Black Gold in the Golden State

The Role of Oil in the Development of the Puente Hills

By

Michael T. Keating, MA
History Department
Claremont Graduate University
Claremont, CA 91711

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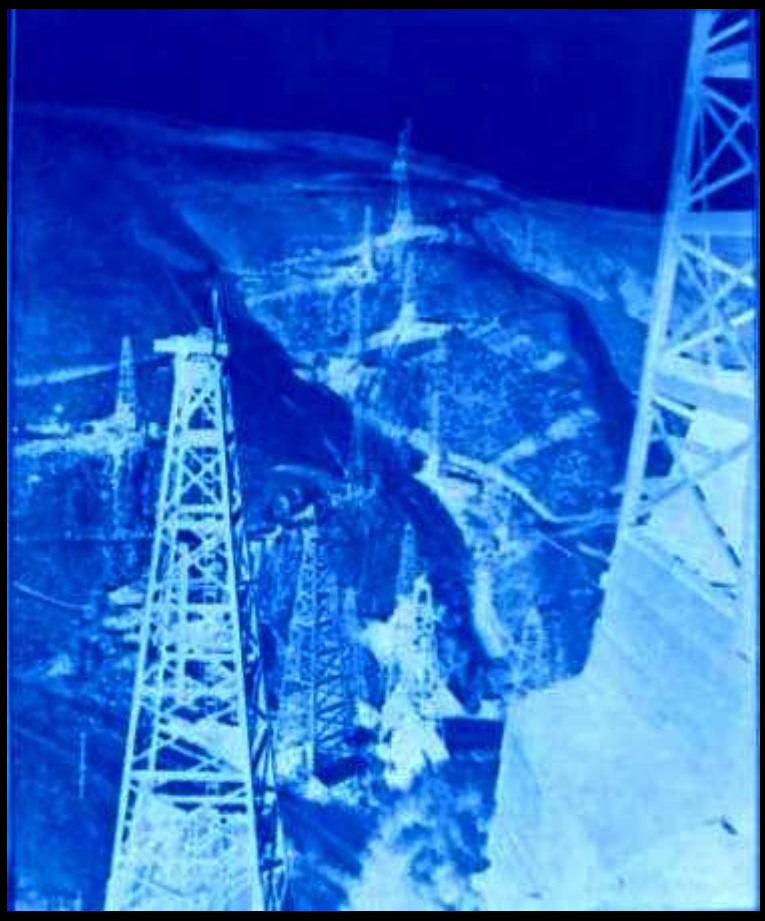

When one thinks of oil in the United States images of Texas and the 1980s television drama *Dallas* usually come to mind. When one thinks of oil in California it is usually in regards to the discoveries in and around Bakersfield, or Signal Hill in the 1920s. For example, in a recent addition of the "Lifestyle" section of the Southern California Automobile Association of America's (AAA) *Westways* magazine editors asked readers to submit a list of places where they take their out-of-town guests when they visit Southern California. Along with famous locations in Hollywood and Corona del Mar, one individual from Long Beach wrote that she enjoys taking her friends and relatives to Discovery Well in Signal Hill in order to see "the site where the California oil boom began when a gusher exploded in 1921."[1]

Yet in the heart of Southern California tucked amidst today's endless sea of urban sprawl lie the Puente Hills, a region that helped shape the growth of the Southern California oil industry decades before the wells of Signal Hill came into existence. Although no museums or tourists' markers dedicated to the oil industry exist in the Puente Hills, a drive down the Orange Freeway (State Route 57) allows one to see first hand the impact that the oil industry has had on the Puente Hills. Located near the freeway at the boundary between Orange and Los Angeles Counties sit a handful of towers and oil pumps endlessly bobbing up and down in their search for the last remnants of "crude" from the Puente Hills. These oil towers and pumps are some of the last remnants of a bygone day, when oil was king and the Puente Hills were home to a lucrative and influential oil industry that helped Southern California grow into a large industrial center.[2]

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[1] Lifestyle: You Said It, "First Impressions," *Westways* 98, no. 3 (May/June 2006): 78.

[2] Although the oil derricks noted above are not in the present boundaries of the Puente Hills Landfill Native Habitat Preservation Authority, the oil derricks and wells located near the Orange Freeway are still within the Puente Hills range and provide us with a glimpse of what the oil industry was once like in the hills. However, some signs of the

The Puente Hills separate the San Gabriel Valley from the coastal plain. The hills rise from the eastern bank of the San Gabriel River and continue along an east-by-south trajectory towards the Santa Ana River. Lying along the southern boundary of the Puente Hills are the cities of Whittier, La Habra, La Habra Heights, Fullerton, Brea, and Yorba Linda. Along the northern part of the hills sit the communities of Hacienda Heights and Rowland Heights, and the cities of La Puente and Diamond Bar. The Puente Hills, one of the three important locations in Southern California's early oil history, cover a distance of around twenty-five to thirty miles from east to west and form much of the northern boundary between Los Angeles and Orange Counties. As one observer noted, the Puente Hills:

> consist of a low range cut off from the Santa Ana Mountains by the Santa Ana River. On the north they are separated by the San José Hills by the south fork of the San Gabriel Valley . . . on the west they are separated from the Rapetto Hills by the San Gabriel River; on the south they slope down to the valley of the Santa Ana River and the level country which stretches southward toward the Pacific Ocean, about 20 miles away.[3]

Several canyons traverse the Puente Hills including numerous small canyons that form right angles with the crest of the hills while larger canyons "cut through the crest of the hills or run parallel to their course." [4]

The Puente Hills have long comprised a significant geographical part of Los Angeles County; they are also the site of some of the region's most successful oil discoveries--discoveries that helped propel the region into an industrial juggernaut. The Puente Hills witnessed many important events in the history of Southern California. From Don Gaspar de Portola's expedition and the founding of the San Gabriel Mission in the eighteenth century, from cattle ranching and agriculture of the influential Workman, Rowland, and Pico families in the mid-nineteenth

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past oil industry still exists in the lands that the Puente Hills Habitat Authority controls today. For example, although the oil towers and pumps have been removed from the landscape the hills still contain traces of the past oil industry, such as access roads and well pads that were used by oil companies in the past.

[3] William Watts, *Oil and Gas Yielding Formations in California* (Sacramento: A. J. Johnston, Superintendent State Printing, 1901), 19.

[4] Watts, *Oil and Gas Yielding Formations in California*, 41.

century, to the development of the oil industry in the last decades of the nineteenth century, the Puente Hills have formed the backdrop and the setting for much of the region's history. The hills and its surrounding environs have been utilized, manipulated, and controlled by those who have come into contact with the area ever since the Puente Hills first appeared in written texts.[5]

Most of the scholarship surrounding the Puente Hills deals with issues relating to the broader history of the Los Angeles region. The diary of Father Juan Crespi is the earliest written record that refers to the Puente Hills. Father Crespi, a member of the 1769 Portola Expedition, kept a detailed diary of his journey that historian Herbert Eugene Bolton first translated and published in 1927 as *Fray Juan Crespi: Missionary Explorer on the Pacific Coast, 1769-1774*. Bolton's translations of Crespi's diary formed much of the basis for later works that dealt with descriptions and observations of pre-mission Southern California including Leonore Rowland's *The Romance of La Puente Rancho* (1958). Various scholars and historians also mention the Puente Hills and its surrounding lands. Blake Gumprecht did so in his history of the Los Angeles River, while William Robinson focused on the ranchos and missions, and Glen Dumke who studied the land and real estate boom of the 1880s. However, these scholars like so many others usually mentioned the Puente Hills only in passing and focused much of their scholarship on other parts of Southern California.

Much of the information that exists about the Puente Hills is found in scattered texts containing only obscure and random references to the hills, such as the real estate promotional newsletter from the 1890s, the *Covina Argus*, that glorified the natural beauty of the Puente Hills, or are found in local histories written by inhabitants of the region, such as *An Historical Sketch*

[5] Leonore Rowland, *The Romance of La Puente Rancho* (Covina, CA: Neilson Press, 1958), 8. Leonore Rowland was a relative of John Rowland, who was one of the original grantees of Rancho La Puente, and much of what we know about the Rancho and its environs comes from Leonore Rowland's writings. These writings came from remembered stories and experiences from fellow family members.

of Los Angeles County (1936) and *History of Whittier* (1933). Surprisingly, little has been written about such a prominent natural feature that cuts through the heart of Southern California. Instead much of the focus has been on the events occurring on the periphery of the Puente Hills. As a result, the hills are an understudied and underappreciated aspect of the history of the Los Angeles region. There is especially little written about the role of the Puente Hills in the development of the oil industry of Los Angeles. It is my hope that this paper may serve as a springboard and a catalyst that will inspire others to seek a greater understanding of the impact that the Puente Hills and their surrounding environs have had, both cultural and economic, on the development of Southern California.

By using a variety of primary source documents, such as Lionel V. Redpath's *Petroleum in California* (1900), and material such as Leonore Rowland's *The Romance of La Puente Rancho* (1958) and the *History of Whittier* (1933) by Benjamin F. Arnold and Artilissa Dorland Clark, I argue in this paper that oil played a vital role in the development of the Puente Hills region during what I believe were the formative years of Los Angeles' development, the 1920s. The development of the Puente Hills mirrored the development of Southern California and the development of the hills allows us to witness the way Southern Californians viewed the land and the natural environment. The Puente Hills played an important role during the lucrative years of the cattle industry in Southern California; similarly, the development of oil production in the hills made the region a focal point of industrial business ventures in Southern California. Oil not only brought capital into the hills, but it also brought developers and inhabitants into the surrounding communities, the same individuals who shaped the landscape in new ways. These patterns of development have had a significant impact on the way Southern Californians viewed and used the land both in the past and into the present day.

When Andres Pico first discovered oil in Southern California Los Angeles remained an "agricultural city surrounded by citrus orchards, walnut groves, and vineyards, with a population of less than 300,000." Once speculators discovered oil in places such as Newhall and the Puente Hills, along with Edward Doheny's well on Los Angeles' State Street in 1892, speculators and industrialists poured into Los Angeles. Oil wells appeared virtually overnight and within the next ten years some "1,500 wells were dug and the hills just above downtown were covered with derricks." The rush for oil became so great that, even after the city banned oil wells as unclean and unhealthy inconveniences, many residents circumvented the law by calling their oil derricks water wells and claimed that they only struck oil by accident.[6]

However, at the beginning of the twentieth century Appalachia and the Midwest, particularly Indiana, remained the center of the major oil-producing fields in the United States. California produced less than five percent of the nation's oil. By 1920 the Golden State produced over a quarter of the nation's oil and the Appalachia region produced only seven percent.[7] In 1900, California produced a little over four million barrels of oil a year. In 1910 California produced over 77 million barrels a year and by 1923, the Golden State produced 25 million barrels of oil a *month*.[8]

Not only did California experience a great boom in its oil productivity but so did Los Angeles. Around 1900 Los Angeles produced around 400,000 barrels of oil a day but by 1920 the region produced over 105 million barrels of oil a day.[9] The newly opened, man-made port of Los Angeles contributed significantly to the region's development. Although not nearly as large

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[6] Dan La Botz, *Edward L. Doheny: Petroleum, Power, and Politics in the United States* (New York: Praeger, 1991), 10.
[7] Harold F. Williamson and Arnold R. Daum, *The American Petroleum Industry: The Age of Illumination, 1859-1899*, v. 2 (Evanston, IL: Northwestern University Press, 1959), 17.
[8] Rockwell D. Hunt and Nellie Van de Grift Sanchez, *A Short History of California* (New York: Thomas Y. Crowell Company, 1929), 607.
[9] La Botz, *Edward L. Doheny*, 113.

as other ports on the west coast, especially in San Francisco and Seattle, by 1921 Los Angeles entered and cleared more than 600,000 tons of cargo volume at its port in San Pedro. This number is all the more impressive when one keeps in mind that in the 1880s the amount of tonnage that entered and cleared the port was zero.[10] Money from oil, motion pictures, and tourism created an economic and population boom in the 1920s—a decade when more than two million people moved to the Golden State, three-quarters of whom settled in Los Angeles – that drastically changed the physical and cultural landscape of Southern California.[11]

Thus the development of the oil industry in Los Angeles made a significant contribution to urban population growth in Southern California. By 1930, the oil industry in California employed some 80,000 workers, approximately thirty percent of the state's workforce. In 1910, a little over half a million people lived in the Los Angeles area. By 1930, the region had over two million inhabitants. This increase in population not only reflected the feverish and often unscrupulous activity of the region's boosters but more importantly, and less recognized by historians, was the role of the oil industry in adding the population boom. Even after the original late-nineteenth-century oil discoveries epitomized by Edward Doheny, the years 1917 and 1921-1923 "witnessed major oil discoveries which stimulated rapid expansion of population and urbanization in many districts," such as Montebello and Signal Hill. [12] As a result, the oil industry played a vital and substantial role in determining the cultural pattern and growth of Los

[10] B. C. Forbes, *Men Who are Making the West* (New York: B. C. Forbes Publishing Co., 1923), 25. Phineas Banning is one of the most colorful figures in the history of Los Angeles. Originally form Delaware, Banning came to Los Angeles in his youth and became a successful businessman in Southern California. He is often credited with being the 'Father of the Port of Los Angeles' for his vision in creating a man-made harbor at San Pedro. However, his connection with the Puente Hills predates the relationship local oil companies had with the port in San Pedro. During the latter part of the eighteenth century Banning, along with other local elites, would travel from his home in Wilmington and partake in the rodeos and cattle round-ups held in the Puente Hills on the Rancho La Puente of William Workman and John Rowland.

[11] Carey McWilliams, *Southern California Country: An Island on the Land* (New York: Duell, Sloan & Pearce, 1946) 136.

[12] Martha-Lee Stone, "The Petroleum Industry of California" (Master's thesis, The Claremont Colleges, 1938), 55.

Angeles from a small, dusty village into the major metropolitan and industrialized city of today.[13]

The Discovery of Oil in Southern California

The presence of oil in California had been known for some time before it became a major industry. The first notice of the existence of oil came from the Spanish explorer Juan Cabrillo. During his 1542 voyage along the California coast, Cabrillo observed the native Chumash people near present-day Santa Barbara using tar to caulk their canoes, fasten arrowheads to shafts, waterproof baskets, and mend pottery.[14] The Spanish called this substance *brea* and noted several hundred places throughout the state where *brea* seeped through the earth.[15] When they began to establish settlements throughout California, the Spanish used this same tar-like substance as an adhesive material in the construction of the roofs of their adobe structures, such as the local missions.[16] However, from the Spanish conquest through the end of the nineteenth century, the use of oil/tar remained relatively small and localized. Only after people devised more efficient ways to extract oil from the earth, and created new ways to use that oil, such as in household illuminants, lubricants, and fuel, did oil exploitation and development explode throughout Southern California, including the Puente Hills.[17]

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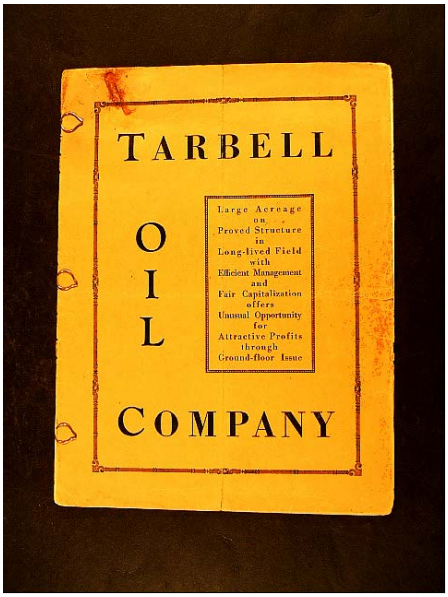
[13] Stone, "The Petroleum Industry of California," 7.
[14] William Henry Hutchison, *California: Two Centuries of Man, Land, and Growth* (Palo Alto, CA: American West Publishing Company, 1969), 273-274, and Gerald T. White, *Scientists in Conflict: The Beginning of the Oil Industry in California* (San Marino, CA: The Huntington Library, 1968), 4.
[15] White, *Scientists in Conflict*, 4.
[16] Richard O'Connor, *The Oil Barons: Men of Greed and Grandeur* (Boston: Little, Brown and Company, 1971), 154-155, and Lionel V. Redpath, *Petroleum in California: A Concise and Reliable History of the Oil Industry of the State* (Los Angeles: 1900), 9.
[17] White, *Scientists in Conflict*, 4. Also, for a good description of the native uses of oil see Herbert Eugene Bolton, *Fray Juan Crespi: Missionary Explorer on the Pacific Coast, 1769-1774* (Berkeley: University of California Press, 1927).

One of the first significant discoveries of petroleum in the Los Angeles area occurred when Andres Pico discovered petroleum on his San Fernando Valley property in the mid-1850s. Andres, the brother of Pio Pico – the last governor of Mexican California – organized a company in 1856 to drill for oil at La Brea in Los Angeles and to refine the crude oil found in the bubbling tar pits along modern-day Wilshire Boulevard. Pico also owned several thousand acres of land in and around the Puente Hills where some years later (and discussed below in more detail) his successor landowners began extracting oil.



Prospectus for Tarbell Oil Company, 1923. With discovery of oil, many oil companies developed around the Puente Hills-Whittier area and helped to transform Los Angeles and its environs into an industrial metropolis. *Image courtesy of the Workman-Temple Homestead Museum.*

In the years following the initial Pico oil discovery and the creation of the Wilshire Boulevard Company, many other oil companies were formed in order to extract petroleum from the various pools of tar that dotted Southern California. Most of the companies met with little success. The extraction techniques and machinery, along with a general lack of demand for petroleum, contributed to the failure of many of these start-up companies. Later, better means of production, combined with an actual demand for a cheap source of fuel, along with a growth in industries that used fuel oil, turned oil into the de facto choice for America's fuel needs. Most of the oil operations, therefore, that started in the years following the Pico discovery met with failure and folded almost as quickly as they had begun.[18]

[18] Redpath, *Petroleum in California*, 9. Along with being Pio Pico's brother, Andres Pico led the opposition forces in California during the Mexican-American War. Andres Pico, along with is brother, also owned large tracts of land throughout Southern California, particularly in the San Fernando and San Gabriel Valleys. Pico's properties in the

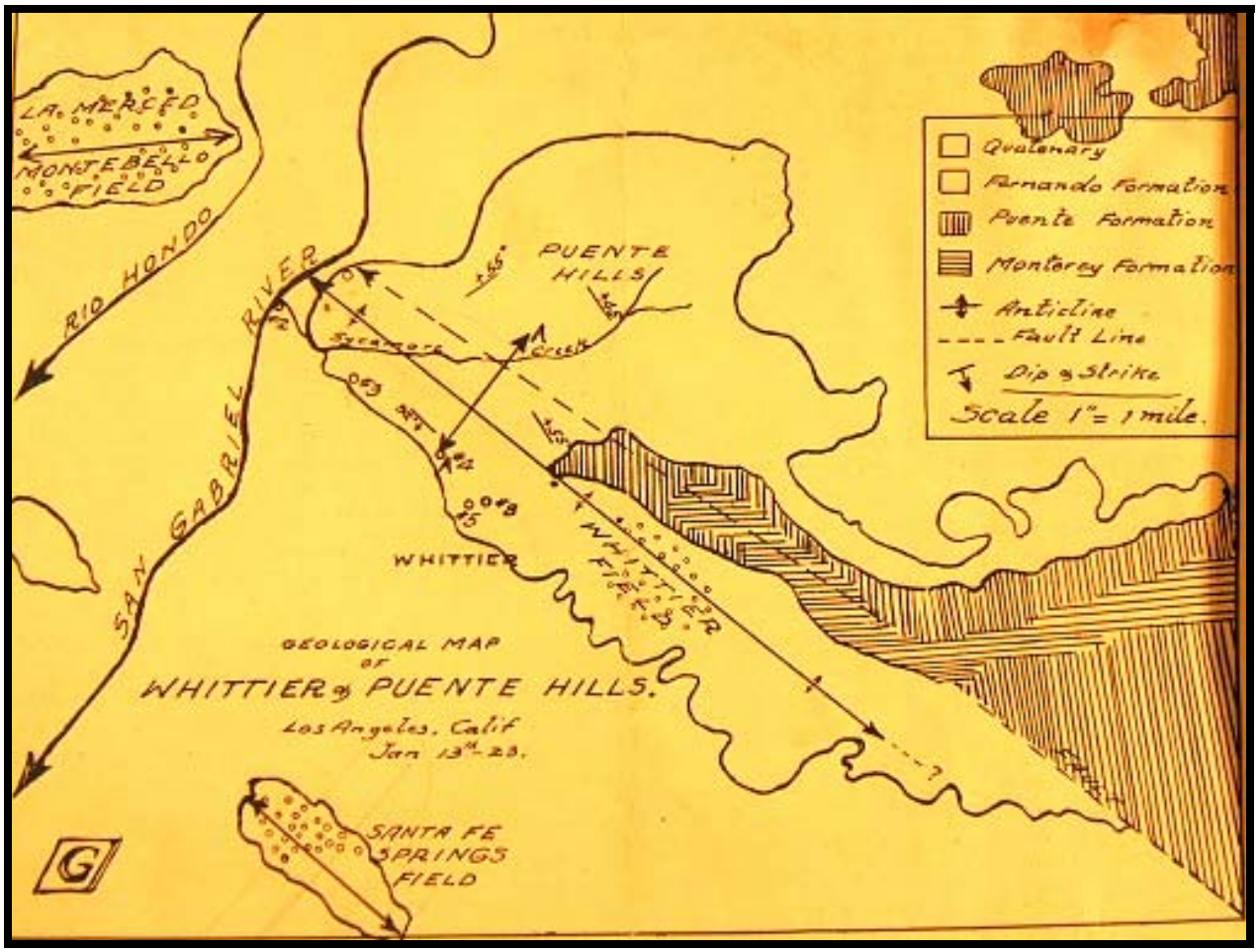
Although the initial discoveries of oil in Southern California did not necessarily yield significant results, California sat on a large oil belt that stretched about 600 miles from San Diego in the south to San Francisco in the north. This oil belt had an average width of 70 miles meaning that California contained 42,000 square miles or 27,000,000 acres of potential oil-producing fields. In the Southern California region the oil belt extended from San Diego County, through Riverside and northern Orange Counties, and into the Los Angeles area where it reached the various hills and mountains of the Coast Range, including the Puente Hills. Although the oil belt was not uniformly oil rich, it contained sporadic spots and pools of oil with the potential of yielding significant large amounts of petroleum, particularly in the areas surrounding Los Angeles.[19] Because much of the region in and around Los Angeles was composed of sandstone, many in the oil industry hoped with great enthusiasm that Southern California might contain the state's richest oil deposits.[20]

According to historian Lionel Redpath, the oil-yielding formations in the Puente Hills, which dated from the Neocene age, as well as those of the Los Angeles City Fields made famous by Edward L. Doheny, resulted from "certain oil sands which interstratify the lower portion of the shale formation, and, probably, constitute the uppermost strata of the underlying sandstone."[21] Most of the rocks of the Puente Hills are of sedimentary origin.[22] The geological formation of the Puente Hills tends to be quite uniform causing much of the hills to be covered with "igneous rock overlaying a bed of shale." Thus the oil pools at Puente and Whittier, along with those at Brea all originated from the same oil belt and many experts regard them as one.[23]

San Gabriel Valley and Puente Hills region included the 50,000-acre Rancho de los Coyotes and 6,000-acre Rancho La Habra.

[19] Redpath, *Petroleum in California*, 28.
[20] Redpath, *Petroleum in California*, 29.
[21] Redpath, *Petroleum in Californian*, 15-16.
[22] Watts, *Oil and Gas Yielding Formations in California*, 20.
[23] Redpath, *Petroleum in California*, 42.

Sand formations that carried around 10 to 15 percent of their bulk in oil marked the soil in the Puente Hills region. As a result, many individuals did not know how much oil lay beneath the surface of the Puente Hills. Lionel Redpath, along with many others, assumed that hidden beneath the surface sat great riches at lower levels and that the oil located at such levels, due to the strata and lighter gravity, might possibly be more abundant than in other fields in Southern California.[24]



A hand-drawn, geological map of the Puente Hills from the Tarbell Oil Company circa 1923. *Image courtesy of the Workman-Temple Homestead Museum*.

[24] Redpath, *Petroleum in California*, 32.

Los Angeles, like most American cities at the end of the nineteenth century, relied on coal as its main source for fuel and energy needs. Los Angeles relied on coal despite the fact that it was scarce natural resource in the Southwest. As a result of its scarcity, coal was an extremely expensive source of fuel for California. Coal retailed for around $20 a ton at the end of the nineteenth century, making energy needs in the growing region very costly. The apparent abundance of oil in the state, particularly the southern half, offered hope that, if oil could be processed and marketed relatively cheaply,[25] it might provide coal-starved California with a natural and effective source of energy.[26] Just as the expectations of California boosters and oil companies about the state's oil deposits soared, the national demand for oil increased dramatically. The national population growth, which grew from 75 million in 1899 to 105 million in 1919, combined with an overall increase in the number of diesel-powered ships, locomotives, automobiles, and oil heating equipment made oil the leading choice for America's fuel and energy needs by the beginning of the twentieth century.[27]

The oil industry in California was not confined to one locale but instead enjoyed a presence throughout the state. Oil discoveries were made in Fresno, Humboldt, Napa, Contra Costa, Kern, and Santa Barbara counties, in addition to Los Angeles County.[28] However, in Southern California, unlike the other oil-rich areas of the state and nation, oil wells were drilled within the city limits, often adjacent to homes and other businesses. With lax regulations and no need for middlemen refiners, a landowner could drill for oil on his own property, refine it

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[25] Margaret Leslie Davis, *Dark Side of Fortune: Triumph and Scandal in the Life of Oil Tycoon Edward L. Doheny* (Berkeley: University of California Press), 23.
[26] Stone, "The Petroleum Industry of California," 6 and 33.
[27] Gerald D. Nash, *United States Oil Policy, 1890-1964* (Pittsburgh: University of Pittsburgh Press, 1968), 4-5. The growth of the domestic market not only allowed oil to quickly supplant coal as the nation's leading fuel source but the oil industry, especially Los Angeles, benefited from the advent of tanker transportation, the opening of the Panama Canal in 1914, and the advent of World War I. All these factors enabled California petroleum to grow tremendously from where it had been only a few decades earlier. For more information see Stone, "The Petroleum Industry of California," pp. 43 & 52.
[28] Redpath, *Petroleum in California*, 11-12.

himself, and sell it on the market at minimal cost. By comparison, small producers in the East and Midwest drilled for oil in areas located farther from population centers and consumer markets. The distances from market led producers to rely more on nearby independent refiners who refined the oil and then shipped it by rail in tank car lots to independent jobbers in more populous areas.[29]

By the turn of the century, as Southern California historian and social critic Carey McWilliams argues, the foundations had been set for the "next great expansion" of Los Angeles: an expansion founded upon oil.[30] By 1909, California produced nearly 58 million barrels of oil annually with a value before refinement at 32 million dollars – almost twice as much as the state's deposits of gold.[31] Between 1900 and 1918, relative to the other major U.S. oil-producing areas, California ranked either first or second in the nation in oil production.[32] During this same period, as oil historians note, the crude oil industry in California became "detached from the mainstream of domestic petroleum developments" which allowed the California oil industry, and in particular the Los Angeles area, to develop differently and in isolation from its eastern counterparts.[33] Although the oil industry relied heavily on the expertise of the eastern oil men – many of whom flocked into the state in search of oil – the oil industry quickly morphed into a uniquely California enterprise, particularly in the Puente Hills.

In the early years until the second oil boom of the 1920s, oil production in the Los Angeles area took place in four distinct fields: Newhall (located in the Santa Clarita Valley), the Los Angeles City Field (located in the mid-Wilshire District a few miles west of downtown),

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[29] Kendall Beaton, *Enterprise in Oil: A History of Shell Oil in the United States* (New York: Appleton-Century-Croft, Inc., 1957), 273.
[30] McWilliams, *Southern California Country*, 128-129.
[31] Boyle Workman, *The City that Grew* (Los Angeles: The Southland Publishing Co., 1936), 257. Boyle Workman was the grandson of La Puente Valley pioneer William Workman and a member of the Los Angeles City Council in the 1920s.
[32] Williamson and Daum, *The American Petroleum Industry*, 27.
[33] Williamson and Daum, *The American Petroleum Industry*, 26.

Whittier, and Puente. Since the Whittier and Puente Fields contained the same depth and oil gravity, the two, in my opinion should (and in this paper are) seen as one– the Puente Hills field. Thus the fields in Newhall, the Puente Hills, and central Los Angeles became the three important locations that accounted for the growth of oil in late nineteenth and early twentieth century Southern California.

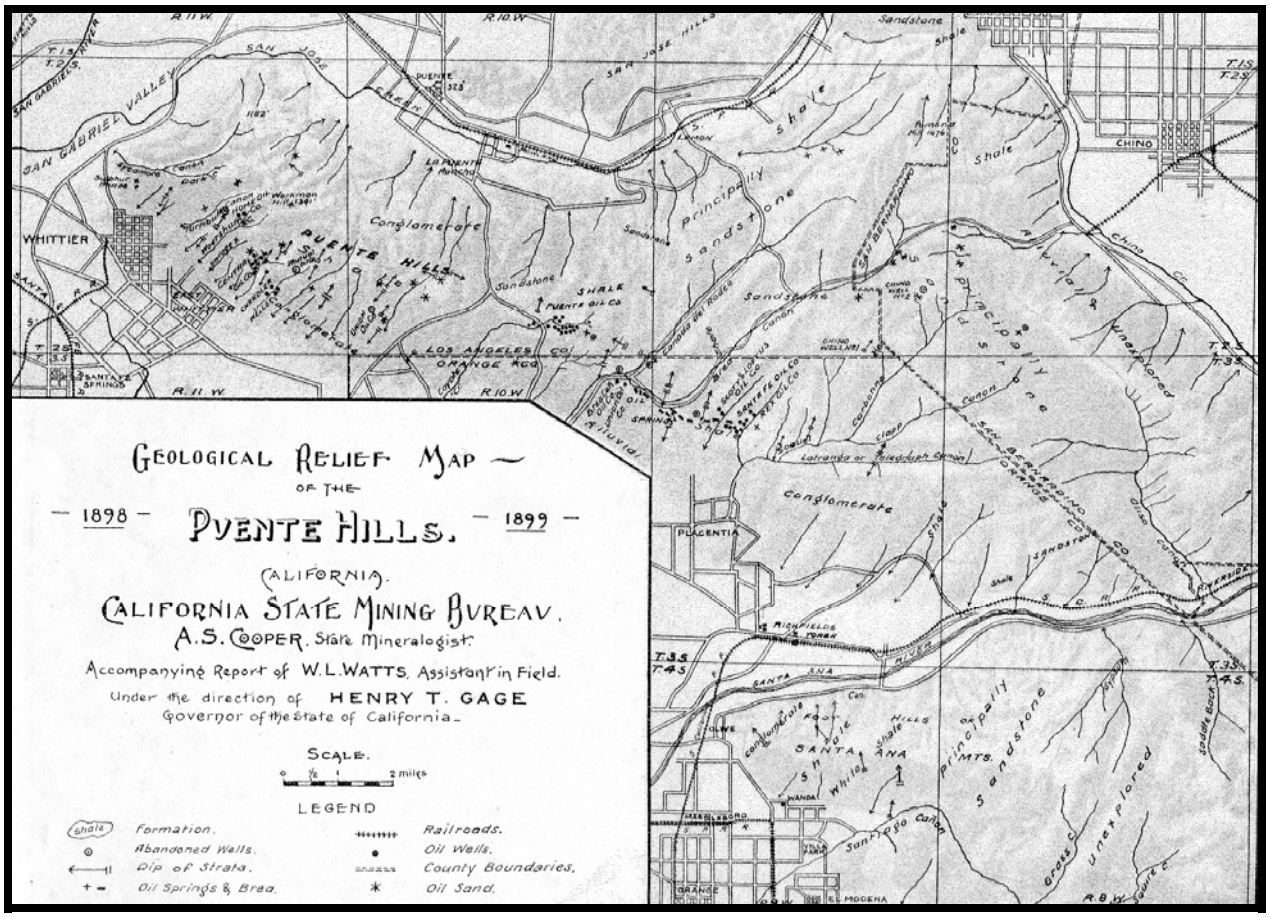
Oil in the Puente Hills

The first discovery of oil in the Puente Hills occurred in 1884, approximately seven miles north of Fullerton and four miles south of Puente when William "Billy" Rowland discovered oil on his father's former ranch, Rancho La Puente.[34] By 1900, oil fields in the Puente Hills produced 50,000 barrels of oil per month and the success of small, local companies brought in the attention of many larger outside oil interests.[35]

When John Rowland died in 1873 his kin subdivided his rancho. One of his sons, Billy Rowland, discovered oil on the portion he inherited of his father's former rancho. A year after the discovery, the primitive wells on the land brought in about ten barrels of oil a day. Although Rowland's wells did not initially produce large quantities of oil in comparison to later oil fields in Southern California (especially those at Signal Hill), his initialing prospecting attracted the attention of oil speculators throughout the state and nation.[36] Rowland formed the Puente Oil Company in 1886 with the financial backing of his business partners William Lacy (a Los

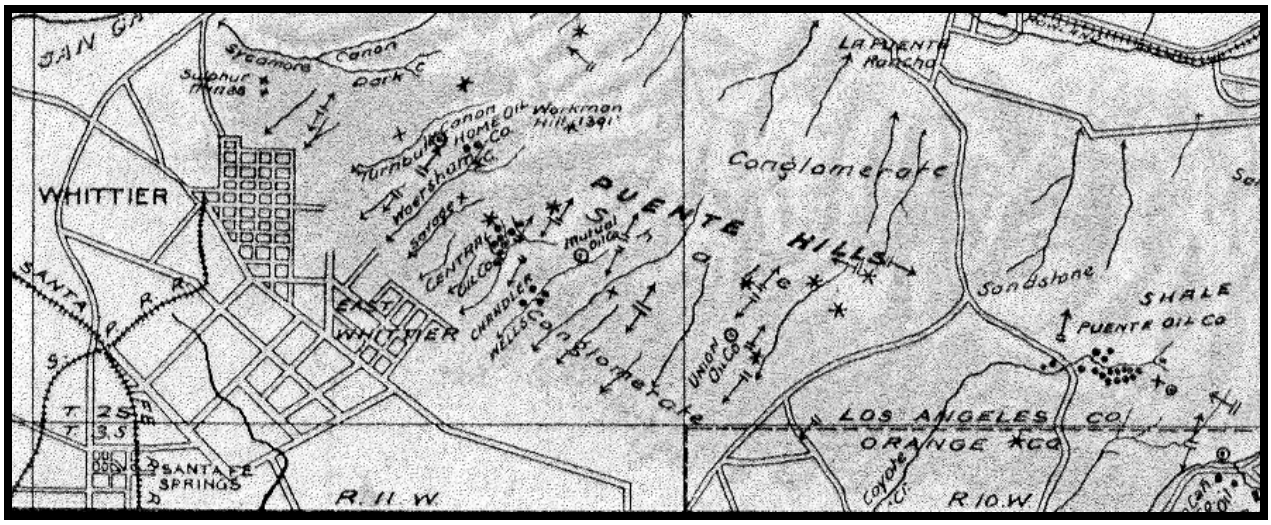
[34] Arnold and Clark, *History of Whittier*, 41.
[35] Redpath, *Petroleum in California*, 152-153.
[36] Beaton, *Enterprise in Oil*, 220-221.

Angeles steelmaker, banker, and merchant), Burdette Chandler, and W. E. Youle (a renowned oil driller).[37] In 1886, Puente Oil became the first company to drill for oil in the Puente Hills.



Geological relief map of the Puente Hills commissioned by the California State Mining Bureau for 1898/1899. This map shows the site of Puente Oil's fields along with the city of Whittier and East Whittier development (far left-side of map). *Image courtesy of the Workman-Temple Homestead Museum*.

[37] Harris Newmark, *Sixty Years in Southern California, 1853-1913* (Boston: Houghton Mifflin Company, 1930), 172. William Workman noted that the sons of William Lacy, Rowland's business partner, went on to establish the Lacy Manufacturing Company. According to Workman, the Lacy Company supplied the pipes and boilers that built much of Los Angeles (see Workman, *The City that Grew*, 256).



Part of the geological relief map of the Puente Hills showing the wells above the city of Whittier in 1898/1899. *Image courtesy of the Workman-Temple Homestead Museum.*

Later, Puente Oil grew to encompass over one thousand acres of land of the former Rancho La Puente, along with three thousand acres of adjoining land in the surrounding area, including the Puente Hills.

Most of the oil fields of the Puente Oil Company sat south of the crest of the Puente Hills. The wells in these fields drilled at an average angle of forty-five degrees with an average depth of 1,200 feet. At its most active period, Puente Oil drilled over sixty wells. While not all wells produced significant yields, most wells pumped a steady supply of oil that provided the stockowners of Puente Oil with a handsome profit.[38] Each well cost Puente Oil approximately $5,000.[39] To better understand that expense and put it in perspective, it is worth noting that in 1903 the Board of Trustees of Whittier College voted to pay forty dollars a month for the services of a fire-fighting crew of twenty men. Although drilling for oil was an expensive endeavor it also had the possibility of returning large amounts of profits to its investors. For example, in its first fifteen years Puente Oil produced over a million and a half barrels of oil

[38] Redpath, *Petroleum in California*, 42-43.
[39] Redpath, Petroleum in California, 43.

from the Puente Hills. One well alone yielded more than 50,000 barrels of oil. This flow made Puente Oil a competitive threat not only to other upstart companies in the region, such as Union Oil, but also to oil companies from San Francisco which at the time was the state's leading industrial center.[40] In fact the Union Oil Company, which at the time operated out of Santa Paula in Ventura County, viewed Puente Oil as a threat to its growing share of the Southern California market.[41]

Within a year of founding the Puente Hills Oil Company, Rowland and his partners contracted with Pacific Coast Oil to construct a pipeline that connected their oil wells in the Puente Hills directly to the railroad depot at Puente. From there Rowland and company sent their oil by railcar straight to markets in Los Angeles. [42] As operations grew Puente Oil acquired more property, including a refinery in Chino in 1895. The company eventually bought a depot on North Alameda Street in Los Angeles and opened several retail stations that sold Puente gasoline throughout Southern California.[43]

The Puente Oil Company, in its early years, marketed its oil to the city of Los Angeles at the same time that local businessmen busily attempted to turn the region into *the* business center of the West Coast. Once Los Angeles developed its own city oil fields during the mid-1890s, the Puente Oil Company needed to find another buyer for its oil. As a result, Puente Oil made a six-year deal with the Chino Valley Beet Sugar Company to furnish the plant with fuel for its sugar refinery. The Puente Oil Company constructed another pipeline, this one to Chino, in order to transport their oil along a sixteen-mile long, three-inch pipe from the Puente Hills to the sugar

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[40] For information relating to the price of fire services for Whittier College see Arnold and Clark, *History of Whittier*, pp. 178 and 36-37, respectively.
[41] White, *Formative Years in the Far West: A History of Standard Oil Company of California and Predecessors through 1919* (New York: Appleton-Century-Crofts, 1962), 133.
[42] White, *Formative Years*, 120.
[43] Beaton, *Enterprise in Oil*, 220-221.

factory in Chino. Consequently, Puente Oil constructed a refinery adjacent to the factory in order to refine its oil from the Puente Hills. From its refinery in Chino, the Puente Oil Company sold its refined product, under contract, to the Standard Oil Company.[44]

Beginning around 1900, Rowland and Lacy participated in the organization of the Columbia Oil Producing Company. Rowland and Lacy turned over Puente Oil's producing properties to the new company, with Puente Oil becoming the "marketing and refining subsidiary of the new company." The creation of the Columbia Oil Company did not slow production capacity in the Puente Hills and Puente Oil's operations did not diminish solely because this valuable California oil property now belonged to the Columbia Oil Producing Company. Along with their property at Puente, Columbia Oil owned land in Montebello and Brea-Olinda, all lucrative oil territories within the Los Angeles region. As a result, according to oil historian Kendall Beaton, Puente Oil continued to be "one of the first commercially profitable oil ventures in Southern California."[45]

In 1922, a then little-known company by the name of Shell Oil of California took over the operations of Columbia Oil, and thus also took over the original Puente Oil fields. At first Shell appeared unimpressed with the potential value of the oil fields held by Columbia Oil. In the long run, however, the Columbia oil fields proved valuable because of its substantial returns. In the beginning Puente Oil supplied Shell with an established sales department that "provided a start for Shell's marketing organization in Southern California." By having Puente Oil in the fold Shell not only capitalized on the established company's recognition within the growing Los

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[44] Redpath, *Petroleum in California*, 43. The Puente Oil Company did business with many companies, including Standard Oil, and business relations with these other companies usually remained cordial. However, many oil companies saw Puente Oil as a threat due to Puente's productivity levels and aggressive advertising campaigns. For example, after a failed buyout from Standard Oil, relations between the two companies became strained especially when Puente Oil and Columbia Oil merged operations. For further information on Puente Oil's relations with other oil companies see White, *Formative Years*, pp. 213 and 319.

[45] Beaton, *Enterprise in Oil*, 220-221.

Angeles market but it also utilized the company's old refinery in Chino. This enabled Shell to eliminate the use of costly middlemen for its refining needs, thereby increasing its profits. The acquisition of Columbia/Puente Oil also meant that Shell acquired one of the richest deposits of petroleum in Southern California, enabling the company to continue to extract oil from the Puente Hills region well through the remainder of the twentieth century.[46]

Shell Oil acquired a number of valuable assets when it took over the former Puente Oil Company from Columbia Oil. The refinery at Chino, although small, proved an asset not only because it meant that the company could refine its own gasoline, but also because the refinery in Chino produced a well-known motor fuel recognized, according to one historian, for its "superior quick-starting properties." The superior property of the gas from Chino, which resulted from the way in which the old refinery "skimmed off only the lightest part of the gasoline fraction and blended it with casinghead gasoline, was so popular that more than 300 potential dealers "hoped some day to handle Puente gasoline."[47]

Shell Oil also acquired the great value of Puente/Columbia Oil's brand name and its favorable reputation. Shell, taking note of the popularity Puente Oil enjoyed in the Southern California market, made Puente Oil's conversion to the Shell Oil brand gradual and thus, the sight of Puente Oil's green colors and its logo (a muscular arm with clenched fist) remained a common sight throughout Southern California years after the company had been sold to Shell.[48]

Because of its location within the oil-rich belt of Southern California, Whittier, another oil district near Puente but within the Puente Hills region, destined to "rank among the best [oil districts], not only of Los Angeles county but of the state," according to Lionel Redpath. In the

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[46] Beaton, *Enterprise in Oil*, 221.
[47] Beaton, *Enterprise in Oil*, 261.
[48] Beaton, *Enterprise in Oil*, 261. Beaton noted that by 1924 Shell Oil shut down the Chino refinery and junked its equipment. Following a short time serving as a depot for Shell's sales department, Shell sold the property to the city of Los Angeles, which used the land as a dump, as well as stables for the city's horses.

wake of the oil discovery at Puente many entrepreneurs started small oil companies in the Whittier district. One of these companies, the Central Oil Company, became one of the district's most productive oil companies. Although outside individuals owned a considerable amount of stock in the company, most of Central Oil remained in the hands of its small circle of business and professional men from Los Angeles, including W. W. Neuer, president; Senator Robert Bulla, secretary; J. M. Eliot, treasurer; along with Charles H. Toll, W. R. Cook, I. B. Newton, R. P. Wade, and H. W. Hines, all of whom controlled the company's operations. At the turn of the twentieth century the Central Oil Company owned nearly 2,700 acres of land in Whittier and drilled around 800 wells with pipes connecting the fields to storage tanks located in Los Nietos. Like many oil companies, the Central Oil Company took great advantage of its position along the railroad tracks that led directly to the port in San Pedro where it sent its oil for shipment to markets around the country and world.[49]

After the Central Oil Company, the Home Oil Company, founded in 1897, was the second largest producer of oil in the Whittier district. In comparison to Puente Oil, several residents of Whittier ran the Home Oil Company, including W. V. Coffin, president; F. H. Buckmaster, vice-president; Alva Starbuck, secretary and manager; G. E. Little, treasurer. Although Home Oil did not meet with immediate success in its early years, its wells eventually began to pump-out around fifty barrels of oil a day.[50] The city Whittier and the Home Oil Company stockholders thrived in tandem. At the same time that Starbuck served as secretary and manager of Home Oil he also served as a vocal booster of Whittier. Starbuck boasted that Whittier prospered because of its good location, its water supply, and the presence of Whittier College (which one can conclude showed Whittier was not the average Southern California

[49] Redpath, *Petroleum in California*, 43-44.
[50] Redpath, *Petroleum in California*, 46.

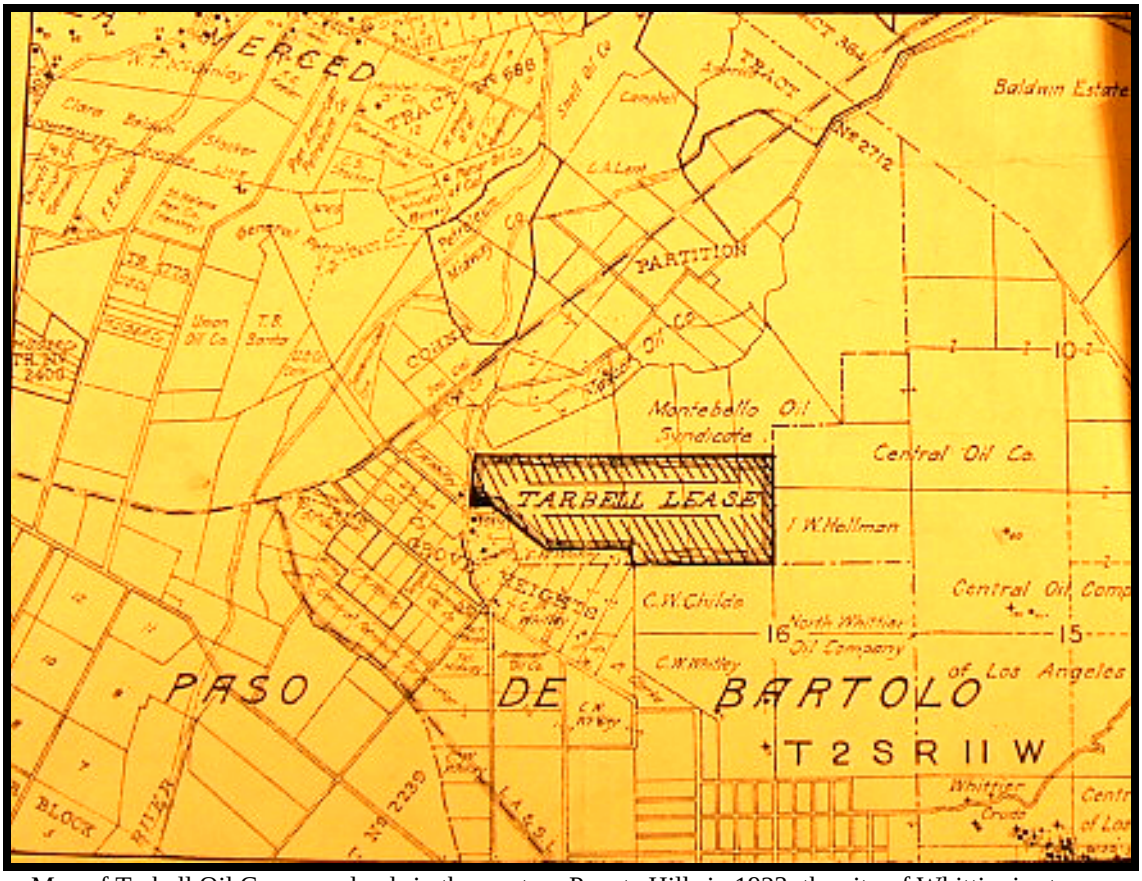
boomtown but was an economic and intellectual leader in the region). Starbuck seemed most proud that Whittier was "a community where the majority of residents own their own homes" presumably showing the economic well-being and industriousness of the residents of Whittier.[51] As Starbuck and his connection with Home Oil and the city of Whittier reveal, oil in the Puente Hills was intertwined with the growth of Whittier and the surrounding region.

The lure of oil can be seen in the number of small companies founded by local residents (often with the help of outside capital, typically from Los Angeles) during the boom at the turn of the century. In the immediate area around Whittier, for example, the wells of almost a dozen companies pumped from adjacent fields. For example, the Home Oil Company leased some of its land to the Whittier Crude Oil Company; located near Whittier Crude sat the wells of the Warner Oil Company with forty acres of land in the Whittier District and owned by individuals from Whittier. Just east of the Home Oil Company land, the Turner Oil Company in 1900 owned twenty acres of land. Just east of turner Oil were the wells of the Fidelity Oil Company—one of the few companies in the Whittier district owned by Los Angeles businessmen. But even Fidelity, which had only three wells on its land and produced very little oil, involved local stockholders J. C. McComb and S. E. McKee.[52]

Other companies in the region included Clarendon Heights Company and the North Whittier Oil Company (owned by individuals from Los Angeles who operated 320 acres of leased land in the Puente Hills). Perhaps to keep costs down and to maintain local control over the region's oil fields, some of the companies, such as Home, Crude, Whittier, Fidelity, and Turner Oil, joined together in order to maintain a pumping plant at the city waterworks reservoir. This action enabled the various smaller companies to pump water into their fields to operate their

[51] Arnold and Clark, *History of Whittier*, 112.
[52] Redpath, *Petroleum in California*, 46-47.

wells at a significantly lower cost than they would have if they had constructed pumps for themselves. However, one local company, Home Oil, became so successful that it constructed its own pipeline to connect its wells with the nearby Southern Pacific Railroad line in order to load its oil directly into the tank cars on their way to Los Angeles and the port in San Pedro.[53] Thus by shipping their oil to the developing harbor in San Pedro, many of the local companies actively took part in the economic growth of the region and showed that oil, along with the much touted and famed citrus industry, was an active player in the economy of Southern California.



Map of Tarbell Oil Company lands in the western Puente Hills in 1923; the city of Whittier is at the bottom of the map. At the time this map was produced Tarbell Oil's stock was worth around $1,000,000. Tarbell Oil's Vice President, A.H. Gregg, was from Whittier while the rest of the company's directors, like many of the oil companies in the Puente Hills, was comprised of men from Los Angeles. Aside from being Tarbell Oil's Vice President, Gregg was the President of the Sycamore Canyon Gravel Company and Director of the Whittier Building & Lease Assoc. *Image courtesy of the Workman-Temple Homestead Museum.*

[53] Redpath, *Petroleum in California*, 46-47.

Oil drillers made use of the proximity of the Puente Hills oil fields to the growing city of Los Angeles by constructing pipelines from their fields in the hills to their customers in Los Angeles and other places around Southern California. Oil drillers also constructed pipelines from the hills to the newly constructed port in San Pedro in order to connect their product with consumers around the world. Several oil pipelines cut through the state, many of which were located in the Los Angeles area, the largest of which belonged to the Union Oil Company. Union Oil's pipe took oil by gravity directly from the fields of Whittier, Brea Canyon, and Fullerton to San Pedro and from there it was sent by steamer to their refineries in San Francisco. Throughout the state smaller pipelines connected oil fields with the railroads for easy transport of their petroleum[54] but in Southern California, particularly with the development of the Whittier-Fullerton fields, the proximity of oil fields to the refineries in Los Angeles, as well as the port in San Pedro, enabled Los Angeles to be serviced by a growing network of pipelines.[55] These oil pipelines, along with the activity at the port in San Pedro, fostered significant capital and industrial development in Los Angeles.

Aside from Puente, Columbia, and Home, several other oil companies established wells in the Puente Hills such as the North Whittier Oil Company. North Whittier Oil, owned by businessmen from Los Angeles, leased 320 acres of land in the Puente Hills. The Pickering Land & Water Company, originally created to bring water to the new town of Whittier in the 1880s, first tapped Turnbull Canyon and the Puente Hills for water, then constructed two concrete reservoirs in the hills and "piped what water they had through the town, parceling it out in fractions of an inch to the lots." The Pickering Company later constructed two tunnels, the first built in 1887 and the second in 1888, in order to "catch the seepage" from the Puente Hills

[54] Redpath, *Petroleum in California*, 36.
[55] Williamson and Daum, *The American Petroleum Industry*, 69.

and bring water to the growing town of Whittier.[56] The Pickering Land & Water Company also prospected for oil at the mouth of Turnbull Canyon in the Puente Hills. The Pickering Company ordered the construction of a well one thousand feet into the hills in order to tap the area for oil. The attempt failed. The contractor could only dig about six hundred feet through the hard bedrock. After several attempts and failures, the Pickering Company gave up on the site.

Others would not be discouraged by the failures of Pickering and many continued to hope to extract oil profits from the Puente Hills. One Whittier resident, Simon Murphy, formed the Murphy Oil Company and drilled fifty wells in the Whittier area, eventually focusing on the Puente Hills because he believed that a unique type of oil existed there rather than at the base of the hills.[57] By the beginning of the twentieth century the oak and sycamore trees that dotted the Puente Hills now shared the landscape with towering oil derricks clustered throughout the hills. Ironically, had it not been for his profits from oil, Murphy's East Whittier real estate investments would not have turned a profit because the "returns from the sale of land and the modest earnings of the water system" proved insufficient to cover the costs of the original investment. Murphy used the money from his oil wells to acquire more land in the nearby Coyote Hills for oil speculation turning more of the surrounding hills into a towering display of derricks and industry.

Eventually, the Standard Oil Company bought out the Murphy Oil Company enabling Standard Oil to establish a presence in the Puente Hills region, a presence that remained even after the legal break-up of the Standard Oil monopoly in 1911. With the Supreme Court ruling against Standard Oil the company was forced to split into several smaller companies. Standard

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[56] Arnold and Clark, *History of Whittier*, 107 and 82.
[57] Robinson, *Land in California*, 153.

Oil's operations in California became a separate company named Standard Oil of California, also known as Socal. Socal later renamed itself Chevron.[58]

Los Angeles investors paid close attention to the lucrative discoveries in the Puente Hills fields. After finding great wealth from his Los Angeles oil wells, Edward L. Doheny and his business partner, Charles Canfield, set-out in search of other oil producing locations throughout Southern California. They were especially successful in the Brea Canyon area of the Puente Hills. Doheny arrived in the Puente region a few years after the Rowland discovery and must have been impressed with the success of the small company.[59] In July of 1899, Doheny, along with strong support from investors at the Santa Re Railroad, formed the Brea Canon Oil Company. The Brea Canon Oil wells proved extremely productive for Doheny and produced "several hundreds barrels of oil a day for the first six months, when most of the wells throughout Southern California yielded well below half that amount."[60] The Brea-Olinda field eventually produced more than 300 million barrels of oil in its lifetime.[61] Doheny's accumulation of wells became so great, that, as an editor of *Forbes Magazine* noted later, Doheny produced twenty-five million barrels of oil a year, "a volume greater than [that] produced by any one Standard Oil

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[58] Robinson, *Land in California*, 85-86. Chevron acquired more oil interests in the Puente Hills as late as the 1990s. For example, in the summer of 1997 Bakersfield-based Monterey Resources, Inc. (which maintained large holdings in the San Joaquin Valley) bought McFarland Energy, Inc. of Santa Fe Springs (a company with interests in the Puente Hills). A few months after the buy-out Texaco bought Monterey Resources, the oil assets of the former Santa Fe Railroad, and thereby increased Texaco's stake in California including the Puente Hills. In 2001, Texaco merged with the Chevron Corporation.

[59] Davis, *Dark Side of Fortune*, 27. The Doheny tale fits into the long canon of American rags-to-riches stories. Having arrived in Los Angeles on the cusp of the real estate bust of the 1880s, Doheny could not find work and had trouble caring for his sickly daughter. One day, while sitting on the steps of an apartment building in Downtown Los Angeles, Doheny noticed tar stuck on the wheel of a passing ice wagon and wondered if the substance had any relation to oil. Doheny followed the source of the tar back to the area know as the La Brea Tar Pits and began to dig a well with his friend, and former business partner, Charles Canfield. The Doheny/Canfield well became the center of the Los Angeles City Field.

[60] Martin R. Ansell, *Oil Baron of the Southwest: Edward L. Doheny and the Development of the Petroleum Industry in California and Mexico* (Columbus: Ohio State University Press, 1998), 45. Railroad companies were one of the largest financial backers of Doheny and as Ansell noted, from Brea to Bakersfield Doheny seemed to pull along the railroad wherever he went in the Golden State. Although Doheny maintained control over his own operations in Brea, in Fullerton Doheny was subject to the needs of his financiers at the Santa Fe Railroad. For information about Edward Doheny and his railroad backers see Ansell, *Oil Baron of the Southwest*, p. 46).

[61] O'Connor, *The Oil Barons*, 155.

Company." In the early 1920s, Doheny's wells produced one-tenth of all the oil produced in the United States.[62] Thus the Puente Hills became the site of numerous successful and influential oil discoveries that affected not only the development of the Puente Hills region but also much of Southern California. Oil from the Puente Hills helped Los Angeles develop into a world-class industrial center that attracted capital and business to Southern California.

The End of an Era

Oil companies, like the individual oil prospectors who preceded them, sought out oil wherever it could be found. Since the oil companies in Southern California, as well as else where, did not sit too long on one piece of property but actively engaged in buying and acquiring new lands and buying-out competing companies that would increase their output of oil and thus increase their profit margins, oil companies constantly moved around in search of new properties to satisfy the demands of their consumers and stockholders. As any good business that wanted to maximize its profits would do, oil companies chased the flow of their product and often focused their attention on new fields while older fields seemed to merely slowly and quietly fade into the background of history. For example, Shell Oil, which still owns large tracts of land in the Puente Hills region, focused its attention away from the Puente Hills and into its other ventures, such as the more profitable and lucrative discoveries in Signal Hill.[63] Along with the initial discovery at Signal Hill in 1921, Shell Oil acquired companies and land throughout California, as well as the entire nation, so that by 1929 Shell Oil had operations in all 48 states, including the territory of Hawaii. Shell acquired properties in the San Joaquin Valley and Dominquez Hills, along with other property and companies throughout the nation. Perhaps to be closer to the ever-expanding

[62] Forbes, *Men Who are Making the West*, 98.
[63] Beaton, *Enterprise in Oil*, 753.

port in San Pedro, Shell Oil constructed refineries in Wilmington and Dominquez (present-day Carson) in 1927. Shell used the Wilmington plant to refine the natural gasoline they pumped from their fields in Ventura which would go on to become one of the companies most profitable holdings.[64]

In the Puente Hills, the oil industry, like the cattle industry before it, proved to be a fleeting enterprise. Although oil would continue to be extracted from the region to the present-day, by the 1920s the oil industry in Southern California shifted from the three areas that originally dominated the landscape – Newhall, Puente Hills, and the Los Angeles City Fields – to new regions of the Southland such as Huntington Beach, Baldwin Hills, Santa Fe Springs, and above all, Signal Hill. While these other fields produced larger quantities of oil than had their predecessors, the Puente Hills still maintained a presence within the Southern California oil industry, albeit a limited presence compared to what it once enjoyed. Large companies bought many of the small local companies that originally established themselves in the Puente Hills and consolidated many of the various operations into large holdings. Although the Puente Hills did not serve as the focus of the Southern California oil industry after the early 1920s, the Puente Hills region still continues to produce oil to this day.

However, the success of the local companies in the Puente Hills region during the latter part of the nineteenth century and early part of the twentieth century put the oil industry and the Puente Hills on the map. The Puente Hills became a centerpiece for Southern California and men such as Edward Doheny and Lyman Steward saw the potential for wealth in the region and turned their attention to the fertile hills of the La Puente Valley. Larger regional and even national companies began to buy out the smaller local companies that once dotted the landscape of the Puente Hills. These buyouts and mergers allowed large corporations, such as Shell,

[64] Beaton, *Enterprise in Oil*, 753-754.

Chevron, Unocal, and ExxonMobil to either establish a presence in the region or merely increase their holdings in the hills.

The Landscape of Oil

As news of the Los Angeles area's oil strikes of the late 1880s to early 1890s spread throughout the nation, hundreds of money-hungry speculators and miners flocked to the city. It appeared as if everyone who wanted to make a quick fortune crowded into the Golden State; reminiscent of the days of the 49ers who came to California in search of gold, oil fever captured the attention of Southern California and the nation. People came to California in order to stake their claim in the burgeoning oil industry. The early oil industry altered the natural and cultural landscape of Los Angeles and Southern California.[65] The discovery of oil in Southern California meant more than the creation of new millionaires; the presence of oil changed the landscape of Southern California as well as Southern Californians' relationship with the land.[66]

Land once only profitable for farming in rainy years or if extensively irrigated, land that had failed the hopes of ranchers, could now be worth thousands of dollars for its potential to produce oil.[67] Every citizen of Los Angeles, "newcomer and settler alike, seemed to harbor dreams of amassing a fortune by piercing an underground reservoir of black gold." As a result, neighbors fought one another for possession of oil-rich lands and Los Angeles embraced the hum of a new industry that dramatically altered the landscape. Black, grimy wells drilled "noisily day and night, yielding for their owners thick muddy earth and black smoke . . . and ultimately

[65] Davis, *Dark Side of Fortune*, 28.
[66] Workman, *The City that Grew*, 257.
[67] Workman, *The City that Grew*, 11. Rain was a vital commodity during the cattle years because, as well as during the region's subsequent shift to agriculture. Rain, combined with a network of reliable irrigation ditches, allowed the arid Southern California landscape to become one of the nation's largest and most productive agricultural regions.

thousands of gallons of oil," which helped propel Los Angeles into an industrial center, rose from the landscape.[68]

Following the success of the Doheny well in the 1890s, much of the surrounding area in the Mid-City district became dedicated to oil. For example, many of the homes in the Westlake Park section of Los Angeles contained active oil wells in both their front and backyards.[69] Doheny and other men incessantly sought to find more oil fields and as a result, drilled new wells in the middle of the residential sections of the city surrounding State Street. There were no regulations or agencies or even individuals' scruples to protect the city's residents from the rapid increase in oil machinery that popped-up all over the city.[70] By 1895 over 200 wells crammed into the area surrounding the few square blocks of the Second Street oil field with as many as four to five wells per lot.[71]

Individual landowners did their part, too, in digging wells and erecting derricks on front lawns. The potential of profits from the oil wells more than compensated for the smell and the spattering of the derricks.[72] Wooden derricks competed with residences for space in central Los Angeles, thus giving the city a forest without ever having trees, according to one scholar.[73] At times gushers ran wild across the countryside, spewing thousands of barrels of oil into the natural environment with large parts of the surrounding landscape "catching fire in titanic outbursts of uncontrollable waste." Fires, oil spills, and air pollution became common in and around the oil fields. The rewards for environmental degradation were industrial and economic growth for the state and sizable profits for individuals. Oil fields from Bakersfield to Puente turned the state of

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[68] Davis, *Dark Side of Fortune*, 28.
[69] Davis, *Dark Side of Fortune*, 256.
[70] Newmark, *Sixty Years in Southern California*, 603.
[71] Ansell, *Oil Baron of the Southwest*, 35.
[72] John and LaRee Caughey, *Los Angeles: Biography of a City* (Berkeley: University of California Press, 1976), 248.
[73] William Rintoul, *Spudding In Recollections of Pioneer Days in the California Oil Fields* (San Francisco: California Historical Society, 1976), 83.

California into the nation's leading oil-producer between 1900 and 1936, and the nation's second largest oil producer until 1958.[74]

Even during the 1920s Los Angeles oil strikes continued to overrun many residential areas. It was not uncommon to find residential units in close proximity to, if not within, industrial oil districts where homes shared the skyline with towering oil derricks.[75] Owing to the nature of the oil industry in Los Angeles, speculators typically placed oil derricks very close together in the city fields in order for every individual to drill as much oil as possible from his well. For example, when a person sank two wells his neighbor felt compelled to counter with the same, if not more, in order to maximize his own chances of tapping as much oil from the land as possible.[76] Thus since many found their fortunes in sinking a well or two, the residential districts of the city became crowded with promoters, drillers, and derricks. These speculators trampled gardens, flooded lawns, and turned backyards into "paydirt" causing many of the residential districts of Los Angeles to become the site of chugging and wheezing pumps endlessly drilling day and night for oil.[77]

As one scholar of the California oil industry comments, the "exploitation of petroleum in California has been on a large scale, and has duplicated to a singular degree the widespread wasteful production which has characterized the exploitation of most of America's natural resources."[78] Oil settled with the dust in the air moving from one part of the city to the next and created a mess that stuck in the wheels of carriages, as well as on people's shoes and clothing.[79]

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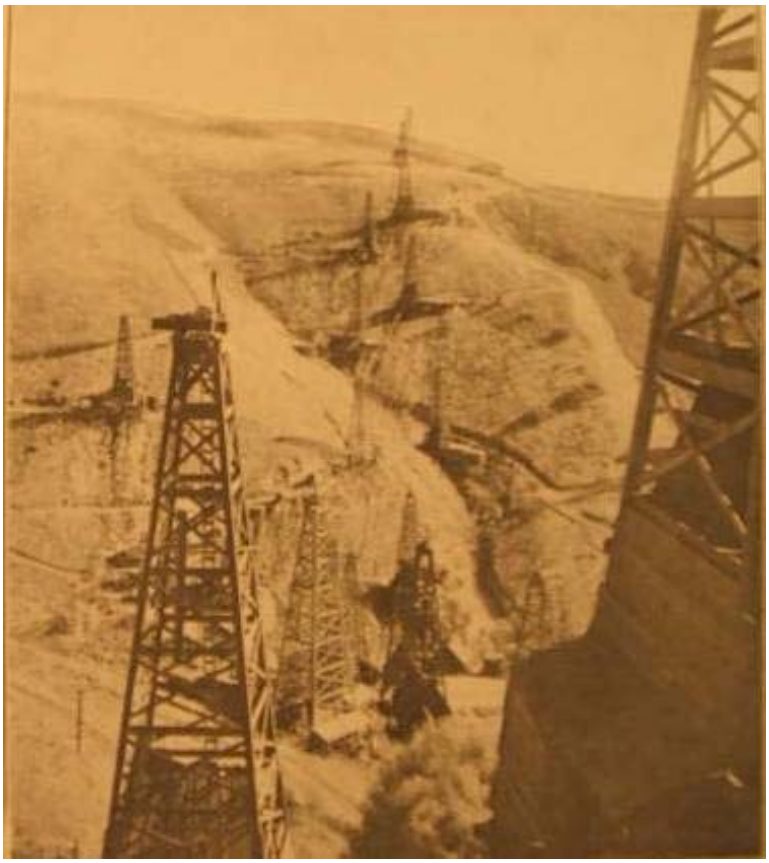
[74] Hutchison, *California*, 286. Also, the advent of World Wars I and II greatly accelerated the demand for oil. During World War II the oil industry in Southern California, including the Puente Hills, flourished because of its location on the Pacific Coast and its proximity to the port in San Pedro allowed Southern California to become one of the top oil-producing states in the nation.
[75] Caughey, *Los Angeles: Biography of a City*, 288.
[76] Redpath, *Petroleum in California*, 40.
[77] Rintoul, *Spudding In*, 83.
[78] Stone, "The Petroleum Industry of California," 60.
[79] Rintoul, *Spudding In*, 85.

Oil spills became a frequent occurrence. Much of the oil that spilled around the sites of the wells saturated the ground, sticking to the hooves of horses that then moved the accumulated crude from one location of the city to the next.[80] Almost every winter Echo Park Lake "became such a sticky mess that it was sometimes necessary to hook up six horses to team the oil wagons around the lake" in order to remove the crude that accumulated on the surface of the lake. In 1907, so much oil spilled into Echo Park Lake that it caught fire and burned for several days. Most residents seemed not to be too concerned with the mess created by the oil industry because many saw it as just another inconvenience of big-city life in the industrial age.[81]



Oil derricks towering over the landscape in the Whittier Field of the Puente Hills. *Image courtesy of the Workman-Temple Homestead Museum*.

Carey McWilliams once called the environment of Southern California "novel" and that as a result, "it has always had a disproportionately large share of what are known as resource-based activities; that is, activities based on peculiar needs."[82] Oil drilling has indisputably been such an activity. The discovery of oil in Southern California combined with the activity of the region's boosters transformed Los Angeles

[80] Rintoul, *Spudding In*, 89.
[81] Rintoul, *Spudding In*, 91.
[82] McWilliams, *California: The Great Exception*, 223.

from a small, agricultural town into a large, industrialized metropolis.[83]

The impact of the first oil boom on the area that became the Puente Hills Landfill Native Habitat Preservation Authority differed from the effects noted above. Ironically, the combined promise of great wealth from oil wells, the difficulty then of developing the Puente Hills into urban areas, and the relatively primitive extraction technology of the era meant the preservation of the wilderness aspects of the area. With the removal of the oil derricks and minimal cleanup, the land retained much of its original natural beauty.

Events surrounding the use of land define the history of the Puente Hills. Those who inhabited the region, depending on their own economic and cultural needs at the time, used the hills in a variety of ways. The Puente Hills witnessed a variety of economic and cultural changes throughout the nineteenth and twentieth centuries. For the Tongva, the hills served as a source of sustenance and supplied the local tribes with food and water, as well as a source of recreation. For the missionaries, and particularly the ranchers, the hills became a vital economic asset and contributed a great deal to the growth of the region. Once the era of the cattle barons ended the Puente Hills, like Southern California itself, survived the fury of nature and persevered during the "lean years" of the droughts of the later nineteenth century.

Boosters and settlers constantly redefined the Puente Hills as the changing cultural landscape determined. No longer physically used for their economic potential, as they had been during the cattle years, the boosters tapped the Puente Hills as a natural asset, unique to Southern California, to entice potential settlers to the region. Yet at the same time, local businessmen found ways to extract money from the hills. Needing a source of water to feed the growing surplus of people flocking into Southern California, some early residents utilized the hills for their water. Once people discovered oil in the hills the land became exploited for its potential to

[83] Ansell, *Oil Baron of the Southwest*, 29-30.

supply black gold and instant wealth. From the days of the missions to the time of the oil barons, the economic and cultural needs of the day determined the use and misuse of the Puente Hills, as well as much of the natural landscape of Southern California.

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