available in the national topographic map series.

Cooperative mapping projects are under way in 30 states. A significant accomplishment of the year was the substantial completion of the topographic quadrangle mapping of Kentucky as a cooperative project. This work, initiated in 1949, represents the largest concentration of mapping operations on a federal-state cooperative basis ever accomplished by the Survey and includes over 700 7½-minute maps at the uniform scale of 2000 feet per inch.

Drilling on public lands during the year included the spudding of 1413 wells and the completion of 1352, of which 937 were productive of oil or gas. In all, 21,758 wells, including 12,433 capable of oil or gas production, were under supervision on 30 June 1955. Production was appreciably greater than in 1954, amounting to about 110,595,718 barrels of petroleum; 260,661,003,000 cubic feet of natural gas; and 211,127,968 gallons of gasoline and butane, with royalty returns to the United States of about $39,222,638.

Under the Federal mineral leasing laws the bureau supervised 1813 mining properties and 110,577 oil and gas properties on Federal, Indian, and "acquired" lands. Total valuation of production amounted to approximately $523,753,229. This was an increase of about 8 percent over the preceding record-breaking year, and produced royalties for division among the states, Indian tribes, the Reclamation Fund, and the U.S. Treasury of $53,676,777.

Atomic Energy Notes

■ A conference to discuss the establishment of an international atomic energy agency will take place in Washington, D.C., on 27 Feb. All the invited countries have agreed to send delegates to the meeting. The participants include Australia, Belgium, Brazil, Britain, Canada, Czechoslovakia, India, France, Portugal, South Africa, and the U.S.S.R. James J. Wadsworth, deputy to the chief United States delegate to the United Nations, is this country's representative. The primary purpose of the meeting will be to consider the text of a draft statute for the new organization, which is to be a special agency under the United Nations.

■ The first cyclotron on the African continent was opened recently by the South African minister of economics. The facility was built by the South African Council of Scientific and Industrial Research at a cost of $280,000.

■ The U.S. Atomic Energy Commission has made public its 19th semiannual report to the Congress.

■ West Germany has started construction of its first plant for production of heavy water. The Farbwerke Chemical Company of Höchst, which is near Frankfurt, has announced that it is building a $1.5 million plant that is expected to be in production in 1957.

Annual Reviews

Annual Reviews, Inc., nonprofit publishing house in Palo Alto, Calif., has expanded so greatly that construction of a $63,000 headquarters building will begin soon. Since its founding 25 years ago by J. Murray Luck, professor of biochemistry at Stanford University, the organization has been housed in the university's physiology building.

Annual Reviews publishes summaries of all the literature in each of nine different fields. The most recent subject to be included in the series is entomology, the first volume of which has just been completed.

The original market for the reviews was primarily academic, but there has been a growing demand from industry. Annual sales last year were $193,000.

News Briefs

■ The U.S. Army Medical Nutrition Laboratory, Denver, Colo., in cooperation with the Quartermaster Research and Development Command, Natick, Mass., is conducting a metabolic balance study on a platoon of 26 soldier volunteers at Fort Churchill, Manitoba, Canada. The object is to determine the caloric and nutrient requirements of human subjects who are exposed to cold and great physical exertion for an extended period of time, and also to study the physiological and biochemical changes that occur. The team from the Nutrition Laboratory includes Leo V. Growley, Lester M. Levy, Billy Welch, C. Frank Consolazio, and seven enlisted laboratory technicians.

■ M. S. Thacker, director of the Indian Council of Scientific and Industrial Research, announced in Calcutta at the end of December the establishment of a Scientific Civil Service for India. The new service has been formed in order to develop a group of men of ability for scientific study and research. At the end of the second Five-year Plan the council will have 21 research laboratories; at present it has 16.

■ Evidence that early man may have roasted elephants more than 29,000 years ago on Santa Rosa Island, 30 miles off the coast of California, has been reported by George F. Carter, professor of geography at Johns Hopkins University. The discovery of burned elephant bones in what is believed to be a man-made fire place was made by an expedition to Santa Rosa that included, in addition to Carter, Philip C. Orr, curator of anthropology at the Santa Barbara Museum of Natural History; Carl L. Hubbs, biology professor at the Scripps Institution of Oceanography; and Wallace Broecker of the Lamont Geological Observatory at Columbia University.

Scientists in the News

T. KEITH GLENNAN has been selected by President Eisenhower for membership on the National Science Board. Glennan, who has been president of the Case Institute of Technology in Cleveland since 1947, is to serve out the unexpired term, ending in May 1958, of Chester I. Barnard, president (retired), Rockefeller Foundation, whose resignation the President has accepted.

NORRIS W. RAKESTRAW, head of the chemistry division of the Scripps Institution of Oceanography, has received the annual $1000 James Flack Norris award of the Northeastern Section of the American Chemical Society. The award, which is for outstanding achievement in the teaching of chemistry, was presented at a dinner on 9 Feb. at Massachusetts Institute of Technology.

H. L. ANTHONY, III, has been appointed director of research at the Mellon Institute and G. A. WEBB the new director of engineering. Both men, who took office on 1 Feb., have held fellowships at the institute.

Anthony, a member of the institute since 1939, is a specialist in metalworking, particularly in pressure vessel technology. He has headed the fellowship on metalworking that is sustained by the Scaife Company of Oakmont, Pa., and since 1947 he has been a member of Scaife's executive committee.

Webb is a chemical engineer for the Koppers Company. He specializes in catalytic operations involving dehydrogenation, chlorination, and polymerization.

EARL W. FLOSDORF, director of research and development for the F. J. Stokes Machine Company, Philadelphia, has just returned from the Territory of Chad in French Equatorial Africa. He was there in connection with a joint project being sponsored by the United States and France to assist the cattle industry. In particular, the purpose of the visit was to instruct in proper lyophilization techniques for the mass production of viral veterinary vaccines.

ROBERT F. FURCHGOTT, associate professor of pharmacology at the Washington University School of Medicine (St. Louis), has been appointed executive officer of the new department of pharmacology at the State University of New York College of Medicine in Brooklyn. He will assume his new post sometime this spring. Previously combined with physiology as a joint department under the administration of Chandler McC. Brooks, pharmacology at the State University College will become an independent department.

FINDLAY E. RUSSELL, formerly physiologist at the Institute of Medical Research, Huntington Memorial Hospital, Pasadena, Calif., has been appointed director of the Laboratory of Neurological Research, College of Medical Evangelists, Los Angeles General County Hospital.

STANLEY P. DODD, who for the past 2 years has been with McKesson and Robbins, Birmingham, Ala., has been appointed technical director of the Chicago Apparatus Company, Chicago, Ill. He will be responsible for the product development, technical information, and technical services of the company.

RICHARD W. DODSON, secretary to the General Advisory Committee of the Atomic Energy Commission, has been awarded a certificate of appreciation. Dodson, who is chairman of the department of chemistry at Brookhaven National laboratory and professor of chemistry at Columbia University, was cited by the AEC for "devoted service of extraordinary quality to the country in his capacity as Secretary to the General Advisory Committee."

WILLIAM C. ADAMSON, head of the Community Guidance Center in Austin, Tex., for the past 4 years, has been named director of the Child Study, Treatment, and Research Center of the Woods Schools, Langhorne, Pa.

CLAY L. PERRY of the U.S. Naval Postgraduate School at Monterey, Calif., has been named head of the Stanford Research Institute program that will use the new SRI-Stanford University joint computer facility. He has been granted a 9-month leave from his duties as supervisor of the computer laboratory and professor of mathematics at the Monterey school.

To be located in the Engineering Research Laboratory on the university campus, the computer will be of the medium-speed, general purpose digital type. The joint computer facility will be directed by John G. Herriot, professor in the department of mathematics.

LOUIS G. DUNN, who joined the Ramo-Wooldridge Corporation in August 1954 to direct missile research activities, has been elected a vice president of the corporation.

The Washington (D.C.) Academy of Sciences has conferred the following annual awards, which are given to scientists under 40 years of age in recognition of distinguished achievements in the biological, engineering, and physical sciences, and to a secondary school teacher for excellence in the teaching of science:

CLIFFORD EVANS and BETTY J. MEGGERS of the Smithsonian Institution, a husband-wife team, were selected to receive jointly a Biological Science award in recognition of their contributions to the prehistory and human ecology of Lowland South America. They were pioneers in archeology in the Amazon area. They lived and worked in the rain forests where no one previously had been willing to work and there uncovered evidence that has necessitated revision of previously held views of native culture in northeastern South America. Their field work has been in Peru, the Lower Amazon, in British Guiana among the Wai Wai Indians, and in coastal Ecuador.

ROBERT TRAUB, formerly chief of the department of entomology of the Walter Reed Army Institute of Research and now commanding officer of the U.S. Army Medical Research Unit in Malaya, was selected for a Biological Science award in recognition of his work on ectoparasites, fleas, and mites. He made contributions during World War II to the control of mite-borne scrub typhus in the Malaya area, and during the Korean War to the control of hemorrhagic fever.

E. ARTHUR BONNEY of the Applied Physics Laboratory of Johns Hopkins University, Silver Spring, Md., was selected for the Engineering Science award for his contributions in the field of supersonic aerodynamics. He has played a role in elucidating the problems of interactions among the wings, body, and tails of supersonic missiles.

TERRELL L. HILL of the Naval Medical Research Institute, Bethesda, Md., was selected for the Physical Science award in recognition of his contributions to physical and biological chemistry. He has made advances in the statistical mechanics of the behavior of assemblies of particles, molecules, and atoms, and in the applications of statistical mechanics to problems of general chemistry.

HELEN N. COOPER of North Bethesda Junior High School, Bethesda, Md., was selected for the Teaching of Science award for her distinction in fostering ability and enriching perspective in mathematics.

EMIL OTT, director of research for the Hercules Powder Company, has been appointed a vice-president of the Food Machinery and Chemical Corporation's Chemical Divisions and director of the firm's Central Chemical Research. Ott will be located in the executive offices of the Chemical Divisions in New York pending completion of the new research center for the Chemical Divisions near Princeton, N.J. The center will concentrate on long-range research projects in organics, polymers, plastics, tracer techniques, high-temperature and high-pressure processes, and other areas of potential interest to the corporation's six chemical divisions.

JONAS E. SALK was awarded a Congressional gold medal on 26 Jan. for his "great achievement in the field of medicine," the development of the poliomyelitis vaccine. The medal was presented by Secretary of Health, Education and Welfare Marion B. Folsom. Last April President Eisenhower gave Salk a personal citation because no gold medal had yet been struck. Later, at the President's request, Congress authorized that the medal be struck by the United States mint and voted $2500 for the purpose.

The Institute of Metals, London, England, has announced the following awards:

1956 Institute of Metals medal in platinum, to GEORGES LEON CHAUDRON, professor at the Sorbonne and director of the Laboratoire de Vitry du Centre National de la Récherche Scientifique, "in recognition of his outstanding contributions to knowledge, particularly in the field of the light metals, which have greatly benefited the metal industries."

1956 Rosenhain medal, to DONALD McLEAN, principal scientific officer, Metallurgy Division, National Physical Laboratory, Teddington, "in recognition of his outstanding contributions to knowledge in the field of physical metallurgy."

1955 W. H. A. Robertson medal and premium of 50 guineas to E. J. THACKWELL of the Northern Aluminium Company, Ltd., Rogerstone, Mon., for a paper on the "Choice and construction of monolithic linings for twin-bath induction furnaces for melting aluminium alloys."

Recent Deaths

JOHN W. BARNARD, Madison, Wis.; 43; professor of anatomy at Marquette University Medical School; 24 Dec.

BERTHA C. CADY, Atlanta, Ga.; 84; naturalist; former executive secretary