santa Fe to become president of the Mexican Central, and based primarily on the Santa Fe’s experience, Robinson eventually decided to use oil on the Mexican Central, hoping to develop a native supply in Mexico. As Doheny recalled, Robinson “knew of my connection
with the development of oil in Los Angeles and was anxious for me to undertake the discovery of petroleum anywhere along the lines of his railroad in Mexico."

Apparently, Doheny did not take the proposition too seriously in the beginning and asked Canfield to join him on what they assumed would be no more than a paid vacation: "Having succeeded beyond our utmost expectations, we went to Mexico for a rest, deciding that we could rest better while prospecting." But Robinson was serious enough to promise Doheny that he would "facilitate in every way possible our efforts to develop [any oil property] and make a contract with us, if we were successful, to purchase the oil for fuel for the Mexican Central Railway."6

Robinson's offer was too good to pass up. Here was a chance to combine raw adventure in Mexico with the promise of the same sort of financial arrangement with the railroad that Doheny had enjoyed in California. Furthermore, having prospected in Mexico during his mining days, Doheny did not doubt its potentially vast resources. The first expedition took place in the spring of 1900, with the oilmen prospecting from the back of Robinson's private car. By this time, they had been joined by A. P. Maginnis, who was an old friend of Robinson's and was probably responsible for bringing Robinson and Doheny together. When this preliminary scouting trip revealed promising oil exudes along the Central's line into Tampico, Doheny worked for several months buying up as much of the surrounding territory as he could lay his hands on.7 Doheny's enthusiasm for the project was clearly evident in a September 1900 letter to a prospective investor: "Without wishing to make it appear that we are extravagant in our ideas, we do not feel at all timid about saying that the Mexican lands which we have acquired have all the earmarks of containing within their limits oil territory equal in oil value per acre, and many times greater in extent, than the Bakersfield district in California."8

Doheny and Canfield incorporated the Mexican Petroleum Company of California on December 18, 1900, to develop their newly acquired properties. The list of directors included Maginnis, who would become the first superintendent; W. G. Nevin, a director of the Santa Fe's California oil properties and the general manager of the Santa Fe lines west of Albuquerque; E. D. Kenna, the general solicitor for the Santa Fe and one of the Southwest's best corporation lawyers; H. M. McIntosh, a Chicago capitalist who had financial interests in California real estate; and Russell J. Waters, a former bank president and a current Republican congressman from Los Angeles. The remaining list of directors and investors read like a "Who's
Who” of Santa Fe officials and Los Angeles businessmen, including Santa Fe president E. P. Ripley and chairman of the board Aldace F. Walker, as well as a host of financiers, attorneys, and judges. There was even a respectable contingent of local oil men that Doheny had fought in the mid-1890s, including his old nemesis from the Oil Exchange, R. H. Herron. Typically, oil companies used inflated capitalization figures to impress unsuspecting investors, but this was a close corporation with no intention of propagandizing its work. Clearly, they were not giving away any secrets when they listed the capital stock at just $225, a token $5 apiece for the initial 45 investors.9

For the next several years, in fact, Doheny struggled to keep information about the company’s progress from leaking out to the press, but the Spindletop blowout in Beaumont in January 1901 made that almost impossible by creating a climate of speculation. In the months that followed, Texas oil fever spread as far south as Tampico, Mexico, where the residents were convinced that the Mexican Petroleum Company was hiding a fortune on its 465,000 acres outside of the city. When drilling began on April 30 near the Ebano station on the Mexican Central line, there was no denying the local interest. One Tampico reporter was certain that “oil in Mexico means gold, and if one-half of the hopes of the company now in the field are realized it means that Tampico and the Gulf Coast of Mexico will see an era of prosperity never before witnessed in the history of the republic.” However, in spite of the number of oil speculators and lease hunters prowling around town during the summer, the Mexican Petroleum Company put up what were described as “immovable barriers in the way of a rubber-necked public” by withholding information about their work.10

Doheny was more forthcoming with the Mexican government when he sought and received a formal ten-year concession to legitimize his operation. Under the terms of the agreement, the government would suspend the import duties on certain building materials and exempt the company from all federal exactions except the stamp tax. In return, Doheny promised to meet certain development targets and agreed to sell oil to the government at ten percent below wholesale. A few days before this concession took effect, on May 14, 1901, Doheny struck oil at Ebano. At fifty barrels a day, this was not the gusher Tampico residents had been hoping for, and Doheny waited seven months before telling the local press that the company had a producing well.11

In the meantime, the foremost problem was to implement the plans for selling this oil to the Mexican Central. According to Doheny, he had been offered a specific contract with the railroad in August 1900, several
months before he incorporated the oil company. Supposedly, the railroad agreed to purchase oil from him at $0.90 to $1.20 per barrel, depending upon its point of delivery, while he agreed to convert the locomotives to oil burners at his own expense, maintain them with fuel oil, and cover any reconversion costs if he failed to keep pace with demand. But, as Doheny recalled, "the first effort on the part of the oil company to put this contract into effect was met by the statement of the chairman of the board of the Mexican Central that the contract had been abrogated." And in 1901, the chairman was none other than Henry Clay Pierce, the only man possibly threatened by Doheny's presence in Mexico.¹²

Doheny blamed Pierce for scuttling his plans, but the situation was not as simple as he made it out to be. There was no question that the Mexican Petroleum Company had been formed to sell oil to the railroad, but there was some doubt about the nature of that commitment, and Doheny seems to have become involved with the Mexican Central at the wrong time. In March 1901, a group of American investors linked with the Standard Oil Company and including Henry Clay Pierce, started buying up shares of Mexican Central and soon controlled 55 percent of the stock. With that control, they elected a new board of directors and took over the management of the railroad. Apparently, Robinson tried to block the takeover but ultimately failed. When it was over, Robinson was still president of the company, but ten out of seventeen members of the board had been replaced, and Pierce had been elected chairman. To make the line more profitable, Pierce noted that his efforts would be directed "to the physical betterment of the property and increasing its traffic through the development of the resources of Mexico."¹³

When the immediate plans of the new management did not include the use of Ebano oil on the Mexican Central, Doheny blamed it on Pierce's treachery. But if Doheny had actually had an enforceable contract with the railroad, Pierce would not have been able to cancel it without some legal consequence. Previously, Doheny had never hesitated to go to court to protect his rights, yet he apparently accepted this devastating turn of events without so much as a whimper. Since such a reaction would have been uncharacteristic for Doheny, it is probably that his supposed contract was not a signed agreement but a long-term objective based on Robinson's desire to use Mexican fuel oil. That understanding might have fallen victim to the machinations of Henry Clay Pierce, who was regarded as a brilliant but unprincipled businessman who "liked to pull fast ones." But there were also larger financial considerations at work. Specifically, a report from the Mexican Central in November 1901 revealed that the railroad still planned
to use oil but that it had “no way of securing the much desired fuel at a moderate cost.” From the railroad’s perspective, Doheny’s production was as yet inadequate, and imported oil from Texas or California was too expensive.¹⁴

Doubtless shocked to find himself without a guaranteed market for the first time in a decade, Doheny singled out Pierce for blame and overlooked his own miscalculation. But this episode forced him to widen the net for potential customers by becoming more outspoken on behalf of the business, reminiscent of his early experience in Los Angeles. In August 1901, for example, Doheny explained to the local press that he and Canfield had revolutionized the fuel situation on the West Coast by discovering the great oil fields of California and proclaimed that “we are going to do the same thing for Mexico.” Nevertheless, Doheny was still worried that the Mexican Petroleum Company might somehow be unfairly associated with unscrupulous oil promoters and tried to keep specific information to a minimum. As he explained it:

The Mexican Petroleum Company does not feel disposed to furnish material and advertising for professional boomers. On the strength of our developments many persons attempt floating oil propositions imposing bogus stock upon uninformed persons. People familiar with the nature of oil fields know that one man might have a valuable claim and another, with adjoining land, a claim absolutely without value. When the time comes the Mexican Petroleum Company will make a statement to the public as to what it expects to do. At present the less given by the newspapers the better.¹⁵

Still, he could not stall an eager public for long, and, a few weeks later, on his return trip to California, Doheny revealed that the company had no fewer than 600,000 acres in its possession in the Tampico area. Obviously, his earlier silence had been necessary to keep the oil boomers at bay until the company had all the property it needed; with that accomplished, Doheny announced that he needed about 600 men to clear the land to make way for the drilling crews. To date, the company had more than a million dollars invested in the operation, and, Doheny added, “we have not been in the habit of using money to no purpose.” But he was not yet willing to state what it was. Instead, he offered a compromise: the “Mexican public will demand that we explain some of the plans of our work, and by October we are confident that there will be something of unusual interest to give out regarding what we have found up there.”¹⁶
Doheny missed this deadline by a couple of months, but in December he formally announced that Mexico—not just his company—had an oil well producing about 400 barrels per day. Actually, the Mexican Herald had already published several reports, going back to October, stating that the Mexican Petroleum Company had oil in paying quantities, and within two weeks of those reports, at least five new companies had formed to develop oil prospects. Although none of them was in the Tampico area, Doheny was careful not to tip his hand.\footnote{17}

As before, he also made a point of assuring everyone that, unlike these other companies, his operation was not putting any of the public's money at risk, and he went out of his way to discredit stories that the company had been selling stock in the market: "We have no small investors in our company. The men interested in our concern are involved to the extent of $5,000 and over, none less. Some of us have invested $200,000 in the enterprise. We do not want any man to invest his savings with us. The oil business is too uncertain for the laboring man to tamper with." Then, "as a way of placing the company right in the minds of the public," Doheny said he would repurchase the shares of any stockholders who were dissatisfied with their investment and offered to pay fifty cents a share for any returned stock plus a ten percent profit on the investment up to that point. All of this was intended to validate his longstanding claim that the Mexican Petroleum Company had not been using the names of wealthy investors to promote a swindling scheme aimed at the unsuspecting public.\footnote{18}

Why Doheny felt that he needed to allay the fears of people who had not been offered shares in his company in the first place seemed inexplicable until he revealed that he had just returned from a lengthy visit with President Diaz. At that meeting, Diaz told him that he did not want to see Mexico exploited by the kind of stock manipulation taking place in the Texas oil fields. With that concern in mind, Doheny directed his comments primarily at the capital, where several of Díaz's associates, and eventually the president himself, were shareholders in the Mexican Petroleum Company. Apart from the potential problem of speculators, Diaz was so afraid that Standard Oil was interested in producing oil in Mexico that he made Doheny promise never to sell his oil holdings to Standard Oil without giving the Mexican government the first option to buy him out.\footnote{19}

Thus, even though he knew the situation was more complicated, Doheny may have accused Pierce of interfering with his contract with the railroad as a way of substantiating his independence from the oil trust. It is also possible that Doheny's promise to Diaz kept him from selling the company when the Mexican Central postponed its conversion to fuel oil.
In later years, Doheny would recall that the loss of his anticipated arrangement with the Mexican Central was so devastating that it scared several of his largest stockholders into pulling their money out of the company. This was part of the reason that Doheny sold the Petroleum Development Company in Bakersfield to the Santa Fe in April 1902. But as the situation continued to worsen into the summer, at least one of Doheny's investors suggested that they sell a half interest in the company to either Standard Oil or Waters-Pierce to give them the leverage they needed to break into the market. Obviously, Doheny resisted, not so much because of his promise to Díaz but from an increasing determination to find a market in Mexico beyond the railroad.20

The depth of the company's financial plight during this period is impossible to fathom, and the actual number of shareholder defections is unknown. But it is clear that the large capital expenditures tested the nerves of Doheny's associates and threw him back on his own resources a number of times. Nevertheless, he retained a pool of seasoned investors who were not likely to run at the first sign of trouble. Typical of this group was Richard C. Kerens, the individual who suggested that Doheny cooperate with Pierce. Based in St. Louis, Kerens had been instrumental in promoting a number of western railroad lines, including a partnership with Colis Huntington in the Los Angeles, Pasadena, Glendale Railway in 1890. Kerens had also invested heavily in mining property, including the Pacific Gold Mining Company of Pinos Altos, New Mexico, which had leased its mines to Doheny in 1890. The following year, Kerens had been appointed by President Benjamin Harrison to an intercontinental railway survey commission that conducted a lengthy investigation of the railroad systems of fifteen Latin American nations. When he finished that project in 1900, Kerens joined the initial group of investors in the Mexican Petroleum Company. Kerens's daughter was married to E. D. Kenna, the Santa Fe Railroad attorney, who was also on Doheny's board.

Kerens was perhaps most important, though, for his political influence. He had served on the Republican National Committee from 1888 to 1900 and worked closely with the powerful Mark A. Hanna during the two McKinley campaigns. Despite the fact that they had some obvious political differences, Doheny's friendship with the "political boss of Missouri" provided links to prominent Republican politicians and businessmen, which accounted for much of his early success. Finally, Kerens also made it his mission to meet on friendly terms with Henry Pierce, to the point of inviting him out on a private hunting trip the next time they were both in Mexico.21
With that kind of support, Doheny had no reason to panic as long as he could find a market for Mexican oil. In reality, though, heavy petroleum of the type found at Ebano had a limited range of uses: it could either be burned as fuel oil or refined into asphalt. Thus, with the collapse of the Mexican Central plan, there was only one alternative. The question was whether Doheny could break into the asphalt business. As it stood, the industry in Mexico was dominated by the Barber Asphalt Paving Company, a division of a larger asphalt trust that controlled the paving business in the United States and elsewhere. Barber had already done some work in Mexico and had just negotiated additional street contracts for several of the largest cities when Doheny arrived on the scene. Fortunately, though, Barber's position was not absolute. The failure of several companies to complete their projects more than ten years earlier had produced an official inquiry into how these contracts had been assigned. In particular, plans for covering streets in Mexico City had been on hold for ten years—until 1899—at which time the city council appointed a commission of lawyers and engineers to devise stringent guidelines for prospective bidders. With the new rules, the paving commission hoped to prevent fly-by-night companies from entering the bidding process altogether. Henceforth, officials would accept bids only from companies that were presently engaged in the paving business and could prove that they had satisfactorily laid pavements in at least two foreign cities.  

When the council offered new contracts for Mexico City in 1900, there were only three companies apparently qualified to submit proposals: the Barber Asphalt Paving Company of New York, the Assyrian Asphalt Company of Chicago, and the Neuchâtel Asphalt Company of London. When the British company failed to meet the submission deadline, the council began an exhaustive review of the two remaining bids, including an analysis of every aspect of each company's previous work. Initially, the commissioners declined both offers. The Chicago company could not substantiate its claims about past work, and although Barber Asphalt had documented reports on its work in New York, Chicago, New Orleans, and Newark, the company had used imported material from Trinidad and charged premium prices. Lacking an alternative, however, the commission negotiated a 15 percent reduction in fees and reluctantly accepted Barber's bid to pave seventy-five streets in the capital.  

These negotiations ended a month before Doheny arrived in Mexico and would have been part of his investigation of the local market. Clearly, challenging Barber's position in an open contest would be difficult, and if other cities adopted the same rules as had the capital, it would be
impossible. However, if Doheny could overcome the prejudice against new
companies, he stood a chance of competing against the established opera­
tors by undercutting the price, and his trump card was his six new wells at
Ebano. Instead of having to import raw material from Trinidad or even
California, as Barber had to, Doheny could produce asphalt from Mexican
oil. By the spring of 1902, the Ebano wells had literally paved his way into
the asphalt business in Mexico.24

What really cleared his path, however, was the collapse of Barber’s par­
ent organization, the National Asphalt Company. At the time, Barber was
the leading subsidiary of at least twenty companies that accounted for al­
most all of the asphalt work done in the United States. But after losing
several big-city paving contracts to independent asphalt companies, the
trust was placed in receivership in December 1901. The trust also lost a
protracted legal battle over the possession of a pitch lake in Venezuela,
supposedly the most valuable asphalt deposit in the world. Despite assur­
ances that the financial difficulties of National Asphalt would not affect
Barber’s work in Mexico, local officials were justifiably worried. And Do­
heny had been given an opportunity that he could not afford to pass up.25

The first order of business was to find a way to compensate for his lack
of experience. Knowing that he had price and accessibility in his favor,
Doheny decided to bring in an established company from California to act
as a reputable spokesman for the quality of his Ebano material. With that
arrangement in place, Doheny formally incorporated the Mexican Asphalt
Paving and Construction Company on June 18, 1902. The investor group
included the same core of individuals who had formed the Mexican Pe­
troleum Company: Charles Canfield, A. P. Maginnis, Russell Waters, and
Charles Wellborn, a Los Angeles attorney and long-time associate of Do­
heny’s who had taken over for W. G. Nevin after his death in January. Join­
ing them were J. A. Fairchild and E. W. Gilmore, the co-owners of the
Fairchild & Gilmore Asphalt Company, with offices in San Francisco and
Los Angeles.26

Two weeks later, Fairchild & Gilmore wrote up a promotional letter
touting Mexican Asphalt. Without identifying themselves as directors of
Doheny’s company, they stated that they had been in the asphalt construc­
tion business for over fifteen years and were familiar with every type and
grade of commercial asphalt. After testing samples from Ebano, they pro­
claimed it “superior to nearly all of the other brands of refined asphaltum
which are at present offered in the market to contracting firms laying as­
phaltum pavements.” While they previously had relied upon California as­
phalt exclusively, they were prepared to switch to the Mexican product as
soon as it was available: "We have the utmost confidence in its quality and superiority and do not hesitate to recommend its use wherever asphaltum pavements are to be laid." Within a few months, officials in Mexico City were experimenting with Ebano asphalt, despite a fair amount of interference from the established companies.27

Along with this promotional campaign about his paving material, Doheny also released more information about the overall extent of his operation, much of it coming through A. P. Maginnis. In August 1902, for example, Maginnis pulled out all the stops in an interview for the *Mexican Herald*:

> I am convinced that there is a larger supply of oil in the Republic of Mexico than will be found in the states of Texas and California combined. . . . Everyone knows what the discovery of large quantities of oil means for the future of Mexico. . . . I tell you I see such a brilliant future for Mexico as no man dreamed of a few years ago. I have no fears of contradiction when I say that our own property alone will be pumping 200,000 barrels a month within a year. . . . For almost two years now we have worked quietly and with as little publicity as possible. We were not in the promoting business. We were sure we had a rich commercial enterprise in our hands, and then too there were other lands which we had not yet acquired and we didn't want to talk too much. But now we have everything fixed up. We have found oil. We have the field and the market, and we don't mind taking the public into our confidence for the sake of its own information.28

Doheny gave a more concrete appraisal of the company's assets a few months later. At that time, they had eight producing wells at Ebano with a combined capacity of 600 barrels per day, or 18,000 per month. With the completion of the four wells being drilled, Doheny thought that the company could produce 1,000 barrels per day and expected to reach 5,000 barrels by January 1904, shy of Maginnis's prediction but impressive nonetheless. In total, the Mexican Petroleum Company had invested $4 million in their properties and was about to add another $500,000 to build about 95,000 barrels of tank storage and a six-mile railroad spur to connect the oil camp with the Mexican Central line. To complete the job, the company had about 30 American and 350 Mexican laborers working as hard as they could. With respect to marketing his product, Doheny acknowledged that, although asphalt "adds greatly to its commercial value, our aim is to dispose of the bulk of our oil for fuel."29

For all of its preparations, however, the Mexican Petroleum Company had not yet sold a single barrel of oil. Ironically, the first prospective
customer was the Waters-Pierce Oil Company, which sent some of their managers on an inspection tour of Ebano in January 1903. They were escorted around the property by Herbert G. Wylie, another Los Angeles well driller, who had been in control of Doheny's operation at Bakersfield and who had taken over Maginnis's position as superintendent in Mexico the year before. Wylie was proud of the job he was doing at Ebano and told Doheny that the Pierce people "were astonished at the progress made here during the past few months and at the amount of work now being carried on." Having convinced them that "the next six months would be the decisive period in our work here," Wylie expected Pierce to wait until then before making any decision. He also suspected that they "had in mind the purchase of the property, rather than the production." In the meantime, Waters-Pierce requested sixty barrels of test oil for their refinery.

In addition to giving promotional tours of the Ebano facilities, Wylie was also responsible for explaining the large sums of money spent at the camp to the stockholders of the company. Apparently, the grumbling about excessive capital expenditures was still a problem, and Wylie was on hand at the January 1903 annual meeting to give an accounting of his work. Wylie extended the same challenge to the shareholders that he did to pro-
spective customers: come and see for yourself. He was certain that anyone who had been to Ebano in the past and revisited it now would approve every penny spent on improvements, and he personally assured Doheny that recent investments would "commend themselves to any one who will give them consideration."  

Doheny was thoroughly convinced that Mexican Petroleum had "the most complete oil camp in the world." The company's own railroad ran from the Ebano station of the Mexican Central line to the company's refinery and out to the wells. Their oil-burning engine, the first in Mexico, was a working advertisement for the business. The camp also had a twenty-two-mile water line to the Tamesi River fitted with high-pressure pumps and boilers. An existing thirty-barrel-a-day refinery, used to make samples of Ebano asphalt, was being replaced by a large asphalt plant that could handle up to 12,000 barrels of oil a day. Alongside the refinery, the company was building a cooperage plant capable of turning out 1,000 barrels a day in which to ship the asphalt to market. In addition, the company had all the sundry elements necessary run a self-sufficient operation: machine shop, blacksmith shop, saw mill, electric plant, ice plant, and warehouse. The whole camp employed a workforce of 50 Americans and 700 Mexicans.  

Clearly, there was a lot going on at Ebano; even if Doheny had not begun to promote his activities, it would have been hard to keep his business under wraps any longer. In fact, as he laid the groundwork, several other companies came in behind him. Although not on the same scale, these other efforts were usually tied in some way to one of the competing railways in Mexico. In Guerrero, for example, the management of the Mexico, Cuernavaca, and Pacific Railway had experienced oilmen looking for oil along its tracks, and the Southern Pacific purchased a number of wells in Sonora for its Mexican subsidiary. Among the more outlandish schemes was a proposal from a Texas company to run their excess production from Beaumont through a three-inch pipe to Mexico City. As impractical as this was, it reflected a desire by many businessmen in Mexico to have access to foreign oil to make up for the slow pace of domestic production. Because the duty on imported oil made such plans impractical, businessmen began to work for a repeal of the law.  

The campaign to remove the tax originated in 1901 with the American Smelting and Refining Company, part of the Guggenheim empire. American Smelting already used oil at its New Jersey plant, planned to burn Beaumont oil in a new smelter in El Paso, and wanted to import Texas oil for their plants in Monterrey and Aguascalientes. Disclaiming any special
privilege, the company’s chairman, David Guggenheim, argued that removing the import duty would benefit every industry in Mexico. The petroleum age was here to stay, Guggenheim asserted, and the Mexican government needed to encourage its use from every available source. Guggenheim’s appeal was well-founded but failed to account for the nascent oil business in Mexico, which had the support of the Diaz administration. Besides, there was no guarantee that eliminating the import duty would actually lower oil prices in Mexico for other consumers. Most Mexicans, especially those in government, believed that the Standard Oil Company controlled Texas oil and fully expected the oil trust to take advantage of any change in the law. And, according to a former employee, Waters-Pierce was already cheating on the duty by importing refined oil that had been colored with just enough crude—about 10 percent—to pass inspection. After the company had paid the lowest duty rate for this oil, the additive was removed, at virtually no cost to the company, and the resulting refined product was sold at full price. If this was true, then reducing the oil import duty would simply add another layer of profit for the Standard Oil organization.³⁴

Rather than reducing the oil duty, the Mexican government did all it could to encourage efforts to produce oil in Mexico, including the addition of a new law in January 1902 which offered the same privileges to any producer that Doheny had received in his concession six months earlier. The major difference was that, whereas Doheny had asked only for tax abatements and a reduction of import duties on industrial materials, the new recipients received one-year permits to explore for oil on vast stretches of public land. Once they had located and developed an oil prospect to the point of producing at least 2,000 liters, or about 12 barrels, of oil per day, they would receive an official concession to fully exploit the source. Moreover, the first company to discover oil in a specific territory could establish an exclusion zone of up to three kilometers from the center of the well to keep out competitors.³⁵

Needless to say, Doheny was not happy about a law that allowed others to come in under better conditions than he had received in 1900, especially when he had been promised an exclusive right to the privileges he had negotiated. He was particularly irritated with Weetman Pearson, the famous British contractor, who had come to Mexico on a major construction job and ended up rivaling Doheny in the oil business. Whereas Doheny and Diaz met cordially on a few occasions, Pearson and the Mexican president became close personal friends. And when Pearson received liberal concessions to begin exploring for oil in 1901, Doheny resented him for it.
Certainly, Doheny was not wrong in perceiving a change of allegiance within the Díaz government. In fact, his conflict with Pearson signaled an increased friction between American businessmen and President Díaz over preferential rights to European investors in Mexico.36

Initially, Díaz’s modernization policy favored heavy American investments in basic industries and led businessmen to feel that their money and property were safer in Mexico than in the United States. But the result exceeded Díaz’s expectations, as United States investors began to control major sectors of the economy. By the early 1900s, American capital made up 70 percent of the total foreign investment in Mexico. In the years leading up to the revolution in 1911, Mexican leaders concluded that this overwhelming presence of American economic power threatened their nation’s stability and increased the likelihood of attempted political or military intervention by the United States. The most aggressively anti-American among Díaz’s advisers was his finance minister, Jose Yves Limantour, who not only sought out European investments but seemed to have a special antipathy to Doheny’s oil business. Doheny recalled that, for whatever reason, Limantour “tried to create an atmosphere of dislike, almost contempt, for our efforts.”37

It was also clear to many observers that it was not simply the weight of American investment that was cause for concern but the mercenary attitude that came with it. Even the Mexican Herald, the advance agent of the American business community, acknowledged a tone in Yankee capitalism which was hard to endure:

If there is in all the Mexican republic one American who makes his home there with any other ultimate object than the dollar, he is the exception that proves the rule . . . Americans in Mexico want to make money and make it fast . . . From our early years we have associated Mexico with treasure. Romance, beauty, chivalry, tragedy—all have figured in our imagination, but first and foremost has been treasure . . . In general your American is for amassing wealth in Mexico and bringing the wealth home. There are Americans in Mexico who represent all that is best in Americanism, but unfortunately their modest incandescents are too often outshone by the sixty-candle arc lights of the bad Americans.38

Fortunately, except for Limantour, most Mexican officials tended to congratulate Doheny for his efforts to develop the native oil industry. Of course, he had been actively campaigning on behalf of his work from the very beginning, escorting prominent Mexican and American visitors to
Ebano on a regular schedule. On one trip in early 1904, Doheny invited the congressional representative from Jalisco, Tomas Moran, to inspect the development of the oil field. Moran was duly impressed with the facilities and even more so with “the energy, determination, and perseverance of Mr. Doheny and his associates.” At one point, Moran was accidentally splashed with oil from one of the wells and was immediately advised that he “had been baptized in oil” and would henceforth be an oilman. If this was not a planned event on the tour, it should have been, considering Moran’s reaction: “I believe I will be one,” he recalled later, “as my experience at Ebano has converted me to the belief that we have lots of oil right here in Mexico.” Moran, who went on to invest in the company, was certain that Americans like Doheny would always be welcome in his country.39

No doubt, many other Mexican leaders received similar treatment and came to the same conclusion, and Doheny missed no opportunity to convert officials from outside of Mexico, either. A month before Moran’s visit, Meredith P. Snyder, the Democratic mayor of Los Angeles, equated what he saw at Ebano with what had occurred in Los Angeles a decade earlier, and there was no doubt in Snyder’s mind that oil had been “the salvation of California.” In 1906, as the annual convention of the International Institute of Geologists met in Mexico City, Doheny personally escorted a trainload of government officials and geological experts on an inspection tour of the oil wells.40

Clearly, Doheny had everyone’s attention and was doing everything he could to convince them of the practical applications of oil. Apart from its use as fuel, it could pave the roads and provide gas for lighting, heat, and other domestic purposes. As Doheny incorporated all of these elements into his campaign to market Ebano oil, he actually benefitted from the temporary shelving of his agreement with the railroad. If nothing else, it forced him to concentrate on asphalt and gas production as the most visible signs of progress in Mexico. Mexico City was the obvious place to begin this process, and, in January 1904, Doheny brought in P. C. Smith, another California partner, as the chief engineer of the company. Doheny also hired an experienced contractor from the Sicilian Asphalt Company of New York to oversee paving operations. The latter had directed the paving of Fifth Avenue and Wall Street and was expected to put the new company on a thoroughly professional level. Finally, in what was one of the best decisions of Doheny’s career, he picked Harold Walker, a young attorney from New York, to become the general manager. Walker was the son of former Santa Fe chairman Aldace F. Walker, one of the original investors in Mexican Petroleum. After his father’s death, Walker went to Mexico in 1903 to in-
vestigate the value of the oil company stock, and that initial contact led to a thirty-year association with Doheny. Walker was a graduate of Columbia Law School and had worked for a New York law firm before he took control of the asphalt company, and he soon became the principal attorney for all of Doheny's Mexican operations.41

By the time Doheny began work in Mexico City in 1904, about 370,000 square meters of asphalt had been put down by the Barber Asphalt Company over the previous two years. By February, Doheny's Mexican Asphalt Company had contracts for another 100,000 meters in the capital and additional work in Guadalajara. As he anticipated, this work proved to be a
bargain for everyone involved. For example, with the four successive contracts Mexican Asphalt had with the city of Guadalajara, the company laid a total of 145,000 square meters of paving over a four-year period, for which it received approximately $1,140,000 in fees, or $7.85 per square meter. Then, in 1908, the company put down an additional 50,000 meters of pavement at $9 per meter. By contrast, the Barber Asphalt Company had been charging $11.00 to $11.50 per meter.\(^4\)

In addition to the cost benefits of having his own oil supply, Doheny was able to save even more money because of a new portable asphalt plant invented by his partner, P. C. Smith. The Smith Asphalt Preparer, touted as the “latest and most improved asphalt plant that has yet been devised,” was simply a compact asphalt mixer mounted on a freight car, which eliminated the need to set up a temporary site at every job and enabled the company to go to work almost immediately. Smith also adapted oil burners to the elements used to heat sand and asphalt prior to mixing. Previously, it took time to heat up coal, and fuel was wasted as the coal continued to burn while it cooled down. Now, using oil, the fire could be lit instantly and extinguished at the beginning and end of a paving run. The Smith oil burner not only saved time and fuel but required only two men to produce 800 square meters of two-inch wearing surface per day, well above the production of any permanent plant in Mexico City.\(^5\)

Given these economies, Doheny continued to win contracts to pave hundreds of streets in Mexico City, Guadalajara, and Tampico. He sent Ebano asphalt to several major American cities, such as New York, New Orleans, and Los Angeles. His success using native material even prompted the Mexican Congress, in 1908, to pass a law requiring the use of Ebano asphalt for any future paving work in the capital as a way to foster sales and growth of home products and industries. Asphalt production had become a profitable, if secondary, branch of Doheny’s business.\(^6\)

Doheny’s prospects for the fuel oil business brightened considerably in the fall of 1904, when the Mexican Central Railroad finally consented to test his product. After three years of financial reorganization, the Mexican Central was completing an aggressive development program to modernize the road and expand its mileage. The railroad had not kept up with capital improvements and found itself falling behind its competitors. In addition, although gross earnings had been increasing over the years, the profit margin had been eaten away by a declining exchange rate between Mexican silver and American gold. Although these conditions affected every line in Mexico, the Central seemed the hardest hit. Poor performance and the failure to pay dividends prompted the 1901 takeover that made Henry
Pierce chairman of the board. To pay for the revitalization program, however, the new board assumed $20 million in bonded debt in 1902 and 1904 just to make basic improvements in track and rolling stock. With this added burden, the declining peso, which dropped in value from $.49 in 1900 to below $.40 in 1903, became a constant threat. The impact of the devaluation was so severe that the Mexican government subsidized the interest payments on railroad bonds and even passed a decree in 1903 allowing all the lines to increase their rates by 15 percent to cover their currency losses.\footnote{In light of these factors, it was no wonder that the Mexican Central backed away from a conversion to fuel oil and remained skeptical of Doheny’s claim that his Ebano wells could produce all the oil it needed. By September 1904, however, Pierce anticipated a surplus for the year and realized that he needed to complete his program of improvements before the first set of bonds reached maturity in 1907. This was the time to make the transition to oil.\footnote{If Pierce needed to justify the decision to proceed cautiously along these lines, he had only to point out the experience of the Tehuantepec Railroad, a newly reconstructed railway owned jointly by the Mexican government and Weetman Pearson. In 1899, Pearson had won a contract to rebuild an existing two-hundred-mile-long railway across the Isthmus of Tehuantepec in conjunction with a harbor construction project at Coatzacoalcos. With that work underway, Pearson got interested in oil after an unplanned layover in Laredo, Texas, in April 1901. By chance, this was just a few weeks after the Spindletop gusher came in, and, catching oil fever along with the rest of the population, Pearson returned to Mexico a determined man. After acquiring oil properties on the Isthmus, Pearson set out to duplicate Doheny’s recent success at Ebano by supplying the Tehuantepec engines with his own oil. The railroad ordered six oil-burning locomotives based on Pearson’s assurance that he was certain to find an adequate supply of petroleum.\footnote{Unfortunately, none of Pearson’s wells on the Isthmus met his expectations and never approached the requirements of the Tehuantepec Railway. This set Pearson’s oil company off on a spate of wildcatting across southern Mexico, but to no avail. Although the new engines were a great success, the oil had to be imported by tank steamer from Beaumont, and, by early 1905, Pearson thought he might have to seek out oil lands in Texas to fulfill his obligations to the Tehuantepec. Pearson’s failure was a good object lesson for the Mexican Central, as it was considering making the conversion to fuel oil, but Doheny claimed to have the oil that his British counterpart...}...}...
lacked. Since he had proved the utility of the fuel on his own engines at Ebano, Doheny felt that the Mexican Central was being either overly cautious or deliberately evasive. In the meantime, Doheny hedged his own bets. All the major railroads in Mexico were testing his oil simultaneously: the Mexican Central, the Interocceanic, and the Mexican Railway, Ltd. Previously, the Mexican Railway Company had been importing coal briquettes from Wales, while the Interocceanic and the Mexican Central received almost all their fuel from coal fields in the United States. The Interocceanic had actually been experimenting with fuel oil since the fall of 1902, when officials requested 100 barrels of Ebano oil and tested it against a similar amount from Texas. Doheny’s liaison with the railroad thought that “it [would] be easy to close a deal” if the tests proved satisfactory, but for some reason they were still experimenting two years later. The Mexican Central began its tests in 1903, although it was initially interested in using the oil for heating and rolling iron in its manufacturing plant.

Curiously, the first engine tests were not made with fuel oil; instead, they were made with a combination of coal dust and asphalt, a mixture concocted by P. C. Smith of the Mexican Asphalt Paving Company. Because the Mexican Central’s coal came from as far away as Philadelphia and Baltimore, it contained a lot of dust by the time it had been jostled all the way to Mexico. Smith’s solution was simply to mix the coal dust with about ten percent asphalt to produce an excellent fuel that, unlike oil, did not require any modification of the burners or the fire box.

Although Smith’s idea was cheap and practical, it left the railroad dependent on imported coal. Unfortunately, the quality of Mexican coal was inferior and the cost of producing it prohibitive—a combination of factors, according to one mining historian, that literally “drove consumers to oil or imported fuel.” But transporting coal from the United States or Great Britain introduced its own set of problems. The 70,000 tons that the Mexican Central imported from the Northeast every month left the railroad vulnerable to any number of hazards along the route, from traffic jams to labor strikes. Importing was also a major source of financial strain, since the company had to set aside a large number of cars to haul the coal and had to pay for it in American currency.

And yet, the only thing worse than sticking with a bad situation would have been a desperate leap into a more precarious one, as the Tehuantepec’s predicament showed. That railroad had survived because it was a short, two-hundred-mile line with only a handful of oil burners. The Mexican Central, on the other hand, was more than fifteen times as large, and
an equivalent miscalculation could have been catastrophic. Doheny, of all people, knew the consequences of pressing for large oil contracts before he was ready to handle them, and, at one point during the summer of 1904, he admitted that the Mexican Petroleum Company was also unwilling to make any fuel oil contracts "until it is in a position to carry them out without fail."\(^{32}\)

Up to that time, Doheny was producing a small but steady supply of oil. It was enough to get the asphalt business started and keep the storage tanks full, but nowhere near the thousands of barrels a day that the Mexican Central would require. Doheny made a huge step forward in April 1904, however, when the company drilled its first official gusher, which blew in at 1,500 barrels per day and gave him the proof he needed that there was an extensive reservoir of oil at Ebano. If nothing else, it at least impressed his stockholders, who tripled a request for $250,000 in bonds once the gusher had been flowing for two months.\(^{33}\)

Doheny needed the money to dredge out an existing gully between Mexican Petroleum's railroad line at Ebano and the Panuco River, some ten miles to the south. The new well actually sat in the middle of this gully and was vulnerable to periodic flooding. Doheny wanted to create a permanent canal, in part to protect the well, but also so that oil could be loaded directly onto barges and steam tugs and sent down the waterway to the river and out to the port of Tampico. A system like that would make the company completely self-sufficient. With additional storage facilities and a fleet of ocean tankers along the Gulf, Doheny believed, they would have "free access to the markets of the world."\(^{34}\)

Apparently, it was at this point in January 1905, rather than earlier, that Doheny was perceived as a potential threat to the Waters-Pierce Oil Company. In fact, there was a great deal of speculation going on that an oil war was brewing between the two American companies over the gasoline market in Mexico. While it was true that Doheny could manufacture gasoline as a by-product of topping fuel oil and making asphalt, it was a small percentage of the final product. Nevertheless, to keep him from putting what he had on the market, Waters-Pierce lowered the price of gasoline for its industrial customers, mostly mining companies, who might be tempted to switch suppliers. One mine owner stated that a Waters-Pierce agent made repeated offers to lower his fuel bill if he would promise not to sign a contract with Doheny. The mine owner refused to be cornered in this fashion and was surprised to receive an unsolicited price cut anyway.\(^{35}\)

Since Ebano fuel oil was usually taken straight from the well, however, a better alternative would be to tie up Doheny's oil with a contract to
supply the Mexican Central as soon as possible. Perhaps that was one of
the reasons, along with the economic factors discussed earlier, that the
Mexican Central made its first real test of Ebano oil at precisely this time.
In spite of his motivation, though, Pierce could not hurry along a review
process that seemed to take forever. Doheny, at least, was running out of
patience, as the Mexican Central conducted second and third trials on the
oil between February and May 1905 and two other railroads pursued simi­
lar experiments.\(^56\) Although the tests went fairly well, a lot of foot-dragging
occurred behind the scenes, as the railroads negotiated the terms of their
proposed contracts, and Doheny was uncharacteristically pessimistic in
early May when he vented his frustration to the press:

> There is one great source of wealth down there as to which myself and
associates have been sorely disappointed. I refer to fuel oil. There is abso­
lutely no demand for it. The railroads won't have it except at a prohibitive
rate, and they will not use it for power. For the last four years we have been
producing and storing it, and haven't sold a barrel. A single well belonging
to us has given forth half a million barrels in a year. There is enough be­
longing to us to supply the demand of the world, and yet it is about the
most valueless stuff imaginable under existing conditions.\(^57\)

Doheny’s assertions to the contrary, the railroads still had legitimate
concerns about the quality, if not the quantity, of the oil. For one thing, its
high asphalt content made it harder to burn than either California or Texas
fuel oil. For another, the Ebano oil gave off a tremendous amount of
smoke. California oil had been a real improvement over coal because it
was a clean-burning fuel. Mexican oil was just the opposite. This issue was
an insurmountable problem for the Mexican Railway, because their pas­
enger trains passed through a number of tunnels along heavy grades. Un­
der such conditions, the smoke and gas thrown off by the oil burners could
be deadly if a train got stuck in one of the tunnels. On flatter routes and
on freight trains, in particular, the smoke was not a concern.\(^58\)

There were also doubts about Doheny’s claims that he could meet any
demand. As it turned out, almost as soon as he committed himself to sup­
ply the Mexican Central, he revised his calculations and notified the other
railways that he might not have enough oil to supply all three lines after all.
In September 1906, he cut off negotiations with the Interoceanic Railway,
forcing it, for the time being, to abandon efforts to convert to oil; in Octo­
ber, he did the same with the Mexican Railway. The latter company turned
instead to Pearson and agreed to use the residue from his new refinery at
Minatitlán, Veracruz, as fuel oil. This material burned more cleanly than did Ebano oil and proved an ideal fuel for the Mexican Railway. Curiously, the Tehuantepec Railroad continued to burn Texas oil, as part of a larger strategy to set aside all of Pearson’s production for an assault on the refined oil market in Mexico.59

Doheny’s hard-won contract with the Mexican Central was a fifteen-year agreement that called for approximately 45 million barrels of fuel oil and promised a 20 percent reduction in fuel costs from those of coal. At the time, Doheny could manage only 2,000 barrels per day, or about a quarter of what the railroad would require with all of its locomotives burning oil. But the Mexican Central planned to convert its engines in stages and counted on Doheny to increase production proportionately. Starting with twelve operating oil burners in December 1905, the railroad’s officials hoped to convert an average of seven locomotives per month over the next two years, to reach a total of 170 by October 1907. After that, they would convert the remainder of their 200 to 300 coal engines at the rate of a dozen a month until they were finished. From 1908 to 1910, the Mexican Central demanded an average of about 6,250 barrels a day, or enough for more than 200 engines using 30 barrels a day. Even at this rate, however, the railway ran into supply trouble and had to return to using coal on some of the lines.60

Still, as promised, the Mexican Central posted significant savings on fuel costs and operating expenses. Initially, the railroad reported an increase in maintenance repairs per locomotive—from $1,862 in 1905 to $2,360 in 1906—attributed to the cost of converting them to burn oil. At the same time, the company reported a fuel savings of approximately $4,200 per year for each oil-burning engine. Since fuel costs made up about a third of the railroad’s operating expenses, this was a major improvement. The difference between using oil and using coal was clearly shown in a detailed report by the Wall Street Journal, comparing the 1907 financial statements of the Mexican Central and the National Railroad of Mexico. According to this analysis, the Mexican Central reported a 10 percent increase in gross earnings and a 16 percent reduction in fuel costs. The National, on the other hand, saw a 13 percent gain in gross income, negated by a 26 percent increase in the cost of coal. So, although Doheny could not meet all of their expectations, the leaders of the Mexican Central had little to complain about with respect to the benefits of using Ebano fuel oil.61

Another beneficiary of this improved efficiency was the Mexican government, which by this time was a majority shareholder in the largest of
the nation's railroads. As part of a plan initiated by Finance Minister Limantour in 1902 to offset financial problems and the threat of bankruptcy for the major railroads, the government quietly purchased railroad stocks until it achieved a dominant position on the boards of the major lines. Then, beginning with the National Railroad and the Interoceanic, the railways were merged under government supervision. In 1906, the government formed the National Railroads of Mexico Company, which held an option on Mexican Central stock and integrated it into the national system a few years later.62

Given that the Mexican government's objective was to improve the economic performance of the railroads, Doheny's fuel oil contracts were an essential element of success. Eventually, he would supply oil for trains running on 85 percent of the railway mileage in Mexico. Years later, when he was accused of monopolizing the profits from Mexican oil, Doheny cited the benefits of his fuel oil contract with the government as evidence to the contrary.63

It was precisely the potential for substantial profits, however, that led the Díaz government to briefly consider a plan to take control of the coal and petroleum industries along with the railroads. Beginning in August 1905, at the same time the government was buying its way into the railway business, a committee of Mexican lawyers and engineers submitted such a proposal to the minister of development. At issue was Article 10 of the 1884 mining code, which stated that coal mines and oil wells were the exclusive property of the owners of the surface land. The committee wanted to amend the law to allow for expropriation by the government under certain circumstances. In particular, they sought to regain control of Mexico's petroleum resources by defining oil production as a public utility. Thereafter, the property owners would be compensated based on a percentage of the value of the oil extracted from their land but would lose direct control of the oil itself.64

Questions over the legal merits of this proposal inspired a series of debates in the fall of 1905 among the best lawyers in the nation. One of the things that was clear from the start was that the argument over oil did not necessarily arise from the fear that foreigners would steal away the nation's natural resources. More worrisome from the government's perspective was that "the owners of the soil [had] not been displaying sufficient energy in exploring for such deposits or in working them when discovered." To the surprise of many observers, however, the legal experts upheld the existing law and did not sanction any move toward nationalization. While this seemed like a definitive answer to the question of subsoil
rights, the debate turned out to be a prelude to a more determined attack on foreign ownership during the revolution.\textsuperscript{65}

Nonetheless, petroleum's growing importance as a public utility was most evident in the area of manufactured gas. Once again, Ebano oil could be run straight from the wells into the fire boxes of locomotives. But when it was topped, it yielded a small percentage of gasoline and kerosene, and, when further refined into asphalt, Ebano oil furnished another 20 to 30 percent in gas oil. Having banked a good deal of his future success on the asphalt business, Doheny took the next step in deciding to manufacture city gas from the residue. Consequently, in the fall of 1906, Doheny obtained a concession from the Mexican government allowing him to manufacture and distribute crude-oil gas in Mexico City and its suburbs. Next, he organized the Mexican National Gas Company to carry out those plans and brought in an experienced manager from Los Angeles, expecting to have the Mexico City operation running within a year. Instead, it was almost three years from the date of the contract before he began in earnest.\textsuperscript{66}

Doheny on Horseback, at Ebano, ca. 1905. Archival Center, Archdiocese of Los Angeles.
The delay was related mostly to the large capital expenditures necessary to construct the plant and install gas lines and meters but also to a change in management along the way. When he was finally ready to move ahead in the spring of 1909, Doheny purchased the land for the gas plant and then went to New York in July to buy $480,000 worth of gas supplies, including over thirty miles of gas pipe, oil tanks, gas meters, and appliances. At this point, Doheny still seemed confident that gas would be running through the lines by the end of the year, but, as one delay led to another, the company risked losing the goodwill of the residents who, according to a local reporter, were "impatiently waiting for the time when [they] will be connected up to the supply." In May 1910, the company promised to have the job completed within a matter of days, and Doheny made his fifty-second trip to Mexico to supervise the long-awaited connection of the gas lines. However, no sooner was the company in business than it was overwhelmed by demand, and Doheny once again found himself unable to fully support a market he had created.67

But Doheny had been hard at work on a permanent solution to his oil supply problem when he opened up a new petroleum zone in the Huasteca, the Indian name for the border area between the states of Veracruz, Tamaulipas, and San Luis Potosi, which would be known as the "golden lane" in later years. Doheny and Canfield had actually prospected there in 1900 and were extremely impressed with the number of exudes and the amount of visible oil. Although the property was unavailable initially, it was subsequently leased to the Barber Asphalt Company as a potential source of paving material; Doheny was able to acquire it in 1906, when Barber sold the Huasteca leases to him after having taken possession of a large asphalt deposit in Venezuela the previous year.68

Like many places in Mexico, natural asphalt could be dug out of the surface in the Huasteca as a result of constant oil seepage. Unlike the Ebano product, however, the oil was a good deal lighter and offered excellent prospects for further refining. For this reason alone, Doheny recalled, "We made up our minds that we wanted that property, wanted it badly, and wanted it right away." Once he had it, Doheny incorporated the Huasteca Petroleum Company on February 12, 1907, to develop the area. Four days later he organized a new holding company, the Mexican Petroleum Company, Ltd., of Delaware, to finance the various components of his oil business in Mexico.69

These new arrangements were necessary because developing the Huasteca property required another massive capital investment. Where the wells at Ebano had been found within easy reach of the Mexican Central line,
the initial Huasteca drilling site was twenty to thirty miles inland from the Gulf and required a combination of canoe trip and horseback journey to get through the jungle. Setting up drilling machinery was an incredible undertaking in itself. The best way to get the oil out was to construct a seventy-mile-long pipeline that ran from the wells to Tampico. Added to that, when Harold Walker negotiated the government concession to develop the Huasteca properties in 1908, he obligated the company to construct another pipeline to Mexico City, about 190 miles to the southwest. Walker agreed to the Mexico City pipeline as part of the plan to provide oil for the gas company. But many engineers, including some on Doheny’s staff, thought that pumping heavy crude oil onto Mexico’s central mesa was impossible; in any case, it could never be a cost-effective operation. Doheny disagreed, citing the successful California pipeline that ran from Bakersfield to San Francisco. Although that line climbed just 800 feet, Doheny believed it was only a matter of adding enough pumping stations to lift the oil 8,000 feet onto the mesa. Extrapolating from California, he calculated that it would take five to seven percent of the oil moving through the line to operate the necessary machinery.

In December 1910, the Huasteca Petroleum Company allocated $3 million for the Mexico City pipeline and planned to have oil flowing as soon as possible. They intended to deliver a minimum of 20,000 barrels a day to be used by the Mexican National Gas plant as well as a large number of other crude oil consumers. The pipeline was also needed to relieve congestion on the Mexican railways, which prevented them from carrying any more than half of the oil traffic. Then, just as these plans got underway, the company gave up on the project without offering an explanation. Perhaps the idea was as impractical as its critics claimed, but the work might also have been considered too dangerous to attempt during the opening disturbances of the coming revolution.

Meanwhile, work on the shorter pipeline from the new field to Tampico had gone ahead out of absolute necessity. While Doheny had been putting together the plans for his first well at Casiano, the Pearson company started drilling at Dos Bocas, less than fifteen miles to the north. Then, in July 1908, the Dos Bocas well came in so violently that it caught the drilling crew off guard. As the first jets of gas and oil shot from the well, they were ignited by the flame under the steam boilers nearby. Instantly, the well became a raging inferno, and it burned for the next two months with such ferocity that some said a person could read a newspaper by its light seventeen miles away. When the well finally burned itself out, it was still churning up 25,000 barrels a day of hot oil and saltwater into what was
described as “an immense cauldron in which the water and oil boils up in
great wave-like upheavals.” Supposedly, Pearson lost several million barrels
of oil in the catastrophe, although many people believed the well had been
mostly gas. In either case, Dos Bocas put the Mexican oil fields on the map
and alerted Doheny to the danger that lay ahead.\(^2\)

Clearly, he was not going to make the same mistake. But if he drilled a
well even close to the size of Dos Bocas, which he fully expected to do, it
was certain to overrun any storage system in a matter of days. Still, because
he needed the oil as soon as he could get it, Doheny gambled a bit by
constructing a pipeline and storage system at the same time that the drill­
ing crews started a number of wells. By the end of 1909, he had five drilling
rigs in operation and two completed wells whose combined production of
1,200 barrels a day went into one 55,000-barrel tank. At that point, all the
sections of eight-inch pipe needed to complete the line had been distrib­
uted along the route, but only about ten miles of it were ready for oil. This
initial stretch was crucial, though, since it ran from the wells toward the
edge of the Tamiahua Lagoon, an inlet from the Gulf, where the company
had three steel barges ready to load. Two more 55,000-barrel tanks were
also under construction at the northern end of the pipeline in Tampico,
with additional tanks to be added to the three pumping stations along
the route.\(^3\)

With these preparations underway, the company drilled in its first big
well, Casiano No. 6, on July 26, 1910. The well started producing at 8,000
barrels a day and reached 14,000 barrels two weeks later when it was com­
pletely shut in. The two 55,000-barrel tanks were full, and the pipeline was
still a month from being finished, despite some 2,000 workers being
pressed to the limit. Then, on September 11, the crew on Casiano No. 7
struck oil. This second gusher came in suddenly at 60,000 barrels per day
before the crew had cemented the well casing in place. When Herbert Wy­
lie, by now the Huasteca superintendent, tried to close in the well, the
internal pressure lifted the casing off the bottom, allowing the oil to escape
and work its way into seepages around the well, which created oil springs
as far as 300 feet away from the derrick that produced 3,000 barrels a day
on their own. Fearing another Dos Bocas blowout, Wylie opened the gate
valve as much as necessary to stabilize the well, which left them with a flow
of 25,000 barrels a day. By September 17, with the completion of the pipe­
line, a potential disaster had been averted. Nevertheless, the company had
to shut in production on all of the other wells, stop drilling, and devote all
its resources to handling the oil from Casiano No. 7.\(^4\)

Even at a reduced flow, the big well filled the Huasteca pipeline to
capacity from the start, forcing the company to begin a parallel line almost immediately to double the volume. In the meantime, Doheny needed to move the oil as quickly as possible. He began by signing a larger contract with the Waters-Pierce refinery which took a million barrels of oil out of storage at once and another 1.5 million over an extended period. Doheny also hoped that his sales and gas operations in Mexico City would draw off even more oil, but he was still left with a large and growing surplus.\textsuperscript{75}

Given the market constraints in Mexico, American oil producers had been anticipating the inevitable overflow of Mexican crude across the border for several years. At the time, there was no specific duty on Mexican oil except for a countervailing tax against Mexico’s import fees. With increasing production, American producers believed that President Diaz was planning to remove import duties on foreign oil as a way to force the United States to respond in kind. As one fearful oilman put it, “There is a flood of oil in Mexico, enough to fill the Rio Grande, ready to be poured into this country when that duty is repealed. It is dirty oil but it is dangerous.” When the United States Congress deliberated tariff reform in March 1909, the independent oil producers of Ohio went so far as to send a delegation to Washington to lobby against any possibility of Mexican oil being put on the free list. In fact, the independents wanted the United States to place a formal duty on Mexican oil as “the most dangerous threat” to the small producer in America.\textsuperscript{76}

In response to the outcry against Mexican oil, Doheny wrote a letter to the Senate stating that there was nothing to fear since he was still struggling to meet his contract obligations. At the time, he was producing 7,000 barrels a day, while he owed the National Railways of Mexico 10,000 and the other producers combined did not make up another 1,500. Under those circumstances, the only crisis was in Mexico—not in the United States. Besides, Doheny continued, “if we should, fortunately, be able to produce more than they [the railroads] need or take, it might be sold to the U.S. in the east for road-working purposes, [but] it certainly cannot be imported into the U.S. for refining purposes.” Ironically, Doheny and his fellow producers were appealing to the Mexican Congress to adjust the duty on American oil to keep Texas oil from flooding south.\textsuperscript{77}

To settle the argument, the Taft administration sent its chief geologist, C. W. Hayes, to survey the situation. After interviewing Doheny and Pearson and a taking personal tour of the oilfields, Hayes concluded that, while Mexican oil production was bound to increase, “the quality is such that it cannot compete under present conditions in the markets of the United States or Europe.” Furthermore, with almost all of the Mexican oil in the
hands of large producers and under contract for years to come, there was little chance for small operators to move in and upset the market, as usually happened in the United States. Relying on Hayes's evaluation, the Senate voted down the proposed duty on Mexican oil in June 1909. But the advent of the gusher era in Mexico the next year disproved most of Hayes's assumptions and generated new waves of fear from American producers.78

However, Hayes was right to see that the Mexican oil industry would remain in the hands of a few very large companies for the foreseeable future. It was certainly obvious that Doheny's operations literally defined the situation from 1901 to 1910, and there was no reason to believe that this would change any time soon. In the first decade of oil production, Doheny's Ebano wells had accounted for 10.5 million barrels out of a total of 12,290,775, or roughly 85 percent of the national output. The remainder came from the only other companies of any consequence—Weetman Pearson's oil company and the Oil Fields of Mexico, a company started by another Englishman, Percy Furber. Between them, they averaged 700 barrels a day from 1904 to 1910.79

If Doheny's dominant position was not enough to discourage imitators, the early experiences of the other two companies revealed the obstacles awaiting anyone foolish enough to try and come in behind them. Pearson's story, in particular, was an object lesson on how to lose a fortune in dry holes and disappointing wells. "It is to be doubted," one oil reporter wrote in February 1910, "if any corporation in the long and romantic history of the oil trade had expended such enormous sums of money to so little advantage as have the Pearson interests in the Republic of Mexico."80

Having tried and failed to locate oil in Tehuantepec in the early 1900s and having lost Dos Bocas in 1908, Pearson, like Henry Pierce, was still getting most of his oil from Texas. Perhaps for that reason, he decided to challenge Waters-Pierce for a share of the refined oil market in Mexico. At first, to avoid a fight, Pearson hoped to divide the trade by mutual agreement, but the two could not agree on a percentage split; supposedly, Pearson wanted half the market and Pierce insisted on two-thirds. The Englishman retaliated with a direct assault on the market, which touched off an oil war between the two companies. In the heat of the battle, Pearson tried to force a merger with Waters-Pierce but failed in the attempt. At that point, as one reporter noted, "there is little pretense on either side that the war is not one of extermination, with no mercy extended or expected."81

Ultimately, Pearson gained the upper hand when he created a new Mexican company known as the Compania Mexicana de Petroleo "El Aguila," S.A. (a Mexican company dealing in the Eagle brand of refined oil). El
Aguila, or the Mexican Eagle, assumed control of Pearson's holdings north of Veracruz and was devoted exclusively to serving the domestic market with native crude and refined oil. Having thus reconstituted itself as a domestic company, El Aguila began to attack the "foreign" character of the opposition. It also strengthened its direct ties to the Mexican government through its directors, including Governor Enrique C. Creel of Chihuahua, Governor Guillermo Landa y Escandon of the Federal District, and Colonel Porfirio Diaz Jr. Next, the company inundated the public with effective; and sometimes shameless, appeals to native sentiment: "Down with the Trusts," went one advertisement, pointing out Pierce's ties to Standard Oil. "Even the Pope has issued orders that only Aguila Oil shall be used," stated another.

With approximately 20 percent of the retail market in hand by 1909, Pearson was still importing oil from Texas and losing money on every barrel. Failing in his efforts to secure oil in the Huasteca, Pearson turned to Percy Furber, whose Oil Fields of Mexico Company seemed to be having better luck producing oil near Papantla, Veracruz. Furber had started out in 1900, at the same time as Doheny, after taking control of a company associated with Cecil Rhodes. Several years of legal battles kept him from drilling until 1904. Unfortunately, while Furber had a number of active wells, he had no large producers. Nonetheless, Pearson was either so convinced of the worth of Furber's property or so hard up for oil that he formed a partnership with the Oil Fields of Mexico Company in 1909. In exchange for all of Furber's output, Pearson agreed to complete a railway and pipeline from the wells to the coast at Tuxpan, which still left him loading his oil onto boats and shipping it down the coast to his Minatitlán refinery. As with all his experiences to this point, however, Pearson's run of bad luck continued, and the Furber wells proved to be of little value.

Throughout this process, Doheny played no active role in the battle between the retail companies beyond his limited contract with the Waters-Pierce Refinery. While there had been some early talk about a possible three-way contest for the local petroleum market, Doheny had no plans to move further into the refining end of the business. But given his complaints about Pearson's relationship with the Diaz administration, he could not help being drawn into the contest when he rejected an offer to sell oil to El Aguila.

In the end, Pearson's position changed overnight when, in December 1910, he brought in the biggest Mexican gusher to date. The well, known as Potrero del Llano No. 4, sat on a separate tract of land between two of Doheny's properties, about twenty-five miles south of Casiano.
again, the well ran wild for almost two months before the company brought it under control at an estimated flow of 100,000 barrels per day. Now more than ever, this monster well reflected the complete transformation of the Mexican oil industry. In the nine years from 1901 to 1910, Doheny had produced over 10 million barrels from his wells at Ebano. In the fifteen months from September 1910 to December 1911, Casiano No. 7 produced 10.5 million barrels while flowing at less than half its potential. If opened all the way, Pearson's Potrero No. 4 could produce the same amount in three months. By 1911, Mexico was drowning in oil. Henceforth, the full development of the Mexican oil industry would depend on the ability of the major companies to transport their growing production to as many customers as could be found, no matter how far away (see Appendix A).85

In looking back over the period from 1900 to 1910, which formed the introductory phase of the Mexican petroleum industry, it is clear that Doheny was primarily responsible for the direction the industry would take. As a result of his past experience in California and his financial backing, Doheny succeeded where others feared to try. In reviewing his work with Canfield, Doheny noted that:

Our lifetime spent at prospecting and our experience in developing oil in the vicinity of the exudes in California, constituted in us the proper frame of mind to fully appreciate the evidences of petroleum which existed in Mexico, and which undoubtedly had been seen by thousands of natives and perhaps a great many intelligent Mexicans and foreigners, who, however, by reason of not having had the proper experience which we had, were not sufficiently impressed to undertake the task of developing oil there, which task did not prove light, even though we went into it with health, strength, enthusiasm, and practically unlimited cash resources, and a great belief in our own judgment and good fortune.86

Unquestionably, the "practically unlimited cash resources" were crucial to success and allowed Doheny to control the fuel oil trade in Mexico, after negotiating the nearly insurmountable barriers to entry. By both necessity and design, Doheny developed the Mexican Petroleum Company on a massive scale when he purchased more than 500,000 acres of oil land and invested over $4 million at Ebano in advance of the market. If he had maintained his primary operation in California, instead, and only entered Mexico on a limited basis, the development of the Mexican oil industry might have looked more like the chaotic scramble that took place in the flush
fields of both California and Texas. But it was Doheny’s persistent attempt
to distance himself from the Spindletop phenomenon that set the ground
rules for entering the Mexican market. It was certainly true, as one Ameri­
can oil reporter observed, that “the individual with a $3,000 bank roll and
a 40-acre lease would be a piker in Mexico.”

Compared to Doheny’s specialized knowledge and established financial
backing, Weetman Pearson’s perseverance and personal wealth served him
well. With Doheny dominating the fuel oil trade through native produc­
tion and Henry Pierce controlling the sale of refined products using im­
ported oil, Pearson eventually adopted a combined strategy of using native
production for the refined oil market. Pearson’s decision, like Doheny’s,
evolved as much from the type of oil he found as from any predetermined
plan. Had Pearson initially located an extremely heavy-grade fuel oil simi­
lar to that from the Ebano wells, he might have used his considerable in­
fluence with the Díaz government to challenge Doheny’s position as the
chief supplier for the National Railways. Instead, he found a higher-quality
oil at Tehuantepec which could be refined in competition with Pierce’s
imported product. Overall, these three options comprised the only pos­
sible marketing strategies for Mexican oil during this introductory phase
of the industry.

The irony was that, once the Casiano and Potrero gushers came in, any
strategy aimed at dominating a sector of the domestic market was totally
inconsequential. The story of the growth of the Mexican oil industry after
1911 is one that centers on the direct competition between Doheny and
Pearson to move their oil, crude or refined, into an international arena. As
Doheny concluded in June 1911, “Mexico has reached its market limit . . .
We must go abroad to sell.”