

of units it is often impossible to add new acquisitions to existing units. In 1934 the average unit contained 2,900 acres of plantable land compared with 2,400 acres in 1929. Of the 186 units 74 are in England, 27 in Wales and Monmouth and 85 in Scotland.

Developments in forest technique are recorded, and, with regard to education, it is stated that the average attendance of forestry students at the Universities of Oxford, Cambridge, Bangor, Edinburgh and Aberdeen was approximately 160 a year and in the 15-year period some 524 degrees and 222 diplomas were awarded. The Imperial Forestry Institute, established at Oxford in 1924 for post-graduate instruction, has been attended during the 10 years by 274 students.

Interest in the countryside and the preservation of its distinctive character and amenities has increased greatly, according to the *Times*, in the last few years, and the report shows that, in the course of managing the New Forest, it has become apparent that still wider recreational use might be made of unplanted land. This area more nearly conforms to the general conception of a national park than any other in Great Britain. There are no means of estimating the number of people who visit or use the New Forest in the course of the year, but there must be many tens of thousands. For campers alone some 800 to 900 permits are issued annually. Of all the numerous ancient Royal forests only two—Dean Forest and New Forest—have survived, haphazard, in a form which affords opportunity for both timber production and public recreation. It appears to the commissioners that by taking a little thought and possibly incurring a little additional expenditure in the utilization of the land acquired for the new forests, it may be possible to provide, for the future, areas as highly prized by the public as is the New Forest to-day.

The commissioners have recently been in communication with the Council for the Preservation of Rural England on the subject of the relation of forestry and afforestation to the amenities of the countryside and a joint informal committee has been formed for the discussion of outstanding questions.

PETROLEUM LABORATORIES OF THE BUREAU OF MINES

Industrial and Engineering Chemistry states that plans for future activities of the research laboratory at the Amarillo, Texas, Helium Plant have been announced by Dr. John W. Finch, director of the U. S. Bureau of Mines. The laboratory staff, which in the past has been concerned largely with work relating to production and conservation of helium, will direct its efforts toward studies of technical problems involved in production and utilization of petroleum and natural gas. The Amarillo laboratory is one of the

best equipped in the country for research on properties of gases at low temperatures.

The laboratory at Amarillo will make studies of physical and thermal properties of petroleum mixtures that have influence on their flow through the producing sands and in wells, using specialized experience and technique developed in the research that has done so much to improve methods and reduce costs of extracting helium from natural gas. Also the activities of the research group at Amarillo will include special studies of the causes and prevention of freezing in high-pressure, natural gas pipe lines, often experienced at temperatures many degrees above the normal freezing point of water. This work will be closely correlated with investigations of flow of natural gas through pipe lines, which have been under way at the bureau's experiment station at Bartlesville, Okla.

The petroleum research activities at Amarillo, as well as the continued operation of the government-owned helium plant and 50,000 acres of natural gas properties, will be under the general direction of R. A. Cattell, chief engineer of the Petroleum and Natural Gas Division, with headquarters in Washington, D. C. C. W. Seibel, supervising engineer of the helium plant, will be in administrative charge at Amarillo, and several petroleum technicians will be added to his staff to aid in the petroleum research centered there.

The petroleum field office of the bureau at Laramie, Wyo., is being reopened as a result of a provision in the appropriation for the fiscal year ending June 30, 1936, for establishing and operating a petroleum experiment station on the campus of the University of Wyoming. Offices and laboratories are now in temporary quarters but will be moved to a new building to be erected by the university. The office was closed on June 30, 1933, because of reduction in funds available for oil and gas investigations. The staff will begin work with a general survey of the Rocky Mountain oil fields and refineries.

MOTION PICTURE FILMS OF THE NATIONAL ARCHIVES OF THE UNITED STATES

A CORRESPONDENT of *The New York Times* calls attention to a measure establishing a national archives of the United States, which has recently been enacted. This section reads:

The National Archives also may accept, store, and preserve motion picture films and sound recordings pertaining to and illustrative of historical activities of the United States, and in connection therewith maintain a projecting room for showing such films and reproducing such sound recordings for historical purposes and study.

The "projecting room" is a small theater, equipped with the latest and finest in motion picture equip-