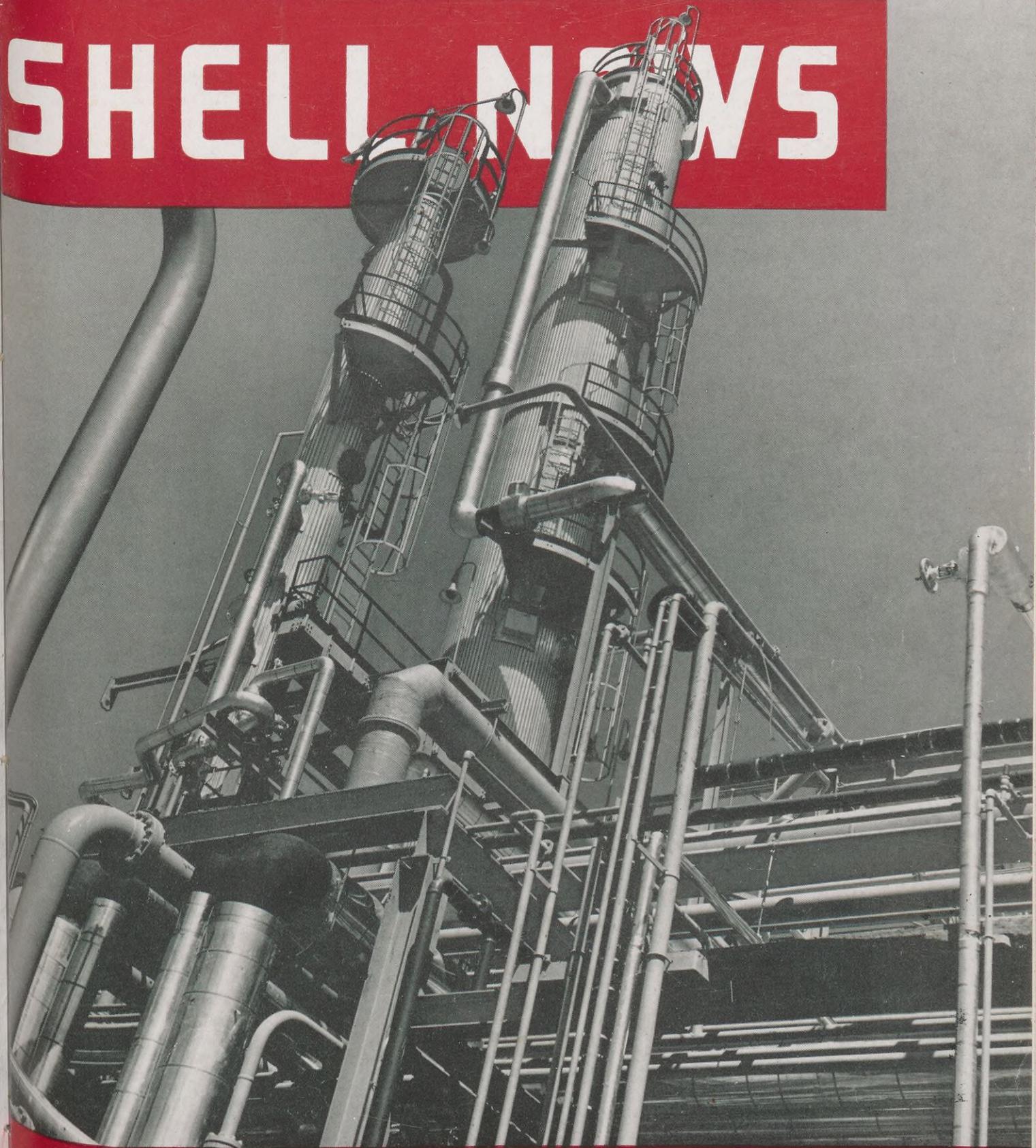


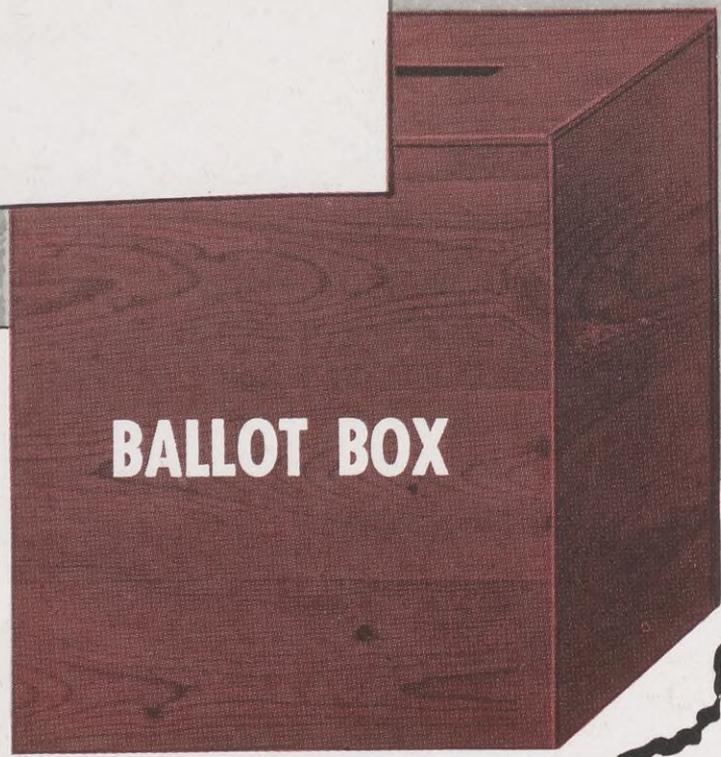
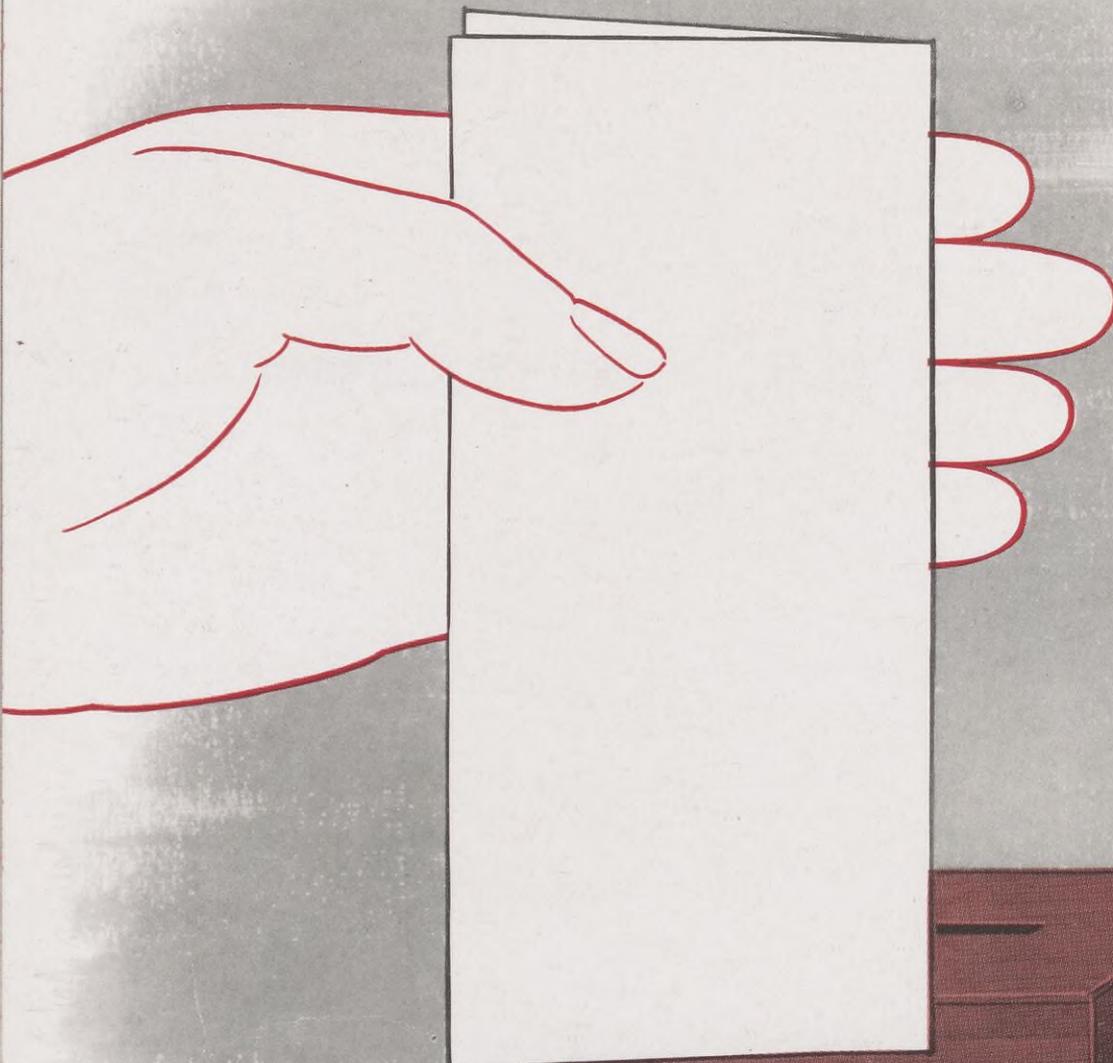
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# SHELL NEWS

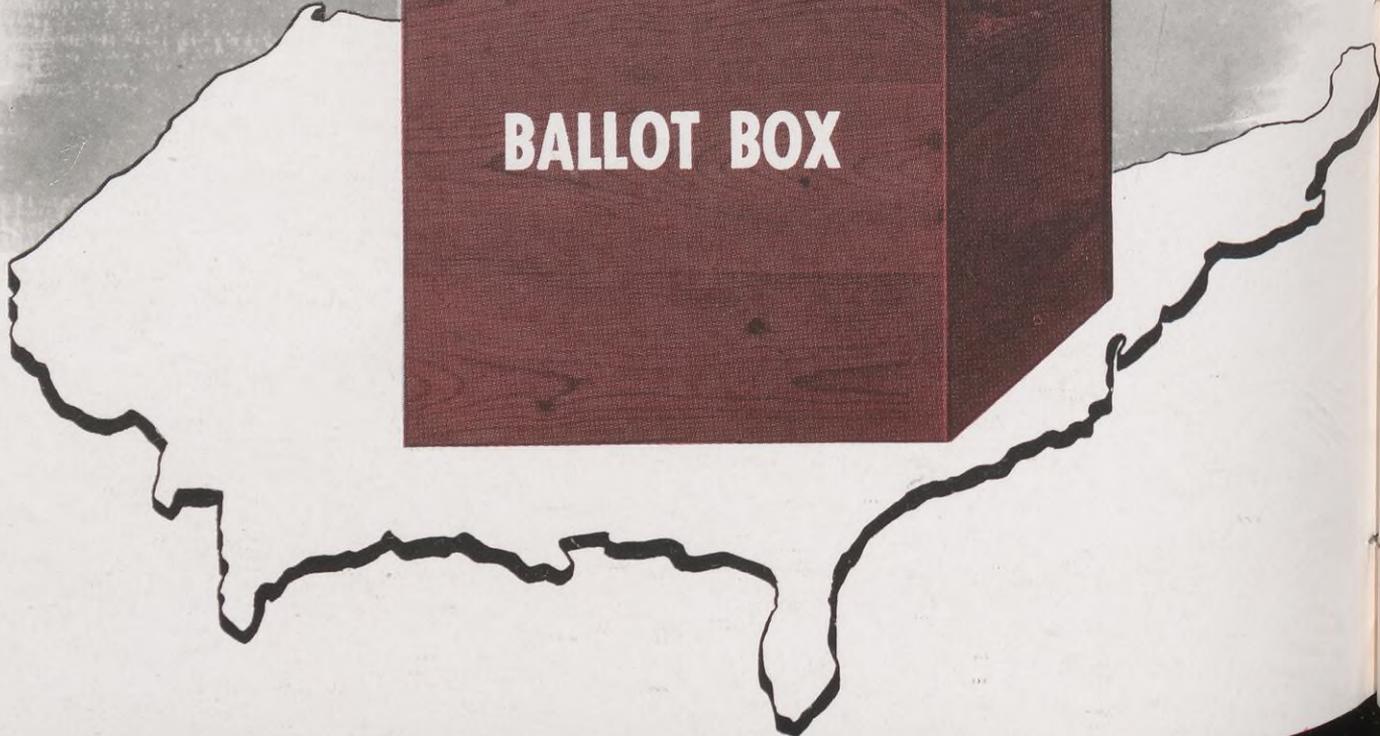


OCTOBER · 1948

**THE CITIZEN**



**BALLOT BOX**



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

*Employee Publications Division  
Personnel Department, New York*

## AND THE BALLOT BOX

ON November 2, Election Day, American citizens will have another opportunity to help shape their own and their country's future. Once again they will have the privilege of naming the President of the United States and other government officials—the chance to participate in their government.

History tells us that ours is a government that thrives on participation. The ballot box, in other words, is more than just a symbol of democracy. It is the immediate agent through which a democratic people can actively influence their government. Generally speaking, the greater the number of voters going to the polls, the closer our government comes to representing accurately the wishes of the people as a whole.

Most of us in this day and age take our right to vote as a matter of course, as a sort of inherent right. It is sometimes easy to forget that our ancestors couldn't take it quite so lightly. They didn't have anyone to inherit it from . . . so they had to think highly enough of the privilege to fight for it. It wasn't easy.

One would think all of us would be proud and eager to vote on Election Day, but history tells another story. In the last presidential election 54 per cent, barely half, of the nation's eligible voters went to the polls.

It is easy to pay lip service to the right to vote. But the only way to enjoy the right is to exercise it—and VOTE.

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# International Training Program

As Training Host to Representatives of Associated Companies Abroad, Shell is Cooperating in Industry's Attempt to Help Western Europe and Other Parts of the World Regain Their Feet

**O**UTWARD bound from New York last May 29, the transatlantic liner *Queen Elizabeth* moved down the Hudson from her pier at the foot of West 50th Street. Aboard was John Brittain, an employee of B. P. M.—The Hague, who was returning to Holland via Southampton in his native England before assignment to Egypt. Like others who had preceded him, and more to follow, Brittain had spent over a year in the United States with Shell. During that time he had pursued a course of training designed better to equip him for his career as an exploitation engineer. In those months he had toured the oil fields and seen many of our production installations in Texas, Louisiana and New Mexico. There, under the guidance of experienced engineers, technicians, drillers and other Shell men, Brittain had

observed and studied at close range the newest techniques and developments of the industry in this country in bringing oil from the ground.

Many Shell men and women in the U. S. have either seen or met at least one, perhaps more, of our many visitors from associated companies abroad who, since the end of World War II, have come here to take advantage of Shell's International Training Program. They hail from all parts of the globe; from England, Holland, France, Norway, Switzerland and other European countries . . . from Venezuela and such far places as Egypt, Australia and China.

Among these visitors have been some of the men who, remaining behind as the Japanese advanced through the East Indies in early 1942, fired the refineries and production installations of Sumatra and Java to prevent their falling intact into the hands of the enemy. Captured, but not before their mission was accomplished, they spent the rest of the war years in Japanese prison camps.

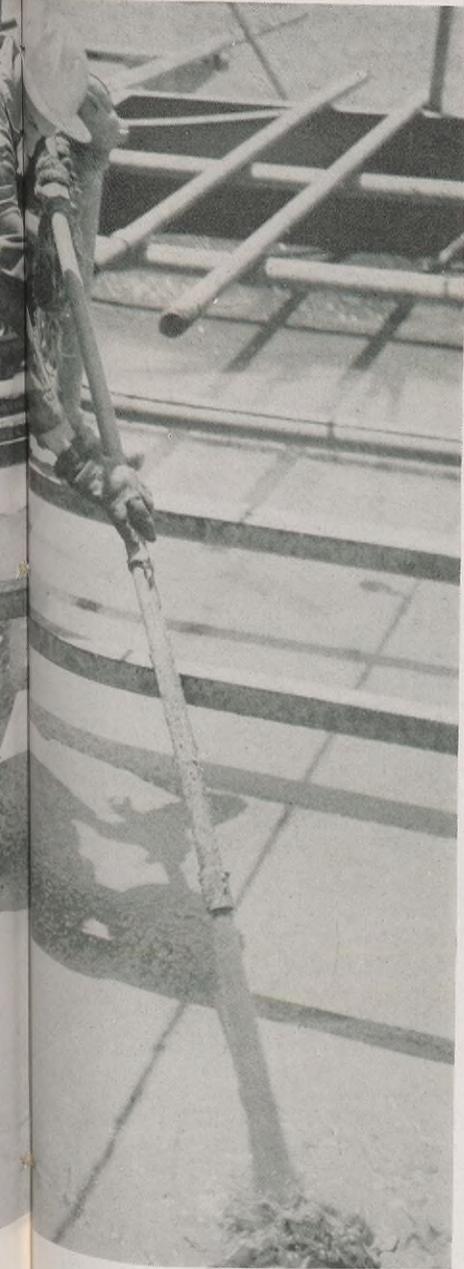
Others—by far the largest representation—served with the army, navy or air forces of their respective countries. Some lived through the war in countries overrun by the invasion and occupation forces of the

Exploitation engineer training includes instruction in reservoir computations. *Left*, C. W. Daniel (using instruments), a B.P.M. employee, was coached in this instruction by Gladstone Stewart, Production Engineer.



enemy. Natural modesty makes them reticent about their part in the struggle. As one of them from Holland put it, "I regret to say, not very heroic. My only struggle was to keep myself out of the hands of the Germans and to keep my wife, children and parents from starvation. Thanks to sugarbeets and tulip bulbs which were our principal foods, and with some luck I succeeded." But on further acquaintance, it came as no surprise to learn that among them were men who had served in the underground in France, Holland,





other theaters suffered similarly, although not to the same extent due in part to the fact that they were in less industrialized continents than Europe. In the past three years the problems of rehabilitation in Europe have been of concern to the nations of the Western Hemisphere, particularly the United States and Canada—no less, in many respects, than they have concerned the people of Europe.

Congressional passage of the European Recovery Program testifies to the fact that the United States recognizes this situation, and that it is assuming leadership and a major share of the responsibility for providing effective recovery measures. But are dollars and goods in themselves enough to insure the economic recovery of Western Europe? Most responsible people think not. Among others, the U. S. Department of State, many Congressional leaders, and important segments of American industry believe that money and materials must be supplemented by a large scale program to train nationals of other countries in the latest industrial developments.

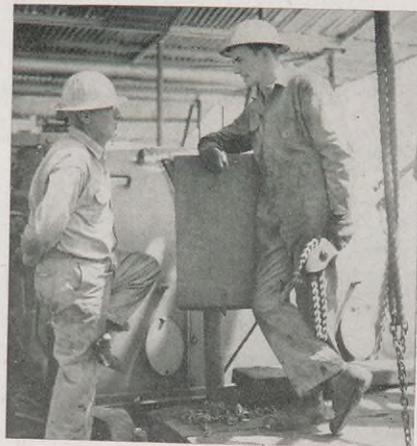
There are good reasons for this: Many important industrial processes and techniques were developed during the war. In the petroleum industry exploration and production methods were improved. Refinery processes were also improved and, in many instances, altered extensively. Both the variety of petroleum products and

their application increased. For example, methods of catalytic cracking of petroleum, now in widespread use in this country, were introduced largely after 1939. The manufacture of a wide range of chemicals from refinery and natural gases was also to a large extent a wartime development. For the most part, if these changes were not unknown, they were at least unfamiliar to men who had been out of touch with their special branch of the industry during the war years. In view of this situation, and because of the vital importance of oil to the world's economy, it became necessary to train and refresh technical and marketing people from abroad in the progress made here in their respective fields.

The Department of State has said that it "desires to assist in every way possible, nationals of other countries coming to the United States for bona fide practical training in industry, commerce or related fields under programs which promote the national interest."

Representative Christian Herter of Massachusetts has written, "The help that we can give . . . should not be limited to dollars and commodities—it should include the skills that we have developed probably far beyond those of any other nation in both industrial and agricultural production." And Herter goes further: "These skills cannot be imparted to foreign nations by diplomats and statesmen.

*Left.* While visiting one of Shell's drilling locations, Daniel tries his hand at mud mixing, and *below left*, threads a pipe under the experienced eye of Morris Hebert. *Below right.* He discusses a drilling problem with Rotary Driller John J. Rodman.



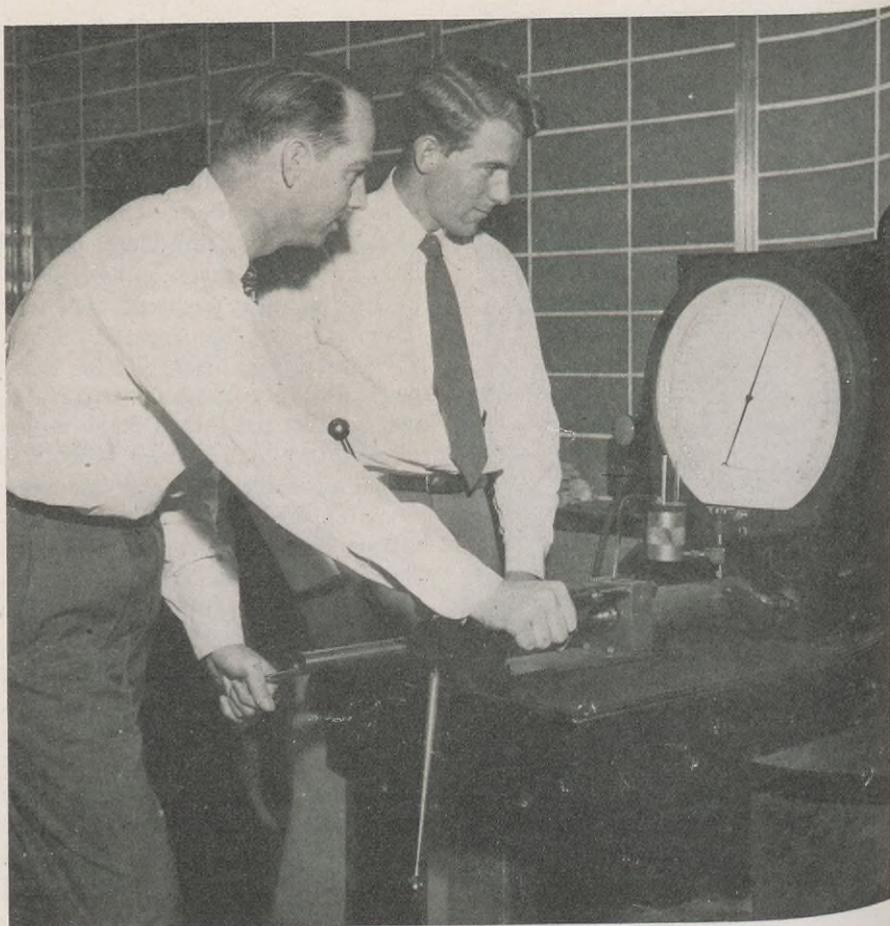
Norway and other occupied countries; men who had exposed themselves to the risk of reprisal, banishment, even death, to serve their countries from within.

Their reason for being here goes back to World War II. During the war, the principal industrial centers of Europe were either directly damaged by the conflict or had much of their basic industrial equipment transported to Germany where it became lost or destroyed. Thus, much of the industrial plant of Europe was virtually wiped out. Industrial centers in

They can only be imparted by the men who are thoroughly familiar with them—the business executives and technical men who know how to make them effective.”

For its part, American industry has shown clearly where it stands on the subject of providing technical “know-how” to overseas countries. At present, approximately 100 American companies, including Shell, are and have been engaged in post-war training of Europeans and other nationals in American industrial and business operations and methods.

Shell began to make plans shortly after demobilization got underway in 1945 for the training and re-training of employees of its associated companies in other countries. With the approval of the Immigration and Naturalization Service and the Department of State, arrangements were made for a number of technical men to visit the U. S. for training. Thirty seismologists comprised the first group. Their number was later increased, and eventually the program was expanded to encompass training



Above. John Brittain, another B.P.M. employee, receives instruction in P.V.T. (pressure, volume, temperature) analysis used in reservoir computations from A. W. Lampadius, who is operating the apparatus.

and refresher courses in exploration, production, research, refining and marketing.

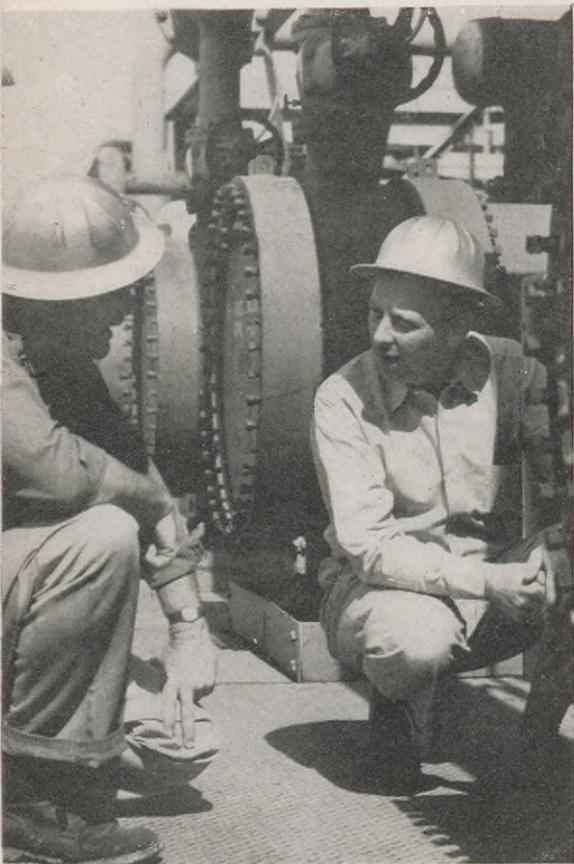
The program is designed to meet the needs and interests of two general groups. Executives, department heads and senior personnel with years of experience in the oil industry are afforded an opportunity to bring themselves up-to-date through refresher courses. Men with technical backgrounds . . . geologists, geophysicists, engineers . . . some with a few years and others with little if any practical experience in the industry, receive training in the latest techniques and developments in their respective fields. Upon returning home, or moving to assignments abroad, our visitors are quick to pass on to their associates the knowledge

and information learned in this country. Thus, like a chain reaction, the benefits of the training program accrue in some measure to those who remained on the job at home.

Visitors' comments have reflected generally the value of the training programs to them. Expressed, too, is their appreciation for the hospitality and interest shown them by Shell people in the United States.

So far approximately 360 visitors have received training and refresher courses and others are still to be accommodated. While its full benefits have not yet been realized, the program is getting results, according to reports from many of those who participated and who are now back on the job in Western Europe and other parts of the world.

Operator J. C. Dunbar at Houston Refinery's Cat Cracker finds G. A. McDonald (right), a visitor from England, an interested listener as he explains the operation of the unit.





At conference sessions, senior marketing representatives from overseas compare notes and study marketing and operating methods developed by Shell in this country.



◀ In the Control Laboratory at Sewarden, the visiting representatives are shown how the viscosity of finished products is determined through use of electronic equipment.



Field trips afford marketing visitors an opportunity to study operating methods and equipment at first hand. Here, H. B. Quigley, Plant Superintendent, Sewarden, explains operation of can filling, sealing and packaging equipment at the Compounding Plant to members of one group. ▶



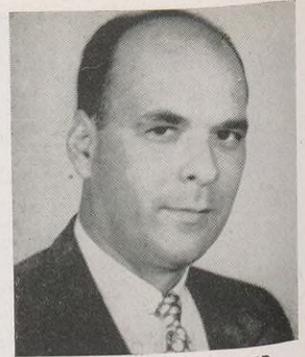
R. C. BYARS



A. H. VINEYARD



A. S. GILLES



W. F. SCHOENTHALER

## SHELL PEOPLE

**R. C. BYARS** has been named Administrative Assistant to the Manager of the Midland Exploration and Production Area. Starting as a Safety Inspector in 1929 with Shell Petroleum Corporation in St. Louis, Mr. Byars was transferred to Houston, Texas, in 1933 as Claims and Right of Way Representative. In 1939, he became Supervisor of the Claims and Compensation Section. Since 1946 he had been Personnel and Industrial Relations Manager of the Midland Exploration and Production Area.



**A. H. VINEYARD** has been appointed Personnel and Industrial Relations Manager of the Midland Exploration and Production Area, succeeding R. C. Byars. Mr. Vineyard began his career with Shell in 1925 as a gauger at the Wood River Refinery. After being transferred to the Industrial Relations Department of the refinery, he became Head Safety Inspector in 1936 and, two years later, was named Assistant Manager of the Industrial Relations Department. From 1940 to 1943, he held the position of Safety Engineer in Head Office Personnel Department. Prior to his present appointment, Mr. Vineyard had been with Shell Chemical Corporation since 1943, the last three years as Assistant Manager, Personnel and Industrial Relations, in the San Francisco Head Office.



**A. S. GILLES** has been appointed Personnel and Industrial Relations Manager of the Tulsa Exploration and Pro-

duction Area. A graduate of the University of Oklahoma, Mr. Gilles has been with Shell since 1939 when he was employed as Compensation Adjuster in the St. Louis Head Office. He was transferred to Wood River Refinery in 1940 and became Assistant Manager of the Industrial Relations Department there the next year. Following service in the Army, where he attained the rank of Major, Mr. Gilles returned to Shell in 1946 as an Industrial Relations Representative in Head Office, from which position he moves to his new assignment.



**W. F. SCHOENTHALER** has been named Manager of the Distribution Department in the Head Office of Shell Chemical Corporation, New York City. A graduate of Washington University, St. Louis, Mr. Schoenthaler came to work for Shell in 1934 as a stock clerk in St. Louis. Since 1940, Mr. Schoenthaler had been with the Head Office Transportation and Supplies Department of Shell Oil Company, Incorporated, becoming a Division Supervisor in 1943 and, in 1945, Assistant Manager-Supplies.



**H. P. INGERSOLL** has been appointed Superintendent of the Massachusetts Products Pipe Line and the Plantation Pipe Line Terminals, with headquarters in Waltham, Massachusetts. A veteran of more than 25 years service, Mr. Ingersoll joined Shell as a laborer at the former Arkansas City Refinery. In 1927 he was transferred to East Chicago, Indiana, as Stillman in the refinery there, becoming Assistant Head Stillman two



H. P. INGERSOLL



V. K. LEONARD



D. G. WARD



J. C. QUILTY

## IN THE NEWS

years later. Mr. Ingersoll has been with the Products Pipe Line Department since 1940 when he became Assistant Superintendent at the East Chicago Terminal, later Terminal Superintendent there and, in 1946, Superintendent of the North Products Pipe Line.



V. K. LEONARD has been appointed Acting Superintendent of the North Products Pipe Line to succeed H. P. Ingersoll. Following graduation from the University of Michigan with a degree in Mechanical Engineering, Mr. Leonard came to Shell in 1939 as a Junior Engineer at East Chicago, Indiana. After his transfer to Head Office in 1941 he served in various capacities as an engineer in the Products Pipe Line Department, and in 1946 became Senior Engineer. Last March, Mr. Leonard returned to East Chicago as Division Engineer for the North Products Pipe Line—the position he held prior to his present appointment.



D. G. WARD has been transferred from San Francisco to New York where he has been appointed an Assistant Manager-Traffic of the Head Office Transportation and Supplies Department. Mr. Ward, under the direction of the Traffic Manager, will supervise the handling of Shell Chemical Corporation's traffic work since he performed a similar service prior to that company's removal of its Head Office to New York. Mr. C. H. Wager, in his ca-

capacity as Assistant Manager-Traffic, will continue in his present duties.

Mr. Ward came to Shell in 1929 as a clerk in Los Angeles, California. In 1935 he was transferred to San Francisco Head Office as a rate clerk and in 1940 became Chief Rate Clerk there. From 1942 to 1945 he served on special assignment with Asiatic Petroleum Corporation. Returning to Shell Oil Company at San Francisco in September 1945, he was named Assistant Manager of the Traffic Department, at San Francisco Head Office, in January 1947, and served there until his new assignment.



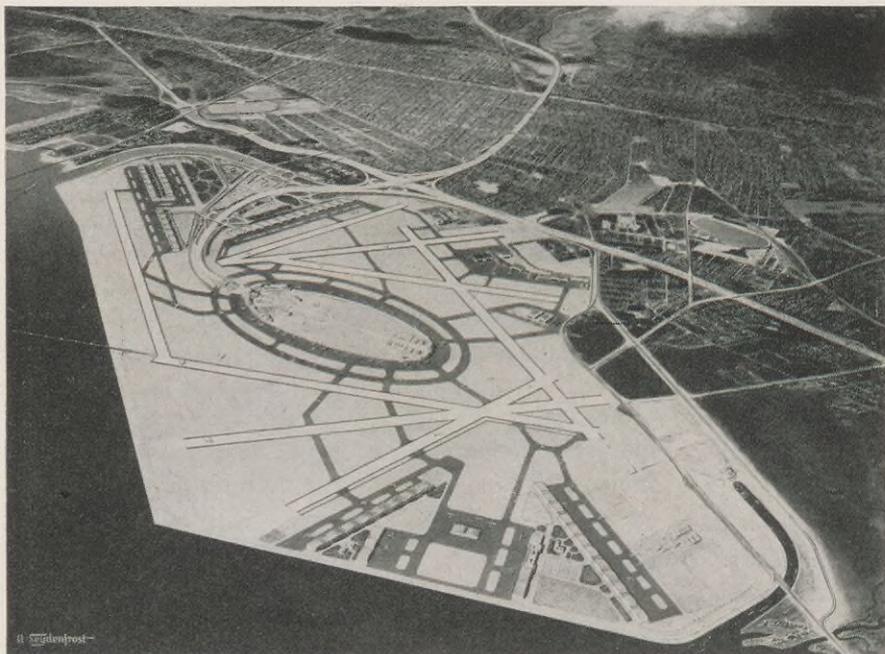
JOHN C. QUILTY, Manager of Head Office Industrial Relations Department, has been nominated as one of the two U. S. employer delegates to the second meeting of the Petroleum Committee of the International Labor Organization, to be held during November, in Geneva, Switzerland.

Organized in 1919, the International Labor Organization is an inter-governmental agency which seeks through international cooperation among its 59 member nations to improve standards of living throughout the world. The I. L. O. is recognized by the United Nations as a specialized agency with responsibilities in the field of labor conditions, industrial relations, social security and similar matters.

The committee to which Mr. Quilty has been nominated comprises representatives of government, labor and industry from most of the principal oil producing countries of the world. It is one of several industrial committees established within the framework of the International Labor Organization.

# New York International Airport

The World's Largest Airport Takes Its Place in the Network of Four Commercial Fields Which Promises to Break New York's Air Traffic Bottleneck



An artist's conception of how the airport will look in the future from the air.

**N**EW YORK INTERNATIONAL AIRPORT (Idlewild) was dedicated last July 31st. The largest airport in the world, it is thought to be the answer to the chronic congestion which for years has plagued air traffic coming in and out of the city. Because of its geographical position New York is a logical terminal both for domestic and transatlantic air

traffic. Consequently, hundreds of flights daily take off and land at airports serving the metropolitan area. Up to this time LaGuardia and Newark airports have handled the bulk of the traffic. Now Idlewild and later Teterboro, a small airport in New Jersey, will join them to make up an airport network designed to handle thousands of flights a day without the

One of the side issues incident to the construction of New York's newest airport is its name. The Port of New York Authority, operators of the airport, insist on its official title "New York International Airport" as one which befits the dignity of the world's largest. The citizens of Long Island and most of the metropolitan press, however, call it "Idlewild" after the former golf course of the same name which is now part of the project.

expensive and sometimes dangerous delays resulting from air traffic congestion.

Most of the real estate in the New York commuting area is either built up or otherwise not particularly suited to airport construction. The city was forced, therefore, to build Idlewild on a combination of wasteland, tidal marshes and a golf course.

This was not New York's first experience with such terrain since LaGuardia Field was built in the marshes of Flushing Meadows. But, as an engineering project, Idlewild dwarfs LaGuardia in every respect. For one thing, it covers an area of seven square miles—nearly nine times the size of LaGuardia which itself is one of the largest commercial airports in the world.

## Engineers Transform a Wasteland

In 1942, when work was started at Idlewild, 2,000 shacks, shanties and other tumble-down buildings had to be razed before construction could be started. Runways couldn't be laid directly on marshes, nor could they be laid with much hope of permanence on marshes that had been drained. Fortunately, the marshland at Idlewild was shallow. Beneath it was a base of hard beach, little changed since the days when great glaciers covered parts of North America.

Given this solid foundation, what was needed was a solid top layer which would pack down the marsh. The engineers decided that this top

layer should be eight feet deep—deep enough to accommodate miles of sewers, drainage and water pipe, communication lines and power conduits. The material used was hydraulic fill, a combination of sand and water that can be pumped for sizable distances and which forms a hard layer when the water evaporates or drains off. To do the job, the engineers dredged more than 63 million cubic yards of hydraulic fill from the bottom of Jamaica Bay which borders the airport on one side. This dredging operation has been described as the greatest ever undertaken anywhere.

To handle the rainfall on the 4,900 acres of airport and also that which normally drains through the area into Jamaica Bay, required the laying of 64 miles of drainage pipe under the surface of the field. Side by side with the drainage system lie 24 miles of water pipe and a 1,600,000-foot net-

work of electrical conduit. No wonder contractors bemoan the fact that much of their handiwork is hidden from the taxpayer's appraising eye.

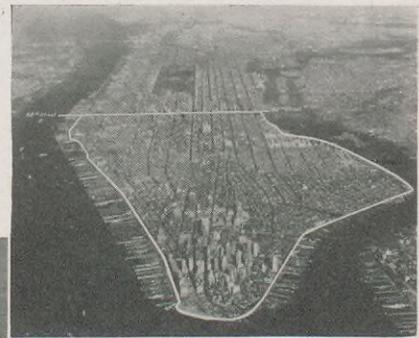
Topside are six concrete runways. Each is 200 feet wide and 12 inches thick and has 50-foot asphalt shoulders on each side. The longest of the six parallels Jamaica Bay and its 9,500-foot length will accommodate not only the largest planes in use today but also the leviathans taking shape on the drawing boards. The other runways range from 8,200 feet down to 6,000 feet in length. It is expected that these runways will eventually be called upon to handle a thousand flights a day.

A seventh runway, specifically designed for instrument landings, is now under construction. Of the varied traffic situations encountered in airport operation that of instrument approaches and landings is among

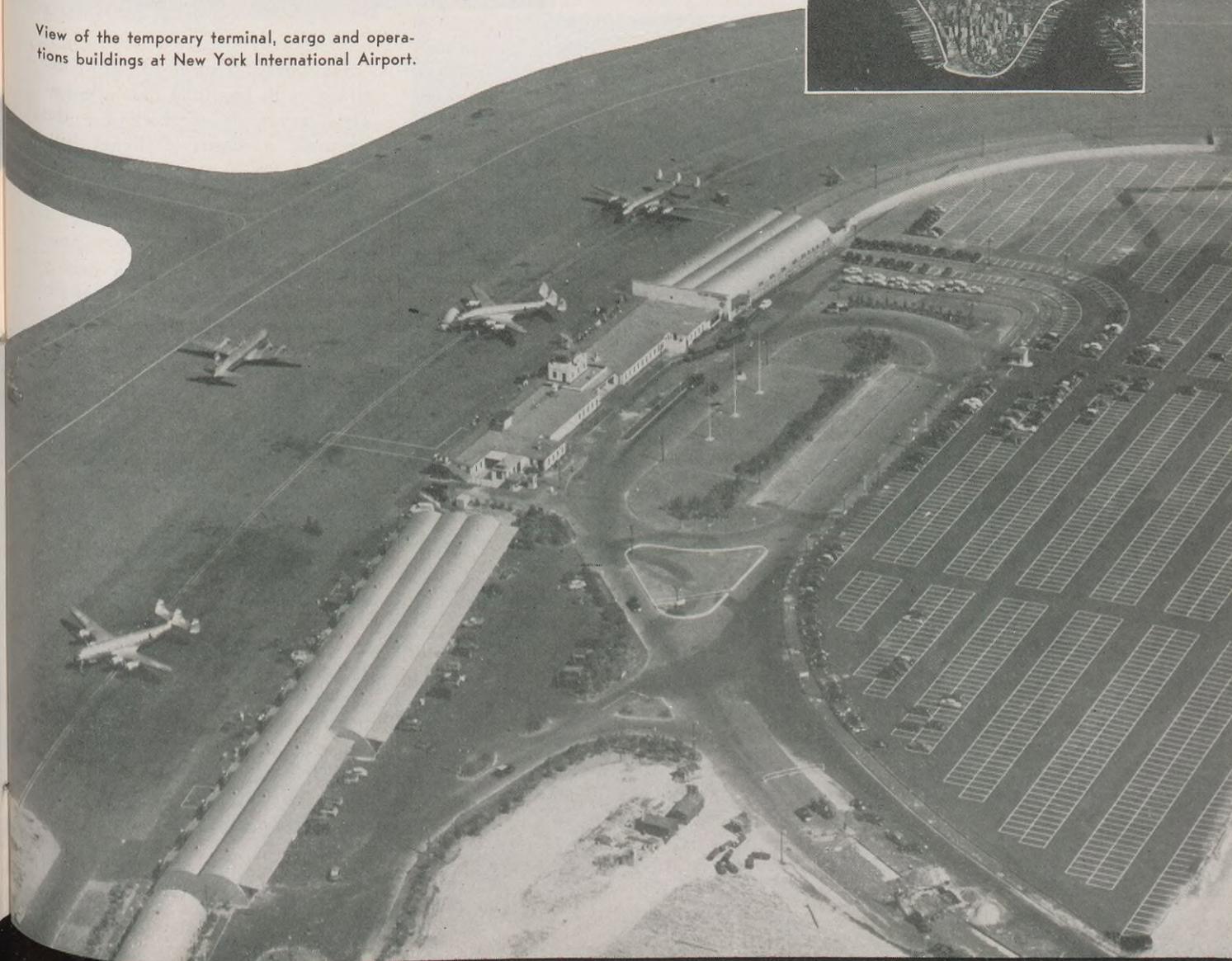


The area of New York International Airport (whose Terminal building appears above) is 4,900 acres—equal to the area of Manhattan island from 42nd Street to the tip of the Battery, shown below by the white line.

*Fairchild Surveys, Inc.*



View of the temporary terminal, cargo and operations buildings at New York International Airport.



the more ticklish, demanding, as it does, a sky free of converging or intersecting flight patterns. To meet this qualification the new 8,000-foot "blind" runway will be so aligned as to keep planes approaching for instrument landings clear of traffic patterns used by planes coming in to other fields in the metropolitan area.

### All-Weather Approach Lighting System

Also installed is a revolutionary all-weather approach lighting system, termed a "runway in the sky" by its designer, the Westinghouse Electric Corporation. A pier mounting a row of 70 lights—35 krypton flashing units spaced alternately with an equal number of neon blaze units, extends for 2,500 feet out into the waters of Jamaica Bay from the end of runway "C." These powerful lights will penetrate the darkest night, and even fog,

The world's most powerful all-weather lights guide pilots landing at New York International Airport in low visibility weather. The square units are the neon blazer lights, while the others are the krypton flashers.

Traffic into and out of the field is regulated from the control tower atop the administration building. When the airport is in full operation, two additional control towers will be required to handle the anticipated 1000 flights daily.



snow and rainstorms, and in answer to a critical need will enable a pilot to make a visual landing despite low visibility. The system fashions a man-made bolt of lightning which appears to the pilot as a flash traveling toward the runway at a speed of 4,110 miles an hour—more than five

times the speed of sound. Capable of being seen from a distance of at least 1,000 feet even through heavy fog, the flash, in its full intensity, totals more than 115 billion candlepower or, momentarily, the light equivalent of nearly two billion ordinary 60-watt household bulbs.

The powerful surge of light comes and goes in less than half a second. The "traveling" effect causing it to resemble a flash of lightning is achieved by a synchronizer which makes the flashing lights "follow the leader." The light farthest from the runway flashes first, then is followed at split-second intervals by each of the others down the 2,500-foot line.

Buildings on the field at present are few, but already two large hangars, each 200 feet by 300 feet, have been erected and are in operation. Two additional and larger hangars are to be completed by late next year. Although only a temporary structure, a terminal and administration building is in operation and provides, among other facilities, 50 per cent more space for customs and immigration authorities than that available at LaGuardia Field. The roof of the terminal holds an observation deck for visitors and the control tower for air traffic at the field. Two additional control towers are planned for the future. The terminal houses a restaurant, soda fountain, drug store, barber shop, haberdashery, a bank and administrative offices. Behind the build-

began in the spring of 1942 but was slowed to a snail's pace by wartime shortages of materials. As things turned out this was a blessing in disguise. The rapid developments in the aviation field during the war brought with them new ideas for airport design. Had Idlewild been rushed to completion in the early years of the war, there is no doubt but it would lack many of the features which will make it such an outstanding installation.

### **The Problem of Finances**

Closely tied with completion and future growth of the field is the question of finances. More than \$60,000,000 has been spent on the project to date and it is estimated that another \$100,000,000 will be needed before the job is finished.

But Idlewild, along with the three other airports of the Metropolitan network, is now in the capable hands of the Port of New York Authority. This unique agency was created in 1921 by the states of New York and New Jersey to develop the New York port area. It operates such projects as the Lincoln and Holland Tunnels and the George Washington Bridge, main arteries between the two states. What is more, it makes its projects

pay for themselves.

By the end of next year all overseas traffic will be concentrated at Idlewild. Already Scandinavian Airlines System, Air France, Sabena (Belgian Airlines), Royal Dutch Airlines (KLM), Flota Aerea Mercante Argentina (FAMA), Linea Aeropostal Venezolana (Venezuela), Swiss Air Icelandic Airways, Peruvian International Airways, and a number of non-scheduled cargo carriers are operating out of the field. National Airlines, Inc., serving cities in the south and Cuba, is the first major domestic airline to lease space and start operations from the field.

Ultimately, it is planned to base intermediate and long-range domestic flights at Idlewild; short-haul domestic traffic and, possibly, flights to Canada and Bermuda, at LaGuardia; and short, intermediate and long-haul domestic flights at Newark. Use of Teterboro Air Terminal is still in the planning stage.

Thus the air traffic bottleneck which for years has plagued the New York metropolitan area is being broken and Idlewild is taking its place as the number one airport of the world.

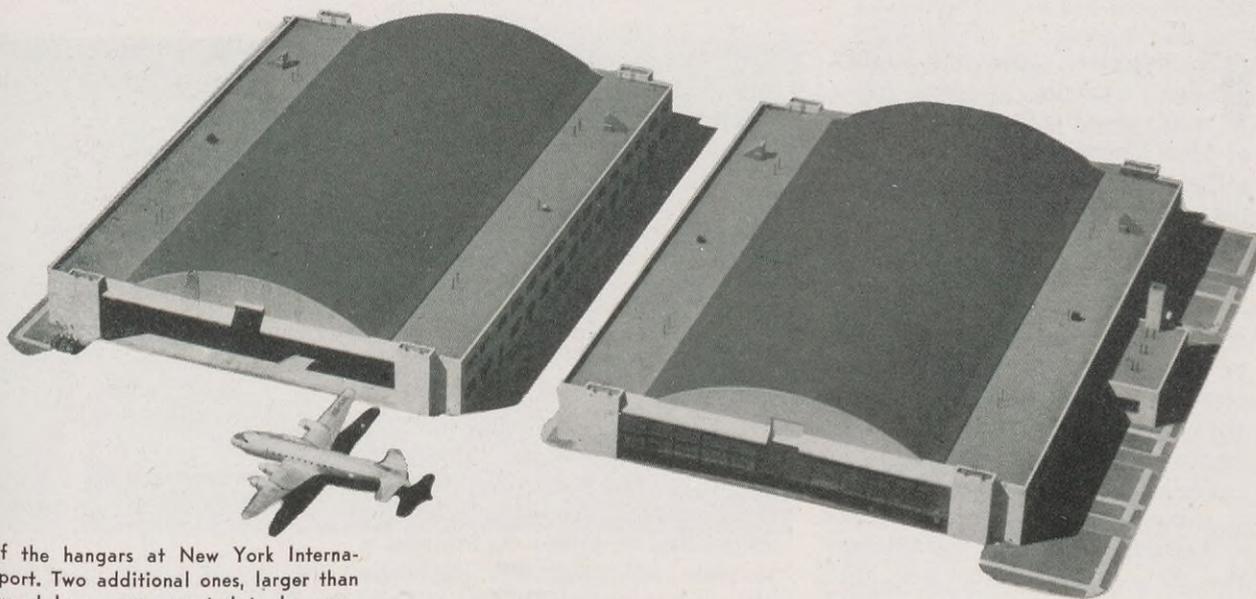
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Pictures in this article not otherwise credited—courtesy of the Port of New York Authority.



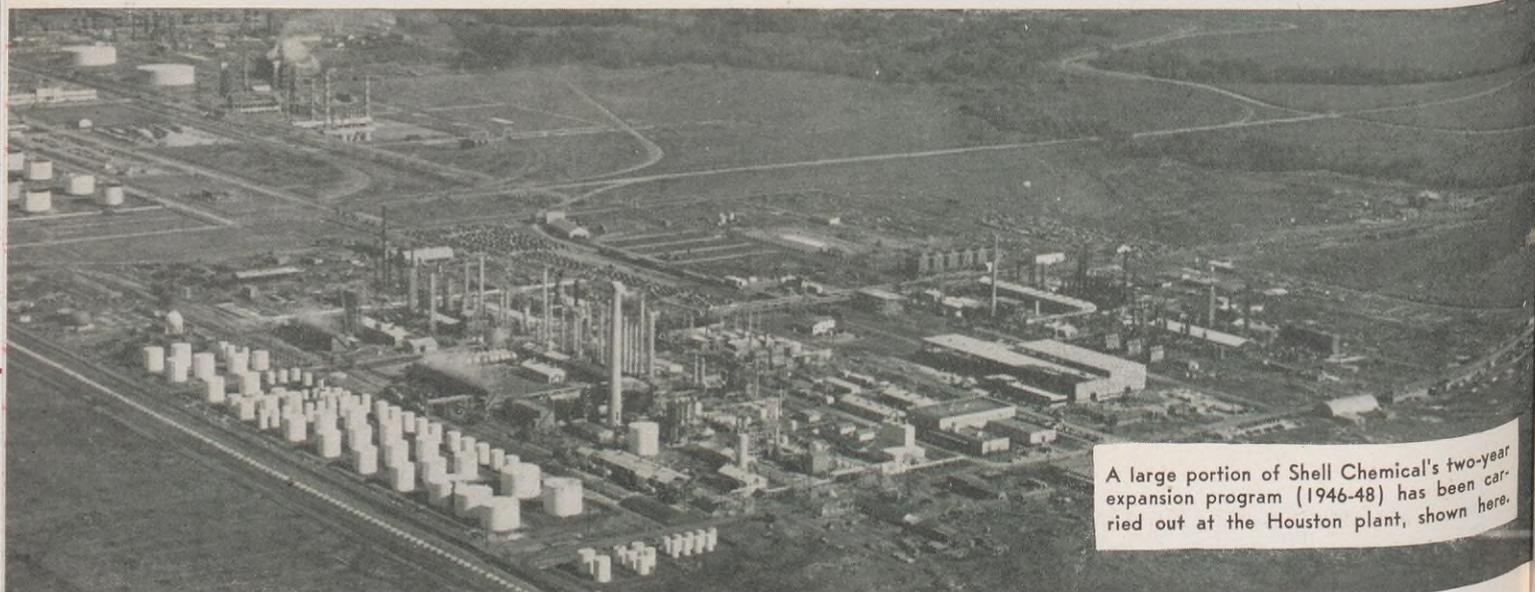
ings is a 2,000-car parking lot. Close by a Quonset-type structure contains fire and crash emergency equipment and crews.

Idlewild has been under construction for six years and will not be completed until 1954. Earliest work



Airview of the hangars at New York International Airport. Two additional ones, larger than those pictured here, are expected to be completed and in operation during the coming year.

# Shell Chemical Corporation



A large portion of Shell Chemical's two-year expansion program (1946-48) has been carried out at the Houston plant, shown here.

An Expanding Organization, It Has Pioneered in Developing New Products and New Markets for Industrial Chemicals Made from Petroleum.

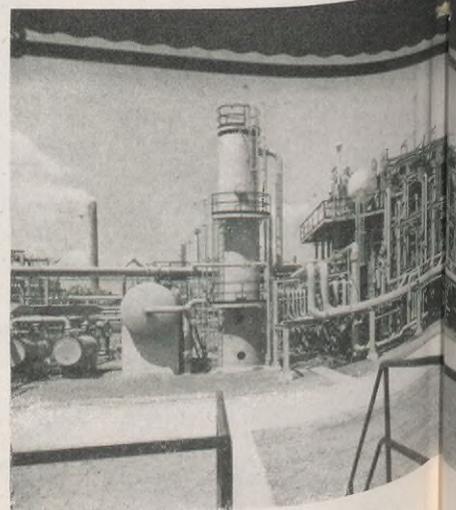
ON September 16th, the world's first synthetic glycerine plant was opened at the Houston Plant of Shell Chemical Corporation. Glycerine is a product which is essential to modern living. During and since the war it was in short supply; so much so that housewives were asked to save kitchen fats to be used in its manufacture. Consequently, the opening of the synthetic glycerine plant has aroused national interest, not only in the plant itself, but in the company that built it.

Shell Chemical Corporation, as it is today, is the result of far-sighted and courageous plans conceived more than 20 years ago. At that time, Shell scientists saw, in natural gas and by-product gases from high temperature

cracking operations, potentially important sources of hydrocarbon raw materials for the manufacture of chemicals and a fascinating field for research. So in 1929, Shell Chemical Corporation was founded to manufacture chemicals from petroleum.

## The Chemical Industry

To understand the growth of Shell Chemical and the problems it has had to face, one must understand the nature of the industry in which it operates. The chemical industry is one of the fastest moving industries in the country today and certainly the hardest to define. Its business is to make something into something else—not by changing its outward appearance but by working with the

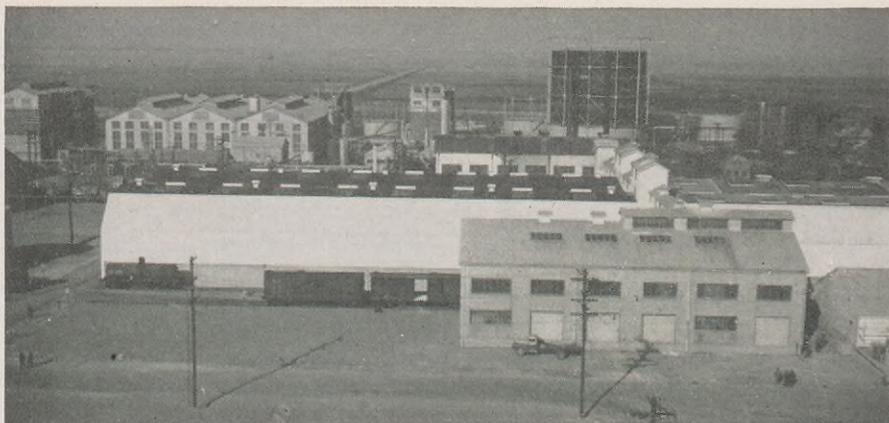


The complicated but orderly arrangements of piping (shown above) are a common sight in Shell Chemical's Houston plant.

unseen tools of the chemist—atoms and molecules. The chemical industry makes products that are new, products that are economical, products to make other products; products that are very rarely seen by the ultimate consumer. The chemical industry, as such, does not make plastics, paints, cosmetics, fireworks, soap, textiles; but it does make products which are either essential or economical to the manufacture of these and thousands of other items.

The industry works from five basic materials: coal, sulfur, limestone, salt and, to a growing extent in more recent years, petroleum. Typical of the "simple" or well-known products that the industry manufactures from these raw materials are sulfuric, nitric, and hydrochloric acids; caustic soda; coal tar products; hydrogen; ammonia; industrial alcohols; and solvents. The industry then goes on to make thousands of combinations of these "simple" products. Because of its nature, the chemical industry very often creates the market as well as the product. Frequently its work in one field will outmode its accomplishments in another so that it faces an unexampled obsolescence in plant and equipment.

At the end of World War I the chemical industry of the United States was practically non-existent. Today, it has its finger in almost every



The agricultural products anhydrous ammonia and ammonium sulfate, are made at Shell Point.

pie. Every home, every plant, every mode of transportation; almost everything that man labels a convenience contains something of the chemical industry. This, then, was the field into which Shell Chemical stepped in 1929.

### The Products

The business of Shell Chemical is to take raw materials from petroleum and put them through manufacturing processes to get products which are then sold to customers in the chemical consuming industries. The Company does not sell its products to any appreciable extent in the retail market.

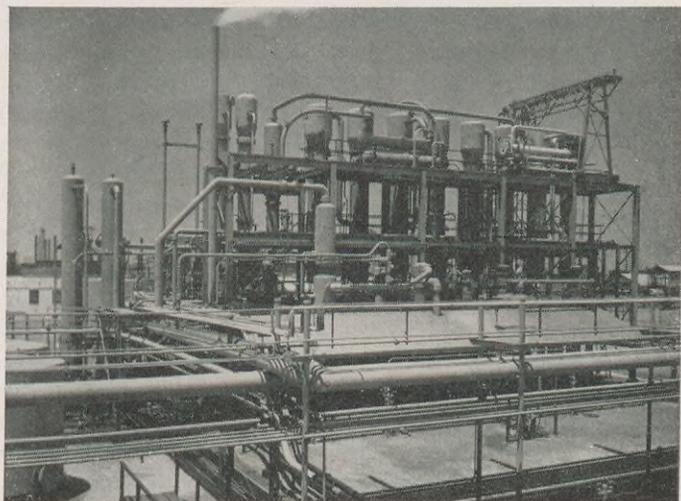
Shell Chemical is not content to make products for a ready made market. It also manufactures new products and then goes out to develop a market for them. In the development

of new products from petroleum derivatives, Shell Chemical works hand in hand with Shell Development Company. The bulk of the pioneering, long-term research is carried out by Shell Development and then turned over to Shell Chemical which manufactures the new product on a commercial scale. Shell Chemical, however, does its own research on product and sales development both before and after manufacture of the new product gets started. This necessitates close contacts with potential consumers and a semi-scale manufacturing set-up to provide samples for test purposes as well as a products application laboratory which studies the processes of industries which might use the Company's products.

Based on industrial demands and the availability of raw material, Shell Chemical is at present marketing some 30 products. These fall into three general classes: agricultural products, chemical intermediates and organic solvents.

Two of the agricultural products— anhydrous ammonia and ammonium sulfate—are made from methane, or natural gas. A third, D-D, is manufactured in conjunction with manufacture of chemicals from oil refinery gases.

Shell Chemical has pioneered in the direct application of ammonia into the soil. Ammonia itself contains 82 per cent nitrogen by weight and is therefore the most concentrated source of one of the chemical elements most vital to plant life. Ammonium sulfate and other solid fer-



An organic chemicals plant, which began its operations in 1936, is located at Dominguez, California, in the vicinity of Los Angeles.

## Shell Chemical Corporation

tilizers contain less than half this amount of nitrogen. In the "Shell Nitrojection Process" gaseous ammonia is released into the water of irrigation ditches, to fertilize the fields. In the "Shell Nitrojection Process" gaseous ammonia is forced from special equipment directly into the soil itself. These two processes institute an entirely new technique of fertilization. D-D is a soil fumigant, destroying certain parasites which live in the earth and attack crop roots. In the making of ammonia from methane, carbon is also produced and sold for use in the carbon-treating of steel.

The chemical intermediates, made from refinery gases, are used in the production of plastics; in the making of pharmaceutical products, anesthetics and resins; in detergents and fumigants, and in many other fields.

Third of the groups is that of the organic solvents, used in the manufacture of surface and protective coatings, such as lacquers, and in making such synthetic fibers as rayon. Such chemicals as acetone, methyl ethyl ketone and isopropyl alcohol fall in this class.

Among the important organic solvents is ethyl alcohol, one of the most valuable and versatile of all industrial chemicals. Shell Chemical has just completed a plant for its manufacture. The product in various denatured grades is to be employed only for non-beverage purposes. Among

its most important industrial uses are in the manufacture of such items as anti-freeze, lacquers, varnishes, plastics, dyestuffs, vitamins, toilet soaps and cosmetics.

### The Company Today

Jan Oostermeyer is President of Shell Chemical Corporation. Vice-Presidents W. P. Gage, Manufacturing, and L. V. Steck, Marketing, assist him. G. E. Brewer is the Corporation Secretary while the Treasurer is A. G. Schei.

The Head Office of the Company is now in New York. There are four plant areas and 10 district sales offices. One plant area is Shell Point, near Pittsburg, California. Here, ammonia and ammonium sulfate are made. Here also is a machine shop for adapting agricultural implements to the "Shell Nitrojection" technique.

Shell Chemical also has installations at the Martinez and Dominguez Refineries in California. Both of these manufacture synthetic alcohols and ketones from refinery gases. Martinez also has a small plant area where special chemicals are manufactured on a small scale while the market for these products is being developed. If successful after a trial period, they are put into full production.

The Houston plant is the largest of Shell Chemical's manufacturing facilities and contains a number of new units which were built in the past two years as a part of the general expansion program. Here at Houston, is the installation which is the first in

the world to produce glycerine synthetically on a commercial scale. Here as well are made the several alcohols and ketones which bear the Shell name as well as such chemical intermediates as allyl chloride, glycerol epichlorhydrin, glycerol dichlorohydrin, diallyl phthalate, diallyl ether, and many others.

Customers for Shell Chemical products are located throughout the 48 states, and are serviced by the 10 district offices. These sales offices are located in New York, Newark, Chicago, San Francisco, Los Angeles, Cleveland, Detroit, Boston, St. Louis and Houston. The Export Division in New York is responsible for selling to Shell Chemical's customers in other parts of the world.

Shell sells the bulk of its products to companies which make surface coatings, rayon, rubber, petroleum products, plastics and other materials based on modern chemistry. Among the customers are American Cyanamid, DuPont, Monsanto, Dow and a host of others. Shell Chemical sells in bulk lots, moving its products in tank cars and drums.

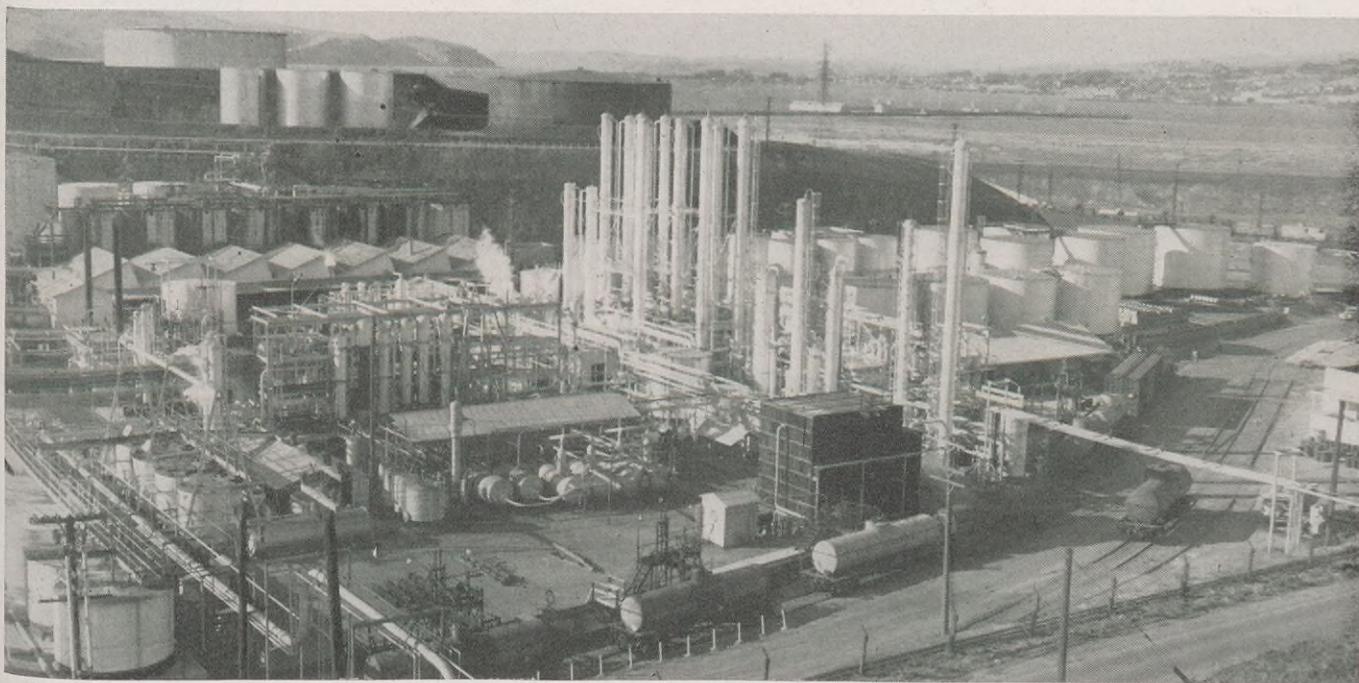
### Company History

Shell Chemical's first move in 1929 was to commence the construction of a nitrogen fixation plant at Pittsburg, California, on the location known today as Shell Point. The site was chosen because a pipeline could easily bring in natural gas from the central California fields, and because it offered rail and water transportation for product shipment. The location was surrounded by agricultural country, a promising market for the ammonia products which were to be used to enrich the soil. The plant, completed in 1931, was the first synthetic ammonia plant of any size to be constructed in the western portion of the United States, and the first in the world to be based upon natural gas.

At first, the ammonia produced at Shell Point was converted into ammonium sulfate for fertilizer, sold in bulk for industrial purposes, principally explosives, and also sold in cylinders for refrigeration purposes. It was not long, however, before Shell

A modern administration building marks the location of Shell Point, at Pittsburg, California, where Shell Chemical began its manufacturing operations.





Industrial alcohols and ketones are manufactured from cracked petroleum gases in this organic chemicals plant at Martinez, California, near San Francisco.

Chemical's invention and promotion of the techniques of Nitrogenation and Nitrojection resulted in new and growing demands for ammonia to be used as such in fertilization, and today a major portion of the plant production is allocated to agricultural purposes.

In 1930, a small semi-commercial plant for producing secondary butyl alcohol from refinery gases was established near the Martinez Refinery of Shell Oil Company. The plant was later expanded until by 1935 it was producing secondary butyl alcohol, tertiary butyl alcohol, methyl ethyl ketone, isopropyl alcohol and acetone. This pioneering work was to bear fruit in increased knowledge by the time the next plant was built adjacent to Shell Oil Company's Wilmington-Dominguez Refinery near Los Angeles. Completed in 1936, the Dominguez plant soon was making the same products as those produced at Martinez and derivatives of these products.

By 1941, Shell Chemical's processes were being used for the manufacture of isopropyl alcohol and acetone from the cracked gases at Shell Oil Company's Houston Refinery. The Houston plant pioneered in the first commer-

cial production of butadiene, one of the important ingredients required for synthetic rubber. The first full-scale butadiene plant in the nation was the one which went on stream in Houston in September, 1941, and which out-produced all other butadiene plants in the nation in 1942. Shell Chemical later undertook the design, construction and operation of a larger butadiene plant for the government at Torrance, California, bringing it on stream in July 1943, as part of the great wartime national synthetic rubber program.

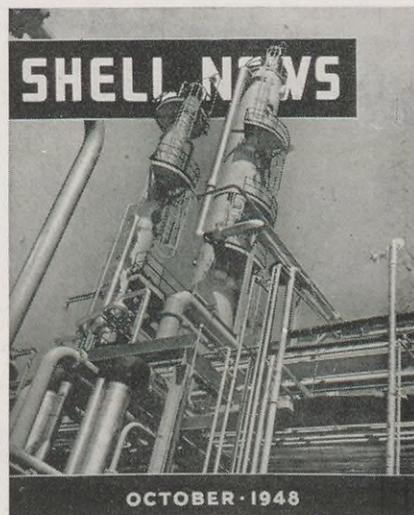
Early in 1943, Shell Chemical was requested by the government to convert the incomplete Cactus Ordnance Works, in the Texas Panhandle, to the production of an additive for use as a blending component in super power grades of aviation gasoline. The conversion was completed in six months.

More war work took place at Houston in 1945, when the War Production Board authorized a plant to supply allyl chloride, allyl alcohol, and D-D; the first two required in pharmaceuticals and resins, while the latter was employed as a soil fumigant to help increase food production throughout the nation. By 1946, Shell had developed Shell 105 catalyst, which has

since been adopted for use in all petroleum butadiene plants operating under the government program.

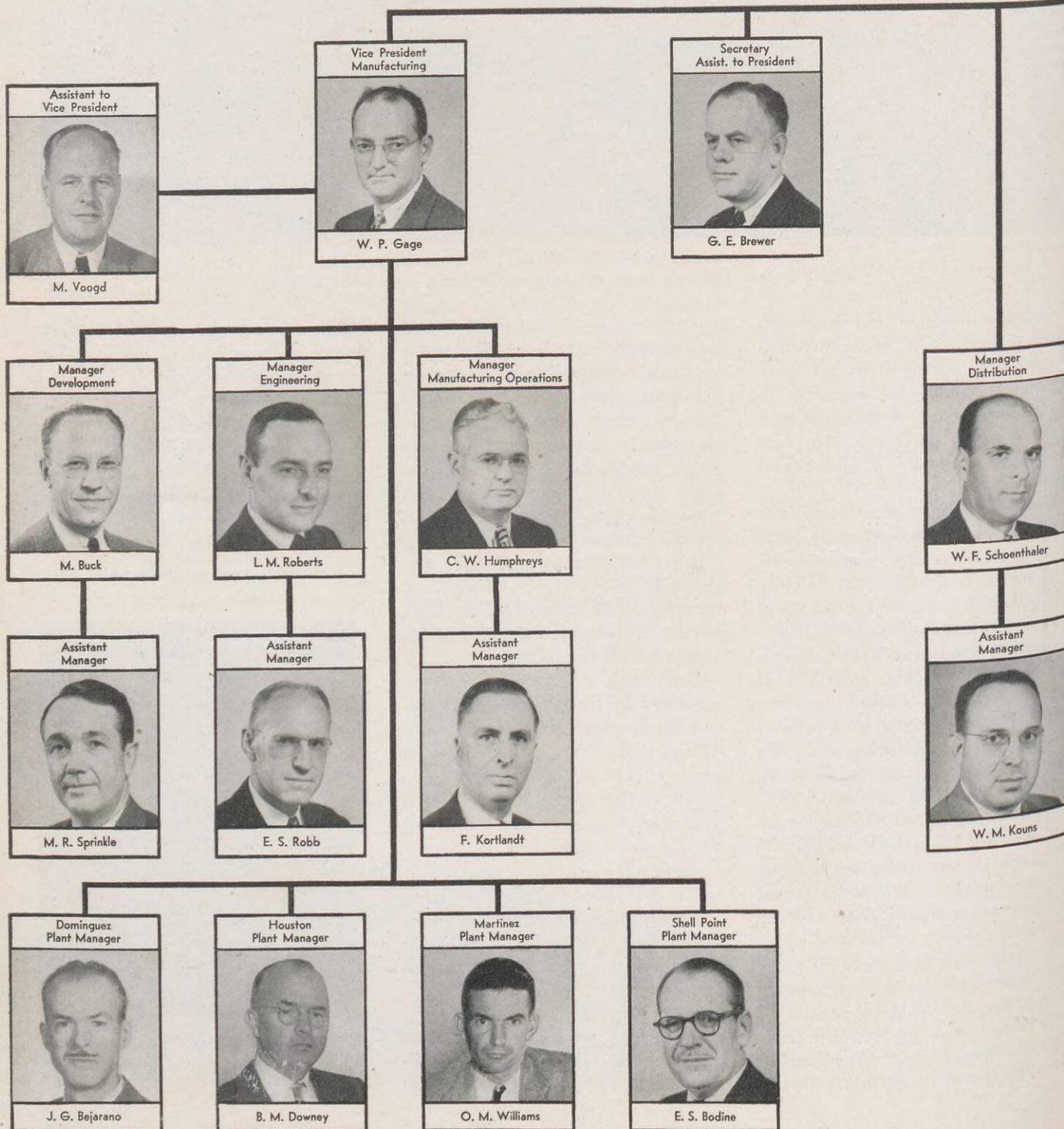
After the end of the war, Shell Chemical turned once again to peacetime production, working to make up nationwide chemical shortages. From this effort has sprung the \$43,000,000 expansion program at Shell Chemical's four plant installations.

*(Continued on page 18)*



THIS MONTH'S COVER: "One of the modern units used by Shell Chemical for the manufacture of chemicals from petroleum."

# SHELL CHEMICAL CORPORATION



# MANAGEMENT ORGANIZATION CHART

October—1948

President



J. Oostermeyer

Treasurer



A. G. Schei

Assistant  
Treasurer



J. Rysdorp

Office  
Manager



H. M. Kurtz

Vice President  
Marketing



L. V. Steck

Assistant to  
Vice President



J. P. Cunningham

Manager  
Economic Research



M. W. Leland

Manager  
Marketing Operations



M. L. Griffin

Manager  
Sales Development



V. C. Irvine

General Manager  
Western Division



G. R. Monkhouse

Sales Manager  
Eastern Division



J. M. Selden

Technical Advisor  
Exports



P. E. Joyce

Sales Manager  
Export Division



G. R. Johnson

Sales Manager  
Western Division



B. K. Read

## Shell Chemical Corporation

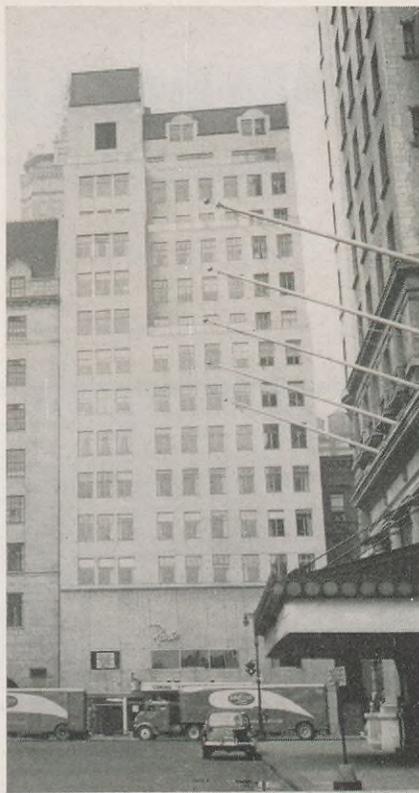
### Head Office Move

Since the greater volume of Shell Chemical's business is in the East, it was decided early this year to move the Head Office to New York.

A major move of this kind is an operation not to be undertaken lightly since it involves the welfare of many people. E. S. Bodine was given charge of the operation. It was his job to find office space for 115 people and to help obtain living quarters for the 307 members of Shell Chemical families. Arrangements had to be made for the transportation of office furniture, household effects, automobiles and other personal property.

A cavalcade of motor vans was assembled in San Francisco for a movement of office furniture timed to arrive in New York over Labor Day weekend and the new Head Office was opened the following Tuesday morning. More than 500,000 pounds of personal effects were sent by motor van.

The Head Office is housed in four floors of a new building at 4 West 58th Street, just around the corner from Fifth Avenue. It enjoys the very latest in design and comfort. The walls are decorated in a variety of soft colors conducive to a cheerful atmosphere and the lighting is arranged to prevent eye strain. The building is air conditioned throughout. The move was completed without incident and in time for the children to make opening day at school.



The recent Labor Day week-end saw moving vans discharging Shell Chemical office equipment before the building at 4 W. 58th St., New York City, new Head Office location.

### Shell Chemical Looks Ahead

The rise of chemicals from petroleum on the industrial stage has been so rapid that only a fast-stepping, flexible organization could keep up with it. Shell Chemical's first plant products appeared on the market as recently as 1931. Today it is a recognized leader in its field.

As mentioned above, its first efforts

were directed at agricultural markets of the Far West. But, as the Company grew, its products found great demand in the industrial East. Today, much of Shell Chemical's business is in the territory East of the Rockies. This does not mean that product acceptance has lessened on the West Coast. On the contrary, the manufacturing facilities at all three plants on the West Coast have been expanded during the past three years. At Shell Point, for instance, a \$3,000,000 addition to the manufacturing facilities for ammonia will go on stream early in 1949. At Dominguez, a large addition to the acetone plant will be finished late next year and, at Martinez, a new additives plant is about to go on stream.

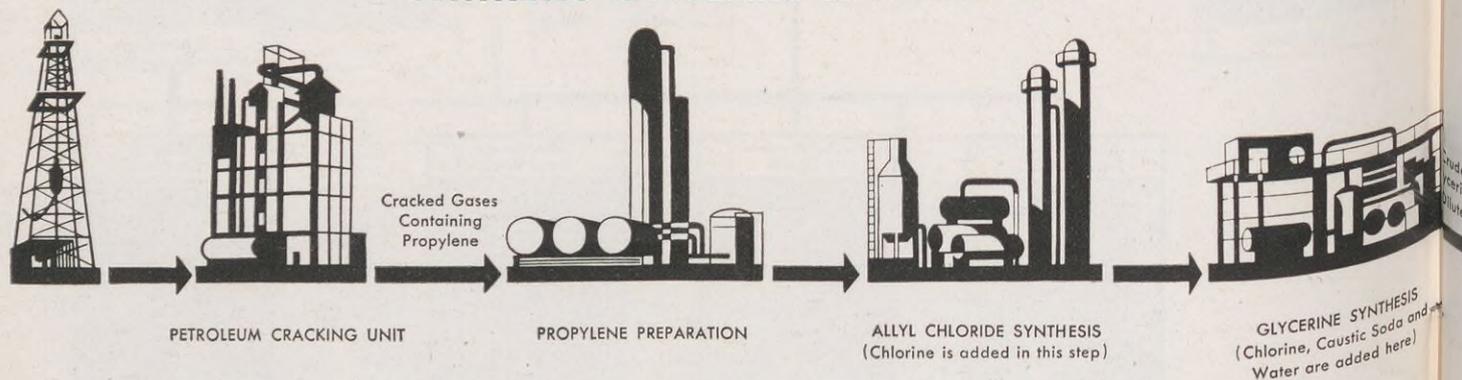
But the great potential in the industrial field is in the East. There are located most of the plants of the chemical-consuming industries, Shell Chemical's main customers. At the close of World War II, Shell Chemical had its plans made for thorough exploitation of the Eastern market.

The Houston plant was chosen as the principal source of supply for the Eastern market for two principal reasons: (1) Because of its position next door to the Shell Oil refinery, (2) Because of the availability of economical transportation by sea and inland waterways. Consequently, the greater portion of Shell Chemical's \$43,000,000 plant expansion is taking place at Houston.

### Synthetic Glycerine

A number of different units have gone on stream at Houston during the

## SYNTHETIC GLYCERINE MANUFACTURE



past year or so. These include manufacturing facilities for secondary butyl alcohol and methyl ethyl ketone, hexylene glycol, ethyl alcohol, ethyl chloride, methyl isobutyl ketone and methyl isobutyl carbinol.

But the most significant of all is the new synthetic glycerine plant which was recently dedicated in the presence of many distinguished guests including Dr. William V. Houston, President of Rice Institute, who made the dedicatory address.

### One of World's Most Useful Liquids

Glycerine is probably used more and talked about less than any comparable chemical compound in existence. Along with water, it is one of the world's most useful liquids, being a component of literally thousands of everyday products ranging all the way from cigarettes to high explosives. But despite its widespread usage, the average American is either totally unaware of its value, or recalls only a very few examples of its use. The chief reason for this paradoxical position is that glycerine is seldom used by itself, but instead is employed in the manufacture of thousands of other products, most of which play some part in providing man with the ease and convenience he enjoys a hundred times a day. Because it is harmless to the human body, glycerine is widely used in foods to maintain adequate moisture and prevent separation and spoilage. Candy, soft drinks, mayonnaise, baked goods and flavoring extracts are just a few of the foods in which it is employed. Glycerine is used in the manufacture of cigarettes to keep the tobacco moist. In addition, it is used in the manufacture of shaving cream,

tooth paste, and such diverse products as glue, cosmetics, paper, hair tonics and printing rollers.

But most of America's glycerine is used in three types of products. The first and most important is paint, varnishes and lacquers. In 1941 more than forty million pounds of glycerine went into the alkyd resins so important in the paint industry. Twenty million pounds a year are used in the manufacture of cellophane. Glycerine keeps cellophane pliable and tough. The third important use is in nitroglycerine explosives, and thirty million pounds annually go for that purpose.

In all, the United States uses more than two hundred million pounds of glycerine per year. That's well over a pound for every man, woman and child. In many years domestic production has not been sufficient to fill these needs and millions of pounds have been imported to make up the shortage.

Prior to the opening of the Shell Chemical plant, glycerine has been manufactured by one or both of two methods: saponification, in which glycerine is a by-product of the soap industry; and fat-splitting, in which it is a by-product of the fatty acid industry. But because glycerine is only a by-product, its availability has always been wholly dependent on the production of soap and fatty acids. This dependence has often caused scarcity and high price.

The process of producing glycerine by chemical synthesis has provided a means of solving the problem of supply. Shell Development Company performed the basic research with the hydrocarbon gases produced during petroleum refining, and Shell Chemical is producing glycerine by syn-

thetic means today.

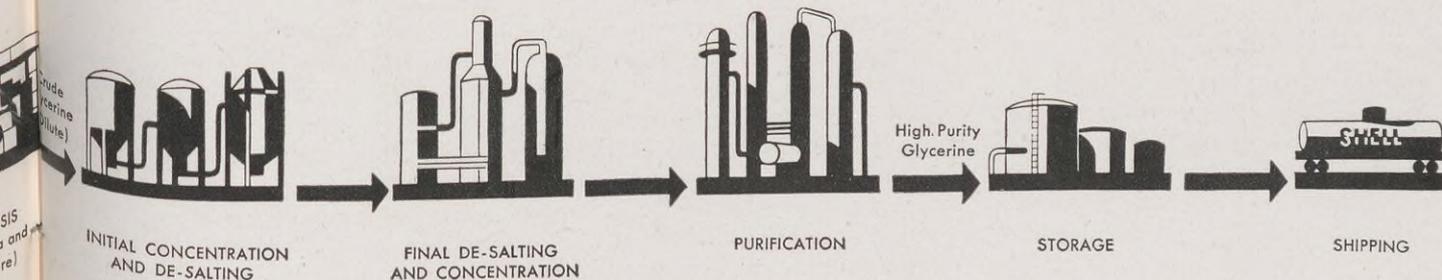
Accepting the glycerine plant in the name of Shell Chemical Corporation, President Jan Oostermeyer described the natural and man-made advantages which resulted in Houston being selected as an advantageous location for the manufacture of glycerine by synthetic means.

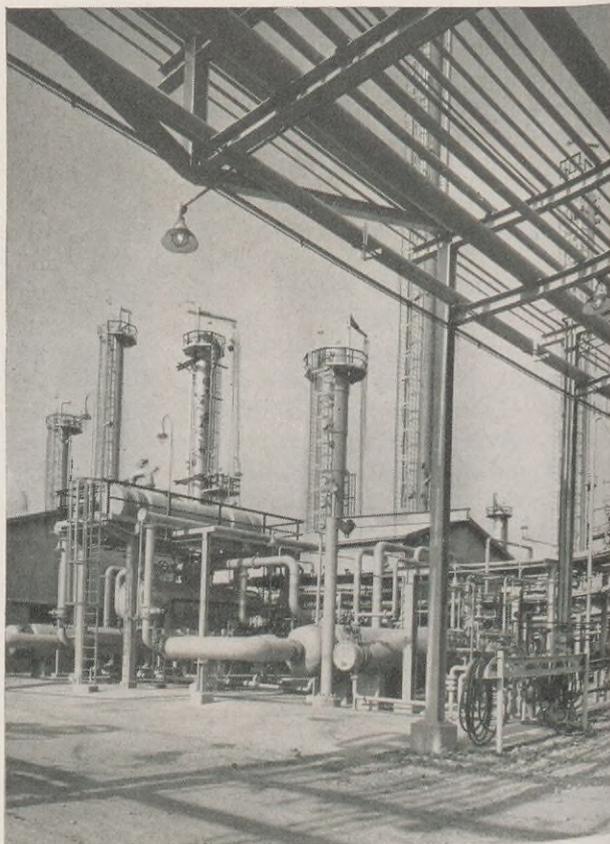
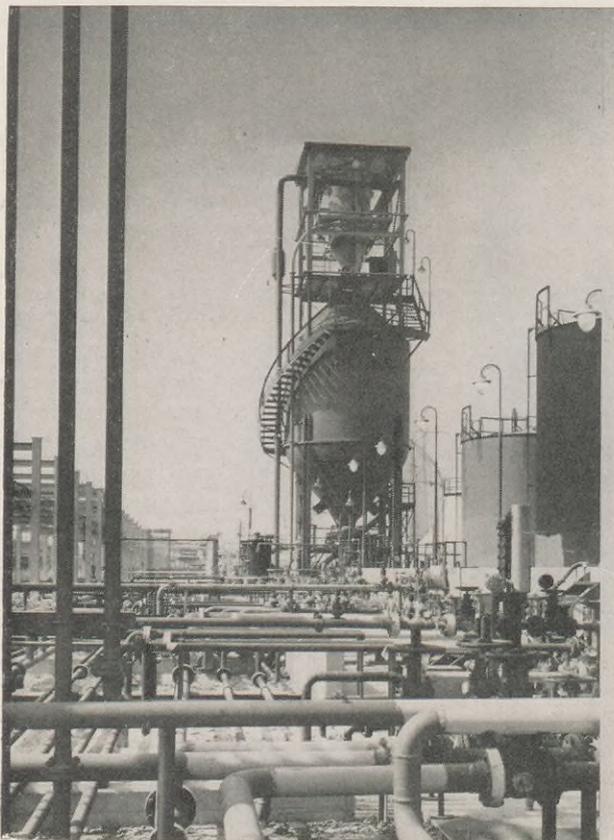
"In the chemical industry—as in any other mass-production industry—the location of one's raw materials is of the greatest importance," Mr. Oostermeyer said. "Nature, in so copiously endowing Texas—and especially this particular part of Texas—with oil, gas, salt, sulfur and other essentials of our young and growing synthetic industry, made it inevitable that we—as well as many others in our field—would gravitate here, and today our roots are as deep as the drill holes and the wells through which Texas delivers all these vital raw materials to us."

Addressing the operators responsible for running the glycerine plant, Mr. Oostermeyer expressed complete confidence in their determination and ability as to the job ahead.

"Texas has indeed been generous to Shell Chemical," he said. "Bountiful as it has been with raw materials and many other things, however, its generosity has been most outstanding with regard to what I consider our greatest asset, our operating personnel . . . who in the final analysis really have the production job to do and without whose loyalty and team effort all our research and preparation would be in vain.

"We have heard and read a great many complimentary things about the research men who invented and developed this glycerine process. This is as it should be. They have done





Shown above are two sections of Shell Chemical's new \$8,000,000 plant for commercial manufacture of synthetic glycerine which was dedicated in mid-September.

a splendid job and have reached a goal toward which many have struggled without success. Every tribute they have received has been richly deserved, and I definitely want to add my voice to the rest in extolling their accomplishments.

"Full credit must also be given to the engineers who have so ably handled the difficult phases of transition from the laboratory to the finished commercial plant. Their job has not been easy, and has required a great deal of creative and inventive effort. Many of the design features of the plant we are viewing here today are novel and unique, and I am sure it will impress you all with the truth of the statement that America's industrial ace-in-the-hole is its engineers.

"But today the burden of responsibility is about to shift. The research scientists and the engineers have run their portions of the glycerine relay race, and now the baton is to be passed to you—operating employees of the plant—and it will be your job to carry it successfully over the finish line.

"This is a big responsibility we shoulder you with, and naturally our expectations are high after the gratifying experience during the construction when all concerned worked shoulder to shoulder to make this job a success. Your work will be anxiously watched, not only by the whole chemical industry in this country and especially the 14 chemical companies who are represented here

today, but also by the armed forces where this very operation is apt to play such an important part in the national security of this country. I am confident that all these people have faith and trust in you men and women and that they will not be disappointed."

Dedication of the \$8,000,000 plant at Houston was a banner occasion for all those who had played a part in the development of the process, as well as those charged with responsibility for operation of the units. The plant is the first of its kind in the world. More than that, it is a symbol of progress; the progress of a young, dynamic organization whose feet are on the ground and whose eyes are on the future.

# A Survey of 1947

A Review of the World-Wide Activities of  
the Royal Dutch-Shell Group of Companies

*(Reprinted from "The Shell Magazine")*

THE annual reports for 1947 of the Royal Dutch Company, the "Shell" Transport and Trading Company, and various associated companies have recently been issued. They present a significant evaluation of the world petroleum picture and an excellent review of the Group's accomplishments during the year just past.

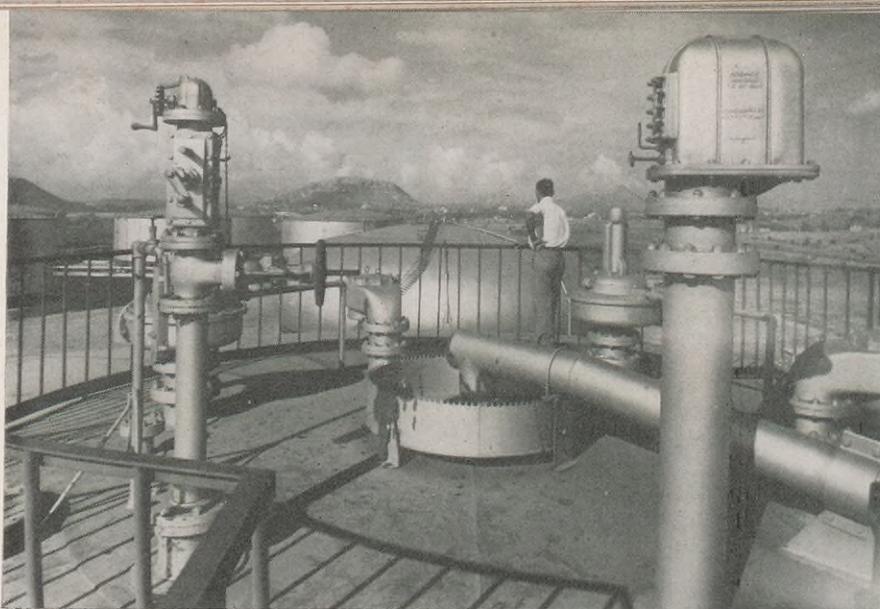
A fully comprehensive summary of these reports is not possible within our space limitations. This article, therefore, will be limited to a brief review of major activities carried on by the Group throughout the world during the past year.

## **The World Background**

Once again the most striking feature of the petroleum industry during the year under review has been the astoundingly rapid expansion of the demand for petroleum products. Consumption in the United States alone increased by 196 million barrels to 1,989 million, and the United States is consuming more oil than the entire world was ten year ago. Despite the

Oil amid the banana plantations of Venezuela.





Storage tanks at Shell's Curacao (B.W.I.) Refinery *Robert Yarnall Richie*

magnitude of the indigenous oil industry in the United States, the requirements of consumers could not be met in full, with the result that the country has now become on balance an importer. It is even estimated that by 1951 the United States will be the largest importer of petroleum products in the world, while the relatively small volume of their oil exports will consist chiefly of special products, lubricating oils, and other high-grade commodities.

Elsewhere, the effects of increasing stringency on the world supply of petroleum products were superimposed upon those arising from an acute shortage of dollars for the purchase of such meager supplies as were available. In the United Kingdom these factors led to increased severity of gasoline rationing. Some countries which discontinued rationing found it necessary to re-impose it, and in a number of other countries various other forms of restriction of the use of motor transport were in force.

The high cost of coal led to conversions to the use of fuel oil in the United Kingdom and other countries for many industrial purposes for which oil had not previously been considered economical. This resulted in increased pressure on world supplies of fuel oil and in some cases the demand was met partially by the increase of fuel oil production at the expense of gasoline.

The achievements of the petroleum

industry during this difficult year nevertheless provided proof of its efficiency and resourcefulness. World production of crude oil again set up a new record with a total (including natural gasoline) of 3,159 million barrels. World production of petroleum products is today approximately 60 per cent larger than in 1938, much of this additional production being obtained from new oilfields, such as those discovered in Venezuela and the Middle East.

These results were achieved despite the world-wide shortage of steel, which has impeded the efforts of manufacturers to provide the additional oilfield and refinery equipment, the pipelines, and the tankers that are needed to convert the abundant crude resources of the world into finished products and to carry these to the consumers. The availability of steel and manufacturing equipment is a governing factor, too, of the time within which the vast programs of development that are planned by the petroleum industry to meet the increase in world demand can be brought to fruition. Meanwhile, economy in the use of petroleum products is a necessity which places on consumers a responsibility for the discriminating use of oil fuels, whether for private or industrial purposes.

### **Exploration and Production**

World-wide production of the Group, including production of nat-

ural gasoline, totaled nearly 275 million barrels in 1947 compared with 229 million barrels for the previous year. The total quantity of crude oil produced, outside the United States and Canada, by the Royal Dutch-Shell Group of companies was about 24 per cent greater than in 1946. This figure compares favorably with the increase in production for the whole world (excluding the U.S.A. and the U.S.S.R.) of about 14 per cent.

Group production, world-wide, for 1947—with comparable figures for the previous year—is shown, by countries, in the chart on the opposite page.

### **Refining**

Much progress was made during 1947 in extending refining capacity. The increased dependence of Europe upon Middle East crude has made it necessary to provide additional refinery facilities in Europe. By an agreement concluded in France with Raffineries de Berre, a share was obtained in a refinery on the Mediterranean in a very good position for dealing with crude imported from the Middle East.

In the United Kingdom an agreement was reached with the Government for the purchase of the refinery section of the aviation fuel plant at Heysham, Lancashire. As a result of six weeks' intensive activity the first unit was brought into operation by mid-March, 1948. Work was continued on the new refineries at Stanlow and Shell Haven, and it is hoped that the former will be in partial operation by mid-1950 and the latter a year later.

The refinery at Pernis (Rotterdam) worked at full capacity, and the total throughput exceeded the 1938 figure by 50 per cent (about 1,200,000 metric tons as compared with 800,000). The area of the refinery has been considerably extended by the leasing of land from the Rotterdam Municipality.

The extension of the refinery of the Consolidated Refineries Limited at Haifa has been fixed at 7,500,000 metric tons a year, of which more than 3,000,000 will be at the disposal of Shell. Haifa Refinery has been

temporarily shut down owing to the present local disturbances, but construction of the new lubricating oil factory is making satisfactory progress.

Curacao Refinery worked at full capacity, and a new plant was put into service to help meet the increasing demand for high-grade lubricating oils. The new refinery at Cardon (Venezuela) is expected to come into operation early next year.

### Future Supplies

In his concluding remarks in the Annual Report of the "Shell" Transport and Trading Company, Ltd., the Chairman, Sir Frederick Godber, referred to the vastness of the world's known oil resources. In the last 20 years continuous discoveries had led to an increase in established reserves from 23,000 million barrels in 1928 to 72,000 million barrels in 1948. In

addition, extensions to known fields must be taken into account, as well as new fields not yet drilled, including the reserves reasonably believed to be present in off-shore and sea areas adjacent to existing production.

"No one need be pessimistic," ended Sir Frederick, "about the future of crude oil supplies. The oil is there and the immediate problem is to make it available for consumption as quickly as the demand requires."

## CRUDE PRODUCTION 1946-1947

(Including natural gasoline)

ROYAL DUTCH - SHELL  
AND ASSOCIATED  
COMPANIES



		1947 Barrels	1946 Barrels
VENEZUELA	CARIBBEAN	22,223,000	16,689,000
	V.O.C.	94,310,000	77,032,000
	COLON	4,662,000	5,705,000
	N.O.M.	17,351,000	16,521,000
	TRINIDAD	5,102,000	5,121,000
	ARGENTINA	3,930,000	3,841,000
	COLOMBIA	4,780,000	3,209,000
	UNITED STATES	76,705,000	70,473,000
	NETHERLANDS EAST INDIES	6,767,000	2,100,000
	BRITISH BORNEO	12,970,000	2,050,000
	EGYPT	9,300,000	8,940,000
	IRAQ	7,557,000	7,625,000
	ROUMANIA	7,756,000	9,223,000
	NETHERLANDS	739,000	218,000
	AUSTRIA	619,000	618,000
	GERMANY	214,000	250,000
	<b>TOTAL</b>	<b>274,985,000</b>	<b>229,615,000</b>



# push button plant

New Houston Plant Now Producing Lubricating Oil Stocks Exemplifies Latest in Modern Refinery Design

IT is no secret that users of lubricating oils are calling for more each year, for the trains, planes, tractors and other machines of the nation. Recognizing this demand, Shell recently brought into full production a new and ultramodern lubricating oil plant at the Houston Refinery that is one of the largest in the nation. With a capacity of 2,800 barrels per day, it will furnish additional supplies of lubricating oil stock needed by Shell, East of Rockies, and produce enough to supplement stocks on the West Coast as well.

From the new plant, which spreads over a 60-acre area, will come 12 different grades of fully refined stock

for lubricating oils. These end products will be shipped in bulk by barge, tanker and tank car to Sewaren, New Jersey and other points. At their destinations, the stocks will be blended and inhibited for commercial use before being distributed to dealers and consumers.

As many as 1,400 people at one time have worked on the building of the plant, a project undertaken by three major construction companies over an 18-month period. The first of the plant's five major units came on stream May 23, 1948, and late August saw the last of the others turned over to the Operating Department.

Handling crude oil residue from the refinery topping plants, the vacuum distillation unit first divides this stock into unrefined lubricating oil fractions. The heaviest fraction is then passed on to the propane de-asphalting unit, where propane is used to remove asphalt which, if left in lubricating oil, would cause sludge and consequently lower the performance of the oil.

All potential lube fractions go through a third process in which certain aromatics detrimental to the oil are removed by phenol in a procedure known as phenol extraction. Next, the dewaxing plant removes wax from the stock which then flows

to the final unit for contact filtration. In this last process, fine clay is mixed with the oil and later removed by filters. The clay treatment improves the color and stability of the oil, removes traces of moisture, acids and soaps and takes out unstable hydrocarbons not previously removed.

Operation of the five units is carried out in accordance with the most modern refinery practices. Automatic controls enable operators to change temperatures and control flow with the push of a button, the flick of the wrist or the turn of a knob. The men who operate the plant work in sound-

proofed, air-conditioned control rooms where long rows of dials and charts tell the step-by-step story of the plant's operation.

The pipe which connects the units is carried above the ground on overhead racks, making it easy to locate and reach for maintenance, less subject to deterioration, and easier to change if the occasion for redesign should ever arise.

The new plant's storage tanks for charge stock and refined products are capable of holding 1,000,000 barrels. Finished products are moved from these tanks to the docks through a

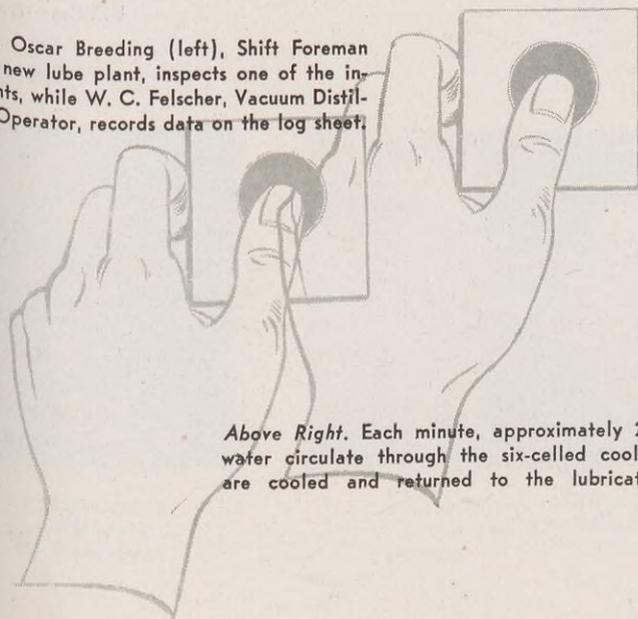
pipe line. Lubricating oil of various grades flows through the line in tenders, one after another, without mixture taking place.

To safeguard the operators and the plant itself, fire stations are strategically located throughout the plant area, carrying steam and water manifolds as well as the usual hoses. The water manifold supplies sprays for furnace stacks and pump rooms, while the steam manifold can be used to smother stubborn oil fires in furnaces merely by opening a series of valves from a safe distance.

Control rooms are equipped with



Above. Oscar Breeding (left), Shift Foreman at the new lube plant, inspects one of the instruments, while W. C. Felscher, Vacuum Distillation Operator, records data on the log sheet.



Above Right. Each minute, approximately 25,000 gallons of water circulate through the six-celled cooling water tower, are cooled and returned to the lubricating plant units.

alarm lights which blink when the danger point is reached in any part of a unit, while each alarm light controls an air howler to sound a warning as well. Special explosion-proof telephones are mounted at all hazardous locations, with fire instructions painted prominently on their cases.

Efficient as modern engineering can make it and capable of yielding more product per year by remaining continuously on stream over long periods of time, the new lube plant will strengthen Shell's competitive position in the important market for lubricating oils.

# They have Retired



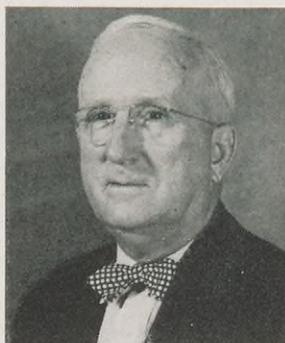
**JOHN W. WATSON**, Vice President and Treasurer of Shell Chemical Corporation has retired. Born in Carlisle, England, Mr. Watson came to the United States via Alberta, Canada, where he was a chartered accountant in public practice. He began his career with Shell in 1930, in San Francisco, after being associated with the public accounting firm of Price, Waterhouse & Co. Later the same year, he became Assistant Controller of Shell Petroleum Corporation in St. Louis, and subsequently held in succession the posts of Controller, Treasurer, and Vice President and Treasurer of that company. He became Treasurer of Shell Oil Company, Incorporated, in New York, in 1940, and has been with Shell Chemical since 1944.

Mr. Watson resides in Sausalito, California, and is a certified public accountant and a member of the American Institute of Accountants. Always interested in young people, he plans now to give much of his time to youth education and community activities in the San Francisco Bay area. He also looks forward to continuing his many interests and activities in the fields of accountancy and finance.

## Manufacturing



**E. A. ADAMS**  
Wood River Refinery  
Engineering Field



**J. E. MUNSON**  
Norco Refinery  
Main Office



**F. J. SCHINAGLE**  
Wood River Refinery  
Utilities

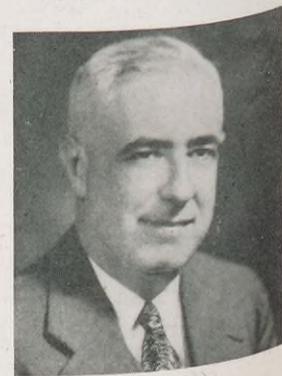
## Head Office



**W. I. SHATTUCK**  
Wood River Refinery  
Engineering Field



**E. N. WEST**  
Wood River Refinery  
Stores



**I. L. KEMP**  
Head Office  
Marketing Plant

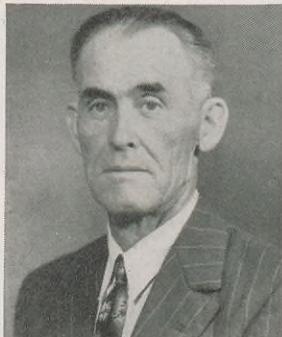
## Exploration and Production



T. M. BURGETT  
Tulsa Area  
Production



F. M. COLLARD  
Houston Area  
Production



L. J. FARRIS  
Tulsa Area  
Production



S. W. GIBSON  
Tulsa Area  
Production



C. W. KERR  
Tulsa Area  
Production



A. R. LANDON  
Tulsa Area  
Production



J. E. MOORE  
Tulsa Area  
Production



O. C. SLAVENS  
Tulsa Area  
Production



L. M. SLACK  
Houston Area  
Production

## Transportation and Supplies



P. LARSON  
Products Pipe Line  
East Chicago, Indiana

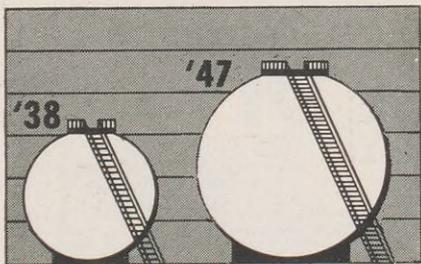
## Marketing



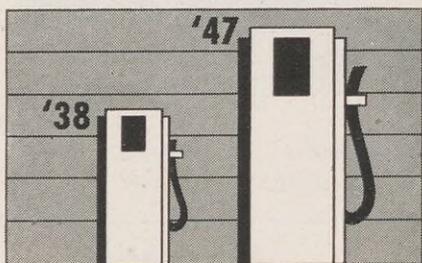
R. J. AGNER  
Cleveland Division  
Operations



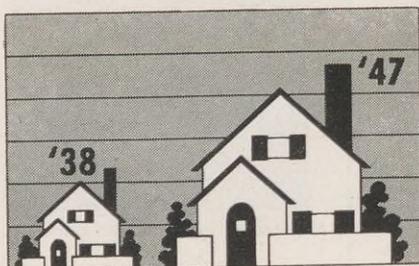
P. N. STIVER  
Indianapolis Division  
Sales



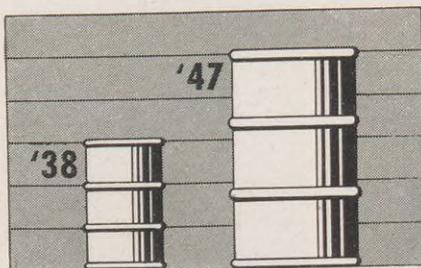
**REFINING:** Oil refineries handled 1.83 billion barrels of crude oil last year—with facilities expanding, refineries will soon top this mark . . . deliver even more oil products in 1948.



**GASOLINE:** America's huge motor fleet now numbers over 37 million vehicles. That's 7 million over 1938. Cars average about 730 gallons yearly . . . trucks, buses use even more.



**DOMESTIC FUEL OIL:** Demand for fuel oil has skyrocketed since 1938. Today, over twice as many oil burners are used in heating the homes, schools and hospitals of the country.



**LUBRICANTS:** Farms, railroads, mines and factories require ever increasing quantities of lubricants. Production of lubricants has increased 68% in the decade since 1938.

# Oil Progress Day

**T**HE United States petroleum industry, on October 14, celebrated "Oil Progress Day," when oil companies and oil men and women throughout the country reported to the American public on the industry's record of growth and achievement.

Prominent among events of the day were radio broadcasts featuring interviews with men and women of the industry, civic gatherings, and "open house" at many plants, service stations, producing properties and other installations. Civic organizations, public officials and leaders in the schools in scores of communities cooperated with the industry in special programs dedicated to the day.

Shell's participation in "Oil Progress Day" and during the week preceding it featured special showings of Shell motion pictures dealing with the industry to clubs and civic groups, and before other community gatherings. Shell service stations serving thousands of customers daily, displayed posters giving prominence to the day, and commercial announcements on Shell radio programs reaching an estimated 16 million people during the week, carried mention of the occasion and its significance.

The record of the petroleum industry is impressive. From a handful of companies in Pennsylvania, the oil industry in the U. S. has grown, in less than a hundred years, to an industry comprising over 34,000 firms employing directly more than 1,800,000 people and contributing indirectly to the employment of hundreds of thousands of others.

From supplying a substitute for whale oil used in lamps, it now supplies nearly one-half the total energy requirements of the entire nation.

From one oil well in 1859, it has grown to more than 430 thousand wells today, producing almost 6 million barrels of oil daily.

Where there used to be only one product, "lamp oil," there now are more than 1,200 products made from crude petroleum.

Where once there were but a few scattered "filling stations" in front of blacksmith shops and grocery stores, now there are more than 250 thousand modern "service stations" located in all parts of the country.

The reason for the petroleum industry's record of progress is no secret. The motivating force has been competition—rivalry between the thousands of companies which make up the industry. Today there are over 18,000 production companies, 400 refining companies, 2,600 transportation organizations, and more than 20,000 jobbers and distributors.

To meet the increasing demands for products and services, the industry is engaged in expanding facilities in all directions. This called for an estimated investment of \$4 billion in 1947 and 1948—equal to 20 per cent of the total gross investment in the industry.

More than \$100 million is spent annually in scientific research to develop new techniques which result in improved operations in every branch of the industry, to improve product quality, to make maximum use of oil produced, and to provide new uses for oil to meet public needs.

Through competition under the American system, and its constant desire to meet the needs of the public, the oil industry is continuing to develop its opportunities to contribute to America's progress and well being.



# SERVICE BIRTHDAYS



30 Years



W. A. KELLER  
Wood River Refinery  
Engineering Field

T W E N T Y - F I V E   Y E A R S



E. A. ELLIOTT  
Wood River Refinery  
Lube Vacuum



E. R. MUELLER  
Houston Area  
Treasury



J. NIGRA  
St. Louis Division  
Operations



L. W. PIPPENGER  
Shell Pipe Line Corp.  
Mid-Continent Area



H. W. RICE  
Tulsa Area  
Production



H. W. SCHAEFER  
St. Louis Division  
Operations



W. E. SCOGGINS  
Wood River Refinery  
Engineering Office



P. A. UFERT  
Wood River Refinery  
Cracking



G. M. WALKER  
Tulsa Area  
Gas-Gasoline



J. F. WILSON  
Shell Pipe Line Corp.  
Mid-Continent Area

T W E N T Y   Y E A R S



W. D. BOST  
Wood River Refinery  
Cracking



A. BUESKING  
St. Louis Division  
Operations



E. CLYMER  
Products Pipe Line  
DeWitt, Ill.



C. W. COLSTON  
Wood River Refinery  
Toluene



L. N. COSTILOW  
New Orleans Area  
Production



J. B. DUNLAP  
Norco Refinery  
Administration



A. GAUBERT  
Norco Refinery  
Engineering



R. C. GILMAN  
Wood River Refinery  
Engineering Field



D. W. GOLDSMITH  
Houston Refinery  
Cracking



A. M. GRUENEWALD  
Detroit Division  
Purchasing-Stores



A. F. GUIDRY  
Norco Refinery  
Boilerhouse



J. B. HARRIS  
Wood River Refinery  
Engineering Field



S. HARRISON  
New Orleans Area  
Land



P. F. HOFMEIER  
Wood River Refinery  
Alkylation



E. R. HORSTMEIER  
Chicago Division  
Administration



H. K. JOHNSON  
Head Office  
Manufacturing



W. E. KLEMAN  
Head Office  
Treasury



S. A. KOLP  
Atlanta Division  
Treasury



M. K. KOPP  
Houston Refinery  
Lubricating



F. F. KUEHNEL  
Wood River Refinery  
Engineering Field



P. F. LENHARDT  
Head Office  
Treasury



W. L. MARTIN  
Products Pipe Line  
Greenville, Ill.



C. S. MAXWELL  
Detroit Division  
Treasury



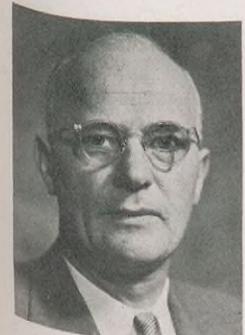
R. C. McFARLANE  
New Orleans Area  
Exploration



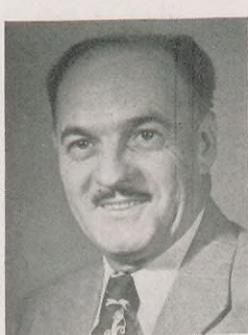
F. MILLER  
Expl. & Prod. Research  
Service



W. J. MONTZ  
Norco Refinery  
Treating



F. W. OUDT  
New Orleans Area  
Exploration



P. E. PERKINS  
Wood River Refinery  
Dispatching



P. PRZENICZNY  
Products Pipe Line  
East Chicago, Ind.



C. R. SCHRIBER  
New Orleans Area  
Production



A. A. SMITH  
Indianapolis Division  
Operations

### Head Office

15 Years

M. J. Bradley.....*Transportation & Supplies*  
D. C. Hausch.....*Manufacturing*

10 Years

E. G. James.....*Marketing*  
D. C. McMacken.....*Manufacturing*  
J. R. Morrison.....*Industrial Relations*

### Products Pipe Line

15 Years

C. G. Simmons.....*Sibley, Ill.*

10 Years

H. W. Carter.....*Zionsville, Ind.*  
R. Smith.....*Kankakee, Ill.*  
W. A. Stark.....*Terre Haute, Ind.*

### Shell Chemical Corporation

15 Years

J. W. Carter.....*Houston*  
J. W. Robinson.....*Houston*

### Shell Pipe Line Corporation

10 Years

V. L. Burress.....*West Texas Area*  
L. R. Mayo.....*Texas-Gulf Area*

### Sewaren Plant

10 Years

E. C. Carstensen.....*Terminal*

### Houston Refinery

15 Years

V. Anastosoff.....*Research Laboratory*  
J. K. Lane.....*Automotive*  
F. H. McLellan.....*Engineering*  
B. E. Norwood.....*Effluent Control*  
J. H. Weidig.....*Engineering Field*

10 Years

M. E. McNeil.....*Control Laboratory*

### Norco Refinery

15 Years

C. J. Cambre.....*Cracking*

### Wood River Refinery

15 Years

A. J. Buckholz.....*Engineering Field*  
O. A. Davis.....*Engineering Field*  
E. Gilbert.....*Engineering Field*  
V. H. Hamman.....*Alkylation*  
H. F. Head.....*Engineering Field*  
R. A. Hicks.....*Lube Extraction*  
W. J. Hubbard.....*Engineering Field*  
C. W. Judd.....*Research Laboratory*  
W. F. Kuethe.....*Control Laboratory*  
M. A. McClintock.....*Products Application*  
R. P. McFarlane.....*Control Laboratory*  
E. R. Mikeworth.....*Lube Extraction*  
C. A. Nicolet.....*Fire & Safety*  
C. E. Oetting.....*Alkylation*  
H. F. Sparks.....*Stores*  
K. L. Teter.....*Research Laboratory*  
R. Williams.....*Lube C. & S.*  
W. S. Wright.....*Engineering Field*

10 Years

E. A. Borchers.....*Alkylation*  
H. R. Gower.....*Engineering Field*  
R. E. Grammer.....*Engineering Field*  
L. J. Kelly.....*Engineering Field*  
J. E. McConnell.....*Engineering Office*  
J. W. Minter.....*Engineering Field*  
H. W. Prengel.....*Engineering Field*  
A. C. Rezabek.....*Engineering Field*  
G. Ruyle.....*Engineering Office*  
H. J. Schenk.....*Cracking*  
B. R. Shannon.....*Engineering Field*  
F. P. Springer.....*Cracking*

### Exploration and Production

#### Regional Office

15 Years

G. B. Bell, Jr.....*Purchasing-Stores*

#### Houston Area

15 Years

W. E. Burns.....*Production*

### Midland Area

10 Years

J. P. Stephenson.....*Exploration*

### New Orleans Area

15 Years

A. A. Lamb.....*Production*  
J. H. McGehee.....*Production*  
D. M. Obermier.....*Treasury*  
O. M. Thibodaux.....*Production*

10 Years

D. Dominique.....*Exploration*  
I. H. Flores.....*Gas-Gasoline*  
B. L. Jones, Jr.....*Land*  
C. R. Phillips.....*Production*

### Tulsa Area

15 Years

D. H. Bair.....*Production*  
F. W. Gibson.....*Production*  
M. L. Metz.....*Production*

10 Years

E. W. Cox.....*Production*  
O. R. Linton.....*Production*  
G. M. Longley.....*Production*  
C. W. Meeks.....*Production*  
S. J. Poindexter.....*Production*  
J. V. Simpson.....*Production*  
H. Walker.....*Production*

### Marketing Divisions

15 Years

C. P. Battle.....*Atlanta, Sales*  
E. P. Maness.....*Atlanta, Sales*  
R. W. Schwarzman.....*Baltimore, Operations*  
A. J. Uelk.....*Chicago, Treasury*  
J. G. Gilbert.....*Cleveland, Sales*  
G. W. Hart.....*Cleveland, Sales*  
A. N. Maxey.....*Detroit, Operations*  
F. E. Miller.....*Indianapolis, Treasury*  
J. W. Ott.....*St. Louis, Operations*

10 Years

J. W. Rutkowski.....*Baltimore, Operations*  
R. E. Carney.....*Boston, Sales*  
G. F. Koller.....*Boston, Operations*  
E. F. Hruby.....*Chicago, Sales*  
T. A. Burns.....*New York, Operations*  
W. C. Meyer.....*New York, Operations*  
V. J. Dillon.....*St. Louis, Treasury*

# matters of *Fact*



For your security upon retirement, at the end of 1947 Shell had paid into the Pension Trust over \$52,000,000. This sum is being added to regularly. At the rate of current payments, it will be increased by approximately \$9,000,000 in 1948.

## FAMILY PORTRAIT



ROUSTABOUT "A"

### ● JAMES W. WILLIAMS

When pumping units, engines, electric transmission lines, surface pumps or other equipment on Shell's producing leases in the Graham-Wichita Falls section of North Texas need repair . . . when there is a well servicing job to be done, such as replacing subsurface equipment or fishing for broken rods or tubing . . . James W. Williams, Roustabout "A" in the Tulsa Exploration and Production Area, will, like as not, be one of the gang that does the job.

For the past five years, he and his wife, Bobbie Kate, and their 13-year-old daughter, Barbara Kay, have made their home in Jacksboro, Texas. Although the time is still some years in the future, Williams, who has spent 22 years in the oil fields (14 of them with Shell), has already planned what he will do when retirement comes. He will take up cattle ranching—to the extent it doesn't interfere with his fishing. With this thought in mind he has already purchased a piece of range land in Oklahoma.

On the producing leases . . . in the gas-gasoline plants which dot the oil fields . . . and all along the pipe lines, there will be found the Roustabouts—more than 800 of them in all—who are a mainstay of our production operations. By helping to maintain pumps, machinery and other equipment, they are contributing substantially to the production levels necessary to meet today's record demand for petroleum products.

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