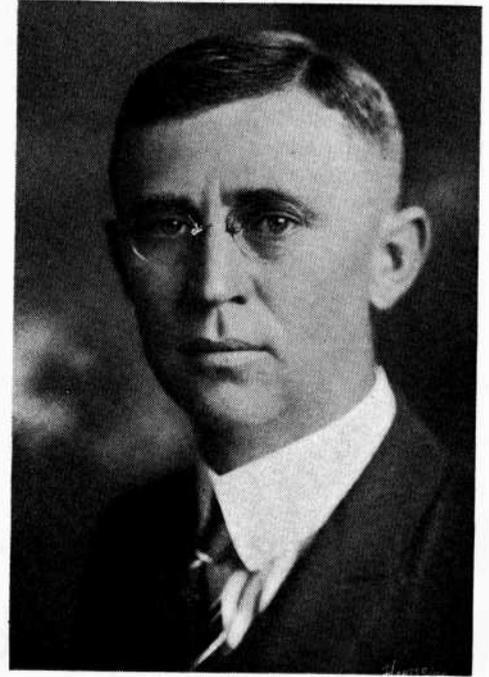


The first engineering graduate of the university is Charles L. Kaupke, '09 eng., water master for the Kings River Water association of California. He obtained his degree in civil engineering and since leaving school has been actively engaged in irrigation work mainly in California. He is arbiter of water that brings wealth to almost a million acres of land and to 35,000 users



## Noted engineers-- Charles L. Kaupke

The first graduate of the engineering college of the university, Charles L. Kaupke, '09 eng., of Fresno, California, has not only achieved national distinction in his chosen field, but he has probably the most unusual occupation of any of the engineering graduates. He is a water master.

Now, you ask, "What is a water master?"

Let Mr Kaupke explain:

"Irrigation water is the life blood of the San Joaquin valley. Here in the vicinity of Fresno in the central portion of the valley, the annual rainfall is less than nine inches, all of which falls from October to April. In the long hot summers we are directly dependent on the mountain streams for a water supply for agriculture and to some extent for domestic purposes.

"In the winter months there is a vast accumulation of snow on the summit and western slope of the Sierra Nevada mountains, which begins to melt in the early spring. As a result, all the streams debouching into the valley begin to rise in the month of April, reaching a maximum stage in June and then gradually receding to a minimum state in September or October. However, during much of the time, the demand for water exceeds the supply and many bitter controversies and much litigation has arisen among rival claimants of right to the water of the streams.

"In 1927 there was organized the Kings River Water association, consisting of irrigation districts, and water companies embracing an area of 940,000 acres.

Its purposes are to distribute the waters of Kings river in accordance with monthly schedules mutually agreed upon and to save and protect the water rights of its members. As water master, it is my duty to administer these schedules and distribute the daily flow of the stream among forty-five canals serving 35,000 water users, and diverting from the river at intervals for a distance of ninety miles."

On receiving his degree of bachelor of science in civil engineering—the first engineering degree granted by the University of Oklahoma—Mr Kaupke became a draughtsman for the United States reclamation service in the North Platte project. In 1910, he became inspector of canal construction and assistant superintendent of farming operation for the Sacramento Valley Irrigation Co. at Willows, California.

Mr Kaupke was made superintendent of operation and maintenance for the Yolo Water & Power Co. at Woodland, California, in 1912. Two years later, he became the engineer for the Huston Farms Co. at Winters. After spending the year of 1915 as office engineer for the Sutter Basin Co. at Sacramento, Mr Kaupke was made field agent for the United States department of agriculture, office of irrigation investigations, to study rice culture in the Sacramento valley with special attention to duty of water on various types of soil.

From 1918 to 1927, Mr Kaupke was the hydraulic engineer of the California state water commission, assigned to speci-

al investigation on Kings river. This investigation, which began in December, 1917, involved a comprehensive and systematic measurement of all canal diversions, seepage losses and return water flows from Kings river, the largest irrigation stream in the state. The work was undertaken at the request of the Kings River Water Storage District association to assist in the definition of all existing water rights on the stream preparatory to the construction and operation of a large storage reservoir at Pine Flat, thirty miles east of Fresno.

A year after accepting this position, the duty of water master in charge of the division and distribution of the flow was added to his work. Two years later, all the irrigation interests on Kings river entered into an agreement requesting the division of water rights of the state department of public works, to prepare a schedule for the division of the water among all canals entitled thereto.

In September, 1921, he was appointed state water master, to prepare and administer the Kings river schedule during 1922. This jurisdiction, continued through 1923, covered a total of more than forty canals with a combined capacity of 10,000 cubic feet a second and covering an area of approximately 1,300 square miles.

Mr Kaupke was elected secretary and a member of the board of directors of the Kings River water storage district. This project contemplates the construction of a concrete dam 320 feet high to impound 600,000 acre feet of water in

(TURN TO PAGE 247, PLEASE)

Clarel B. Mapes, '22 eng., holds one of the most responsible positions in the oil industry in the Mid-continent oil field, as assistant secretary and technologist for the Mid-Continent Oil and Gas association. He is an economic advisor of the statewide proration committee of Oklahoma and an advisor to the American Petroleum Institute on economics. He is one of the youngest engineering graduates to achieve distinction

## Noted engineers-- Clarel B. Mapes

While one does not hear so much today of that oft-repeated fact that Oklahoma is a young man's state, nevertheless the number of young Sooners to achieve success in their chosen fields is a noteworthy exemplification of the statement.

Clarel B. Mapes, just twenty-nine years old, and a graduate of the class of '22, is one of the Sooners who has made safe progress rapidly. He is the assistant general secretary and technologist for the Mid-Continent Oil and Gas association at Tulsa, and as such, is chief of the division of business research of petroleum economics and technology.

A native of Missouri, Mr Mapes had his early education in Missouri schools, graduating from Canton high school in May, 1918. He then attended the University of Oklahoma. He received his bachelor of science in civil engineering in 1922; and in the following year, obtained the degree of bachelor of arts, in mathematics. He was elected to membership in Phi Beta Kappa, Sigma Tau and Scabbard and Blade.

While in school, he did sub-professional work in civil engineering. He later became assistant engineer for the Oklahoma Gas & Electric Co. in northern Oklahoma, doing location surveys for high-tension transmission line construction and was in charge of the field party handling all phases of the preliminary and final surveys. While doing his fifth year in the university, Mr Mapes conducted his own private engineering practice.

On leaving school, Mr Mapes became

assistant engineer for the Truxillo Railroad Co., a subsidiary of the United Fruit Co., in the Republic of Honduras, with headquarters at Puerto Castilla, Honduras. For four months, he served as exploration engineer in charge of the jungle survey party. Later he was transferred to the central office at Puerto Castilla. He was engaged in making railroad surveys and construction.

Returning to the United States in 1924, Mr Mapes resumed private practice in Norman and Pawhuska. Later that year, he became a civil and petroleum engineer for the department of economics of the Marland Oil Co. at Ponca City. That work consisted of engineering and scientific reports and investigations relative to the oil industry, evaluation of oil properties and equipment and business research.

In 1925, he became assistant to the present Carr & McFadden, Inc., civil and consulting engineers at West Palm Beach, Florida. This was a most responsible post in a firm employing at one time approximately a hundred and fifty engineers and having several million dollars of work under supervision most of the time.

On November 16, 1927, Mr Mapes became assistant general secretary and technologist for the Mid-Continent Oil & Gas association. His work includes handling all phases of research work relative to the general welfare of the petroleum industry and especially the fields of the southwest. Mr Mapes has written numerous magazine and newspaper articles on petroleum. For the past two



years he has been a member of the advisory committee on economics of the American Petroleum Institute, which at Chicago last year made the report embodying the suggestions to the oil industry which are now being carried out as corrective measures. This committee will submit another report at St. Louis about the first of April.

Mr Mapes has acted as economic advisor to the statewide proration committee of Oklahoma:

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### CHARLES L. KAUPKE

(CONTINUED FROM PAGE 246)

the Pine Flat reservoir, which will furnish a dependable water supply for a million acres in addition to developing a large amount of hydro-electric energy. From 1927 until now Mr Kaupke has been water master for the Kings River Water association under the nominal supervision of the state department of water resources (formerly the state water commission).

Mr Kaupke is past president of the Fresno Engineers club and of the Fresno council of churches. He is a member of the A. S. C. E., the Kiwanis club and the Masonic order.

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A bill was introduced in the Oklahoma legislature to remove the engineering college from Oklahoma Agricultural and Mechanical college to the University of Oklahoma, but the bill was killed in committee.