

## **Oil in Southern California, 19th Century to the Present: From Grit to Success**

**Robert D. Francis<sup>1</sup>**

<sup>1</sup>Professor Emeritus, California State University Long Beach, [mariondanfrancis@gmail.com](mailto:mariondanfrancis@gmail.com)

### **Abstract**

By the time California entered the Union in 1850, the industrial revolution was well advanced east of the Mississippi, fueled by the coal fields of Pennsylvania, Kentucky, Virginia, and Illinois, the iron ore of Minnesota, and an extensive railroad network. California, separated from all of the other States by a thousand miles of wilderness, was left out. By the early 1850s, the gold rush was waning, and coal, which had to be shipped from the East overland or around the Horn, was far too expensive to be a significant energy source. About the time when the immense oil discovery in Pennsylvania was made in 1859, tar from surface seeps and a few hand-dug “wells” in Los Angeles, Carpinteria and elsewhere were faint glimmers of a future industrial revolution that would make California the economic powerhouse of the United States.

After desultory attempts in the 1860s, encouraged by favorable geologic reports from Ventura County, the first commercially viable well was drilled in 1875 near Newhall. This, and discoveries in the 1880s in Ventura County, Puente Hills, Brea-Olinda, and San Joaquin Valley, all drilled near surface seeps, resulted in two early production boomlets of up to 750,000 barrels in some years. But it was the discovery of the Los Angeles City field in 1892, again drilled near seeps, that began the sustained boom that put California on the map, eventually leading to a peak of almost 400 million barrels in 1983. The Los Angeles City field, and other nearby fields, were also important because they showed the importance of anticlines and faults in looking for oil, especially in California.

This is a story about people, those who risked everything on a hunch or a dream, who turned grit and determination into spectacular success. Examples of such individuals are Samuel Mosher of Signal Oil, Lyman Stewart of Union Oil, Emma Summers the “Oil Queen of California,” and countless unnamed others, who started and sustained an energy revolution that led California and the U.S. to lofty heights, and along the way increased our knowledge of the earth and enhanced the geological profession. This talk focuses mainly on Los Angeles Basin as well as the Newhall-Santa Barbara corridor in part because these areas were the scene of much of the early development, and of many interesting stories. Advances in seismic exploration, exploration and production in an urban environment, development of mature fields, and many other accomplishments, occurred there. Modern exploration tools such as 3D seismic, geochemistry, and basin analysis have proved potent in this region, and have also led to advances in seismology, environmental geology, understanding tectonic evolution, and more.