

support and approval of the male population, and they became experts at the art of persuasion. In a broader sense they appealed to middle-class society by emphasizing their goals and their spirit of service to the community in an attractive and, perhaps more importantly, nonthreatening way.

While the Ladies' Reading Club had firmly declared in their minutes of November 8, 1895, that they did not wish to become ticket sellers, clubwomen soon realized that the need for funds would be a perpetual reality and they became persistent and innovative money raisers. They entertained, decorously of course. They begged, always appealing to the goodness and generosity of the hoped-for benefactor. And they taught, feeling that funds would more readily come from an educated citizenry. Eventually they realized that by reproaching those in authority, they could persuade government to assume financial responsibility for improving the quality of life within the city.

Leadership, of course, was the ultimate key to success. Women like Adele Looscan, Elizabeth Ring, Emma Cherry, Margaret Foster, Alice Baker, and Mamie Gearing, who began with the desire for self-improvement, came to the realization that community improvement could enhance the general welfare. Though they lacked power in the conventional sense, they combined perseverance, intelligence, and an astute sense of timing to effect coalitions that would actively work for the good of the entire population.

From our late-twentieth-century perspective, these clubwomen may have acted conservatively, addressed a narrow segment of the population, and failed to achieve true equality. Within the ideological and political framework of the time, however, they helped to lay the foundation for the feminist expression of the future. The club movement provided a socially acceptable way for many women to begin moving out of the domestic realm and gain a public voice, without taking on the public notoriety that was attached to the crusading feminists of the time. Through their clubs, women learned the importance of joining together to effect change. In them, women found the strength to become autonomous persons.

suffrage movement see Janelle D. Scott, "Local Leadership in the Woman Suffrage Movement: Houston's Campaign for the Vote 1917-1918," *The Houston Review* 12 (no. 1, 1990): 3-22; Larry J. Wygant, "'A Municipal Broom': The Woman Suffrage Campaign in Galveston, Texas," *The Houston Review* 6 (no. 3, 1984).

Images of an Industry: The Hughes Tool Company Collection

Charles R. Hamilton

Given our geographic location and the economic impact of the oil industry on Houston, it's not surprising that the Houston Metropolitan Research Center has large numbers of oil industry related photographs scattered throughout its collections. These numbers dramatically increased recently with the acquisition of the Hughes Tool Collection (RG 1005). This collection contains more than 4,500 negatives and 5,000 prints, along with written information concerning the company and the flying exploits of Howard Hughes, Jr. Processing of the collection is under way and it should be ready for research use in 1994.

Howard R. Hughes, Sr., and his business partner Walter Sharp were among the many entrepreneurs who rushed to the new Spindletop oil field in the early years of this century. Hughes became interested in the problem of designing an improved method of drilling through rock, and in 1909 he and Sharp founded the Sharp-Hughes Tool Company to manufacture Hughes's revolutionary new rock bit. It was an immediate success and the company began to expand rapidly. Hughes constructed a test rig at the plant and continued to experiment with new bit designs, making tests on different types of rock. Walter Sharp died in 1912 and the company became Hughes Tool Company in 1915. In the 1920s, the company also broadened its oil field base and began making tool joints and valves.

Fortunately, photography was used extensively beginning in 1909, and today we have more than just another rhetorical look at the oil industry. Judging from the large number of images, especially during the early years of the company, Howard Hughes, Sr., must have seen the need to document all of the facets of his business. There are consistently large groups of photo-

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graphs in the areas of research, rock bit manufacturing, tool joints, facilities, products, oil fields, and customers. When put in chronological order, the collection offers a visual history of the oil industry over a period of 80 years. The value to researchers is the fact that these photographs are together in one collection.

One of the major areas covered by the collection is rock bit manufacturing. This group of photographs begins with raw bar stock steel and continues through almost every process required to complete the product. Many of the processes show the intricate workings of a rock bit and why a certain design does what it does. Also included in this section are constant updates in manufacturing processes and working conditions. Each time a new process or a new type of machine was introduced that would improve the quality of the end product, photographs were made and the entire process was documented. Some of these photographs were numbered in a way that indicates that they were used as manuals for some of the machines and processes.

Although research documentation is rarely seen by the public or is considered too secret to show to the competition, there are a large number of photographs in the collection involving the development of many of Hughes Tool's products. Some of these photographs are of the first research Howard Hughes, Sr., did in 1909, while others document lunar drill research of 1960s space exploration. Throughout the existence of Hughes Tool Company, there have been hundreds of patents obtained by the engineering and research staff. Howard Hughes, Sr., alone was responsible for 73 patents during his 16 years with the company. Research has always played an important role at Hughes and is well documented by photographs as well as by written records.

Another large group of photographs falls under the category of customers in the field with Hughes Tool's products. Many of these pictures are familiar, or seem so, since many of the oil industry photography collections contain similar scenes of oil-covered roughnecks standing around a rig floor next to drill pipe and a rock bit. The quantity of these pictures in this collection would indicate that Hughes Tool not only welcomed photographs of its customers with its products on location, but even instructed its field salesmen to take them. Many of the photographs have names, dates, locations, contractors, and oil company names on the backs. They came in from around the world and were often accompanied by reports of the footage drilled with a certain bit through a certain type of rock formation. The reports provided valuable information for the engineers who designed the rock bits and the photographs enabled the company to show off happy customers and advertise the quality of Hughes Tool products.

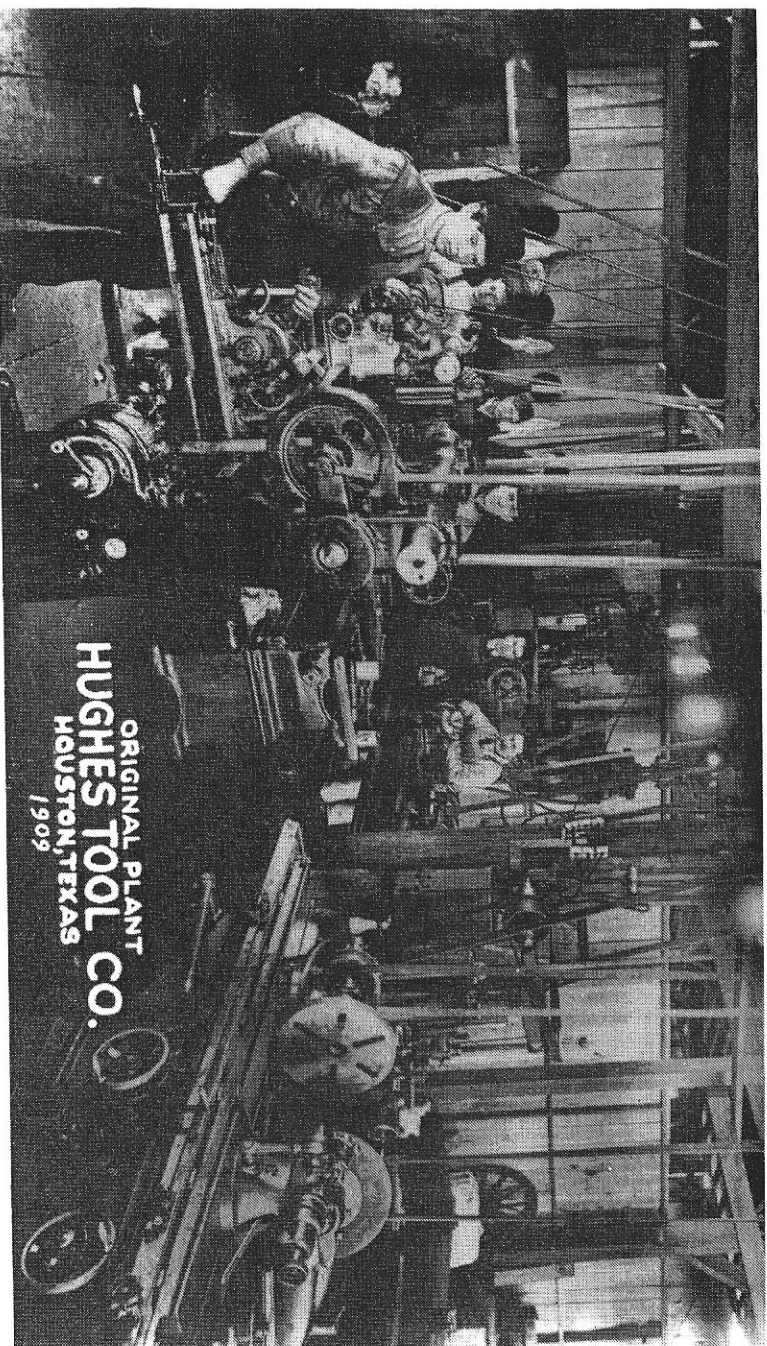
During the 1920s, books of photographs were made that gave customers an overview of the entire Hughes Tool operation from manufacturing to

finished products. These books were very general, but were intended to impress customers with the large facilities, new machines and manufacturing methods, the size of the company as a whole, and the quality of the product. This was possibly the first time a group of photographs in book form was used to describe the company, but not the last. Other groups of photographs followed throughout the next 60 years.

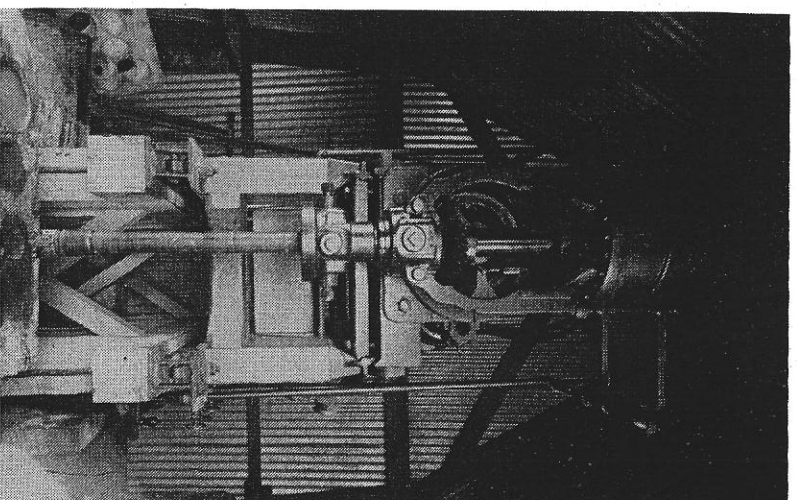
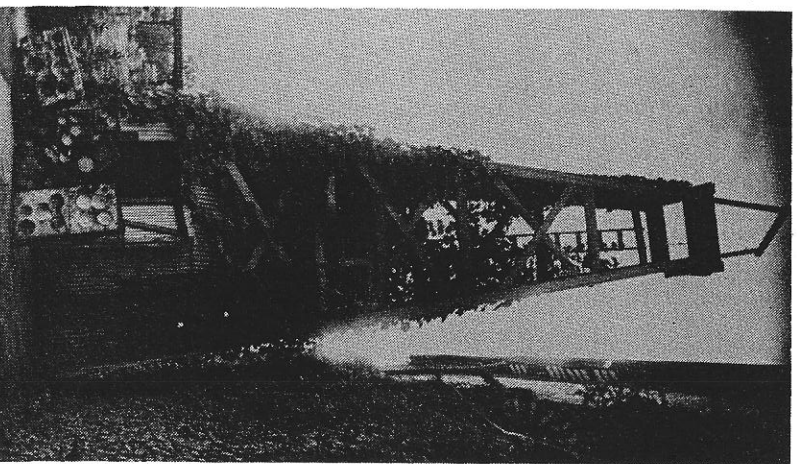
Also included in the collection are many of the modern rock bit designs introduced during the past 30 years, along with some drilling records and written information pertaining to specific rock bits. Hughes supplied many of the bits on the deepest oil wells ever drilled (at that time), many of which are documented with photographs and bit records.

Following the death of Howard Hughes, Sr., in 1924, Howard Hughes, Jr., took control of the company and held that control for almost 50 years. His interests did not lie strictly with Hughes Tool Company; he was also involved with both flying and the movie business. The collection contains portraits of Hughes, Jr., complete coverage of his welcome to Houston and Hughes Tool following a record-setting around-the-world flight in 1938, and numerous photographs of the interior, exterior, and construction of the Spruce Goose and the Hughes Flying Boat. There are also pictures from his youth that include his YMCA basketball team, his kindergarten class, and Hughes with the motorized bicycle he rode around the Hughes Tool plant as a boy. One of the other projects with which Hughes Tool was involved under Hughes, Jr., was the Glomar Explorer (a deep-sea mining ship), which is documented in brochures, news articles, and photographs.

One of the benefits of this collection is its historical perspective. Many of the other oil industry photography collections concern field operations with the familiar wooden derrick and scenes from major oil fields such as Spindletop. The Hughes Tool Collection goes farther than that. With it we can not only see these familiar pictures, but also gain interesting insight into an oil field service company that became a world leader in its field.



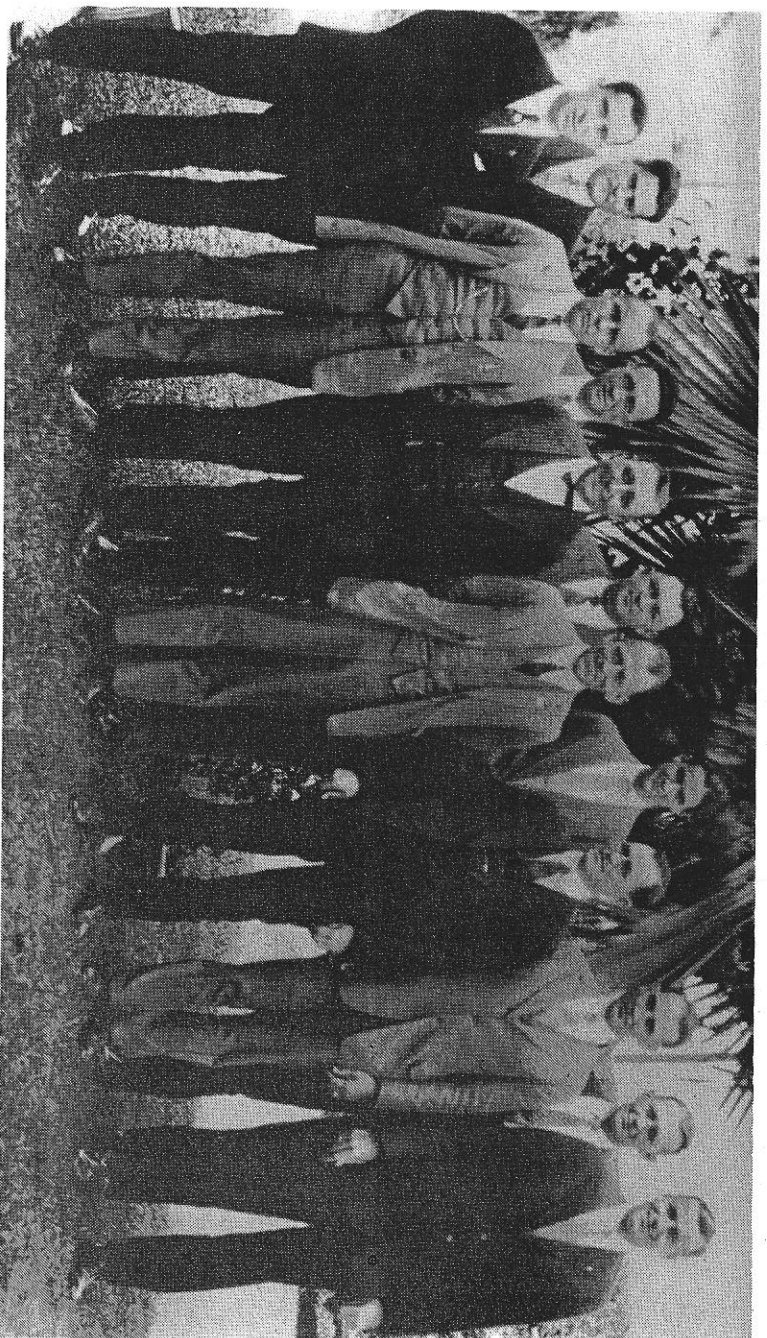
Lathe operators at Sharp-Hughes Tool Company in 1909.



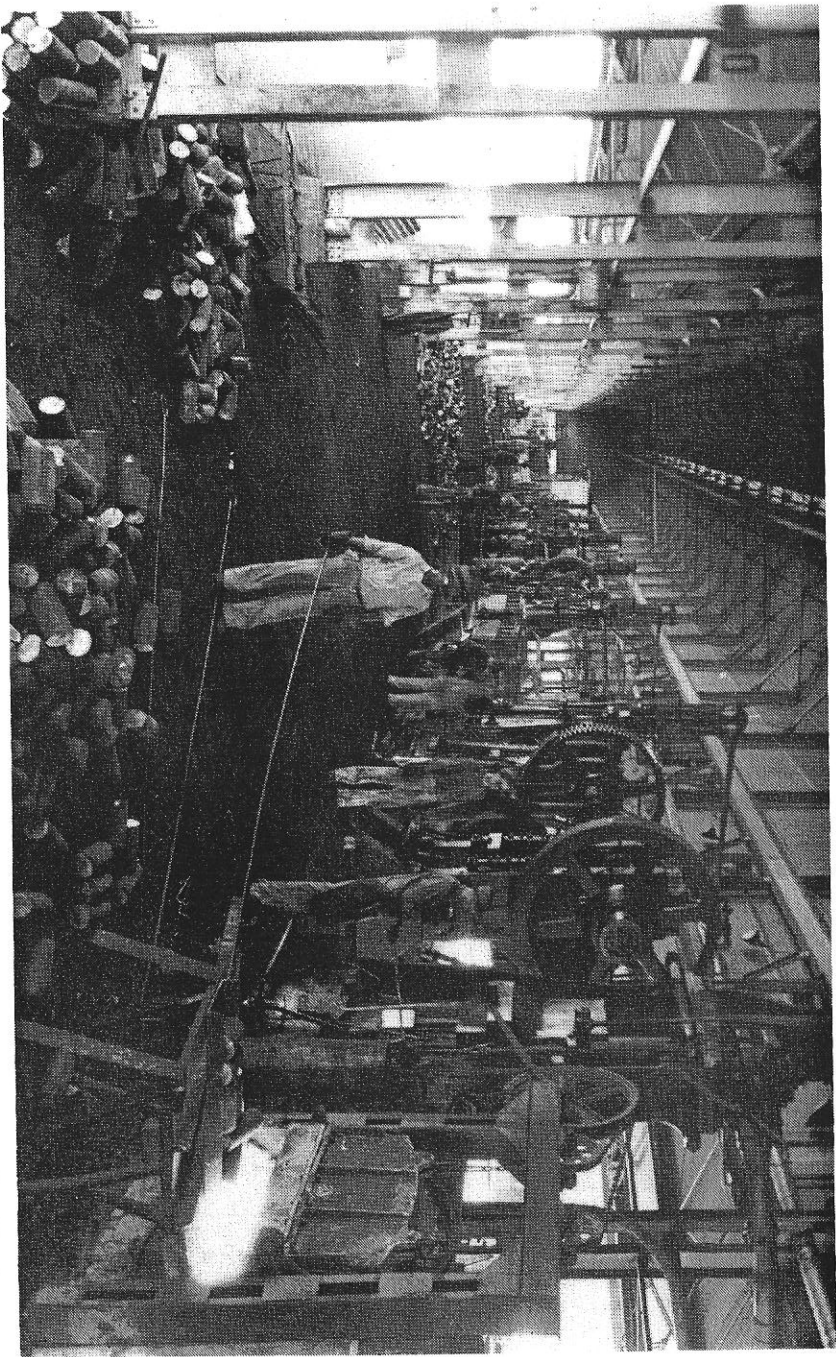
Hughes tested his rock bit prototypes in this research derrick outside the plant. At left, rock samples by the door show holes drilled by different bits. At right, the test rig inside the derrick is set to drill.



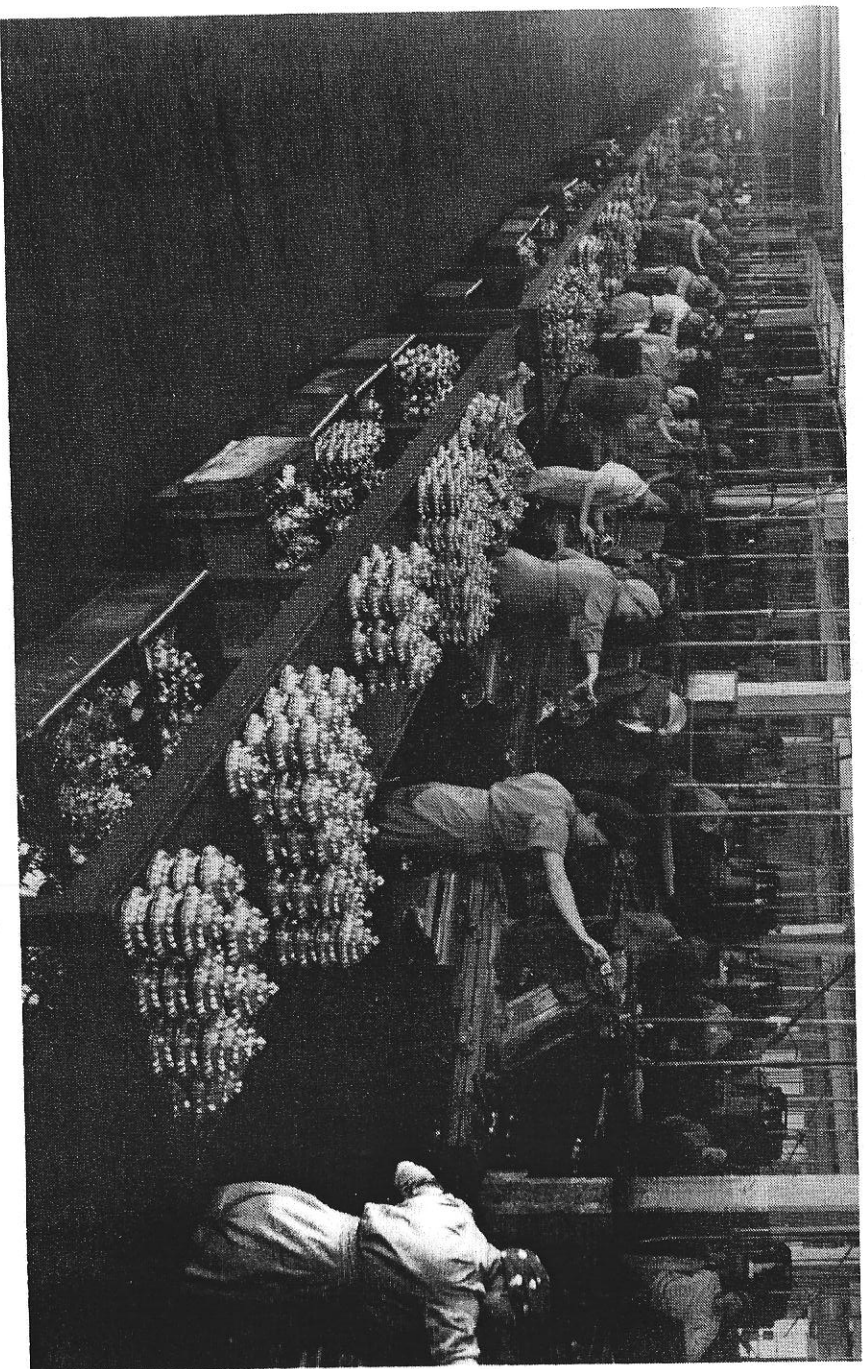
Howard Hughes, Sr. (at right), tests his trench-boring machine in 1917.



The first Hughes Tool Company sales meeting, in 1924. Howard Hughes, Jr., is fifth from the right.



Hughes workers forge tool joints using steel from the Hughes foundry, ca. mid-1920s. Hughes Tool Company was one of the largest users of steel in Houston at this time.



Women employees machining rock bit cones during World War II.