

Death March 14 ended the brilliant career of Dr William Peter Haseman, for ten years head of the physics department of the university and the first in America to work in practical geophysics. During the World war Doctor Haseman aided in government research on submarine acoustics and methods of locating enemy submarines

William Peter Haseman, physicist

BY CHARLES N. GOULD



DURING his residence of more than two decades in Oklahoma, W. P. Haseman carved his name so deeply on the State that a hundred years will not eradicate it.

In 1917 when the United States entered the World war, there was a sudden need for men trained in sound ranging, men with sufficient acquaintance with the higher branches of physics and mathematics, in order to solve problems connected with the locating of enemy guns and submarines. Among the men called to work on these problems was Doctor Haseman of the University of Oklahoma. Already a trained worker, along these lines, he offered his services to his country and was attached to the bureau of standards at Washington, where he served during the duration of the war. The results obtained by this group of physicists did much to make for the efficiency of American gunners and perhaps to shorten the war.

Doctor Haseman's career was not different from that of many an ambitious American youth. It can be epitomized in a few sentences. There was nothing particularly spectacular nor unusual about it.

He was born on a farm near Linton, Indiana, May 4, 1878, attended country school, was graduated from high school, attended normal school, and taught country school. He entered Indiana university and worked his way through, securing his A. B. degree in 1903. For two years he was instructor in the department of physics and received his master's degree in 1905. In September of that year he married Emma D. Strietelmeier, and the same month he entered a two-year fellowship at the University of Pennsylvania, from which school he received his degree of doctor of philosophy in 1907. He returned to his alma mater, Indiana, for

two years as assistant professor of physics, and in 1909 he came to Oklahoma as head of the department of physics where he remained for ten years.

In 1917 he received a leave of absence, and spent a year at the University of Michigan in intensive advanced work in physics. From there he went to Washington where he was of assistance to the United States government in its research work. After the close of the war, Doctor Haseman resigned from the University of Oklahoma and devoted himself to research work in geophysics. From 1922 to 1928 he was head of the research department of the Marland Oil Company.

His death occurred at Oklahoma City March 14, 1932, after an illness of eight weeks during which time he had two paralytic strokes followed by acute myelogenous leukaemia.

This is the record, so brief, yet so comprehensive. What is here untold of struggle and ambition, hope and fear, despair, joy and sorrow must be left to the imagination.

Before the advent of Doctor Haseman, physics at the University of Oklahoma had been sort of an orphan child. At different times various men, some of them effective teachers and enthusiastic in their own subjects, had taught physics as a side line. But it was Haseman who first gave the department its standing. When he came, there was little laboratory equipment, few books and no great interest in the subject. He breathed into it the breath of life. Students and faculty soon learned that there was on the campus a new personality.

He was never a back-slapper. Perhaps not even a "mixer," as the term is popularly employed, but rather a serious-minded, hard working, sympathetic friend

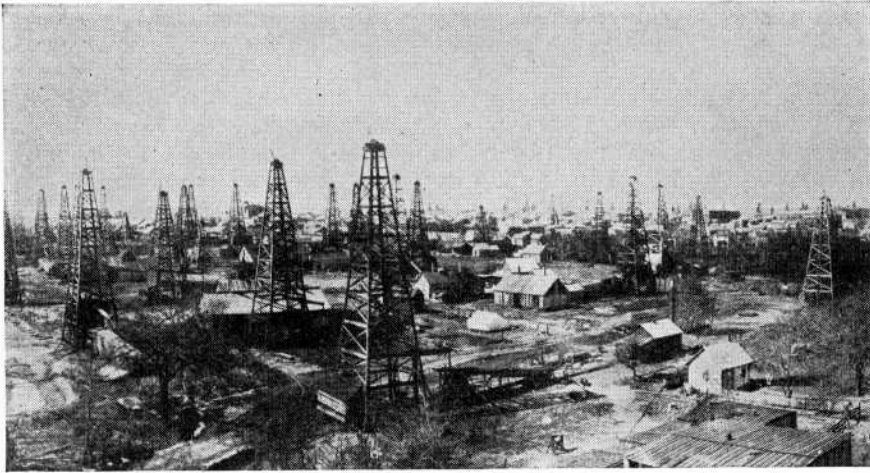
and fellow worker. He was a good teacher, thorough and careful. He did not set himself upon a pedestal from which he might look down with condescension upon those below. Rather, as one of his former pupils recently expressed it, "Doctor Haseman always tried to put himself in the attitude of an elder brother, one who had gone a little farther along the path of learning, and who might be able to suggest ways of doing things which the pupil had not yet discovered." He was skillful in opening up vistas. He set a full table. Throughout this broad land of ours there are hundreds of young men and women who yet remember the hours spent in Haseman's class room. Not that he was an "easy" teacher, for he was not. In fact, he may possibly have erred in being overly strict. But when a student got out of one of Haseman's classes with a high mark, that student knew his subject.

In faculty work he was conscientious, doing well the thing his hand found to do. He served faithfully on such committees as those devoted to research and university extension.

But the thing in which Doctor Haseman's heart delighted was research. He had that God-given faculty, a research mind, than which nothing better, nothing higher, is vouchsafed to mortal man. He had the "insatiable curiosity" of the true scientist, the unquenchable desire to add to the sum total of human knowledge. He was a pioneer in the domain of knowledge; a seeker for new truth. In him burned the consuming fire. He had initiative. He was a pioneer, a breaker of trails.

The particular field of physics in which Doctor Haseman achieved success was sound waves. During the time he was a student in the University of Indiana, he

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on a higher level, bringing \$1.16 a barrel at the wells. Means of transporting the oil were existent. So the boom was under way. By the close of the year 1904, nearly 100 wells were producing on the Bartlesville townsite, marking the State's first oil field. Development in some portions of the town was as close as 140 wells to the square mile. Imagine a well to every five acres!

Bartlesville was then the center of a nearby boom, which spread at first northward to the Dewey, Alluwe and Chelsea vicinities, then southeastward to the Hogshooter field. The area was not without its gushers, some of which produced as much as 1,000 barrels a day. Accompanying gas volumes would reach, in some cases, thirty million cubic feet daily with rock pressure mounting to 500 pounds. But the wastage of gas was enormous. Lacking a market, it was blown into the atmosphere or burned through jets extending above the tree tops.

Removal of legal obstacles was the signal to develop in other sectors of the Sooner oil frontier. In 1901, Bland and Clinton had discovered oil in paying quantities on the townsite of Red Fork, noted cattle shipping point in the Creek Nation. Just across the Arkansas river was the Creek Indian village of Tulsa which received the influx of Kansas oil men attracted by the Red Fork development in 1904. The oil frontier had been extended thirty five miles southward.

The same year, the Muskogee townsite was in throes of a small boom as forty wells were brought in near the Katy railroad tracks there, mainly by the Cudahy company which had been so active at Bartlesville. They erected there the following year the state's first oil refinery. It was built to handle 1,000 barrels daily and the installation included a lubricating oil plant.

Still another townsite was experiencing oil activity. At Cleveland, out in the Paw-

nee Indian country, 1000-barrel gushers were brought in at the backdoor of that town in September of 1904.

Further legal obstacles were removed with the passage of a congressional act on April 21, 1904 which provided for the cancellation of all restrictions for allottees of the Indian lands, who were not of Indian blood (except minors and except as to homesteads).

Westward flung the course of oil empire! The Chickasaw Nation was invaded successfully by the drill the next year with the discovery of the Wheeler field, northwest of Ardmore. South of Tulsa, Chesley and Galbreath were bringing in the discovery well in the Glenn Pool in November of 1905. The latter field was to be a market-breaker a couple of years afterwards. Sooner drilling activities were developing on a big scale. Whereas only 361 wells were completed in 1904, 2,510 wells were finished during 1905. And the state's oil production for the year 1907 reached seven million barrels. The Oklahoma oil industry was full-fledged!

It was a half-decade later that the famed Cushing field was opened at Drumright. That was in March of 1912. By this time, the fields in Soonerland had attracted nation-wide interest. A decided migration of Ohio and Pennsylvania oil men began immediately. To the Easterners the stories of vast riches lying 'neath the Oklahoma prairies stirred the smouldering pioneer spirit once again. It was like the stories Bret Harte told of California gold. And the destination of these Easterners was Tulsa, then with a population of 20,000.

Ever since, the annals of Sooner oil history are no less prominent with the subsequent, sensational discoveries of Burbank (1920), Tonkawa (1921) Garber (1923), the Seminole area (1923) and more recently Oklahoma City (1928).

Today, the grand veteran of them all is still pumping several barrels daily, after

a quarter century of active existence. What a history it has witnessed! Near its mooring, a sign denoting its significance, sets off the site like an Exposition exhibit. The town people refer to it as "the well out in the park." But it was Destiny's prologue in a quarter-century drama of transformation—from Indian reservation to a world-beating oil state.

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WILLIAM PETER HASEMAN, PHYSICIST

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became interested in the subject. Later while working for his doctorate at the University of Pennsylvania, he continued his researches. While teaching at the University of Oklahoma and busy with the multitudinous demands of teaching and administration, he continued his studies along these lines. He was already a marked man, so that when our nation needed men of training and ability, he was one of a group of physicists selected from various universities called to Washington to work on sound ranging.

Along with other scientists, he also worked on submarine acoustics and methods of locating enemy submarines. Associated with this line of research was deep sea soundings by means of reverberated sound waves, the method which has in a great part superseded the old method of sounding the depths of ocean by means of piano wire. Many of these data worked out by Haseman and his associates, being in the nature of official secrets, have not been made public.

It is probable that Doctor Haseman will be longest remembered by the scientific world on account of his pioneer work in connection with the seismograph in the location of subsurface structures. His fertile mind, trained in the best schools of the country, and augmented by contacts with other similar minds with which he was associated while in government service in connection with sound ranging and submarine acoustics, was among the first to grasp the possibilities of its commercial application to subsurface geophysical prospecting.

In 1920, soon after resigning from the University of Oklahoma, Doctor Haseman, along with several former professors at the university, organized a company known as the Geological Engineering Company, of which he was the moving spirit. This company conducted the first active research work in America by means of geophysical methods for the location of subsurface geological structures. Later when Doctor Haseman joined the Marland Company in the capacity as chief of the research department, much of his time was taken with administration and supervision of all sorts of research problems, but he never lost sight of geophysical prospecting. After his resignation from

this position in 1928, he devoted the greater part of his time to the perfecting and refinement of this method.

But he did not confine his work to geophysics. During the past decade he spent much time on the economics of petroleum recovery. He experimented with and wrote on, the proper spacing of oil wells. Through his extensive researches from statistics gathered from hundreds of oil fields and thousands of wells throughout the world, he developed a complicated mathematical formula designed to predict the ultimate yield of an oil pool from the flow of the first well.

Being a true scientist, Doctor Haseman was a member of a number of scientific societies. He assisted in the organization of the Oklahoma club of Sigma Xi, the honorary scientific society. During the years of 1915 to 1918, he was director of the Oklahoma State Bureau of Standards. He was a member of the Oklahoma Academy of Sciences, American Association for the Advancement of Science, the American Association of Petroleum Geologists, and the American Physical Society. His publications dealt chiefly with problems of physics, geophysics and the production of petroleum.

I must not close this sketch without at least a brief mention of the Haseman family, which in many ways is one of the most remarkable families in America. Nine children were born on this Haseman farm, eight of whom attended the University of Indiana. Seven received the A. B. degree, and five the M. A. degree from this University. The youngest girl, Bertha, took her A. B. degree from the University of Oklahoma and the youngest boy took his degree from the University of Missouri. Five members of the family took doctor's degrees from American universities and one from a German university. All except two specialized in some branch of science, including physics, mathematics, zoology, entomology and chemistry. Dr. W. P. Haseman's daughter, Marthena, took her A. B. degree from Indiana university a few weeks before the death of her father. This totals twenty-one university degrees secured by members of the Haseman family.

I like to think of Doctor Haseman as I knew him more than twenty years ago when he first came to the campus of the university. A tall, stalwart man, with an engaging smile, rather shy, not self-assertive, but genial and friendly, devoted to his kindly wife and their little daughter Marthena. Better still, I like to remember his many visits to my office, during the last ten years, when he would sit across the desk while we took no note of the passage of time as we discussed some current topic in physics or geology. He was always enthusiastic, always with some new idea being born; always with high hopes and strenuous endeavor.

His was a busy life, a useful life. He wooed Nature and Nature in turn re-

vealed to him her secrets. Like the Athenians of old, he spent his life in searching for and telling to the world "some new thing."

Because of his untimely death, the world is today poorer, but because William Peter Haseman has lived and wrought, the world of Science is richer.

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JOSEPH EDWARD HALLINEN

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in this section of the country he found an abundance of material for research study. Almost from the time of his arrival until within two or three days before he was taken away he kept careful and meticulous notes on all animal, plant, bird, and insect life, setting down any information he could ascertain from observation, practical study of research coupled with any additional information he might learn from his farmer neighbors. In the small towns where he did his shopping he was a constant recipient of small cardboard boxes which he used to contain his specimens. A small slough, typical of Oklahoma's prairies, cuts through the Hallinen homestead and afforded an excellent nursery for plants he was studying. At one time this slough was closed by an earthen dam built by cattlemen in the early days. This lake he had stocked with fish, but when it offered too great a temptation for young fishermen who crushed the plants he had under observation it was necessary to cut the dam.

Professor Hallinen possessed a small library of scientific books on his arrival in this section of the country, and during the last fifteen years he had collected what has been variously estimated to be a library of five thousand volumes, a small portion of which is in American fiction, the rest being of scientific nature. Contained in this library are some choice items of rare Americana, valuable first editions, and rare and out of print volumes. These have been removed from the home for safe keeping. The main part of his shack, which is unpartitioned, is almost entirely filled with wall shelves for his books, and most of the room space is filled with floor stacks to care for the rest of his library. One end of the room is left for his desk and laboratory equipment, with one wall for laboratory supplies and apparatus. There was scarcely room left in the lean-to added to the main shack and in the main portion of the house for his bed, cook stove, and food supplies which he kept on hand.

Occasionally he took various people into his confidence and talked of his work enthusiastically, of his books, or of anything he might find interesting. He never traveled in inclement weather, reserving that time to work at home.

His portrait he had had made by a

friend in 1928 with whom he would visit when shopping in Snyder. His shopping trips were often as not a constant search for books, which he would buy and take home to be added to his library.

On February 11, 1932, Professor Hallinen became ill. No one called to see him, and it was not until the next afternoon that he walked from his home and attracted the attention of the young son of his neighbor living across the road to the south. This neighbor took him in his automobile to the hospital at Hobart. It is generally understood he was suffering with a complication of pneumonia and influenza. At midnight of February 13, he died. He was nearly seventy-three years old, and died as he had lived, a scholar, a scientist, and a gentleman.

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COMMENCEMENT

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Blair, Tulsa, and Mrs Mabel Alexander Balyeat, Norman. Dr V. E. Monnett, director of the school of geology, is chairman of the reunion committee, class of '12. Mrs Roy Eaton, Norman, is in charge of the Kingfisher college reunion. Other entertainment plans and programs will be announced later, according to Mr Cleckler.

Doctor Lindley is a distinguished chancellor who has gained a worthy reputation among college presidents. In addition, he holds an enviable position among educative leaders of the United States. He is eminently fitted to address the group of young people, who, after June 7, will become alumni of our university.

The commencement speaker has been chancellor of the University of Kansas since 1920. He was professor of philosophy at the University of Indiana from 1902 to 1917; president of the University of Idaho from 1917 to 1920. Doctor Lindley is a member of Phi Beta Kappa, honorary scholastic fraternity, and Sigma Xi, national honorary scientific fraternity. He received two degrees from the University of Indiana: A. B. 1893, A. M. 1894. He was a fellow at Clark university during 1895-97, receiving the Ph. D. degree, 1897. He has studied at the Universities of Jena, Leipzig and Heidelberg.

Many honors have been accorded Doctor Lindley. He has been president of the National Association of State Universities; fellow of the American Association for the Advancement of Science, and a member of the American Psychological association, the Religious Educational association, the Western Philosophical association. He is author of several books on education and psychology.

When Doctor Lindley went to Kansas to assume the chancellorship of the state university, he was the choice of the governor, the board of administration, the