OIL IS FOUND WITH IDEAS

by PARKE A. DICKEY

Next year the oil industry will celebrate the hundredth anniversary of its birth at Titusville, Pennsylvania. Some industries have had humble beginnings, but not the oil industry. Its birth was spectacular, and its growth since that time has been marked by intermittent, extravagant booms, or waves of gushers which have often resulted in an acute oversupply. These periods have usually been followed by periods of low discovery rate during which it looked as if we were going to run out of oil.

A review of the history of petroleum technology shows that each of these bursts of increased production was caused by a new idea. Sometimes the idea was mechanical—for example, new drilling methods like the rotary made it possible to drill on the Gulf Coast, and heavier rigs made it possible to drill for deeper horizons in old areas. Sometimes it is technological like the discovery of waterflooding or hydraulic fracturing. Often it is geographical—oil is discovered for the first time in a new area. Most often it is geological—a new theory on where oil can be found impels men with faith and vision to raise money and spend it wildcating.

We usually find oil in new places with old ideas. Sometimes, also, we find oil in an old place with a new idea, but we seldom find much oil in an old place with an old idea. Several times in the past we have thought we were running out of oil whereas actually we were only running out of ideas. This principle can be illustrated most vividly by reviewing the story of the principal discoveries in each producing area of the world.

Pennsylvania

The oil business started with an idea—the mechanical one of drilling for oil. In Ontario, West Virginia, and Kentucky oil was produced in a small way from hand-dug wells. The promoters of the Pennsylvania Rock Oil Company in 1855 got Prof. Benjamin Silliman, a chemist and geologist at Yale University, to analyze a sample of the oil from Titusville. His analysis showed its great industrial potential for illuminating and lubricating. Apparently the founders of the company, Jonathan G. Eveleth and George Bissell, intended to dig and enlarge the oil springs at Titusville. Bissell accidentally stopped one hot summer day in a drugstore in New York where he saw an advertisement of Kier’s “Rock Oil” “discovered in boring for salt water near the Bank of the Allegheny River about four hundred feet below the earth’s surface.” Drilling was the key to getting oil in commercial quantities, and the reason why the Drake well started the industry off when the other oil wells did not.

Bissel hired a friend, Edwin F. Drake, who was a conductor on the New Haven Railroad, and sent him to Titusville to try drilling for oil. He went to Salina, Pennsylvania, and persuaded a driller and blacksmith experienced in drilling for salt to come to Titusville. He had trouble getting through the soft gravel, and bought some cast iron pipe which he drove 32 feet to bedrock. He drilled to 69-1/2 feet, and shut down over a week end. Sunday afternoon the driller, “Uncle Billy” Smith, noticed that oil had filled the well to a few

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1 President's address
2 Jersey Production Research Company, Tulsa, Oklahoma