## HISTORY OF NORTHWESTERN PENNSYLVANIA

Comprising the Counties of

ERIE, CRAWFORD, MERCER, VENANGO, WARREN, FOREST, CLARION, McKEAN, ELK, JEFFERSON, CAMERON AND CLEARFIELD

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drilling. The corporation of Hoffman Brothers Drilling Company, of which Mr. Hoffman is president and treasurer, is the outgrowth of many years of faithful service rendered to many of the most prominent coal operators and mining engineers of the bituminous coal fields of the United States. Testing coal lands with diamond core drills, by removing cores, or a cross section of all formations, including the cores of coal seams, has played a most prominent part in the opening of mines, and charting the coal resources of our country. In the development and operation of the Hoffman Brothers organization, Leon H. with his brother Orvis C., who died in 1939, has won a national reputation in his field, and is widely consulted as an expert wherever drilling problems arise.

Leon H. Hoffman was born on the old Hoffman homestead, which was known in the early years as "The Valley Road Farm" near Trade City, North Mahoning Township, Indiana County, on August 8, 1877, son of Philip H. and Sarah Jane (Clyde) Hoffman. The family consisted of Orvis Clyde, Leon Hale, and Verna Mabel, the only sister, who married James H. Eckert and resides in DuBois, Pennsylvania. One brother, Murat Blair, died in the year 1916. Leon H. Hoffman was born in the old log house which had been built by his grandfather, Henry Hoffman and was occupied by him as his home until his son, Philip H., built a more modern two-story frame house. This old log house was the typical farm house of that day and many similar houses were built by the early settlers throughout Pennsylvania. Native white oak logs were hewed flat on two sides and laid together by notching the ends so as to be held firmly in place, thus leaving only very small openings between the logs; chunking or blocks of wood were then used to close up the open spaces and the outside and inside between the logs was plastered or closed with clay so as to make them comfortable homes. There was no wallpaper, or at least it was very scarce, but the walls were papered each spring with newspapers.

This old log house had two good-sized rooms. One was the living room and bedroom combined, and the other one was known as the spare room or guest room. It was always well-kept with the newest pieces of rag carpet with many different colors of chain used in the weaving. There was an attic with closed pine stairs leading up to it from the guest room. During the summer time Orvis and Leon slept in the trundle bed, with a tick filled with oat straw as a mattress. Sometimes when there was a freak snow storm in late autumn before the boys had been moved below to more comfortable quarters, in the morning they left their bare foot tracks in the film of light snow which had sifted in through the warped shingle roof during the night and settled on the bare floor at the head of the stairs. There was a medium sized kitchen, attached to the rear of the house, and a back porch which occupied all of the remainder of the space, extending the full length of the house. It was not long however until Philip Hoffman was financially in position to raze the old buildings and construct a modern farm house and an up-to-date bank barn. The farm house is at this time one of the best farm houses in that community. The farm is now owned by Leon H. Hoffman, who takes great pride in keeping it as the home of his childhood.

Leon H. Hoffman, like his brothers and sister, received his early education in the Dilts school, located more than a mile from home near the Little Mahoning Creek. Later he attended summer terms at Georgeville, Hamilton and Covode Academy. He later completed the three-year regular normal course at the Pennsylvania State Normal School at Indiana, Pennsylvania, graduating in the class of 1900. Mr. Hoffman was a member of the Huyghenian Literary Society and served one term as its president. He received class honors by being elected by the faculty as a junior contestant and was also one of the commencement orators. Mr. Hoffman began teaching school very early in life. He taught two terms at Cool Spring, North Mahoning Township, Indiana County. The following year he was principal of the public schools at Hamilton, Jefferson County, and later taught two terms at Covode and Trade City, Pennsylvania. During the summer of 1901 he was assistant principal of the teacher's training school, at Penn Run, Pennsylvania, which had an attendance of 120 students. In the fall of 1901 Mr. Hoffman accepted a position with Dodd Mead & Company of New York in the sale of their International Encyclopedia and continued with this firm in the sale of their "New International." Mr. Hoffman held this position for four years, afterwards being promoted to general manager of their Pittsburgh office, which position he held for one year.

In the year 1906 he became interested in the diamond drilling business with his brother and the brothers worked together, building up their business from only a few drills to many drills. The firm was known as Hoffman Brothers, a partnership, and the business was conducted under this name until the corporation of Hoffman Brothers Drilling Company was formed during the year 1925. It was natural for the two brothers to follow in the footsteps of their father, who was a water well driller.

Today, after continuous service during the entire period since being organized, Hoffman Brothers Drilling Company enjoys the distinction of being a very well organized and capable company. Leon H. Hoffman is president and treasurer, Orvis C. Hoffman, Jr., is vice-president, and W. H. Hampton is secretary and assistant treasurer. They devote themselves largely to the business of testing bituminous coal lands. They have more than fifty diamond core drills suitable for any job. Many new up-to-date gasoline drills have been added. They have electric drills for drilling inside the mines, also variable-speed permissible motors for use in gaseous mines and large high-pressure grout pumps for pre-grouting shaft locations. This is some of the newer equipment installed during recent years.

An outstanding job completed successfully within the last few years was the drilling of the first 1000' horizontal oil well ever drilled. This work was done from the surface of the outcrop of the Cow Run Sand near McConnellsville, Ohio. The drilling of this well created a great deal of interest among oil operators everywhere. Leading oil journals gave considerable space to a description of this method of drilling oil wells and the possibilities for

developing large fields by this method. This first well was 3 3/64" in diameter and was drilled by the use of specially prepared diamond bits and core barrels. The Cow Run Sand was 14' in thickness and the secret of the successful completion of this well was due to the fact that the direction was maintained throughout the entire depth. The well was surveyed periodically and if this survey indicated the direction was leading off either downward or upward, so that the well might lead out of the pay sand, methods were used whereby the direction was changed either upward or downward so as to continue within the sand. There is no doubt but what there will be more and more horizontal wells drilled in oil bearing stratas for the reason that by repressure methods, almost one hundred per cent. recovery of oil is assured.

A great deal of credit for the success of Hoffman Brothers Drilling Company is due to the fact that they have always been able to overcome difficulties and thus establish a reputation for doing satisfactory work. New methods have been tried with great success. The use of special spring pieces, manufactured by this company for coring soft and friable coal seams have increased the core recovery in the drilling of those soft seams of coal.

Recently the corporation has installed a new addition to their machine shop for manufacturing cast-set diamond bits. They have the very best up-to-date machinery for making these bits by casting them in various metals, after which the bits are heat-treated. The diamonds are placed in molds and held by suction and then the molten metal is poured, holding the diamonds firmly in place and in perfect formation, thus eliminating the necessity for hand-set bits. The method of cast-setting has rapidly taken the place of hand-setting which has been the practice during the past. In many formations small bortz diamonds are taking the place of the larger and more expensive carbon bits. Although there are many rock formations where the very fine high-class carbons should be used, Hoffman Brothers Drilling Company use both kinds of bits, depending upon the kind of rock and formations to be drilled.

Three types of metals used in cast-set bits are: (1) magnesium bronze, (2) vancolite, (3) a metal having a combination of carborundum, tungsten and nickel. In making a 3 3/64" standard cast bit over 360 diamonds are used, averaging in size fifteen to twenty carats. This new method saves much valuable time over the hand-setting method.

During all of these years that Leon H. Hoffman has been in business in Punxsutawney, he has taken an active interest in community affairs and by his activities he has provided employment to many. He was one of the organizers and charter members of the Mahoning Valley Milling Company, the Perry Hills Coal Company and the Penn Wayne Gas Company. He is at this time a director

in the Farmers & Miners Trust Company, having served as the president of this institution for one year during the year 1938-39. He is also a director of the Kurtz Coal, Lumber & Supply Company.

Mr. Hoffman was one of the charter members of the Kiwanis Club. He is a member of the Punxsutawney Country Club, also the Black Knight Country Club of Beckley, West Virginia. He is a member of the Presbyterian Church of Punxsutawney and is affiliated fraternally with John W. Jenks Lodge, No. 534, Free and Accepted Masons, Pennsylvania Consistory, Pittsburgh and Jaffa Temple, Ancient Arabic Order Nobles of the Mystic Shrine, Altoona, Pennsylvania. Mr. Hoffman's home is at No. 998 East Mahoning Street, Punxsutawney, Pennsylvania.