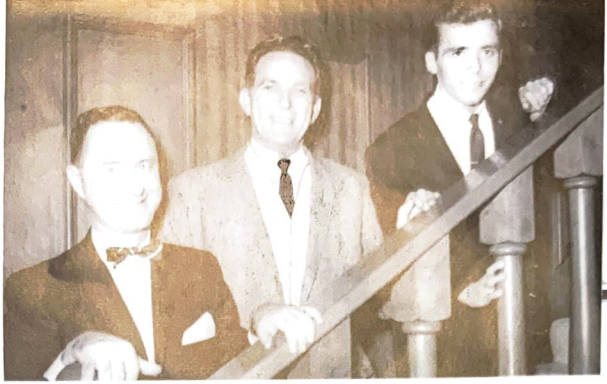

SHELL
MARCH 1963
NEWS

Dr. Thomas Baron (left) of Shell Development Company, Emeryville, and Pat Flanagan (right), son of G. C. Flanagan (center), of Shell Development's E&P Research Division at Houston.

AWARDS FOR ACHIEVEMENT

Three persons connected with Shell received Golden Plate Awards recently at the second annual recognition banquet held at San Diego, California, by the Academy of Achievement, a non-profit organization which honors people who have achieved excellence in their endeavors.

Receiving awards were Dr. Thomas Baron, Director of Basic and General Engineering at Shell Development Company's Emeryville Research Center; Pat Flanagan, young inventor son of G. C. Flanagan of Shell Development's E&P Research Division at Houston; and Dr. Paul Hurd, professor of education and coordinator of the Shell Merit Programs at Stanford University.

These three were among 70 men and women selected by the Academy as being representative of persons of achievement in many branches of science, industry, government, education and the arts. The Academy is dedicated to the education and inspiration of youth—a goal it helps accomplish by gathering those honored for a series of seminars with some 100 San Diego area honor students.

Dr. Baron received his award for contributions to research in the chemical engineering field. He holds B.S. and Ph.D. degrees from the University of Illinois where he taught for three years before joining Shell Development in 1951. He was promoted to Head, Chemical Engineering Department, in 1956 and to his present position in 1961. Previous professional awards to Dr. Baron include the Junior Award (now the Colburn Award) of the American Society of Chemical Engineers for his work in fluid mechanics, and the Society's Professional Progress Award, for his "original contributions to leadership in applying scientific understanding and mathematics in chemical engineering and industrial research."

Pat Flanagan, an 18-year-old high school senior, was recognized for his invention of the "Neurophone," a hearing aid device described as a possible breakthrough in bringing sound to the deaf by conveying it to the brain through nerves rather than through the ear. (Details were reported in the June, 1962 SHELL NEWS.) Last fall he demonstrated the "Neurophone" on the CBS television show, "I've Got a Secret." His invention was also featured in an article in LIFE, Sept. 14, 1962. Pat recently sold the rights to his invention to The Huyck Corporation, a diversified manufacturing company.

Dr. Hurd was honored for his outstanding contributions to science education, a field in which his special interests are the biology curriculum, the design of laboratory facilities and the history of science teaching. Dr. Hurd is coordinator of the Shell Merit Programs—Merit Fellowships, Residencies and Fifth-Year Scholarships—administered and held at Stanford under the sponsorship of the Shell Companies Foundation, Incorporated, for teachers and leaders of high school science and mathematics in the area west of the Mississippi. These programs are designed to stimulate the interest of high school students in science or mathematics by giving fresh inspiration to their teachers. Similar Shell Merit Programs are held at Cornell University for teachers from the area east of the Mississippi ●

ports. Special programs and data are used in compiling and analyzing matters concerning taxes, loans and budgets.

Transportation and Supplies — Programs exist enabling studies of transportation routing and forecasting of product supply needs. A program massing thousands of details in planning product routing and transportation rates aids the study of Company-wide movement of products. One of these programs prints out data which at a glance tell that the least expensive way for Shell to supply, for example, a gasoline account in North Carolina, is to ship the gasoline by truck from the Charlotte terminal rather than from the Wilmington, N. C., terminal.

Shell Development Company—Computers help develop improved process design of refineries and chemical plants, including a variety of plant control techniques using computers as essential elements. For example, the machines helped design an isomerization process which has been adapted to the production of gasoline with higher anti-knock value. Scientists at the Emeryville Research Center also developed the CHEOPS (Chemical Engineering Optimization System) computer program which frees engineers from tedious, time-consuming work and produces thousands of design variations to consider in choosing the one design which will operate the chemical or refining unit with optimum efficiency. The CHEOPS program also can help determine the most efficient way to operate a complete refinery or plant.

Shell Chemical Company—Computers help engineers to design plant units and management to determine the profitability of building new plants. The analogue computer at Head Office aids chemical engineers in running simulations of plant operations. This machine helped in the design of units at the new Woodbury (N. J.) Plant. Shell Chemical is also a pioneer in the telephone line transmission of industrial data from this new plant to New York. Information about supply inventory, financial transactions and manufacture of polypropylene is coded, punched on paper tape and transmitted to the New York Data Center at night over a leased line. These data are processed in New York—eliminating the need for computers and extensive data processing at Woodbury—and weekly operational summaries are returned to the plant. Plans are to link the Marietta (Ohio) Plant, which manufactures Shell Isoprene Rubber, to New York in the same manner early in 1963.

Shell Pipe Line Corporation — Computers have enabled economic projections of the operation of a pipe line for up to 30 years in the future. Another program assists in calculation of the minimum amount of electric power needed for pumping to save money in power costs. Other calculations produce simulations of lines operating under varying conditions, pressures and types of pipe and controls.

In the tape library, Veronica Motto is shown filing one of the N. Y. Data Center's 1,800 reels containing data on a total of over 800 miles of magnetic tape.

Personnel and Industrial Relations—Basic personnel information on every employee is or will be stored and kept up to date for use in the personnel control system. Payrolls are prepared from computer-compiled information. At Head Office, a computer soon will print and sort mailing labels for SHELL NEWS, SHELL PROGRESS, THE SHELL REPORTER and THE SHELL DISPATCH. Also, the entire series of computations necessary to determine the monthly status of the Shell Provident and Pension Fund accounts is performed by the New York Data Center computers.

These are only a few of the many types of Shell projects which have involved computers. These machines are changing Shell's business methods and the flow of data within the Company.

By adapting computers to its data processing needs, Shell has started to participate in what many experts in the field believe is a second Industrial Revolution. The first, which began in England around 1760, involved machinery's extension of men's muscle power. The second, perhaps even more significant, is machinery's extension of some of the powers of men's minds ●