Spindletop and the Beginning of the Modern Oil Industry
1901-1903

From Anthony F. Lucas, "The Great Oil Well Near Beaumont, Texas". (paper read at the annual meeting, Richmond, February, 1901). American Institute of Mining Engineers.

Certain geological indication at Gladys' station, four miles south of Beaumont, on the Sabine Pass and East Texas railroad, induced me to undertake a thorough test of that locality by means of a well. I had been making reconnaissances for nearly two years in that part of Texas, before deciding upon this supreme effort.

At first, I used the system of boring which I had previously used in the Louisiana salt-deposits. But I soon found that this method was inadequate without modification to deal with the quicksand. Accordingly, I adopted the use of large and heavy casings, and pipes of 12, 10, 8, 6, and 4 inches in diameter successively telescoped one into the other. Boring was begun about the middle of October 1900. On January 10, 1901, after many difficulties, a layer of rock containing marine shells was reached, at the depth of 1160 ft. At this time there was about 600 ft. of 4-in. pipe, weighing at least 6 tons in the well. This together with the 6-inch casing above was filled with water. When the rock was penetrated the well "blew out," lifting the whole of the 4-in. pipe. Mr. Hamill was on the top of the 60 ft. derrick when the pipe began to move; but the beginning was so gradual that, warned by the outflow of the water, he had ample time to climb down and retire to a safe distance before the pipe shot into the air. It went to a height of 300 feet above the derrick, the upper works and heavy tackle of which it carried away; then, twisted and bent by the strong wind which was blowing at the time, it broke off with a crash and fell to the ground, fortunately injuring no one. The remaining 4-in. pipe, freed from the weight of the upper portion, followed with greater rapidity, and was shot through the top of the derrick. Simultaneously, the water, which filled the well, was expelled to a great height; and a column of gas, rock-fragments and oil followed it, at first at the rate of about 250 barrels per hour, rapidly increased to 500 barrels, 1000 barrels, etc., until on the third day of discharge was estimated by officials and engineers of the Standard Oil Co., who were naturally the most experienced judges, to be at least 300 forty-two gallon barrels of oil per hour, or about 75,000 barrels in 24 hours.

Since this unprecedented outbreak took us by surprise, it was necessary to improvise some means of preventing the total waste of the oil ejected, and at the same time to devise a method for getting the stream under control. To attain the first object, we hastily constructed dams or levees to surround the oil. The first one, about 2.5 feet high, was overflowed in 24 hours; a second and third, embracing larger and larger areas, the latter covering 50 acres, were likewise overflowed. The clay soil seemed to hold the oil fairly well, but the constant danger of fire was a source of great anxiety, by reason not only of the direct loss of oil, but also of the incidental damage which it might occasion; and, above all, because the ignition of the spouting column itself would make it difficult or impossible to recover and control the well. Even more important, therefore, than the immediate saving of the oil was the shutting of the well. Operation for both purposes were carried on simultaneously.

Interesting historical note: The Spindletop well flowed freely for six days, spewing millions of barrels of oil, before Lucas and his crew were able to cap it.

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