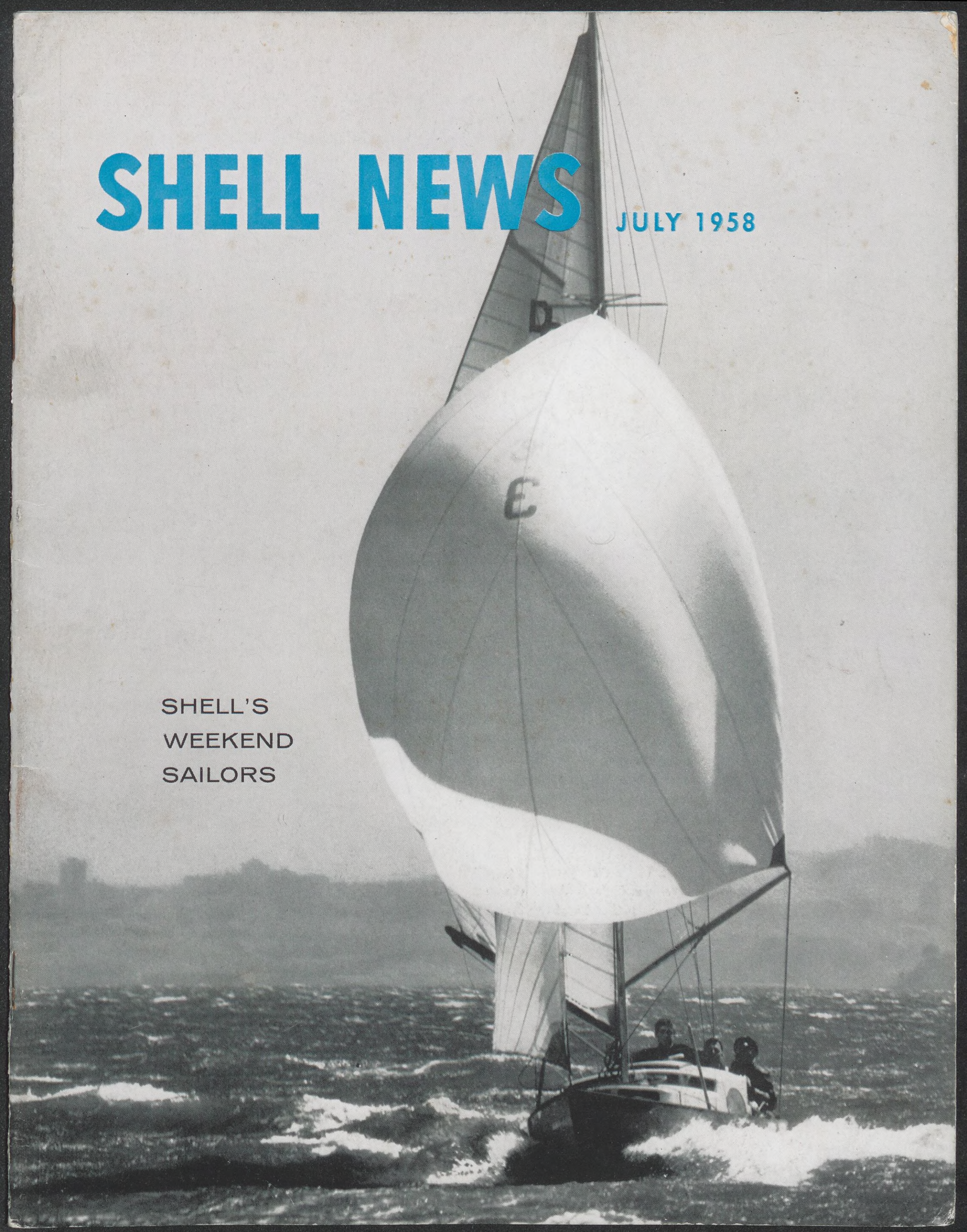
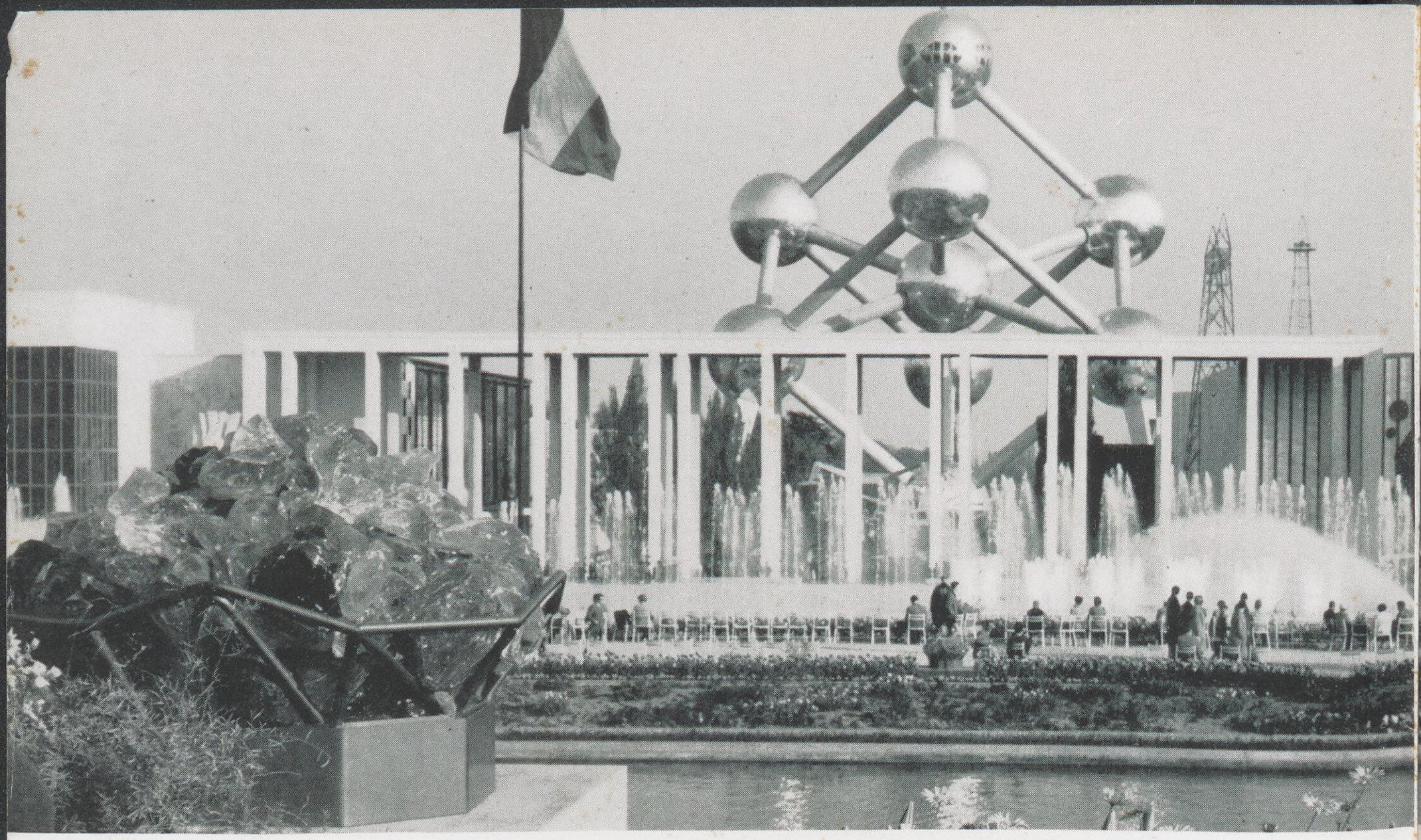
# SHELL NEWS

JULY 1958



SHELL'S
WEEKEND
SAILORS



# OIL at the WORLD'S F

## Exhibits on petroleum and atomic energy are neighbors at Br

*(Article and photographs by HUGH HARVEY, Aviation Department, Shell Oil Company)*

FOR members of the staff of Belgian Shell in Brussels, this is a particularly busy summer. Brussels, as everybody knows, is the site of the first Universal Exposition or World's Fair in a generation. Visitors by the millions are flocking to see show windows of the nations of the world on display.

Shell visitors and friends from around the globe are given special attention at an office—known as SHELL-EXPO 1958—set up in the Shell Building on Brussels' Rue Cantersteen. Here a card index is kept of all Royal Dutch/Shell Group visitors and friends, including such

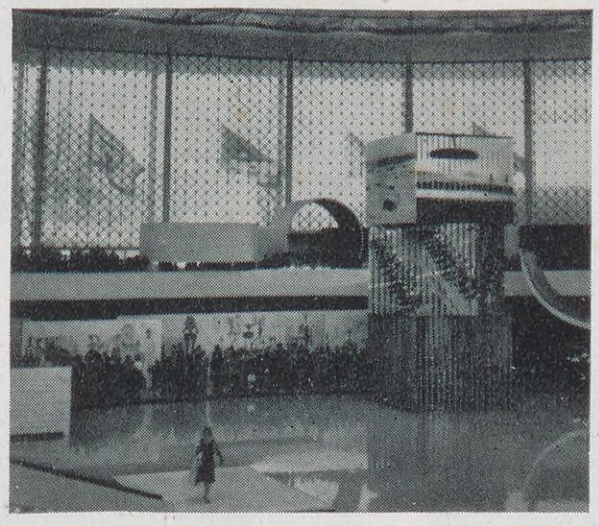
*(Continued on page 2)*



**Visitors** from Royal Dutch/Shell Group companies around the world usually arrive at the fair through the Grand Palais entrance and get this first view of the fair's major symbol — the Atomium, representing the atomic structure of a crystal of iron.

# 'S FAIR

ghbors at Brussels



**In the American** pavilion, a model, lower left, shows a U. S. fashion on an "island" stage over a pool. Another view of the U. S. building is on Pg. 2.

**From this angle,** the drilling rig featured in the petroleum exhibit is paired with the Atomium to symbolize sources of energy for mankind.


# SHELL NEWS

**VOL. 26—No. 7** **JULY, 1958**


*Dedicated to the principle that the interests of employees and employer are mutual and inseparable*


**Employee Communications Department**
**New York, N. Y.**


## contents


Oil at the World's Fair..... 1

News and Views..... 5

Shell People in the News..... 8

Pipe Dream Come True..... 9

It's Costing More to Make Less..... 10

They Have Retired..... 13

The Future is Now..... 14

Purchasing-Stores Organization Chart 17

Shell's Weekend Sailors..... 18

Halt the 'Hoppers!..... 22

Coast to Coast..... 25

Service Birthdays..... 28



Published by Shell Oil Company (H. S. M. Burns, President; C. C. Combs, Treasurer; J. A. Horner, Secretary) for its employees and those of Shell Chemical Corporation, Shell Development Company and Shell Pipe Line Corporation. Address communications to Employee Communications Department, Shell Oil Company, 50 W. 50th St., New York 20, N. Y.




### ABOUT THE COVER

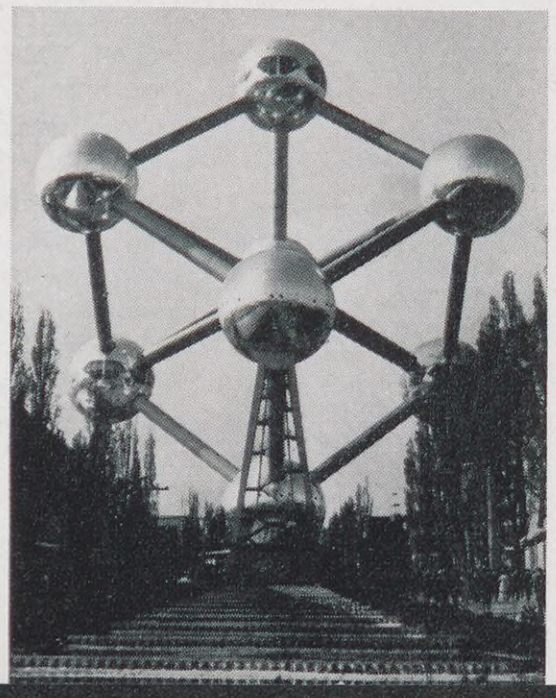
The billowing spinnaker sail over the bow of the "Cirrus" is used when sailing before the wind. Staff Patent Attorney Harry Birch of Shell Development Company's Emeryville Research Center, who owns the "Cirrus," has raised the spinnaker to make maximum speed before a stiff breeze on San Francisco Bay. He is one of many Shell employees who spend weekends on the water in sailboats or powerboats. An article with photographs of other Shell sailors — many of whom built their own boats—begins on page 18.

information as the languages they speak, their special interests and their business connections. Belgian Shell sees that all its guests are given every opportunity to enjoy and profit from their visit to the fair.

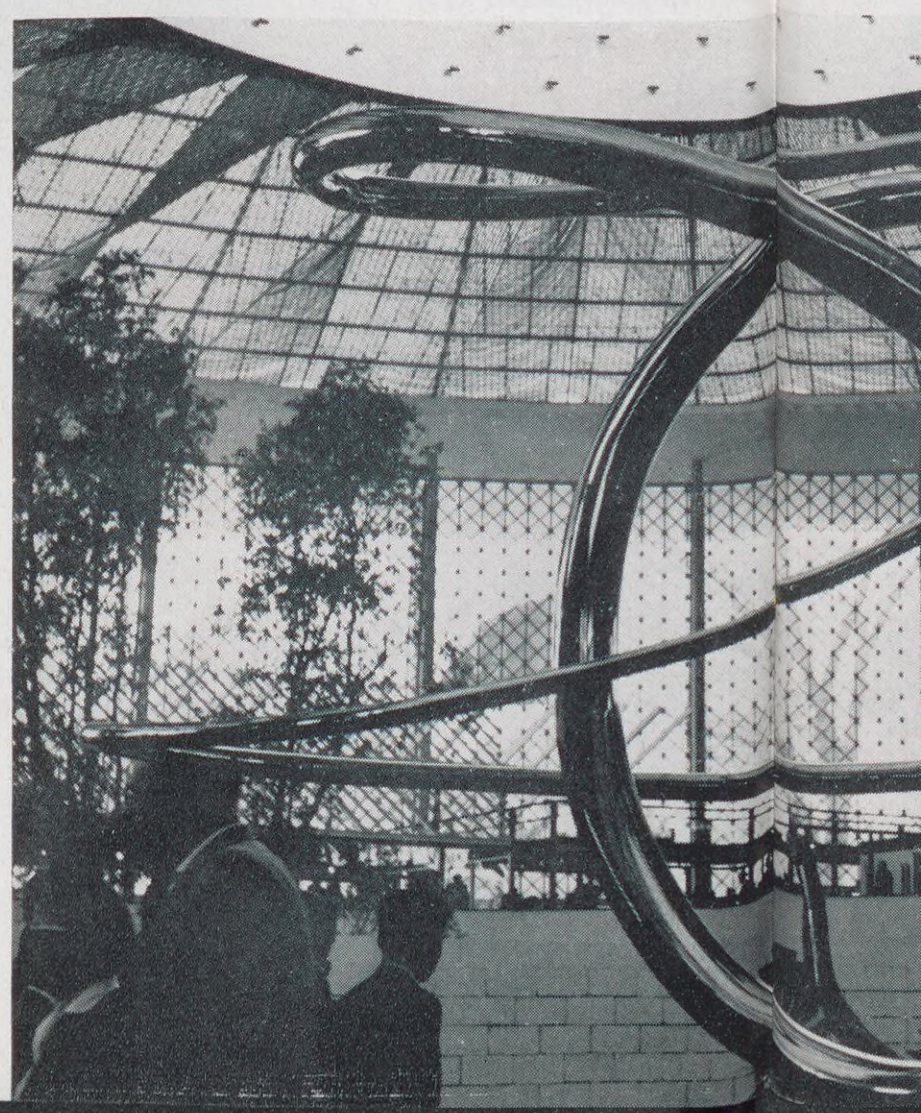
Since the last world's fair was held in New York in 1939-40 much has happened; but it is in the realm of scientific discovery that progress has been most dramatic. And it is in the magnificent showcase of the Brussels Universal Exposition of 1958 that visitors can see and understand the wonders man has accomplished and, at the same time, glimpse the wonders to come.

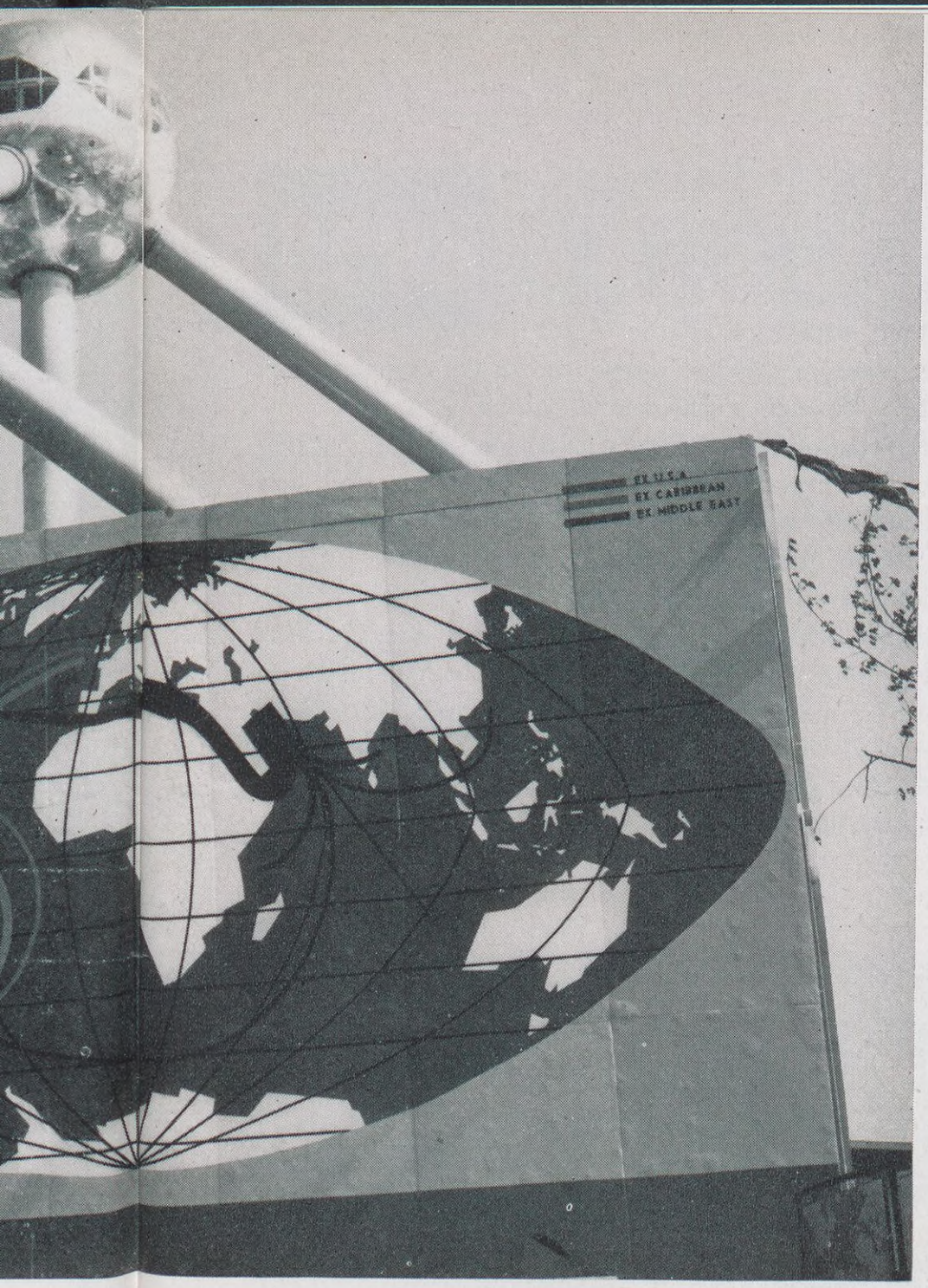
The future, to a great degree, will be based on the atom and, what is more important, man's ability to use the atom for the good of all. In recognition of this, the Brussels Exposition is built around the Atomium—a model, magnified 150,000 million times, of the atomic structure of a crystal of iron. Towering 334 feet above the exhibition grounds, the atomium consists of nine aluminum

**The United States** pavilion, acclaimed as a masterpiece of modern architecture, was designed by the famed Edward D. Stone as a huge drum. It has translucent walls and roof.



**The Atomium,** which dominates the fairgrounds, as seen from the base of the water staircase that separates two busy promenades.





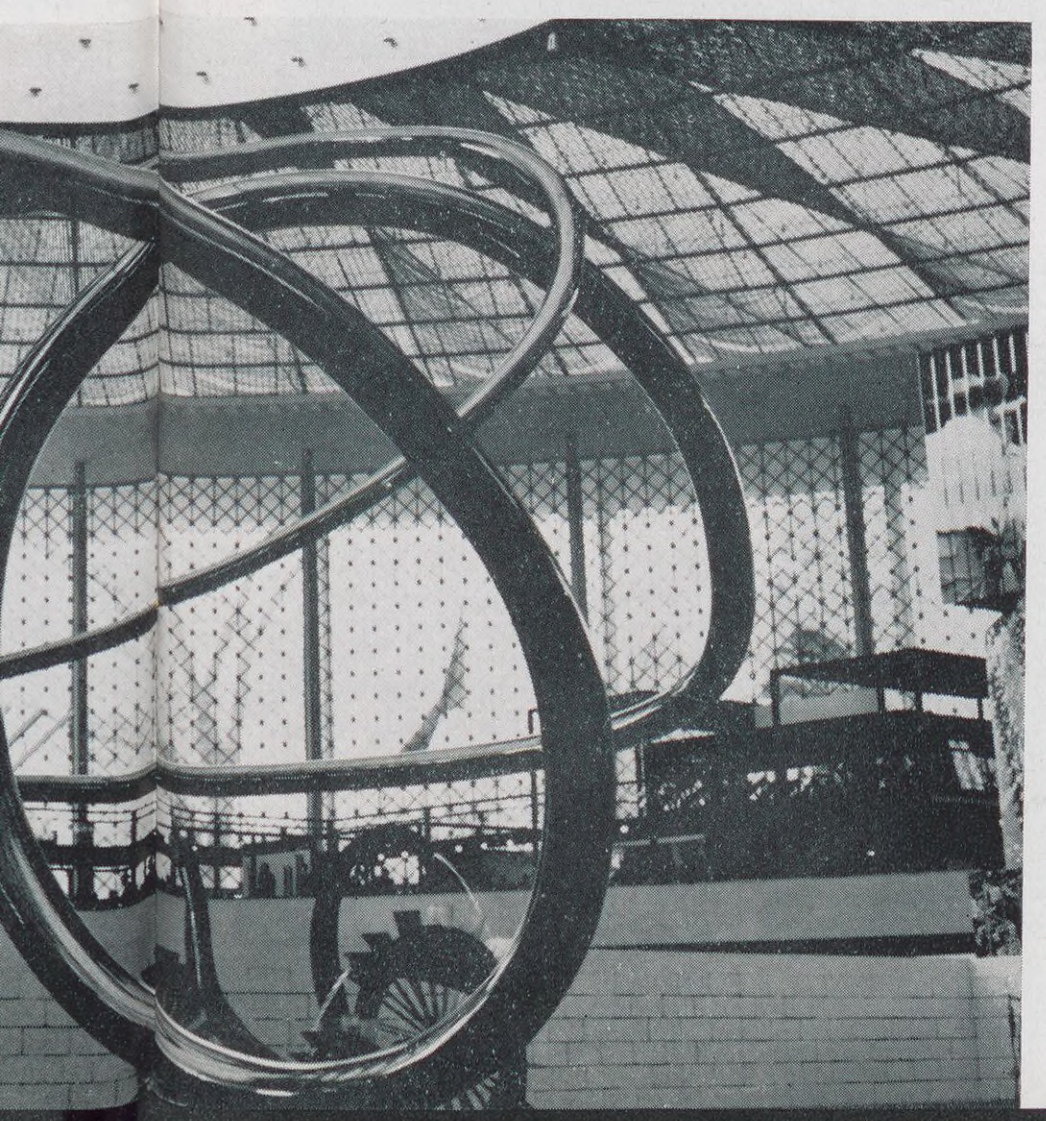

**Tanker routes** are shown on this huge map of the world which is displayed as part of the transportation section of the petroleum exhibit. Belgian Shell helped create the over-all petroleum exhibit.

spheres, each 56 feet in diameter, representing the nine iron atoms in a crystal structure. Supporting these spheres are aluminum-covered tubes containing escalators and elevators so that visitors may progress from one sphere to the next. In the lower spheres are exhibits showing peaceful uses of atomic energy. The topmost globe encloses the already-famous Atomium restaurant where diners enjoy a circular view of the exhibition and Brussels.

From the top of the Atomium, Americans can view with pride the graceful contours of the American pavilion, a masterpiece of architecture. Flanking it is the rectangular glass hall of the USSR pavilion. Facing both these palaces of national culture is the excitingly modern Vatican building dedicated to man's unconquerable soul. (In keeping with the full view obtained from the Atomium, the U. S. exhibit is showing, for the first time, Walt Disney's "Circularama," a film presentation of the face of America from the Statue of Liberty to the Golden Gate. The film is shown in a circular room and the pictures are projected on the walls to give a full 360-degree view of the scenes.)

In the shadow of the Atomium stands the Petroleum pavilion. How well these two exhibits go together is apparent to visitors when they enter the oil exhibit and are confronted by a simple breakdown of mankind's sources of energy — coal, oil, hydroelectric power and atomic power. This display shows dramatically that while use of atomic power will grow, it will not for several decades make a large contribution to satisfying the increasing need for energy. The conclusion is inescapable that the major source of energy will continue to be natural fuels and, of these, petroleum will be the most important.

To the people of Europe, the petroleum exhibit is of special interest, for the great increase in the use of petroleum energy in the postwar years has helped materially in raising the standard of living. Coal has so far been the main source of energy for Europe, but it is rapidly being supplemented by petroleum fuels. The



**An abstract form** is one of the art displays in the U. S. pavilion. The U. S. exhibit, which like those of the 43 other countries at the fair aims to win friends, ranges from technology to fashion shows.

yearly consumption of petroleum products in Europe is increasing at more than twice the rate in the United States.

Visitors to the petroleum exhibit—in whose creation Belgian Shell played a large role—first learn of the ever-widening search for oil in more than 100 countries. The story of exploration and production includes displays of aerial photography, the geological sciences, the turbo drill and models of drilling rigs, including the type of offshore rig used by Shell Oil Company in the Gulf of Mexico. In the central court of the pavilion, a full-scale oil derrick, a beam pump and a "Christmas Tree" are shown as the basic tools of oil production.

At all times one is made aware that exploration and production are costly and exacting tasks that must be carried out in remote and almost inaccessible areas. This phase of the exhibit ends with a placard: "Only drilling can prove the presence of oil."

From exploration and production, visitors go to the second floor where pictures and diagrams follow transportation sequences, including pipe lines and tankers. The advantages of pipe lines are depicted, their construction is explained and their cost outlined. Here one can also see the development of the supertanker and the importance of tankers in the world's merchant fleets. Through the displays, visitors share in the work and leisure of the men who man the tanker fleets.

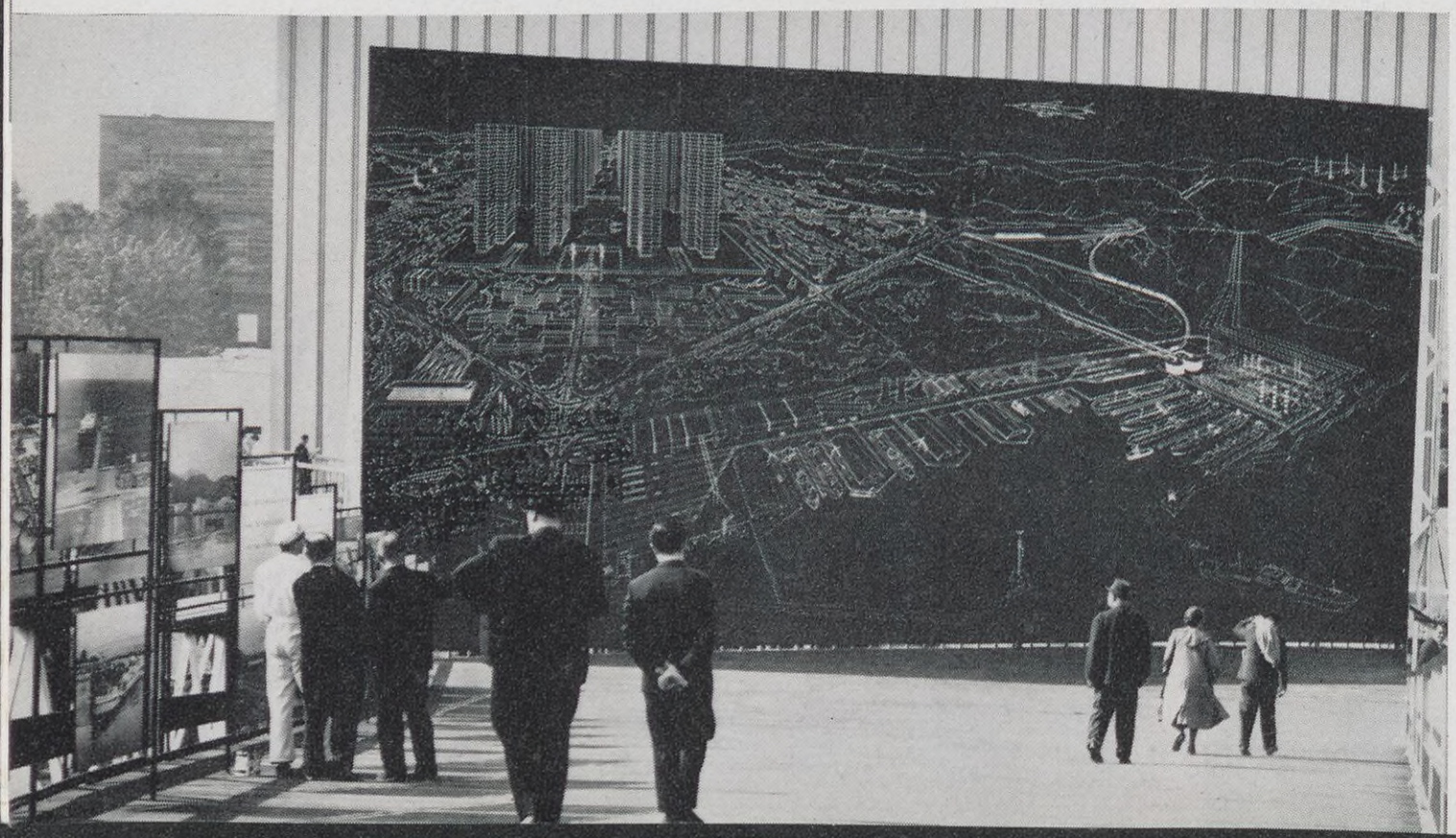
Leaving transportation, visitors climb a ramp and enter a full-scale Hortonsphere, a spherical tank used normally for storing gases. This sphere, which looks as though it might have fallen from the Atomium, houses an exhibit on refining. The displays follow an ascending path around the sphere, explaining the nature of refining and the purposes and products of the principal processes.

The vital role of research in an industry as competitive as oil is exemplified by illustrations of research work integrated with each of the major product groups displayed. Visitors also are introduced to the complexity of a refinery through a scale model of one.

In the Hortonsphere's upper level, one sees the amazing range of chemicals produced from petroleum and how they enter into every aspect of life. Industry and Agriculture, Public Health and the Home are shown as beneficiaries of the products the oil industry has made available.

The last display of the oil exhibit is a vast mural, a visual summary of the whole flow of petroleum from oil fields to consumers. The mural gives a graphic description of the place of oil, today and tomorrow, in the world energy picture—a demonstration that makes visitors aware of the world's increasing dependence on petroleum ●

**A Hortonsphere,** normally used to store gases, makes an unusual showcase for displays of petroleum refining and research.



**The oil exhibit's** last display is this vast mural summarizing the flow of petroleum from fields to consumers. It emphasizes the importance of oil to world energy.

# news and views

## HONORARY DEGREE

MONROE E. SPAGHT

Monroe E. Spaght, Executive Vice President of Shell Oil Company, was awarded an honorary Doctor of Science degree by Rensselaer Polytechnic Institute in June.

Dr. Richard G. Folsom, President of Rensselaer, presented the degree in recognition of Spaght's "achievements as a scientist and industrial executive."

The citation noted his interest in education and the critical need for it today:

"A university trustee and a founder of fellowships, he has worked for international understanding and advocated greater recognition and prestige for teachers. A vigorous advocate of the highest quality in education, he has urged more productive effort in those basic intellectual and spiritual disciplines that can increase the yield of truly enlightened people leading to fruitful lives in a world of peace."

Spaght attended Humboldt College and Stanford University and did graduate work at the University of Leipzig, Germany, before obtaining his Ph.D. in chemistry at Stanford. He is a trustee of Stanford, a director of the Institute of International Education and President of the Shell Companies Foundation, Inc., which administers fellowships, scholarships, research grants and other philanthropic work supported by Shell Companies in the United States.

---

Since publication of the June issue of SHELL NEWS, our attention has been called to an error in the article, "Guides to Better Vacations."

Item 5 in the section CAROL LANE'S TIPS ON TRAVELING, on page 2, suggests the use of "dry ice" for cooling a car. We intended to refer to "ice" —not "dry ice." The fumes from "dry ice" can, under certain circumstances, produce adverse physical effects on the occupants of an automobile.

## WOOD RIVER EXPANSION

A multimillion dollar expansion and modernization of lubricating oil manufacturing facilities at the Wood River Refinery has been approved. When completed in mid-1959, the new facilities will double production of high viscosity index oil to 4,000 barrels a day.

High viscosity index oils are base stocks used in blending such premium oils as X-100® and ROTELLA®. They now are manufactured at the Houston Refinery as well as at Wood River.

Manufacture of crude waxes for the first time at Wood River also will be possible with the new facilities.

Wood River's expansion of lubricating oil manufacturing facilities ties in with the recently-completed packaged products warehouse and lubricants canning plant.

---

## WORLD PETROLEUM CONGRESS

Six Shell employees and retired employees are helping to plan the Fifth World Petroleum Congress to be held in New York City next year.

Nearly 6,000 oilmen from 47 countries are expected to attend the Congress which will last six days starting May 30. The Congress will be held at the new Coliseum in which 300,000 square feet of display area will be used to demonstrate the latest equipment used in all phases of the oil industry.

The Shell Oil Company people involved in planning for the Congress are:

C. E. Davis, retired Vice President Refining, General Secretary of the Congress.

F. S. Clulow, retired Vice President Manufacturing, a member of the Board of Directors of the Congress.

D. B. Hodges, Vice President Transportation and Supplies, a member of the United States Committee of the Congress.

E. A. Hugill, General Attorney, a member of the Legal Advisory Committee.

G. G. Biggar, Manager, Public Relations, vice chairman of the Public Relations Advisory Committee.

F. C. Cutting, Assistant to the Vice President Personnel and Industrial Relations, supervisor of the publication of

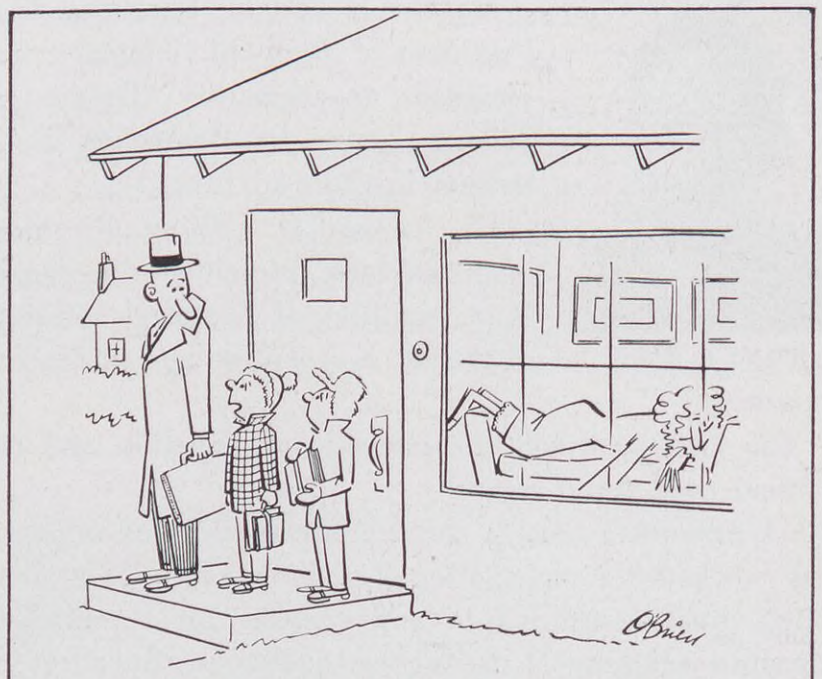
# news and views

all technical papers and proceedings.

Four other such Congresses have been held during the last 25 years: London, 1933; Paris, 1937; The Hague, 1951 and Rome, 1955.

The main purpose of the Congress is to give foreign and U. S. oil scientists and technologists opportunities to exchange and evaluate data collected in oil fields, refineries, laboratories and other petroleum installations around the world. About 250 papers on a wide range of oil industry subjects are expected to be presented at the meeting.

Nine classifications of subjects are to be discussed: geology and geophysics; drilling and production; oil processes and refining; chemicals from petroleum and natural gas; composition, analysis and testing; engineering, equipment and materials; transportation and distribution; utilization of petroleum products; and operations research, statistics and education. The meeting will also feature a symposium on the applications of atomic energy to the petroleum industry.



"Mind if we go to the office with you? We didn't have the heart to tell her that the schools are closed today."

### ADVERTISING AWARD

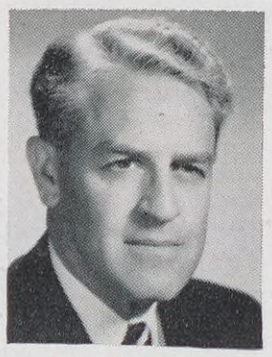
Shell Chemical Corporation has been named among 14 winners in the corporate category of *The Saturday Review* magazine's Sixth Annual Awards for distinguished advertising.

The winners were chosen from the entire field of general advertising by a panel of judges including 33 leading educators, editors, publishers, and advertising and public relations executives.

The Shell Chemical advertising series chosen appeared in national magazines during 1957 and covered agricultural and organic chemicals, and synthetic rubber.

The awards were made in one major and three special categories—corporate, public relations and public service campaigns. The judges screened all general magazine advertising and chose 275 campaigns for further study. From these, 83 campaigns went into the final voting and a total of 48 were cited.

### HONOR AWARD



L. C. BURROUGHS

L. C. Burroughs, Assistant to the Vice President Manufacturing, Shell Oil Company, was honored at the Mid-Year Meeting of the American Petroleum Institute's Division of Refining with the presentation of a Certificate of Appreciation.

During the last 10 years only 19 persons have received the Division of Refining award which recognizes especially productive service to the oil industry through participation in A.P.I. Committee work. C. E. Davis, retired Vice President Refining, received the award previously.

Burroughs' citation read in part: "His time and energy have been devoted to the affairs of the Division of Refining for more than 20 years. His accomplishments in the field of Waste Disposal and Pollution Abatement shine

with a glowing luster. He has been among the most productive and constructive members of the Committee on Petroleum Products. He has distinguished himself in the field of Oil Measurement. He has ably represented the industry in the affairs of other learned societies, trade associations and government. . . ."

---

**MAJOR ACREAGE HOLDER**

Shell Oil Company of Canada, Limited, is the major acreage holder in the region including Canada's western provinces, Yukon Territory and Northwest Territories. Shell of Canada controls about 26 million acres, two million acres more than the next largest acreage holder.

Shell of Canada's holdings are: Yukon Territory and Northwest Territories—15 million acres (including three million in the MacKenzie River Delta acquired recently); Alberta — 7½ million acres; Saskatchewan — about 1½ million acres; British Columbia—almost 1 million acres; and Manitoba—805,000 acres.

Last December 31, Shell of Canada acquired all the oil and gas properties in Canada in which Shell Oil Company and Canadian Shell Limited had interests.

---

**WOMEN DRIVERS**

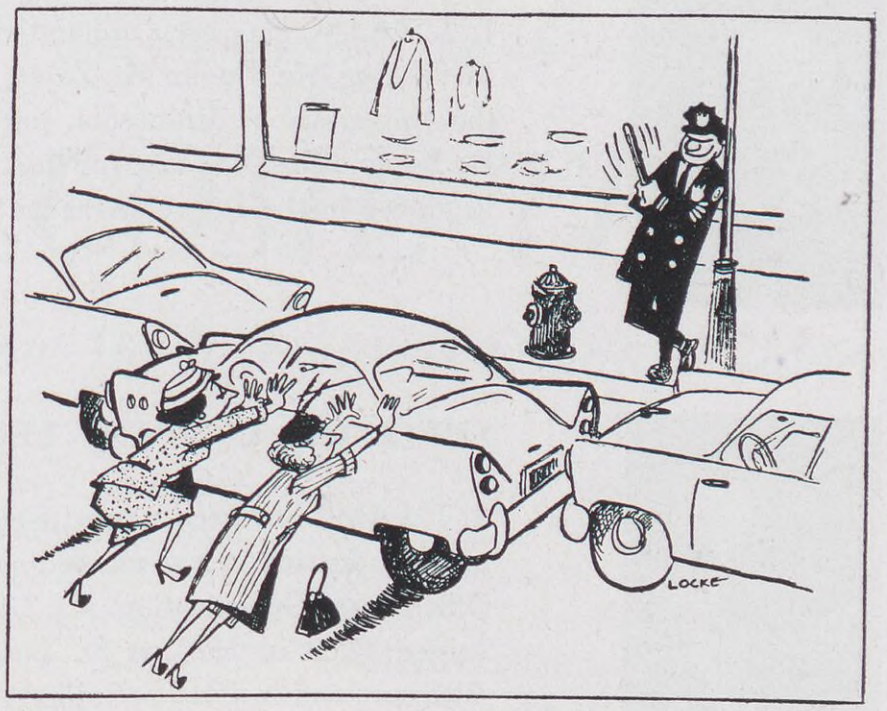
Women applicants for driver licenses rate just as high as men—except in parking.

This was among the conclusions reached by experts at New York University's Center for Safety Education after analyzing 12,000 New York State road tests records.

The survey is part of a three-year research program made possible by a $50,000 grant to the Center by Shell Oil Company. The program aims to determine what personal traits lead drivers to have auto accidents, to develop better tests for driver licensing, and to investigate methods for rehabilitation of chronic traffic accident repeaters.

Examining the road tests, traffic experts found that those failing their tests for the first time did so because of poor judgment in approaching intersections, poor steering control, delayed braking and cutting corners.

These and other conclusions made during the study are being released by the Center for use by driver education instructors and prospective driver license applicants. Further analysis of the road tests is continuing.




A recently-completed phase of the Center's over-all program is the issuing of a film strip titled "Perception of Driving Hazards." The film strip consists of 30 color slides of actual traffic hazards. Each slide is flashed on the screen and viewers are asked to spot the hazard and discuss how they would avoid an accident. The film strip, designed to help drivers become more conscious of driving hazards, is being distributed by Shell free of charge to schools and corrective driving clinics.

# *SHELL PEOPLE in the news*

J. T. DOYLE

## SHELL OIL COMPANY EXPLORATION AND PRODUCTION ORGANIZATION

J. T. DOYLE has been named Assistant to the Vice President, Pacific Coast Exploration and Production Area, succeeding W. F. Bates, who recently became Production Manager, Pacific Coast Area. Mr. Doyle, who holds a Bachelor's degree in electrical engineering from the University of Maryland, joined Shell in 1933 at San Francisco, Calif. Following various engineering assignments in California, he was named a Division Engineer at Long Beach in 1938 and Exploitation Engineer in the Los Angeles office in 1944. He became Assistant Manager of the Gas Department, Pacific Coast Area in 1947 and Manager of that department in 1952.

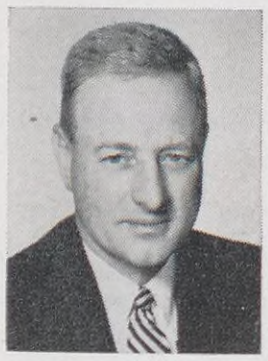
T. S. ZAJAC

T. S. ZAJAC has been appointed Manager of the Gas Department of the Pacific Coast Area, succeeding Mr. Doyle. Mr. Zajac, who received a Master's degree in chemical engineering from the University of Minnesota, joined Shell in 1940 as a Mechanical Engineer at Midland, Tex. He became Gas Manager for the former Calgary Area in 1953 and was named Chief Mechanical Engineer in the Denver Area in September, 1956.

J. T. LAMB

## SHELL OIL COMPANY LEGAL ORGANIZATION

J. T. LAMB has been named General Attorney and Legal Manager of the Denver Exploration and Production Area, succeeding H. M. Gullickson who is on special assignment in the Head Office Legal Organization. Mr. Lamb, who holds an LL.B. degree from the University of Kansas, joined Shell in 1937 at St. Louis, Mo. In 1940 he was transferred to Centralia, Ill., as an Attorney and in 1943 he joined the Tulsa Exploration and Production Area Legal Staff. He was named an Attorney in the Denver Area in 1954.



W. J. OLDFIELD

## SHELL OIL COMPANY MARKETING ORGANIZATION

W. J. OLDFIELD has been named Manager of the Bunker Sales Division in the Head Office Fuel Oil-LP Gas Department. Mr. Oldfield, who holds a Bachelor's degree in liberal arts from Yale University, joined Shell in 1932 at Brookline, Mass. After serving in various sales positions in New England and New York, he was named a District Manager in the Albany Marketing Division in 1941. He received a Special Assignment in the Fuel Oil-LP Gas Department, Head Office, in 1946, and was appointed Supervisor, Bunker Sales in 1949.

**Mr. and Mrs. G. L. Zentner** enjoy the new pipe organ they built over a period of a year. Fortunately, the neighbors enjoy it, too, and have asked that the windows be opened wider so they can hear the music better.

# *PIPE DREAM COME TRUE*

## *An Engineer and His Wife Become Do-It-Yourself Organ Builders*

FOR years G. L. Zentner just dreamed about having a pipe organ of his own. Then, with 21,000 feet of wire, 245 pipes, an air blower and various other equipment—plus the help of his wife, Elizabeth—he turned his dream into an eight-foot-square reality in the corner of their living room.

Zentner, an Exploitation Engineer in the Pacific Coast Exploration and Production Area, had considered building an organ as a post-retirement project. But when he answered a newspaper advertisement for a second-hand pipe organ and found that it had been sold, his viewpoint changed. To ease the disappointment in the Zentner household, he started buying equipment needed to build his own organ.

The pipes, two manual key boards, a pedal key board, a stop key board and an air blower were purchased. All other parts, including the organ bench, were built by the Zentners.

During the year it took to construct the organ, Mrs. Zentner became an expert in several aspects of organ building. She learned to mount pipes, which requires drilling, rasping and felting. Also, she spent about 40 hours soldering wires and connections and helped finish the organ's cabinet.

Since both Zentner and his wife are musicians, their interest in pipe organs comes naturally. Zentner started studying piano when he was five years old and continued his lessons until he graduated from high school. Before obtaining a Bachelor's degree in mechanical engineering from California Institute of Technology, he studied organ for three years at College of the Pacific in Stockton, Calif. Mrs. Zentner, a contralto, sings in her church choir and has done some professional singing. She studied voice at the University of Southern California.

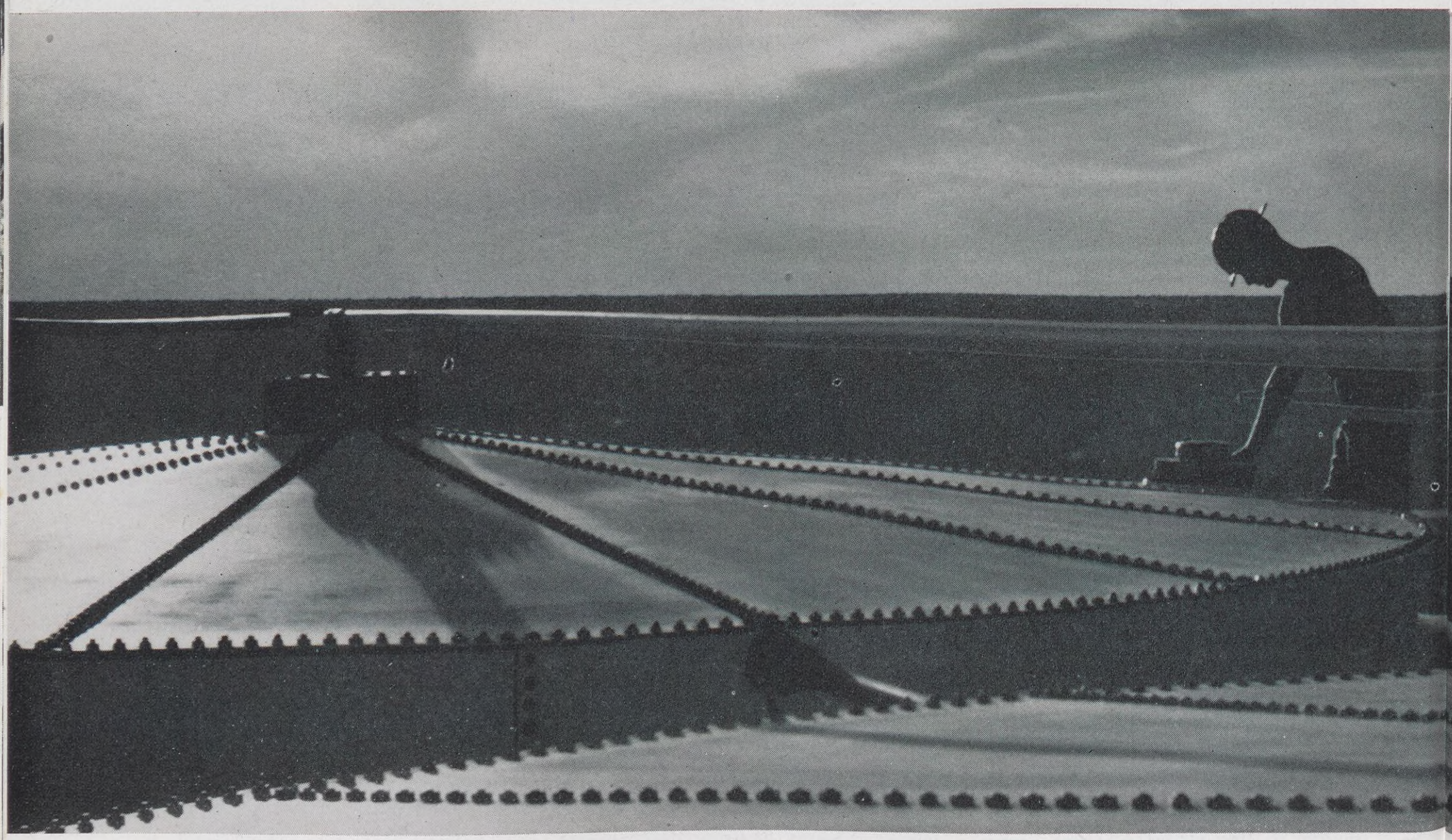
Although the Zentners can now enjoy their pipe organ, it has not been completed. In fact, it will probably be a life-long project because the number of ranks, divisions and stops in an organ is unlimited. The Zentner organ, which has pipes ranging from six inches to eight feet in length and one-eighth inch to seven inches in diameter, produces three full ranks (six to eight octaves each) of musical notes.

"Some organs have as many as 100 ranks," Zentner said, "so our organ will still be a post-retirement hobby."

He has already ordered 135 additional pipes for later installation ●

# *IT'S COSTING MORE TO M*

*A combination of rising costs and lower net income has Shell*



TEN years ago an oil producer got an average of $2.59 for a barrel of crude oil at the well head. From that sum the producer paid his production costs, taxes, research expenses, administrative overhead and some profit to his stockholders. All remaining moneys went to pay for finding and developing new oil reserves.

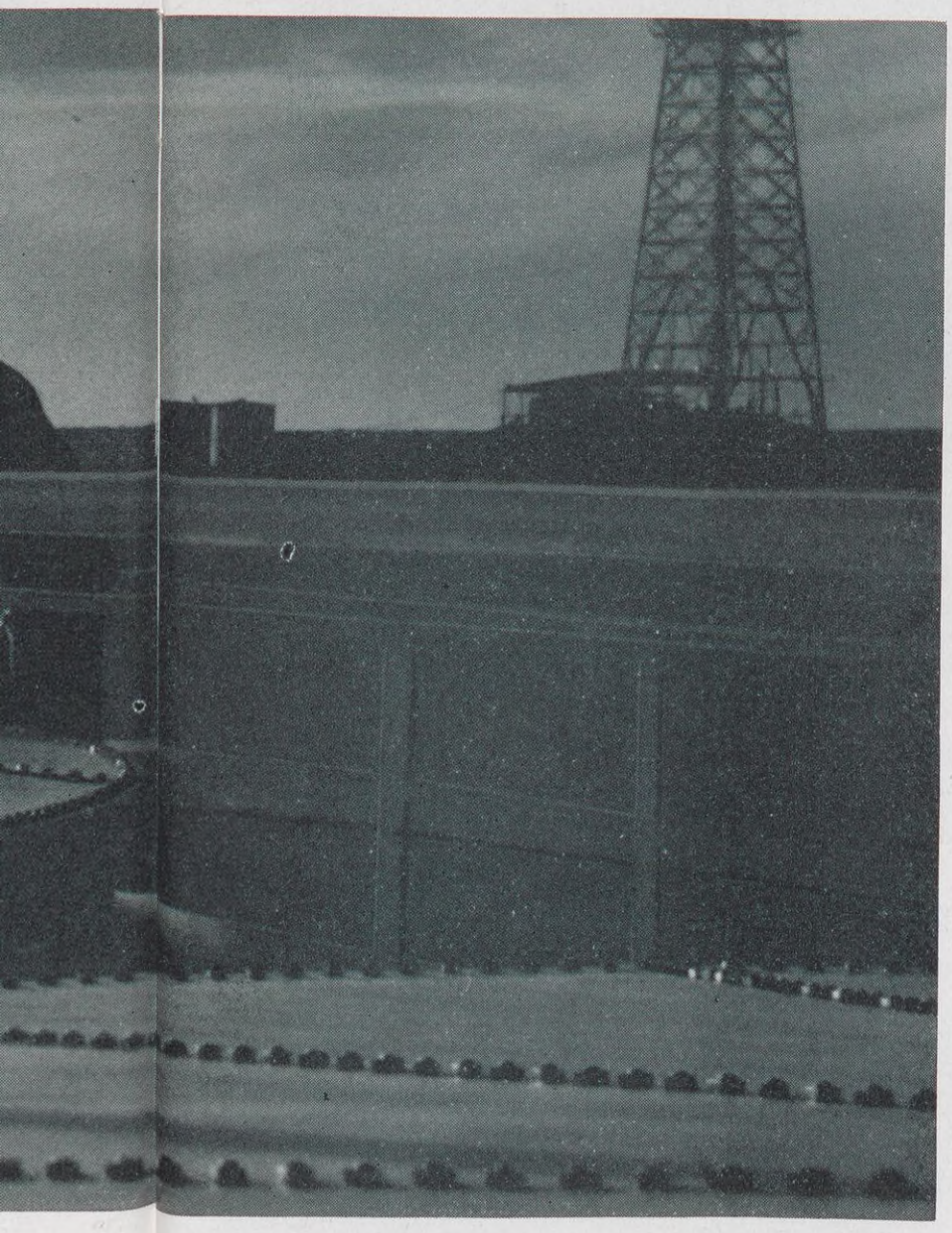
By 1957 the average price of a barrel of crude oil had gone up about 19 per cent to $3.08. But finding and development costs were up far more—in fact about 100 per cent more than the 1948 figures.

This "squeeze" caused by costs rising faster than prices is a continuing and increasingly difficult problem for most industries, and the oil industry is no exception. The present surplus of oil—caused by a number of factors, important among which is flattening of demand – has created a "soft" price structure for oil. It has prevented prices from keeping pace with costs.

This cost-versus-price problem is reflected in the busi-

# TO MAKE LESS

## ne has Shell in an economic 'squeeze'




**A 6,000-gallon** truck like this one cost Shell $13,600 in 1950, but the price was up to $19,100 this year and will likely be higher next year. Shell's Marketing Organization owns more than 1,500 trucks which take gasoline from depot to dealer.

**These steel tanks** are in Gaines County in West Texas. The tanks store oil from wells until it is transported to a refinery. Since 1950, the cost of a 1,000-barrel tank has increased over 33 per cent. Its price in 1950 was $2,050, but today the same tank would cost $2,730.

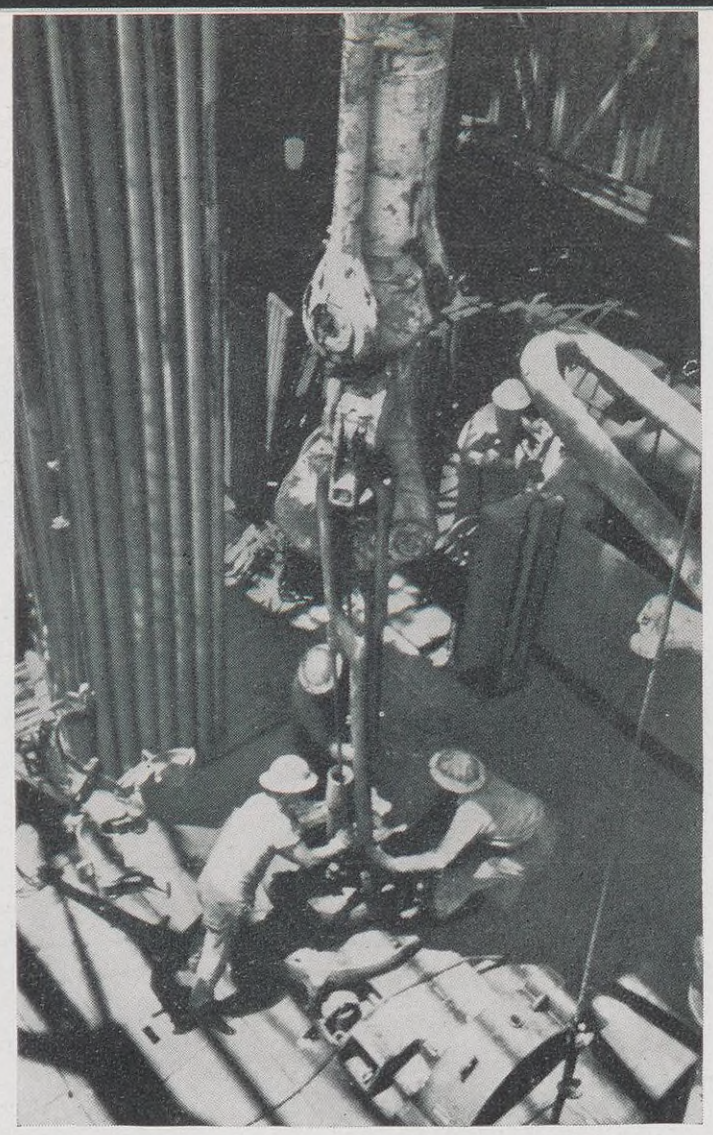
ness barometer economists consider most important—financial return on investment.

On first glance at the annual financial reports of Shell and other oil companies, the "net income" figure looks big. But by itself, this figure doesn't mean much. To have meaning, it must be related to the amount of money invested in a company. While the net income of many oil companies has been increasing, the increases have not been in proportion to the amounts of money invested in them.

On the average, Shell and other oil companies traditionally reinvest nearly four times as much as they pay out in dividends to their stockholders. The reinvested funds go for replacements and expansion, such as discovering more oil and building more manufacturing units. (For example, only by large expenditures has the industry kept oil reserves ahead of consumption by finding 1½ barrels of oil for every barrel it has taken out of the ground.) But today, when costs are rising faster than prices, Shell and other oil companies face the dilemma of having less money for replacement and growth at a time when both are more expensive.

One result has been a drop in the number of oil wells drilled. In 1956 the industry completed 58,160 wells. Last year completions dropped to 53,838, and for the first time since 1943 the industry failed to find more oil than it produced.

Oil exploration requires geological studies, lease acquisitions, and both exploratory and development drilling. In addition to bearing higher costs of labor, services and



**Oil wells,** such as this Shell well at Ventura, Calif., now must go deeper than ever before to find more oil reserves—and the expense goes up with each foot drilled. It costs an average of $10 per foot to drill 5,000 feet—but the average goes up to about $15 per foot for a 10,000-foot well.

**Most refinery** expansions of Shell and other oil companies, such as this platformer-desulfurizer unit being built at the Wilmington Refinery, are to improve products. This unit will manufacture high octane gasoline. But while the price of gasoline (excluding taxes) went up only 12 per cent from 1947 to 1958, the cost of constructing units such as this one at Wilmington went up about 62 per cent.



materials, Shell also must drill deeper than ever before to find oil. And as a well goes deeper, each foot costs more to drill than the one before it. It costs an average of $10 per foot to drill 5,000 feet down; but the average shoots up to almost $15 per foot for a well 10,000 feet deep.

Intense competition within the industry plus a "soft" market caused by surpluses of oil products have put the pinch on manufacturing and marketing. To maintain position in a highly competitive industry, Shell and other oil companies are investing more and more money in refineries. About 65 per cent of this money is being spent to *improve* products—not to make more at less cost, or to cut the cost of what is being made. More powerful automobile engines, for example, demand higher quality gasoline, which costs more to make.

But product prices have not fully reflected the increasing costs of manufacturing and distributing higher quality gasoline and other petroleum products. This is resulting in a profit squeeze. Gasoline prices, for example, went up only about 12 per cent (excluding taxes) since 1947, far less than most other consumer items.

The margin between what a refinery pays for crude oil and the price received from consumers for finished products normally pays the cost of manufacuring and marketing distribution and allows a profit. Today, however, the difference between the cost of a barrel of crude oil and the average market price of products delivered to the consumer has narrowed substantially, and for many companies profit has virtually disappeared.

The current economic slowdown is not easy to cope with, but it presents a challenge to improve ideas and methods. It represents a test of managers and other employees to see how well Shell can meet increasing competition in every phase of the business, from research to marketing. Improving efficiency and controlling costs—in both large and small ways—can significantly affect how well Shell and its employees will continue to advance and prosper ●



F. H.
Wood R
Eng

J. P.
Wilming
Effl. Con

H. G.
Tuls
L

R. J.
Wilmingt
Dispo

# They have RETIRED

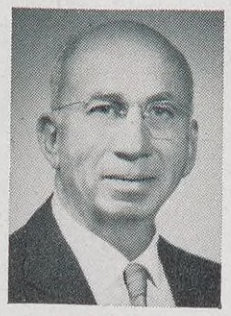
G. E. BREWER

G. E. BREWER retired on June 30 after 29 years of Shell service. He had served as Corporate Secretary of Shell Chemical Corporation since 1948.

George Brewer began his Shell career in 1929 as an Attorney in the San Francisco Legal Department and served continuously in that department until September 1, 1948. Prior to that date he worked on Shell Chemical legal matters. With the transfer of Shell Chemical to New York he was appointed Assistant to the President and elected Corporate Secretary. Mr. Brewer plans to practice law in his home town of Placerville, Calif.

F. H. BURROUGHS
Wood River Refinery
Engineering

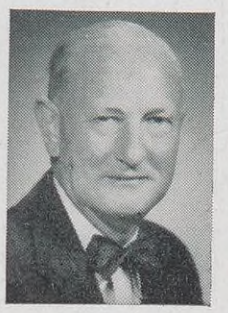
T. R. CANNON
Los Angeles Division
Operations



P. R. DALRYMPLE
Shell Pipe Line Corp.
Texas-Gulf Area

J. R. DAVIDSON
Wood River Refinery
Utilities

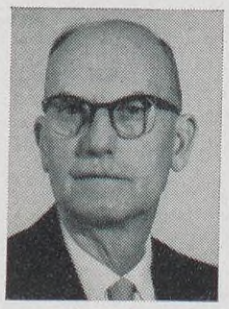
J. A. EILENBERGER
Wood River Refinery
Engineering



F. H. FERBER
San Francisco Division
Treasury

E. S. GATEWOOD
Shell Pipe Line Corp.
Mid-Continent Area

J. JENKINS
Tulsa Area
Production



J. P. MADOLE
Wilmington Refinery
Effl. Cont. & Utilities

W. C. McBAIN
Honolulu Division
Manager

F. T. McDONNELL
Atlanta Division
Sales

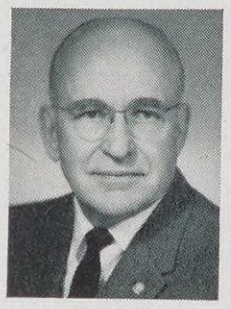
F. J. MITTS
Pipe Line Dept.
Harristown, Illinois

P. MOORE
Pipe Line Dept.
Long Beach, California

C. A. NEWBERY
Tulsa Area
Production

ALICE NEWCOMER
Houston Area
Legal

P. REEVES
Wood River Refinery
Engineering

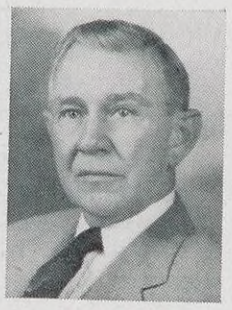


H. G. RENFRO
Tulsa Area
Land

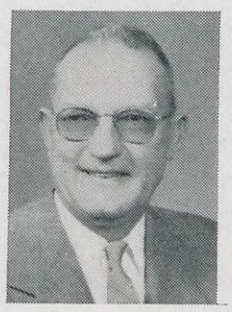
C. A. REYNAR
Wood River Refinery
Engineering

INA L. SCHWARTZ
Minneapolis Division
Treasury

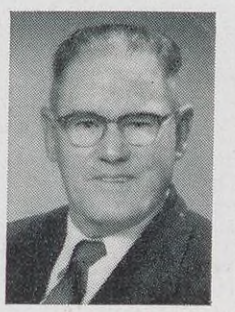
R. E. SIMPSON
Pipe Line Dept.
Los Angeles, California



D. C. SLOAN
Wood River Refinery
Engineering



G. F. SMITH
Shell Pipe Line Corp.
West Texas Area



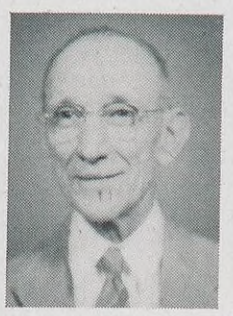
W. J. SMITH
Pacific Coast Area
Gas

R. STRODER
Midland Area
Production

R. J. TAYLOR
Wilmington Refinery
Dispatching

MAY D. WALSH
Boston Division
Operations

L. A. WARFORD
Wood River Refinery
Engineering



H. A. WHITEHEAD
Houston Refinery
Treasury

M. WILLIAMS
Pipe Line Dept.
Kettleman, California

J. A. WILLIAMSON
Atlanta Division
Operations

G. C. ZIRGES
Wood River Refinery
Engineering

# THE FUTURE IS NOW

## In a new Emeryville Research Center laboratory, scientists are seeking tomorrow's fuels today

TO drivers on the eight-lane freeway near Shell Development Company's Emeryville Research Center, the car carrying two men wearing white coats looked like any other Buick. But a flick of a dashboard switch by Engineer E. P. Viscia, put the car five years ahead of anything on the highway.

Viscia's switch-flick started a road test of an experimental fuel feeding an experimental engine under the Buick's hood. The engine has a 12-to-1 compression ratio—greater than any in today's cars, but expected to appear in many models within five years. The test fuel was one of hundreds blended by Emeryville's Fuels and Engine Lubricants Laboratory to find the best fuels for the cars of the future.

Road tests of automotive gasolines are only one phase of the laboratory's research program. In a newly-constructed building that includes the most modern instruments and equipment, the scientists, engineers and technicians of Emeryville's Fuels and Engine Lubricants Department are developing power packages for aircraft and missiles as well as automobiles.

Most of the research on automotive fuels takes place in one large soundproofed room. There, 17 engines, ranging in size from a single-cylinder to the most powerful of the 1958 models, run day and night at the command of complex automatic controls.

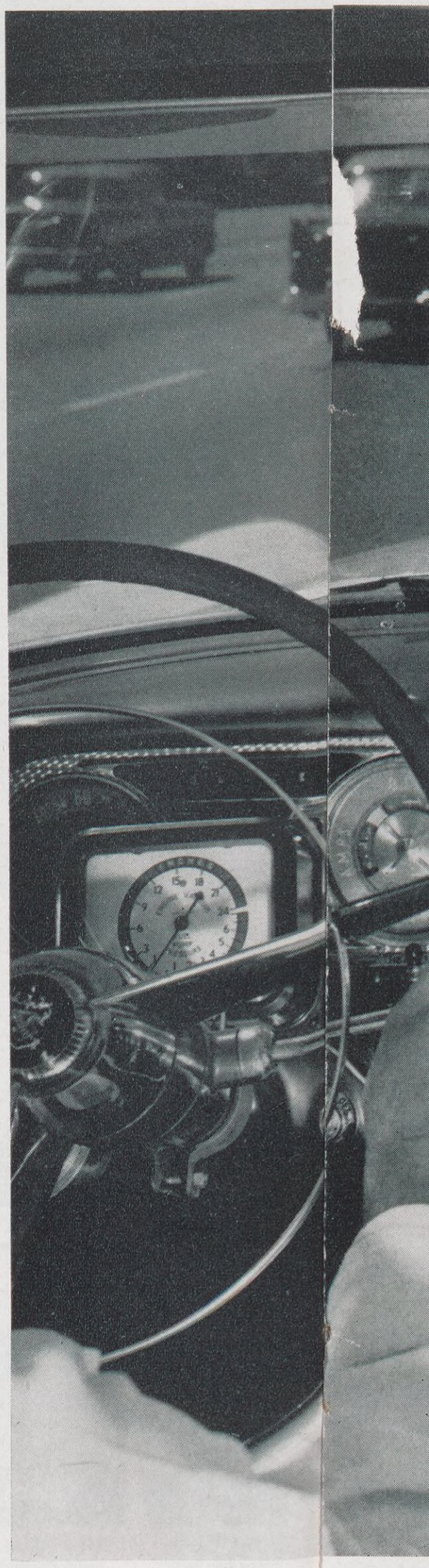
The controls make it possible to test a new gasoline blend's performance over thousands of miles of "driving" in a matter of days—without leaving the laboratory. Pre-set cycles simulate actual driving conditions by starting, accelerating, cruising and stopping engines hour after hour, while instruments record their performance.

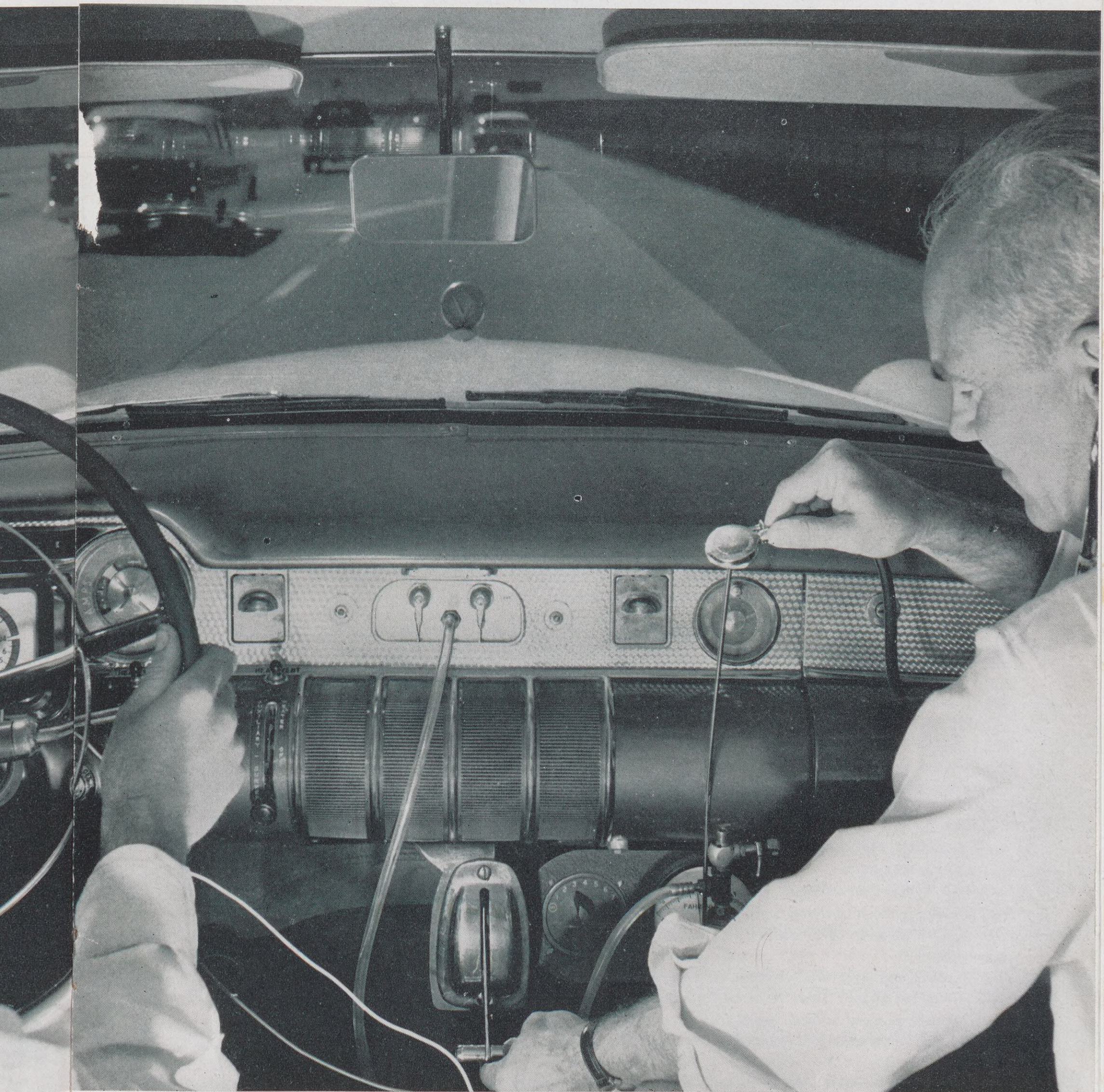
Even the fuel feed system is automatic, through a "switchboard" of rubber pipes connecting any of 25 underground storage tanks with any one of the 17 engines.

While the engines must run for days to test a new gasoline, atomic "detectives" have made it possible to test a lubricating oil's performance almost immediately.

The secret is radioactive engine parts. Emeryville sends chromium-plated piston rings to the Atomic Energy Commission's Brookhaven (N. Y.) Laboratories and steel cylinder sleeves to the AEC's Argonne (Ill.) National Laboratories to be bombarded with neutrons. Then the parts are returned to Emeryville for use in the tests which work this way: Microscopic pieces of metal are worn

(continued on page 16)

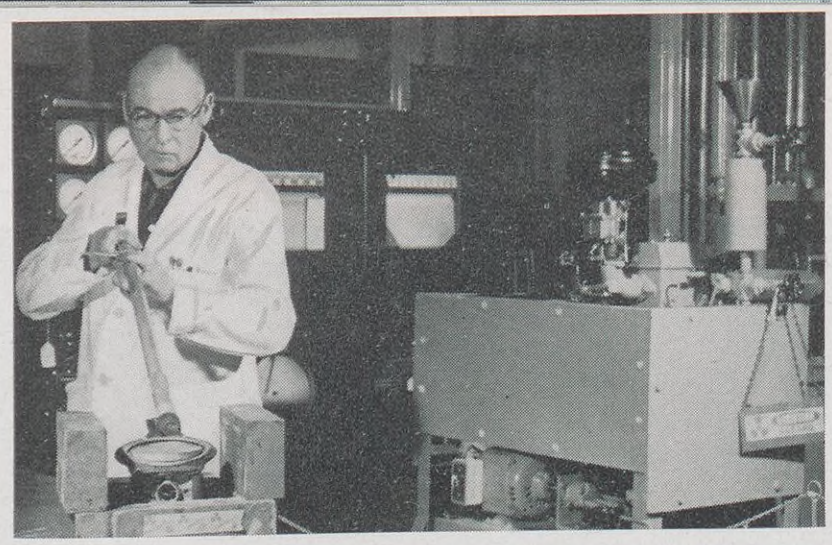




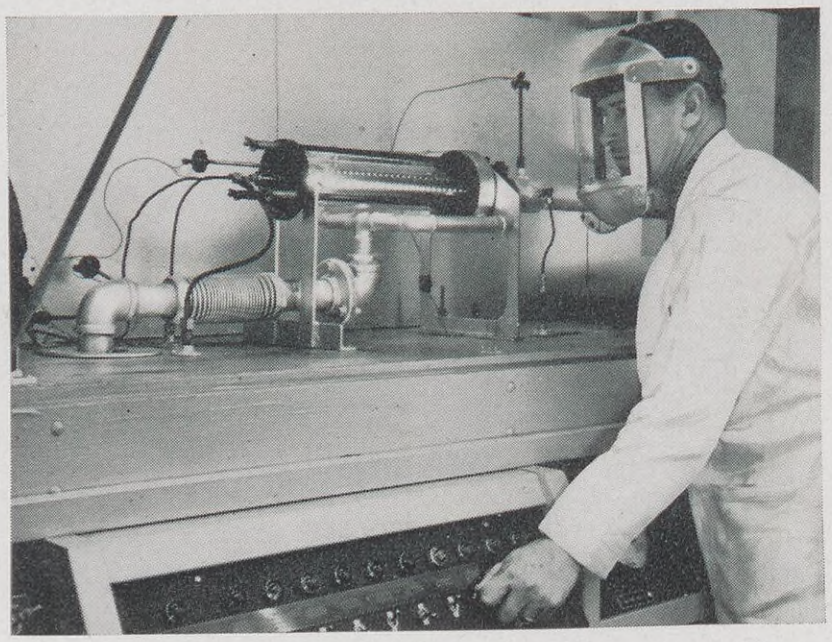
**Engineer E. P. Viscia** of the Emeryville Research Center listens to the "heartbeat" of an engine powered with an experimental fuel. He checks for engine knock by putting a stethoscope to a rod attached to the car muffler. With his left hand he adjusts the engine's spark. Panel switches open and close experimental fuel tanks.

# the FUTURE is NOW

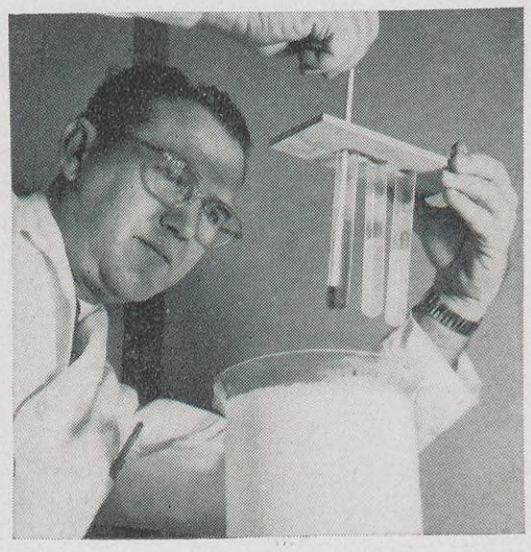
continued



**Automotive** Technician Frank Tripe puts a radioactive ring on a piston that will fit into a radioactive cylinder. Minute particles of the "hot" metals can be measured easily and tell Emeryville scientists how well a new lubricant prevents engine wear.



**Jet fuels** blended at the laboratory are tested in this miniature jet engine. Here Automotive Technician F. S. Hathaway adjusts one of the jet burner controls. The miniature jet includes the key functions of a full-scale jet aircraft engine.



**Jet fuels** run a gamut of tests from burner to ice bucket. Here Senior Laboratory Assistant J. W. Beardmore checks freezing points of three fuels in a cold bath. Special additives keep the fuel on the left clear even at freezing temperatures.

off the "hot" parts during the test operation and deposited in the lubricant. These radioactive particles are counted by a scintillation counter. The amount of radioactive material in the oil tells researchers how much wear there is on the engine parts and thus, the effectiveness of the lubricant.

Lubricating oils are designed to eliminate—as far as possible—engine wear caused by the metal parts rubbing against each other. When radioactive engine parts are used, even the most minute bits of metal worn off into the oil can be measured by a radiation detector.

Before Shell scientists began using this atomic age technique, they had to rely on a "wash-and-wear" routine to determine engine wear. A piston ring was washed and weighed before it was put in an engine; after the test cycle, which required several weeks, the ring then was washed and weighed to see how much metal had worn off. Use of radioactive parts has eliminated that chore, and also made it possible to get more accurate results more quickly.

While full-scale engines are used to test automotive gasolines and lubricants, two miniature models of jet engines burn the laboratory's experimental jet fuels. The jet engines, no longer than a man's arm, include only key jet functions—not enough to give as much data as a full-scale engine but enough to provide performance facts for research purposes.

One of the major problems of jet engines is the creation of clogging deposits from burned fuel. In testing jet fuels of the future, Emeryville scientists are particularly interested in the operational conditions that affect engine deposits, whether certain additives can reduce or neutralize them (much as TCP* additive in Shell automotive gasolines neutralizes harmful auto engine deposits), and how to prevent "flame out"—engine failure.

Emeryville scientists are looking closely at the pre-flight problems of jet fuels as well as in-flight performance. For example, chemists are studying additives that will allow jet fuels to be stored for long periods of time without breaking down, and other additives that may disperse impurities in the storage tanks.

Much of the jet and missile research has been done under U. S. Air Force contracts. However, news of the success of one such project on jet fuels recently was released to the public.

Looking to problems of atomic-powered aircraft of the future, one team of scientists found that a jet fuel resistant to gamma radiation can be made from petroleum components. Such a fuel would be vital in an atomic airplane.

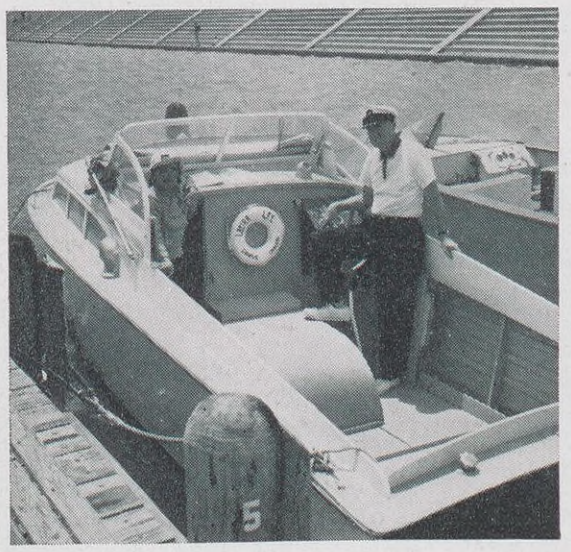
Experts generally agree that atomic aircraft will use auxilliary jet engines for takeoffs, landings and in flight maneuvering. Heavy lead shielding would not be necessary to protect a jet fuel resistant to radiation. The resulting weight saving would increase an atomic plane's range and payload.

Finding a fuel for an airplane that hasn't been built is a good example of how research can solve problems that will affect future aircraft and automobiles. For the laboratory, the future is now ●

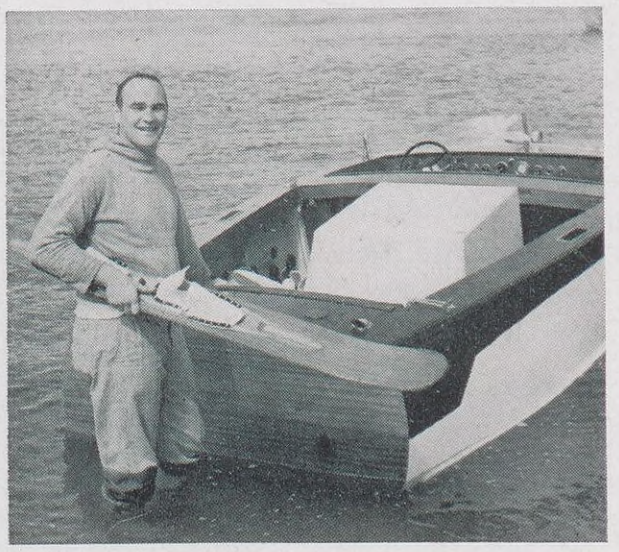
* Trademark Shell Oil Company

**Finishing** touches to the plywood deck of a home-made powerboat are applied by E. L. Kay of the Portland, Oregon, Marketing District before he made his first launching.

**A 22-foot cruiser** is the pride of Paul Hinyard of the Corpus Christi Division of the Houston Exploration and Production Area who teaches spare-time courses in seamanship.



**Water skiing** is one of the many delights that R. C. Teel of the P&IR Department of the Wilmington Refinery enjoys with his 18-foot inboard speedboat, which took him about 1,300 hours to build.



# *WEEKEND SAILORS*

## *Many Shell people are among the millions of Americans who have taken to boating — one of the fastest-growing sports*

FROM Anacortes to Miami and from New York to Honolulu, Shell people have joined more than seven million Americans this summer in enjoying one of the nation's fastest-growing participation sports.

The number of devotees of life afloat has sailed to over the seven-million mark from only 2¼ million in 1947. Last year alone, the spare-time sailors spent more than $2 billion on pleasure boating.

Jam-packed dock facilities in many coastal cities give visual testimony to the rapid growth of boating and led one observer to comment that owners had to "go down to the sea in shifts."

Many of them do like to practice their sport in groups, as indicated in the flourishing number of boat clubs. While there are no Shell boat clubs, Shell people make up a large proportion of boat clubs in many localities. For example, there are 50 Norco Refinery employees in the Norco Boat Club and 22 Anacortes Refinery employees in the Anacortes Yacht Club.

Boat owners may be divided into two broad categories —those with powerboats and those with sailboats. About all the two have in common is that both types of boats float.

Powerboats often are used mainly for transportation—to fishing areas for example. Their use in speed races generally is limited to small hydroplanes, which have as little boat and as much motor as possible. Other types of powerboats compete in "predicted log" races, in which the skipper estimates the time he will need to cover a given course, then tries to make the trip in the time he has predicted.

One proof of the growing popularity of powerboats is Shell's sale of 420,000 gallons of Shell Outboard Motor Oil last year alone. The oil is mixed with gasoline for two-cycle engines, and put in the crankcase of four-cycle ones. There's no way to estimate how much Shell Regular Gasoline with TCP* powers outboard motors. "The myth that outboard motors require unleaded white gasoline is about dead," one Head Office Marketing Staff member said. "Now most boat owners just fill up a can with regular gasoline at a service station."

Sailboat owners usually use their craft for the pure joy of sailing—not for fishing, or to get from one place to another. Racing is a major activity among sailors, over courses ranging from relatively short jaunts for small

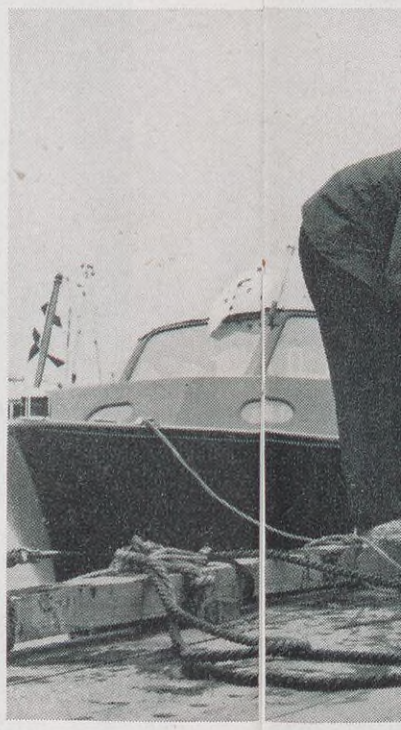
** Trademark Shell Oil Company*

boats to ocean crossings for large ones.

Prices for both powerboats and sailboats range from a few hundred to many thousands of dollars. Many boat owners build their own craft, working from prefabricated kits, plans or their own designs. Experts caution, however, that a "launch-it-yourself" project is quite complex and requires a considerable amount of tool technique.

R. C. Teel of the Personnel and Industrial Relations Department of the Wilmington Refinery, found that it takes a lot more than technique to build a fine boat. He estimates he spent on his 18-foot inboard speedboat about $1,100—and 1,300 hours of work ●


**W. E. Richardson, Jr.,** of the New Orleans Expl. & Prod. Area Land Department, and his wife, skim over Lake Pontchartrain in the sloop he built. He participates in the New Orleans Yacht Club's sailing races.



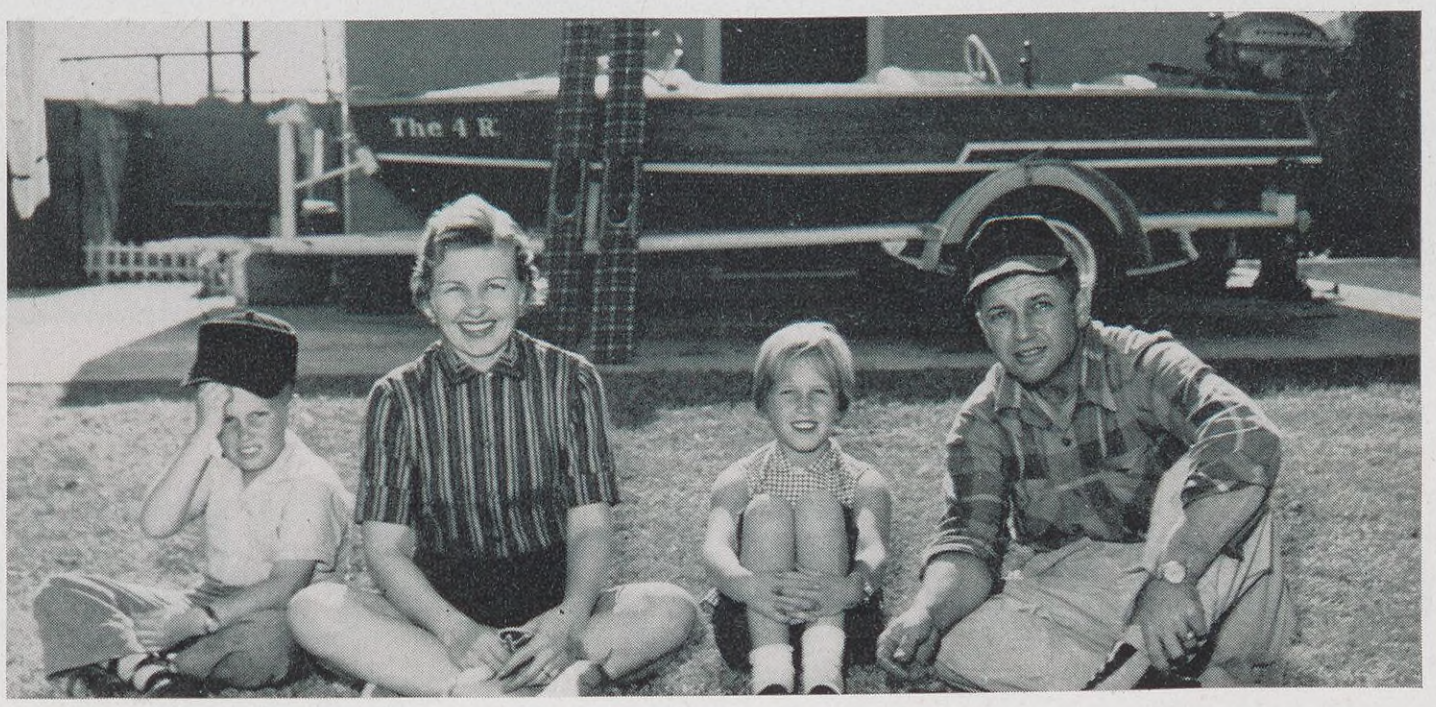

**Bert Sousa** of the Honolulu Marketing Division Depot, uses his 45-foot cabin cruiser "Vagabond" for fishing trips and traveling among the Hawaiian Islands in his spare time. The craft sleeps four.

**D. F. Du**
keting D
Acapulc
gator on
third in
Calif., t

**S. M. Henry** of the Dominguez Chemical Plant's P&IR Department, puts some varnish on his trim racing dinghy. He is the secretary of the Alamitos Bay Penguin Fleet.

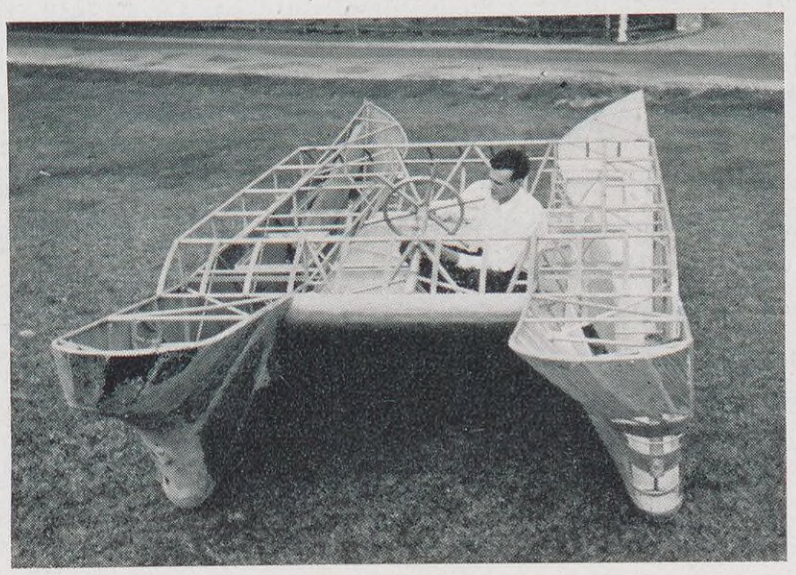
**The results** of crab-trapping are viewed by (L to R) R. E. Smith, W. G. Lutz and boat-owner L. F. Johnson (all of Anacortes Refinery), Johnson's wife Betty and Smith's daughter Karen, kneeling.

**Going aloft** bravely is Mrs. Marguerite Wolford of the P&IR Department of Shell Development's Emeryville Research Center, while her husband, Peter, watches on their yacht, "Isolde."




**J. E. Reid** of the P&IR Department, of the Midland Expl. & Prod. Area, poses with his family and their boat. Midlanders enjoy most of their boating on nearby lakes.

**J. R. Moise** of Shell Chemical Corporation's Houston Plant is building a twin-hull catamaran-type craft that will seat eight. He uses an EPON® resin adhesive in building the 600-pound boat.



**J. D. McKibben** of the Atlanta Marketing Division uses his sleek cruiser weekends on Lake Murray at Columbia, S. C.

**D. F. Duncan** of the Los Angeles Marketing Division, foreground, in Mexico's Acapulco Harbor, was assistant navigator on a friend's yacht which placed third in the 1,430-mile San Diego, Calif., to Acapulco race last winter.

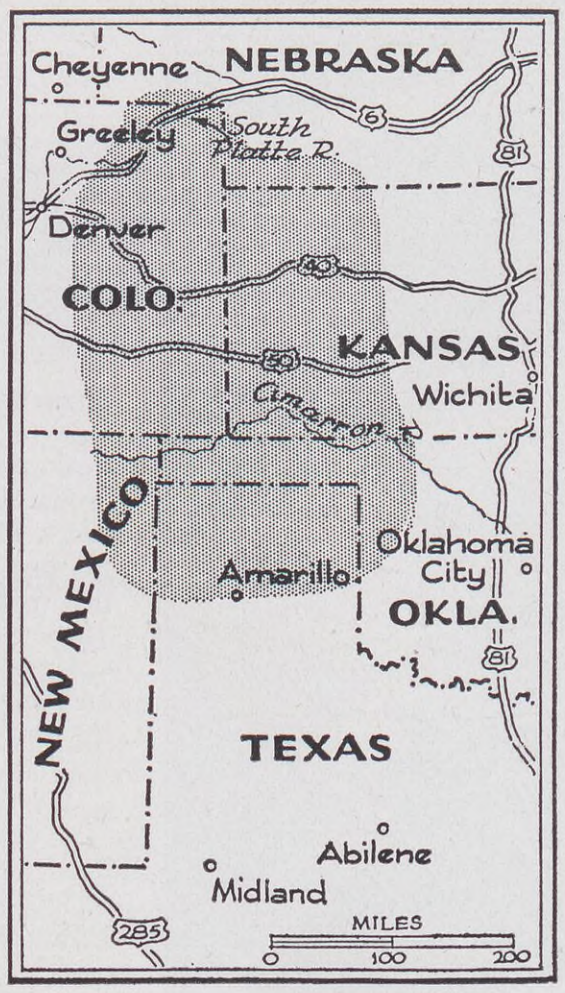
# *Halt the 'HOPPERS!*

AT the beginning of June this year, farmers in eastern Colorado and Kansas, the heart of America's wheatland, happily expected their first bumper crop in years.

The weather had been just about perfect for wheat and small grains—enough rain and warm weather. But those conditions were also perfect for an ancient enemy—grasshoppers. The result was the worst grasshopper plague in the region in 20 years. Some county agents reported more than 300 'hoppers per square yard. The U. S. Department of Agriculture rates more than 28 per square yard as "very severe"—the worst category.

Almost overnight many Colorado farmers saw their lush fields stripped by the voracious young insects. The misfortune of the first farmers losing their grassland crops provided a signal for private and government campaigns to save the wheat crops of the surrounding area, including parts of six states (see map).

On June 11, soon after the Governors of Colorado and




**Flying low** over a field in Eastern Colorado, pilots spray wheat to stop the plague of grasshoppers. The shaded part of the map above shows the states first threatened in the outbreak which started early last month. Also in danger were Wyoming, Montana, North Dakota and South Dakota.

Kansas asked for aid in the crisis, President Eisenhower instructed the USDA to extend all available Federal assistance to help control the insects. The federal move tied in with local programs in which individual farmers share equally with state and federal governments the cost of spraying their fields and their roadsides. Besides the federal-state programs, farmers individually and in groups took measures to stop the grasshoppers.

The stakes were high. The wheat crop in eastern Colorado alone was estimated to be worth $110 million. Also threatened were parts of Kansas, Texas, New Mexico, Oklahoma, Nebraska, Wyoming, Montana, North and South Dakota.

The major weapons chosen for the fight against the grasshoppers in wheat and small grains were the sister insecticides, aldrin and dieldrin, manufactured by Shell Chemical Corporation. Shell Chemical's Agricultural Chemical Sales Division was fully geared for quick action with the insecticides when the warning came.

Insect plagues strike suddenly and hard. For that reason Shell Chemical must have ample stocks of bug killers ready at strategic locations around the country. There is a steady call for these insecticides but Shell stocks must be large enough for sudden emergencies. Other aids to quick action are the substantial supplies of aldrin and dieldrin kept on hand by the manufacturers who use the insecticides in their formulations. (Aldrin and dieldrin are sold only through formulators who market them under their own brand names, such as Black Leaf, Ortho, Real Kill, Green Light, Red Panther. The formulators' labels tell which insecticide the products contain and give directions for use.)

When the Colorado outbreak started, the formulators and Shell Chemical were able to act promptly. Within hours, Shell shipped truckloads of the materials for formulating on the spot in locations where the insecticides were needed. Besides, an advertising program for radio, newspapers and magazines was rushed through to inform farmers of the seriousness of the threat and what they could do to fight it.

The wheatland crisis was only the latest grasshopper attack in which aldrin and dieldrin have been given the leading role. In 1953, they were credited with preventing $25 million damage to crops in California's San Joaquin Valley where a four-day air campaign stopped the insect hordes. At about that same time, aldrin in similar quick action, fought locust plagues in Iran, Pakistan and Iraq. In those locations, as well as in Colorado, it took only between one to four ounces of the insecticides per acre.

Plagues of grasshoppers are perhaps the most dramatic insect bane but they cause only a relatively small part of the billions of dollars worth of havoc wrought by insects on crops annually in the United States alone. Aldrin and dieldrin in a variety of formulations help keep losses down by fighting a wide range of despoilers.

Both of the insecticides are organic chemicals. They both can be formulated for application as dusts, wettable powders, spray liquids and granules. The major difference between them is that while both are fast-acting, dieldrin is long-lasting as well. Aldrin has won fame for its control of soil insects such as root worms. Dieldrin is particularly noted around the world for controlling mosquitoes and other insects that threaten public health and also is used widely for home gardens and termite control. Another member of Shell Chemical's "drin" family,

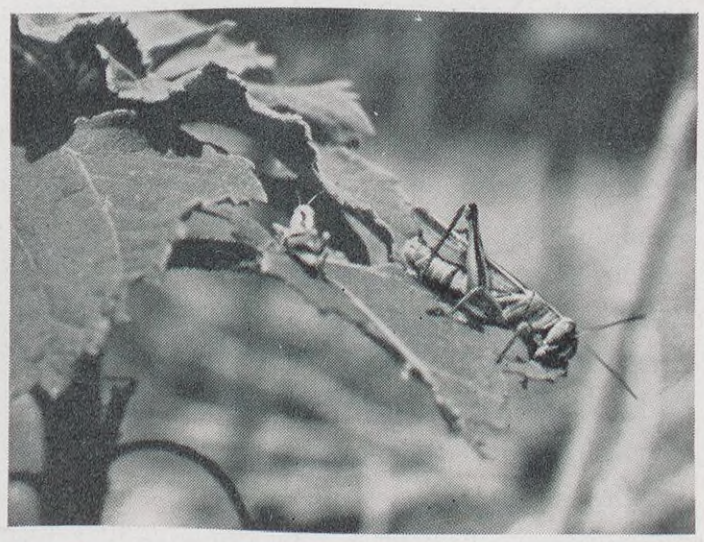
## *HALT THE 'HOPPERS!*

continued

**Spraying** roadsides is important to stop grasshoppers before they can migrate into crops. Shell Chemical Corporation's aldrin and dieldrin are playing a major role in the fight this year against the insects. These insecticides are used against a wide range of pests and have gained fame around the world for their effectiveness.

endrin, has had major success in helping tobacco farmers control hornworms and budworms and in the cotton farmers' fight against bollworms and boll weevils.

When this issue of SHELL NEWS went to press, the campaign against the grasshoppers in Colorado and neighboring states had just gone into full swing. If past victories of Shell Chemical insecticides are a measure, the odds are that proper use of them in the wheatlands will halt the 'hoppers ●



**Grasshoppers** can strip a field of grain in a few hours. In 1938 they caused more than $62 million damage to crops in the western United States and Canada. There are approximately 600 different species of grasshoppers in North America.

# SHELL Coast to Coast

**LYONS' SHARE**

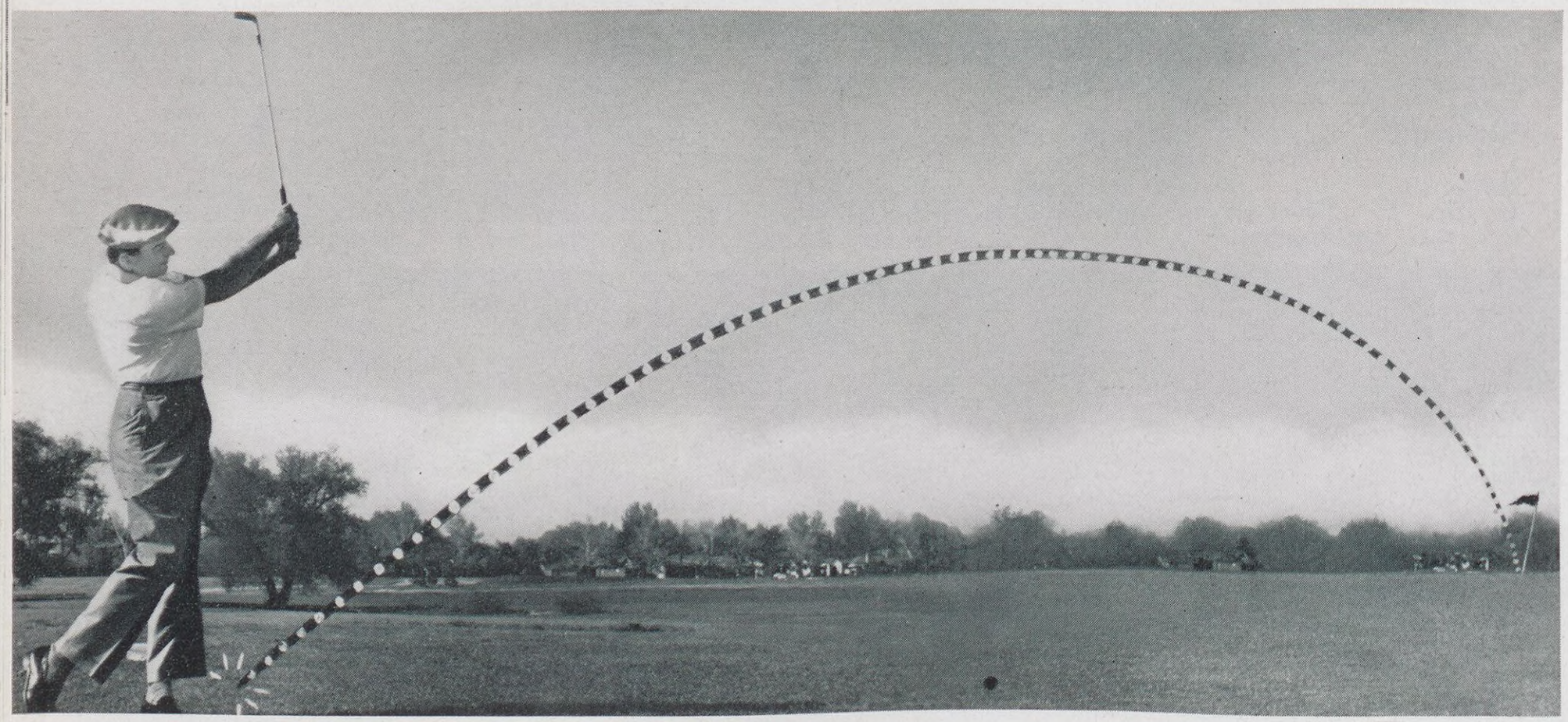
W. C. Lyon, Reconditioning Foreman in the Pacific Coast Area's Ventura Production District, and his wife recently added the first place prize of the American Contract Bridge League's National Tournament to their collection of bridge trophies. The Lyons, who have been playing tournament bridge for 10 years, won over 382 other couples entered in the national tourney.

**MANAGEMENT COURSE**

The participants and staff members of the fifth Shell Management Course, which was held for four weeks recently at Columbia University's Arden House at Harriman, N. Y., were, left to right, first row: G. E. Archie, Houston; V. G. Harrison, Norco; D. B. Luckenbill, Head Office; E. J. Cowing, Albany; R. W. Carr, Head Office; P. W. Wield, Albany; H. S. M. Burns, President of Shell Oil Company; F. C. Cutting (Staff), Head Office; W. B. Golush, Head Office; J. D. Goodrich, Tulsa; S. Goldin, Head Office; C. R. Nelson, Emeryville; J. P. Callum, Toronto. Second row: J. J. Hohler, Houston; F. W. Steckmest (Staff), Head Office; J. A. Mawhinney (Staff), Head Office; R. F. Winfield, Toronto; H. M. Gullickson, Denver; J. W. McDonald, Denver; H. M. Karr, Head Office; C. L. Towers, Jr., Head Office; H. E. Walker, Head Office; J. B. Henderson, Norco; J. E. Condon, Houston; F. M. McMillan, Emeryville; G. W. Hart, Baltimore. Third row: E. C. Taber, Jr., Tulsa; F. N. Haden (Staff), Calgary; H. C. Lowrey, Head Office; H. I. Wolff, Head Office; J. W. Sheehan, Wood River; F. C. Hunt, Los Angeles; W. A. McCormick, Head Office; F. R. Hummert, Head Office; and A. L. Brown, Los Angeles.

**GOLDEN ANNIVERSARIES**

Two retired Wood River Refinery employees and their wives recently celebrated golden wedding anniversaries on the same day. They were Mr. and Mrs. Alonzo Bowman, left, and Mr. and Mrs. Newton Mallory, above. Bowman, formerly a Machinist in the Refinery's Engineering Field Department, retired in 1946 after 27 years with Shell. The Bowmans have one son, J. A. Bowman, Jr., who works in the Wood River Research Laboratory. Mallory, whose last job with Shell was Operator in the Dispatching Department, retired in 1947 after 25 years of service. One of the Mallorys' two sons, Gordon, works in the Refinery Laboratory.



**GOLF BALL PILOT**

C. E. Dillahunty, Pilot for the Denver Exploration and Production Area, prepared to use a seven iron on the 162-yard 12th hole at Denver's Park Hill Golf Course. "Not enough club," his partners said. But Dillahunty swung and they watched the ball fly through the air and, against million-to-one odds, fall into the cup for a hole-in-one—on the fly!

**NOVEL HOBBY**

Every weekend, G. D. Ashabranner, Supervisor of the Tulsa Exploration and Production Area's Legal Title Section, becomes "Dan Kirby," writer of westerns.

Ashabranner, shown here with his wife Eva Mae and 16-year-old daughter, Carolyn, has been writing western fiction since 1943 under the pen name his wife gave him. He has sold about 60 stories to varied publications, and now is at work on his first full-length novel, "Cimarron Territory."

He writes about five or six hours each weekend on his novel, and hopes to complete it this year. Its story takes place in the Oklahoma Panhandle in 1887, when settlers were attempting to have this region admitted as a separate state. Later, the land became a part of the Oklahoma Territory, which became the State of Oklahoma in 1907.

**GOOD TURN**

◀ J. W. Southworth, Detroit Marketing Division Manager, right, appeared on a local radio program, "Guest House," as chairman of Detroit's Boy Scout Traffic Safety Good Turn for 1958. As part of the safety project, Detroit scouts distributed two million windshield safety tissues to motorists at service stations.

**SKEET FEAT**

D. R. Case, Rockford (Ill.) Jobber ▶ Representative in the Chicago Marketing Division, recently broke 98 of 100 clay targets to win second place in the annual Illinois State Skeet Championship matches held at Fieldale, Ill.

# Service BIRTHDAYS

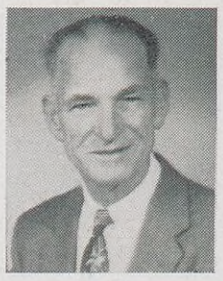
## Forty Years

C. L. JOHNSTON
Wilmington Refinery
Stores

## Thirty-Five Years

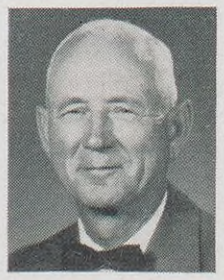
H. M. BAILEY
Sacramento Division
Manager

W. D. C
Wilmington
Pers. & In



J. T. GIBBS
Shell Chemical Corp.
Martinez Plant

J. C. GROENEWEGEN
Shell Chemical Corp.
Torrance Plant



D. B. HARDCASTLE
Pacific Coast Area
Production

R. J. KETTENBURG
Pacific Coast Area
Production

Z. LAWSON
Tulsa Area
Production

J. W. LISANO
Houston Refinery
Catalytic Cracking

J. F. LONGSHORE
Wood River Refinery
Engineering

R. J. C. McARTHUR
Shell Development Co.
Emeryville

J. J. NUG
Wilmington
Engineer

J. H. UNRUH
Sacramento Division
Operations

H. C. WAGER
Wilmington Refinery
Catalytic Cracking

W. WARD
Shell Pipe Line Corp.
Mid-Continent Area

## Thirty Years

C. G. BARTHOLOMEW
New Orleans Area
Production

L. E. BARTON
Wood River Refinery
Engineering

K. C. BLOCHER
Head Office
Financial

R. B. BOYD
Wood River Refinery
Thermal Cracking

B. H. BROU
Houston Re
Treasur

H. H. FORTNER
Tulsa Area
Production

B. A. FOX
Baltimore Division
Treasury

C. W. GRAFFORD
Wood River Refinery
Lubricating Oils

W. E. HALL
Shell Development Co.
Modesto

W. L. HARTSOCK
Wood River Refinery
Engineering

F. HEGDALE
Pacific Coast Area
Production

S. A. HUNT
Wood River Refinery
Engineering

J. L. LAMBERSON
Houston Area
Production

H. J. LOVE
Seattle Division
Operations

A. F. LY
Wilmington R
Alkylati

L. L. POUNCEY
Midland Area
Production

T. H. QUINN
Pacific Coast Area
Gas

C. R. ROGERS
New Orleans Area
Production

S. F. RUBY
Pipe Line Department
Bakersfield, Calif.

E. M. RUMBLE
Shell Chemical Corp.
Dominguez Plant

L. T. ST. AMANT
Norco Refinery
Engineering

C. L. STEVENS
Pacific Coast Area
Purchasing-Stores

W. E. THOMPSON
Shell Pipe Line Corp.
Mid-Continent Area

E. G. TRAVIS
Head Office
Manufacturing

H. J. UNDE
Chicago Div
Manage

## Twenty-Five Years



J. Q. ADAMS
New Orleans Area
Transport and Materials



R. J. BARRY
Pacific Coast Area
Treasury



C. B. BECK
Wood River Refinery
Engineering



N. W. BLACK
Pacific Coast Area
Purchasing-Stores



H. E. BLANCHARD
Shell Chemical Corp.
Shell Point Plant



H. E. BOGIE
New Orleans Area
Transport & Materials



E. BUCKL
Houston A
Transpo

M. BAILEY
amento Division
Manager

W. D. CLOSE
Wilmington Refinery
Pers. & Ind. Rel.

P. E. CONDRAY
Wood River Refinery
Aromatics

P. D. CONNORS
Los Angeles Division
Operations

J. A. EILENBERGER
Wood River Refinery
Engineering

J. C. EMERY
Wood River Refinery
Railroad Section

B. E. GATES
Shell Chemical Corp.
Dominguez Plant

C. McARTHUR
Development Co.
Emeryville

J. J. NUGENT
Wilmington Refinery
Engineering

R. E. PORTER
Tulsa Area
Production

C. N. RIESE
Martinez Refinery
Stores

R. J. RINER
Wood River Refinery
Engineering

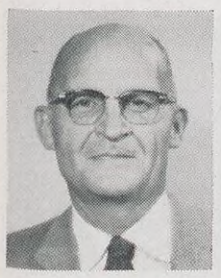
E. L. ROUGNY
Los Angeles Division
Operations

W. C. SMYTHE
Sacramento Division
Sales

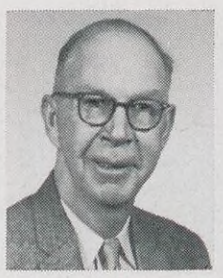
A. B. TAYLOR
Pacific Coast Area
Production

J. G. TIEMANN
Head Office
Purchasing-Stores

R. B. BOYD
od River Refinery
ermal Cracking

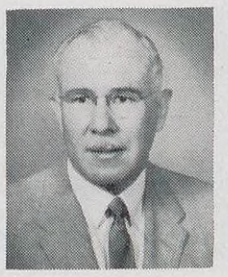


B. H. BROUGHTON
Houston Refinery
Treasury



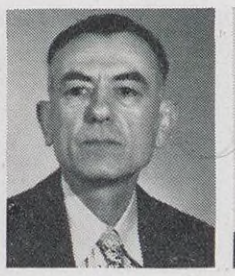
C. D. COLLINS
Tulsa Area
Production

G. C. CORBETT
Shell Chemical Corp.
Chemical Sales Division



G. DICKINSON
Shell Development Co.
Houston

M. A. DUBNEY
Shell Chemical Corp.
Shell Point Plant



J. EULA
Wilmington Refinery
Engineering

L. D. FANSLER
Wilmington Refinery
Dispatching

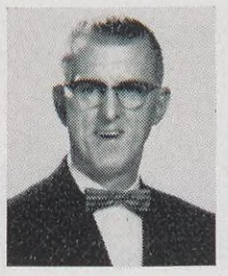
F. E. FITZGERALD
Shell Pipe Line Corp.
Four Corners Division

H. J. LOVE
attle Division
Operations

A. F. LYNCH
Wilmington Refinery
Alkylation

H. E. LYNN
Shell Pipe Line Corp.
Texas-Gulf Area

R. G. MAKOWSKI
Pipe Line Department
East Chicago, Indiana



H. G. MARTING
St. Louis Division
Operations

F. P. McINTYRE
New Orleans Area
Production

C. McREYNOLDS
Wood River Refinery
Engineering

L. C. MENESTRENA
Head Office
Manufacturing

E. J. MICHALSKI
Wilmington Refinery
Engineering

J. S. NEGUS
Los Angeles Division
Treasury

. G. TRAVIS
Head Office
anufacturing

H. J. UNDERWOOD
Chicago Division
Manager

J. R. VAN ARSDALE
New Orleans Area
Production

C. H. WAGER
Head Office
Transp. & Supp.

S. WALKER
Midland Area
Treasury



M. P. WARREN
Sacramento Division
Sales



H. E. WILLIAMS
New Orleans Area
Production



G. P. WILLS
Wood River Refinery
Thermal Cracking



E. W. ZITZMAN
Wood River Refinery
Engineering



. E. BOGIE
v Orleans Area
port & Materials



E. BUCKLEY
Houston Area
Transport



R. C. BYRON
Wood River Refinery
Experimental Laboratory



E. J. CLARK
Pacific Coast Area
Production



R. E. CLARK
Indianapolis Division
Treasury



P. COLLETT
San Francisco Office
Sales Prom.-Advtg.



B. W. DeLONG
Chicago Office
Products Application



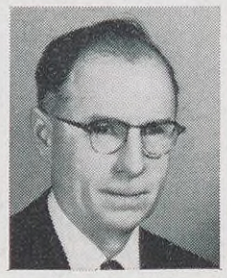
L. C. DODD
Shell Pipe Line Corp.
Rocky Mountain Division

# *Twenty-Five Years* *continued*

M. J. DOUGLAS
Shell Chemical Corp.
Shell Point Plant

S. H. DOUGLAS
New Orleans Division
Sales

J. T. DOYLE
Pacific Coast Area
Administration



O. L. DRENNAN
Wood River Refinery
Catalytic Cracking

W. A. EBERLE
Houston Area
Exploration

A. C. ELLIS
Pacific Coast Area
Production

E. W. ERICKSON, SR.
Shell Chemical Corp.
Shell Point Plant

E. H. FIEGENBAUM
Wood River Refinery
Gas

G. C. FORD
Pacific Coast Area
Purchasing-Stores

E. J. FULLER
Shell Chemical Corp.
Shell Point Plant

B. W. GAY
Shell Pipe Line Corp.
Mid-Continent Area

J. O. GIOVANNI
New Orleans Area
Production

H. F. GROENLUND
Atlanta Division
Operations

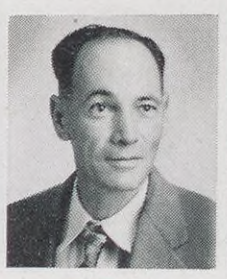
M. L. HALL
Wood River Refinery
Gas

W. E. HELMANTOLER
Wood River Refinery
Gas

E. A. HUGILL
Head Office
Legal

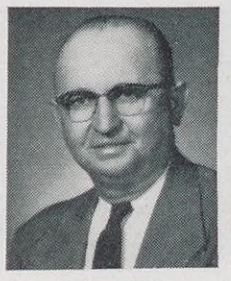
I. J. ILETT
Cleveland Division
Operations

C. H. JESTES
Wood River Refinery
Compounding

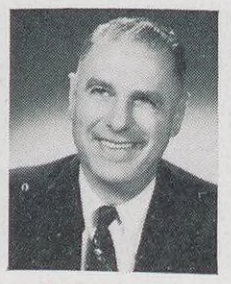


T. KELLY
New Orleans Area
Production

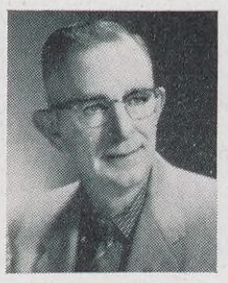
J. H. KING
New Orleans Division
Sales



J. KURANT
Wood River Refinery
Engineering

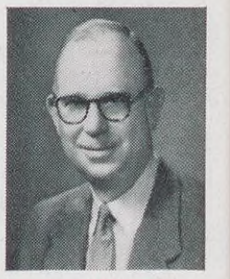


J. D. LA BRIE
Seattle Division
Administration



F. L. LEEPER
Pipe Line Department
Blue Mound, Ill.

W. F. LEWIS
Houston Area
Production



J. S. LINLEY
Los Angeles Division
Personnel

G. J. LUND
Head Office
Manufacturing

J. R. LYNDEN, JR.
Minneapolis Division
Sales

C. H. MARCUS
Wood River Refinery
Engineering

G. E. MASSIE
Wood River Refinery
Engineering

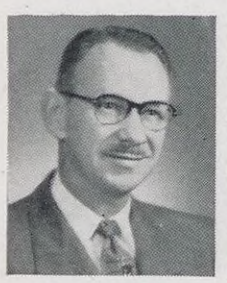
R. C. McCURDY
Shell Chemical Corp.
President

C. McGEE
New Orleans Area
Transport & Materials

A. B. McGLADE
Martinez Refinery
Engineering

B. T. MELENDY
New Orleans Area
Production

C. A. MOORE
Wood River Refinery
Purchasing-Stores



L. B. NELSON
Shell Pipe Line Corp.
Head Office

E. F. OAKES
Shell Pipe Line Corp.
Mid-Continent Area

R. L. PAGE
Pipe Line Department
Long Beach, California

H. W. PARKER
Baltimore Division
Operations

G. H. PETERSON
San Francisco Division
Sales

C. H. PUCKETT
Wood River Refinery
Engineering



H. P. REESE
Cleveland Division
Administration



A. J. SCHOMMER
Head Office
Transp. & Supp.



A. T. SMITH
Denver Area
Pers. & Ind. Rel.



E. F. SWINNEY
San Francisco Office
Marketing Service



C. N. WARREN
Baltimore Division
Sales



C. B. WHEELER
Cleveland Division
Operations



W. F. WIEGAND
Wood River Refinery
Gas



MERLE C. WILLIAMSON
Tulsa Area
Legal



P. R. WING
San Francisco Division
Sales



J. M. WITHEROW
Wood River Refinery
Engineering



O. J. WOOD
Shell Pipe Line Corp.
Mid-Continent Area



C. S. WRIGHT
Shell Pipe Line Corp.
Mid-Continent Area

ERICKSON, SR.
Chemical Corp.
Point Plant

A. HUGILL
ead Office
Legal

S. LINLEY
geles Division
Personnel

. MOORE
iver Refinery
asing-Stores

T. SMITH
ver Area
& Ind. Rel.

. WRIGHT
pe Line Corp.
ntinent Area

# SHELL OIL COMPANY

## Head Office

### 20 Years

E. D. Maxfield . . . . . Marketing
D. C. Nellis . . . . . Expl. & Prod.
G. W. Waters . . . . . Manufacturing

### 15 Years

Rosemary F. Goodrich . . . . . Gen'l Exec. Office
T. Renison . . . . . Marketing

### 10 Years

R. R. Breckenfeld . . . . . Manufacturing
S. Caico . . . . . Marketing
C. M. Jones . . . . . Financial
P. M. Kelly . . . . . Financial
R. Z. Smith . . . . . Financial

## Houston Office

### 10 Years

J. A. Dittoe . . . . . Transp. & Supp.
M. G. Winstead . . . . . Purchasing-Stores

## San Francisco Office

### 15 Years

J. R. Hurley . . . . . Transp. & Supp.

### 10 Years

A. L. Ludwig . . . . . Manufacturing
C. A. Phalen . . . . . Manufacturing

## Exploration and Production

### DENVER AREA

#### 20 Years

R. Floyd . . . . . Land
J. D. Walton . . . . . Exploration

#### 15 Years

Wanda K. Robinson . . . . . Exploration

#### 10 Years

Mildred M. Brum . . . . . Treasury
C. B. Horton . . . . . Crude Oil
V. L. Sherman . . . . . Exploration

### HOUSTON AREA

#### 20 Years

H. E. Arnold . . . . . Production
B. King . . . . . Production

#### 15 Years

V. M. Casida . . . . . Production
T. M. Griffin . . . . . Production
C. M. Holloway . . . . . Production
Z. R. Horton . . . . . Production
W. H. Overton . . . . . Production
A. D. Rogers, Jr. . . . . Administration

#### 10 Years

G. W. Bashen . . . . . Exploration
H. E. Cox . . . . . Production
W. R. Cox, Jr. . . . . Production
C. F. Morgan . . . . . Exploration
R. Slate . . . . . Exploration

### MIDLAND AREA

#### 15 Years

H. W. Bishop . . . . . Production

#### 10 Years

H. J. Davis . . . . . Gas
R. L. Fay . . . . . Exploration
J. E. Freeman . . . . . Gas
A. G. Hatfield . . . . . Gas
E. D. Manly . . . . . Production

### NEW ORLEANS AREA

#### 20 Years

L. G. Irwin . . . . . Production
L. J. Ramogost . . . . . Production

#### 15 Years

E. Derouen . . . . . Production
A. Simon . . . . . Production

#### 10 Years

W. J. Alfred, Jr. . . . . Production
A. L. Bradley . . . . . Production
A. E. Broussard . . . . . Production
G. Fage . . . . . Production
J. I. Hendrick . . . . . Treasury
G. T. Mitchell, Jr. . . . . Production
G. P. Stringer . . . . . Exploration
J. T. Tubbs . . . . . Production
G. S. Viguet, Jr. . . . . Production
K. E. Weigl . . . . . Exploration
E. W. Williams . . . . . Production
H. G. Van Cleve . . . . . Production

### PACIFIC COAST AREA

#### 15 Years

L. Bowers . . . . . Production
J. T. Brown . . . . . Purchasing-Stores
C. C. Burres . . . . . Transport
J. S. Hightower . . . . . Purchasing-Stores
Marjorie A. Mulick . . . . . Production
Lois P. Pohnke . . . . . Gas
F. E. Rice . . . . . Production
O. L. Rice . . . . . Purchasing-Stores
H. W. Shuck . . . . . Transport
R. W. Spalding . . . . . Exploration
C. W. Wilson . . . . . Purchasing-Stores

#### 10 Years

D. E. Clark, Jr. . . . . Land
M. R. Connick . . . . . Production
B. L. Faulk . . . . . Production
B. L. Goepfert . . . . . Production
D. L. Jacobsen . . . . . Production
R. M. Jorda . . . . . Production
F. L. Keyser . . . . . Gas
M. G. McAndrews . . . . . Exploration
J. A. Pryor . . . . . Production

### TULSA AREA

#### 15 Years

H. A. Bodle . . . . . Production
C. E. Davis . . . . . Gas
J. T. Jackson . . . . . Production

#### 10 Years

D. F. Carr . . . . . Production
J. D. Duren . . . . . Production
J. D. Vaughn . . . . . Production
R. W. Zwicky . . . . . Production

## Manufacturing

### ANACORTES REFINERY

#### 10 Years

D. M. Bernard, Jr. . . . . Zone B
L. H. Vienhage . . . . . Zone A

### HOUSTON REFINERY

#### 20 Years

A. J. Wood . . . . . Administration

#### 15 Years

H. F. Cowart . . . . . Engineering
A. P. Jackson . . . . . Engineering
J. R. Lamb, Jr. . . . . Pers. & Ind. Rel.
W. L. Machala . . . . . Stores
J. S. Rodgers . . . . . Engineering
J. J. Templet . . . . . Engineering
S. D. Terry . . . . . Engineering
C. F. Williams . . . . . Engineering

#### 10 Years

T. E. Allen . . . . . Engineering
F. M. Angel, Jr. . . . . Utilities
W. S. Bell . . . . . Engineering
K. D. Benjamin . . . . . Refinery Laboratory
L. B. Burch . . . . . Refinery Laboratory
T. R. Davis . . . . . Lubricating Oils
L. W. Garner . . . . . Engineering
J. Geadon . . . . . Engineering
N. Green, Jr. . . . . Engineering
C. L. Heying . . . . . Engineering
G. W. Jeanes . . . . . Thermal Cracking
L. F. King . . . . . Engineering
G. G. Miles . . . . . Engineering
C. L. Miller . . . . . Engineering
A. H. Moore . . . . . Distilling
T. F. Nowak . . . . . Refinery Laboratory
R. J. O'Brien, Jr. . . . . Lubricating Oils
J. R. Ott, Jr. . . . . Engineering
L. W. Otterson . . . . . Engineering
Y. M. Putman . . . . . Distilling
C. L. Rivers . . . . . Engineering
J. C. Schumacher . . . . . Dispatching
R. H. Shafer . . . . . Engineering
J. A. Talley . . . . . Engineering
J. T. Thompson . . . . . Dispatching
B. H. Wagner . . . . . Engineering
B. T. Weatherly . . . . . Distilling

### MARTINEZ REFINERY

#### 20 Years

L. E. Menesini . . . . . Research Laboratory
W. Wallace . . . . . Distilling

#### 15 Years

O. T. Bishop . . . . . Cracking
D. L. Cook . . . . . Research Laboratory
H. W. Fick . . . . . Compounding
B. K. Harris . . . . . Research Laboratory
B. E. Ravizza . . . . . Engineering
Alice N. Small . . . . . Refinery Laboratory

#### 10 Years

J. D. Cossey . . . . . Engineering
Molly A. Dias . . . . . Pers. & Ind. Rel.
V. D. Foran . . . . . Refinery Laboratory
V. R. Remorini . . . . . Engineering

### NORCO REFINERY

#### 15 Years

E. C. Baudoin . . . . . Dispatching
A. J. Benoit . . . . . Engineering
M. J. Benoit . . . . . Engineering
H. R. Falgout . . . . . Engineering
U. Guillot, Jr. . . . . Engineering
F. L. Jacob . . . . . Distilling
L. M. Nicholas . . . . . Engineering
W. G. Powe, Jr. . . . . Effl. Cont. Fire & Safety
F. J. Robert . . . . . Engineering

### WILMINGTON REFINERY

#### 20 Years

V. H. Monk . . . . . Dispatching

#### 15 Years

P. G. Bischoff . . . . . Thermal Cracking
J. B. Davidson . . . . . Engineering

### 10 Years

R. H. Cortes . . . . . Econ. & Sched.
D. L. Severe . . . . . Treasury

## WOOD RIVER REFINERY

### 20 Years

C. R. Benefiel . . . . . Refinery Laboratory
E. Bradley . . . . . Compounding
C. H. Denny . . . . . Pers. & Ind. Rel.
R. F. Little . . . . . Light Oil Treating
L. E. McGrew . . . . . Engineering
L. W. Morgan . . . . . Experimental Laboratory
E. N. Piazzi . . . . . Engineering
B. R. Shannon . . . . . Engineering

### 15 Years

J. J. Dallas . . . . . Lubricating Oils
J. W. Fallon . . . . . Engineering
D. L. James . . . . . Alkylation
T. F. Leeds . . . . . Lubricating Oils
R. J. Mellies . . . . . Technological
H. M. Smith . . . . . Engineering
R. J. Stoddard . . . . . Utilities
C. C. Van Horne . . . . . Research Laboratory
R. Wright . . . . . Engineering

### 10 Years

J. L. Bame . . . . . Research Laboratory
P. C. Bradford . . . . . Catalytic Cracking
H. R. Campbell, Jr. . . . . Gas
M. R. Hungerford, Jr. . . . . Econ. & Sched.
E. A. Isringhaus, Jr. . . . . Research Laboratory
F. W. Kranz, Jr. . . . . Distilling
R. J. Light . . . . . Engineering
C. L. Lipe . . . . . Dispatching
P. J. McGuire . . . . . Purchasing-Stores
J. A. Menzie . . . . . Engineering
E. N. Petchulot . . . . . Thermal Cracking
W. W. Reynolds . . . . . Research Laboratory
W. Saunders . . . . . Technological
D. J. Sawyer . . . . . Engineering
W. F. Stone . . . . . Railroad Section
R. M. Weeks . . . . . Engineering
R. L. Woods . . . . . Distilling

---

## Marketing

## MARKETING DIVISIONS

### 20 Years

A. H. Campion . . . . . Boston, Operations
N. P. Kusalo . . . . . Sacramento, Treasury
J. S. Hoppock . . . . . St. Louis, Operations

### 15 Years

M. M. Bennett . . . . . Atlanta, Treasury
H. T. Schmus . . . . . Baltimore, Operations
E. Jackisch . . . . . Chicago, Operations
M. A. Du Ball . . . . . Chicago, Treasury
E. E. Sayre . . . . . Los Angeles, Operations
J. J. Kurz . . . . . New York, Operations
H. A. Ebeling . . . . . Portland, Treasury
G. J. Foerst . . . . . St. Louis, Treasury
M. A. Middlecoff . . . . . St. Louis, Sales
J. A. Ryel . . . . . San Francisco, Treasury

### 10 Years

D. B. Fischbeck . . . . . Albany, Sales
H. R. Garinger . . . . . Albany, Sales
W. H. Grant . . . . . Atlanta, Marketing Service
N. G. Davis . . . . . Boston, Operations
B. F. Touchstone . . . . . Boston, Operations
R. S. Bahret . . . . . Chicago, Treasury
K. L. Gary . . . . . Chicago, Treasury
R. T. Shallcross . . . . . Chicago, Treasury
R. W. Wittekiend . . . . . Chicago, Sales
O. W. Brauss . . . . . Cleveland, Sales
I. C. Hallbauer . . . . . Cleveland, Operations
E. E. Miller . . . . . Detroit, Operations
W. H. Pedde . . . . . Detroit, Operations
M. R. Laney . . . . . Los Angeles, Sales
R. L. Way . . . . . Los Angeles, Sales
A. W. Johnson, Jr. . . . . Minneapolis, Treasury
E. F. Kitzman . . . . . Minneapolis, Treasury
W. C. Smith . . . . . New Orleans, Operations
J. F. Posteraro . . . . . New York, Operations
L. W. Meece . . . . . St. Louis, Operations
N. B. Seib . . . . . St. Louis, Operations

## SEWAREN PLANT

### 15 Years

L. M. Lacanic . . . . . Engrg. & Maint.

### 10 Years

S. Fecso . . . . . Engrg. & Maint.
T. M. Muchanic . . . . . Treasury
J. Mucisko . . . . . General Plant
A. Seaman . . . . . Treasury
M. Shuryn . . . . . Compound

---

## Pipe Line Department

### 20 Years

J. H. Harvey, Jr. . . . . Waltham, Mass.
C. L. Lohman . . . . . Zionsville, Ind.
E. J. Ward . . . . . Zionsville, Ind.

### 15 Years

W. G. Lanford . . . . . Spartanburg, S. C.
L. L. Leftwich . . . . . Birmingham, Ala.

### 10 Years

G. S. Arnold . . . . . East Chicago, Ind.
V. R. Jones . . . . . Long Beach, California
L. E. Kemp . . . . . East Chicago, Ind.
Ruth R. Longacre . . . . Los Angeles, California
G. P. Mulligan . . . . . Toledo, Ohio
J. S. Raczka . . . . . East Chicago, Ind.

---

## SHELL CHEMICAL CORPORATION

### 20 Years

R. H. Hemmerich . . . . . Head Office
D. B. Luckenbill . . . . . Head Office
C. MacHenry . . . . . Head Office

### 15 Years

R. L. Hanelinge . . . . . Dominguez
F. B. Folckemer . . . . . Head Office
C. W. DeLong . . . . . Houston
C. L. Harlow . . . . . Houston
J. R. Nelson . . . . . Houston
F. H. Parker . . . . . Houston
H. R. Smith . . . . . Houston
D. D. Dufour . . . . . Norco
O. M. Bastian . . . . . Shell Point
F. Lombardo, Jr. . . . . Shell Point
J. I. Massey . . . . . Shell Point
S. J. Vipperman . . . . . Shell Point

### 10 Years

A. C. Camilli . . . . . Chem. Sales Div.
W. A. McCormick . . . . . Chem. Sales Div.
W. J. Lennox . . . . . Head Office
C. J. Peters, Jr. . . . . Head Office
E. H. Baker . . . . . Houston
L. M. Barnes . . . . . Houston
J. E. Blankenship . . . . . Houston
M. A. Burgess . . . . . Houston
V. H. Clarke . . . . . Houston
O. L. Chappell . . . . . Houston
M. C. Compton . . . . . Houston
S. Curlee . . . . . Houston
L. C. Folly . . . . . Houston
W. D. Fountain . . . . . Houston
D. B. Goodson . . . . . Houston
R. L. Gorman . . . . . Houston
J. H. Hanks . . . . . Houston
A. W. Hart . . . . . Houston
B. C. Hart . . . . . Houston
W. H. Holley . . . . . Houston
H. W. Jones . . . . . Houston
W. A. Keepers . . . . . Houston
C. L. Lively . . . . . Houston
J. J. McDermott . . . . . Houston
A. R. McFadden . . . . . Houston
R. D. McLendon . . . . . Houston
S. E. Morgan . . . . . Houston
L. E. Panzer . . . . . Houston
H. Phelps . . . . . Houston
B. M. Phillips . . . . . Houston
J. A. Rolke . . . . . Houston
P. R. Sheridan . . . . . Houston
P. J. Thompson . . . . . Houston
R. A. Townsend . . . . . Houston
C. J. Vachule . . . . . Houston
G. C. Vornkahl . . . . . Houston
H. L. Waddell . . . . . Houston
F. A. Ward . . . . . Houston
W. G. Wieser . . . . . Houston
F. Willis . . . . . Houston
R. H. Winters . . . . . Houston
H. L. Barnes . . . . . Martinez
C. A. McMurray . . . . . Martinez
O. L. Wylie . . . . . Norco
L. R. Beason . . . . . Torrance
D. S. Thayer . . . . . Torrance

---

## SHELL DEVELOPMENT COMPANY

### 20 Years

F. C. Chance . . . . . Emeryville
H. A. Cheney . . . . . Emeryville
C. L. Eastabrook . . . . . Emeryville
R. J. Shreve . . . . . Emeryville
S. S. Sorem . . . . . Emeryville
R. S. Treseder . . . . . Emeryville
S. L. Pease . . . . . Houston

### 15 Years

Edna F. Dean . . . . . Emeryville
F. E. Condo . . . . . Emeryville
F. T. Eggertsen . . . . . Emeryville
C. M. Gable . . . . . Emeryville
W. R. Harp, Jr. . . . . Emeryville
J. C. Illman . . . . . Emeryville
J. C. Rapean . . . . . Emeryville
J. N. Wilson . . . . . Emeryville

### 10 Years

Margaret L. Adair . . . . . Emeryville
W. R. Robertson . . . . . Emeryville
B. P. Summerer . . . . . Emeryville

---

## SHELL PIPE LINE CORPORATION

### 20 Years

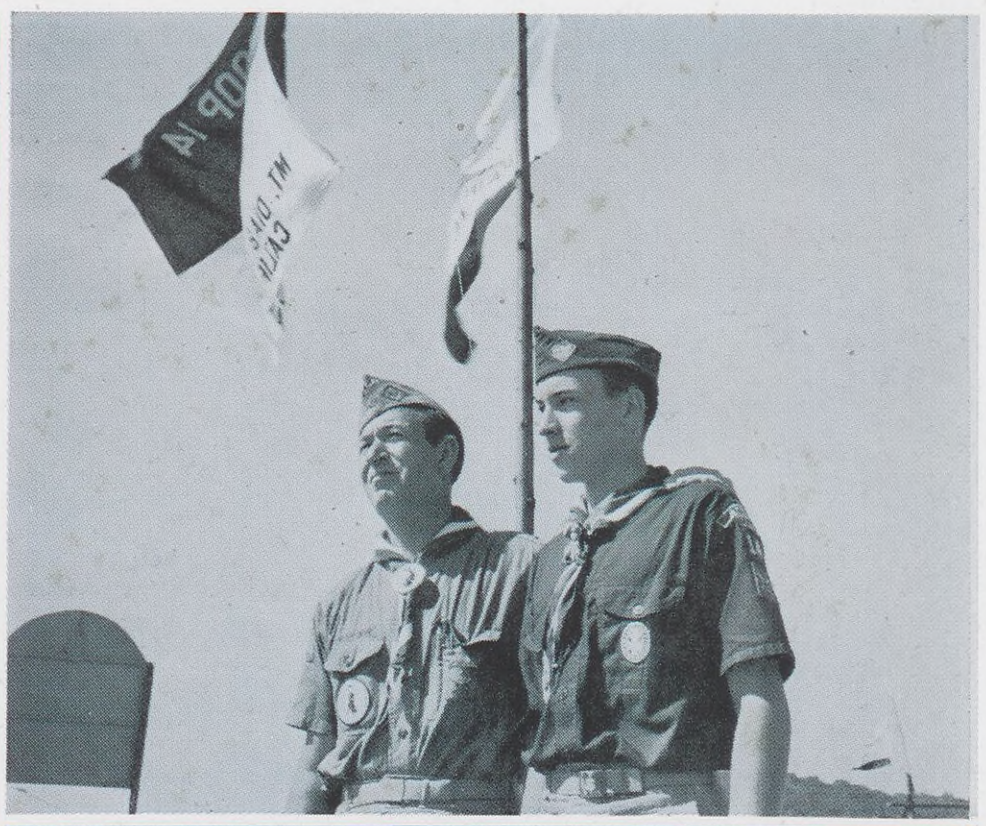
W. R. Gaither . . . . . Mid-Continent Area
R. R. Hayes . . . . . Mid-Continent Area

### 15 Years

E. M. Smith . . . . . Head Office
R. W. Huwieler . . . . . Texas-Gulf Area
A. D. Barry . . . . . West Texas Area
S. Z. Davis . . . . . West Texas Area
H. R. Good . . . . . West Texas Area
J. T. Hall . . . . . West Texas Area

### 10 Years

W. J. Trahan . . . . . Four Corners Division
D. B. Alspaugh . . . . . Head Office
K. C. Cooley . . . . . Head Office
A. D. LaRochelle . . . . . Head Office
C. M. Esar, Jr. . . . . Texas-Gulf Area
J. B. Lalumandier . . . . . Texas-Gulf Area
H. L. Plagens . . . . . Texas-Gulf Area
R. W. Keller . . . . . West Texas Area


# FOR GIVING

Every year, in more than 300 communities throughout the nation where Shell employees live and work, the Shell Companies Foundation, Incorporated, joins employees in contributing to their local Community Chest and Red Cross or United Funds. These contributions support the operations of numerous causes such as the Scouts, the Y's, USO, hospitals, Salvation Army and others.

The Foundation determines how much it will donate to the campaigns in each community by considering the number of Shell employees, the total population and the needs of each community.

By applying this "pattern for giving," the Shell Companies Foundation meets its responsibility as a partner in citizenship with you in your community.

SHELL OIL COMPANY
50 West 50th Street
NEW YORK 20, N. Y.
RETURN POSTAGE GUARANTEED

N. R. Dorn
1805 Wesley
Houston, Texas

SCC

BULK RATE
U. S. POSTAGE
PAID
New York, N. Y.
Permit No. 1101

# Shoe soup for a Mayan dandy

WHEN a Mayan needed shoes, he simply went to the nearest rubber tree . . . *and poured himself a pair.* By dipping his feet repeatedly into a bath of raw latex, he fashioned a kind of shoe. The style was crude, but the fit was perfect.

Rubber goods have come a long way since then, and the development of *synthetic* rubber has been an important factor in this growth—especially since 1941 when Shell Chemical built the country's first commercial butadiene plant. Today over 20 different types of Shell synthetic rubber go into such varied products as shoe soles and heels, tires, belting, floor tile, wire and cable insulation, and hundreds more.

Commercial production of this strong and versatile material is another of the many ways Shell Chemical helps industry with man-made raw materials.

*(This advertisement will appear in six national magazines.)*

The Mayan and other Indians of Latin America discovered a unique material for making clothing and footwear.