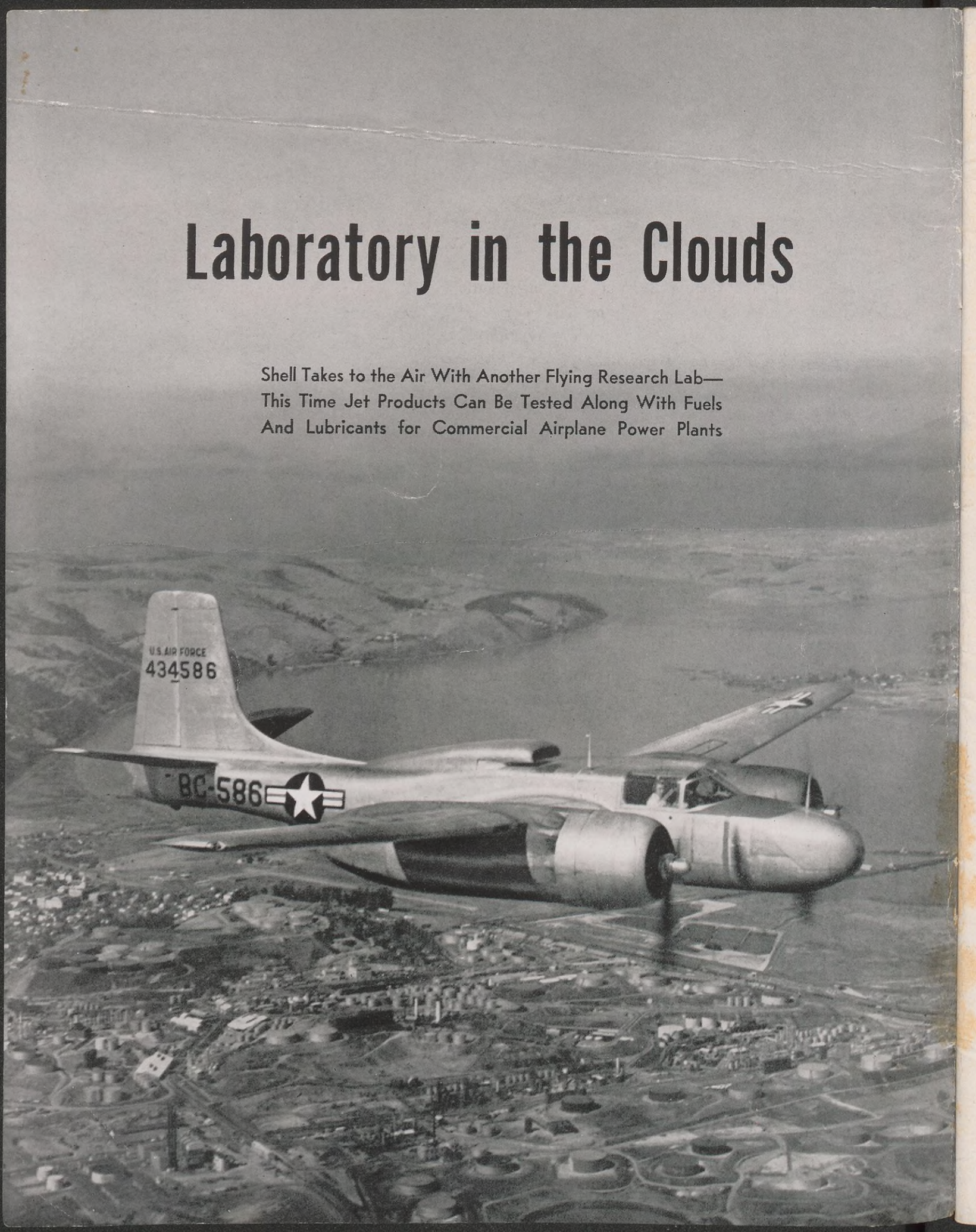
SHELL NEWS

DECEMBER 1949

Laboratory in the Clouds

Shell Takes to the Air With Another Flying Research Lab—
This Time Jet Products Can Be Tested Along With Fuels
And Lubricants for Commercial Airplane Power Plants



PEOPLE around Oakland, California, long accustomed to myriad flocks of military fighters and bombers, stop in surprise these days to stare at what looks like a bomber that has been crossed with a camel. Moreover, the tail end of the plane is a gaping hole, like the business end of a big stovepipe.

The plane that is attracting the attention of aeronautic and lay circles alike is the new "Flying Laboratory II," successor to Shell's famed B-25 that long did aviation research in the skies over the United States. The new flying lab is being used by Shell to test fuels and lubricants in two powerful reciprocating engines similar to those used in many big airliners. But it is also equipped with an auxiliary turbo-jet engine in the tail fuselage, which accounts for the humped airscoop mounted back of the cockpit and the exhaust vent in the tail.

Originally known as the Douglas A-26 attack bomber, a type of aircraft now called the B-26 by the Air Force, Flying Laboratory II is officially designated XB-26F—the X indicating its experimental duties. Recently made available to Shell for research purposes by the Air Force, it is based at Oakland.

The twin engines in the wings of the new flying lab are Pratt and Whitney R2800-83's, reciprocating engines comparable to those which power DC-6 airliners, Convairs and Martin 202's, and some types of military aircraft. For this reason, fuel and lubricant studies made with the engines of the flying lab will contribute to the efficiency, safety and improvement of commercial and military aviation.

In time additional research will be carried out with the turbo-jet engine, a General Electric I - 16 (J - 31). Though such work is temporarily deferred, the fact that a jet engine is already installed in a plane equipped with research equipment makes it possible to carry out quickly experiments requested by the Air Force, should specific turbo-jet problems arise.

The test equipment in the plane provides the means of obtaining detailed information on performance of aviation fuels and lubricants. Temperatures of each of the reciprocating engine cylinders can be measured in flight, and a Sperry engine analyzer, which has a screen like that on a

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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

contents

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SHOPPING FOR CHRISTMAS

In a marvelous wonderland of make believe—the world's largest toy store—Billy, aged two and a half, and Dorothy, nine, two of the four children of Mr. and Mrs. William R. Eagan, were busy making up their Christmas lists weeks ahead of time. Bill Eagan, an employee in the New York Marketing Division, brought his family downtown to pose for the picture on the cover and found himself getting the Christmas Spirit before Thanksgiving.

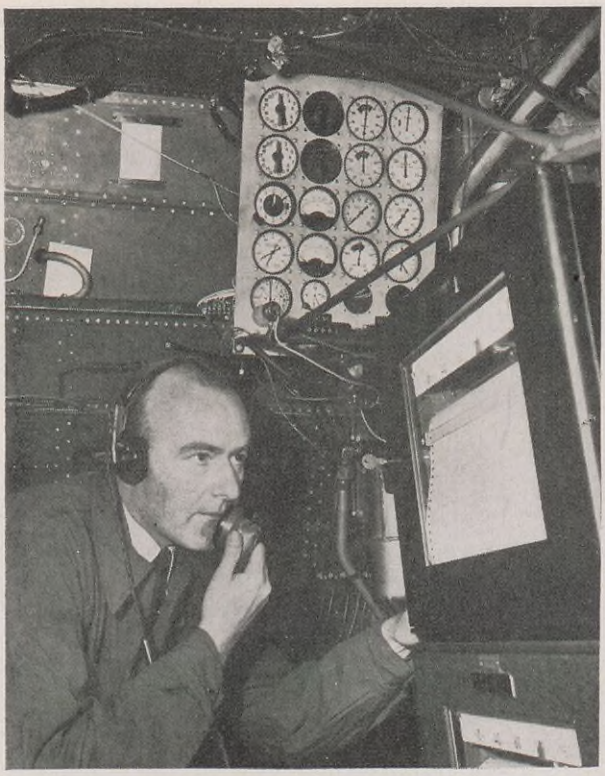
The cover shot of the Eagan family was taken in the F.A.O. Schwarz Toy Store, 745 Fifth Avenue, New York, N. Y. It was a happy experience that portrays some of the joy we wish for everyone during this 1949 Yuletide Season.

Engineer Frame-Thomson, right, shows the humped airscoop in the flying lab's back to D. C. McMacken of the Products Application Department. Air rushes into the scoop, through a turbo-jet engine, and out the vent in the tail assembly, as shown below, at left.

radar set, enables technicians to study the performance of each cylinder. Automatic control and recording devices are such that a minimum of visual readings are necessary while in the air. Thus the crew concentrates on the operation of the plane during test flights, creating the desired flight conditions, and test data are transcribed and analyzed after the plane lands.

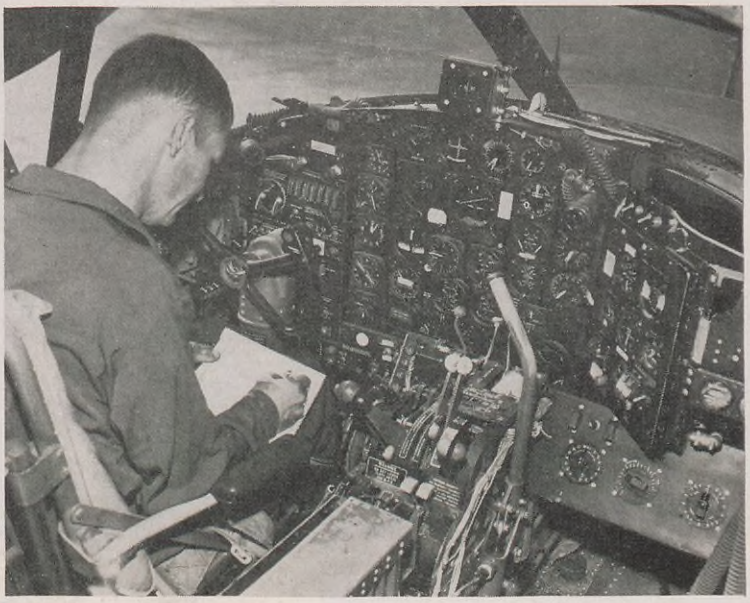
Supplements Ground Research

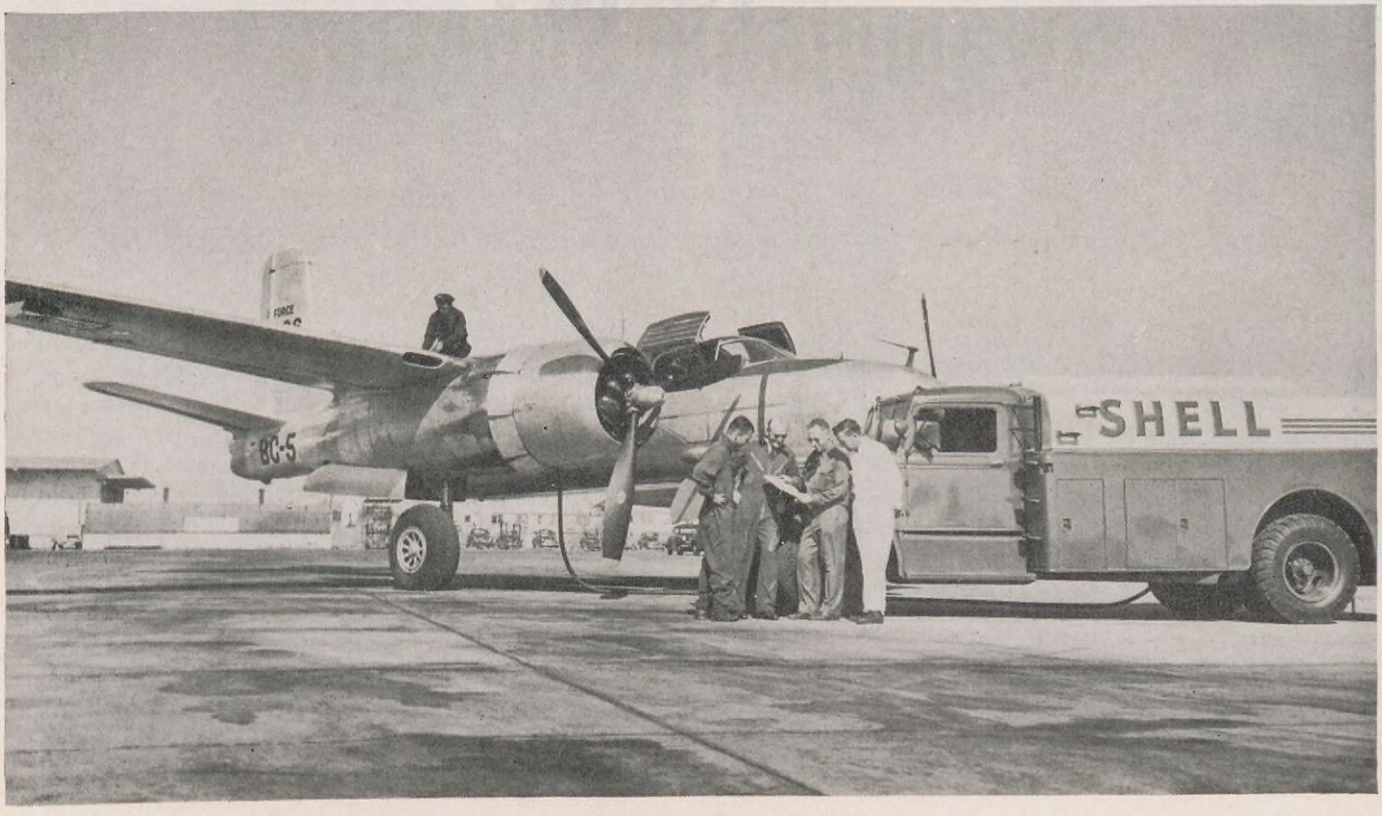
Research with the flying laboratory represents another step forward in Shell's aviation studies which have been going on for years. Tests which heretofore had been confined to laboratories on the ground, and in which it was both difficult and expensive to reproduce desired flying conditions, can now be carried out in actual flight. The valuable data obtained will go four ways: To the U. S. Air Force, to aircraft manufacturers, to airlines using comparable engines, and to Shell where it will be used to further a continuing program of aviation fuels and lubricants research.



The crew checks the flight plan while their plane is gassed. Left to right, E. M. Rohde, pilot; Thomas Frame-Thomson, engineer; D. N. Harris, engineer and director of the research, and R. J. Hughes, engineer. A fifth, land-based member of the team is Fred Watson, data analysis engineer. The program of flying research is steered by a six-man committee headed by Vice President Doolittle.

< Careful instrumentation is what makes the test plane important to Shell. Mechanical eyes, like the electronic temperature recorder, shown at the left in the bomb bay laboratory, and additional equipment like a Sperry engine analyzer installed in the cockpit, below, log detailed information about engine conditions in flight. The information is transcribed and analyzed by Shell engineers when the plane lands. >





Swampland Shooting

Members of a Shell Seismic Crew Meet Tough Going in Louisiana Lowland Country as They Help Map the Structure of Geological Formations Under the Waterlogged Land

IT'S an amphibious life for members of Shell Seismic Crew No. 18, New Orleans Area, as they push deep into Louisiana's gloomy swamps in their search for potential oil-bearing formations. Starting out in boats, men and equipment are carried through winding, narrow waterways until heavy vegetation and marshy banks halt their passage. Then, with trouser legs tied tightly for protection against snakes and leeches, the men go over the side to finish their trip on foot.

Up to their waists in water, dodging cypress roots and saw-toothed palmetto leaves, members of the party press ahead carrying a supply of dynamite and caps, coils of wire, pipe, shooting and recording equipment, a gasoline engine and a set of seismometers. When the proper location is reached, the men "plant the jugs," setting out the seismometers which are connected by the cable to the recording unit. With the aid of the portable gasoline engine, steel casing is forced into the swamp bottom to make a shot hole and dynamite is exploded in the hole, producing a miniature earthquake. Elastic waves produced by the explosion are picked up by the seismometers and recorded. These records, interpreted by geophysicists, help show the structure of geological formations under the swamp, indicating whether or not these formations are favorable to the accumulation of oil.

Seismic methods such as the one illustrated here have been applied successfully in all kinds of terrain, including swamps, deserts and mountains. Also, they are now being used in the open sea off the Gulf Coast.

Waist-deep, men of Shell's Seismic Crew No. 18 slog through the mire of a Louisiana swamp in the course of their day's work. Crew members often lend each other a helping hand for the underwater footing is insecure and the men are weighted down with coils of wire, seismometers, a gasoline engine and the other heavy equipment necessary for geophysical exploration.

When the proper location is finally reached, the crew sets out the seismometers, which are connected by cable to the recording unit.

A dynamite charge is about to be lowered into the hole and set off, to create elastic waves which will be recorded on the seismometers.

With the seismometers planted, the next job is to prepare the casing through which a shot hole will be made to hold the dynamite.

The shot hole is made on the swamp bottom by pumping water at high pressure into the casing as it is wrenched down into the muddy floor.

The explosion marks completion of the mission. Between trips, the crew eats and sleeps in a quarter boat in a nearby inlet.

West Coast Marketing Expansion

Modernization Projects Recently Completed at San Diego and Tacoma Exemplify Shell's Growing Marketing Installations

KEEPING pace with the Pacific Coast's growing demand for petroleum products, Shell has modernized and expanded two marketing terminals in recent months—one in Tacoma, Washington, and the second in San Diego, California.

In the Northwest, Shell's new Tacoma waterfront terminal facilities, previously divided between uptown Tacoma and the waterfront, have been consolidated and expanded. Fourteen new storage tanks, a modern administration building, a 5,650 square-foot warehouse, a 3,150 square-foot barrel platform and modern truck loading equipment are part of the new facilities.

Nearly 1,000 guests were greeted at the Tacoma terminal's open house last November 1st and were given a tour of the plant by salesmen from the district marketing office.

The Tacoma terminal handles more than two million gallons of petroleum products monthly, serving all of eastern Washington and a large portion of the southern part of the state.

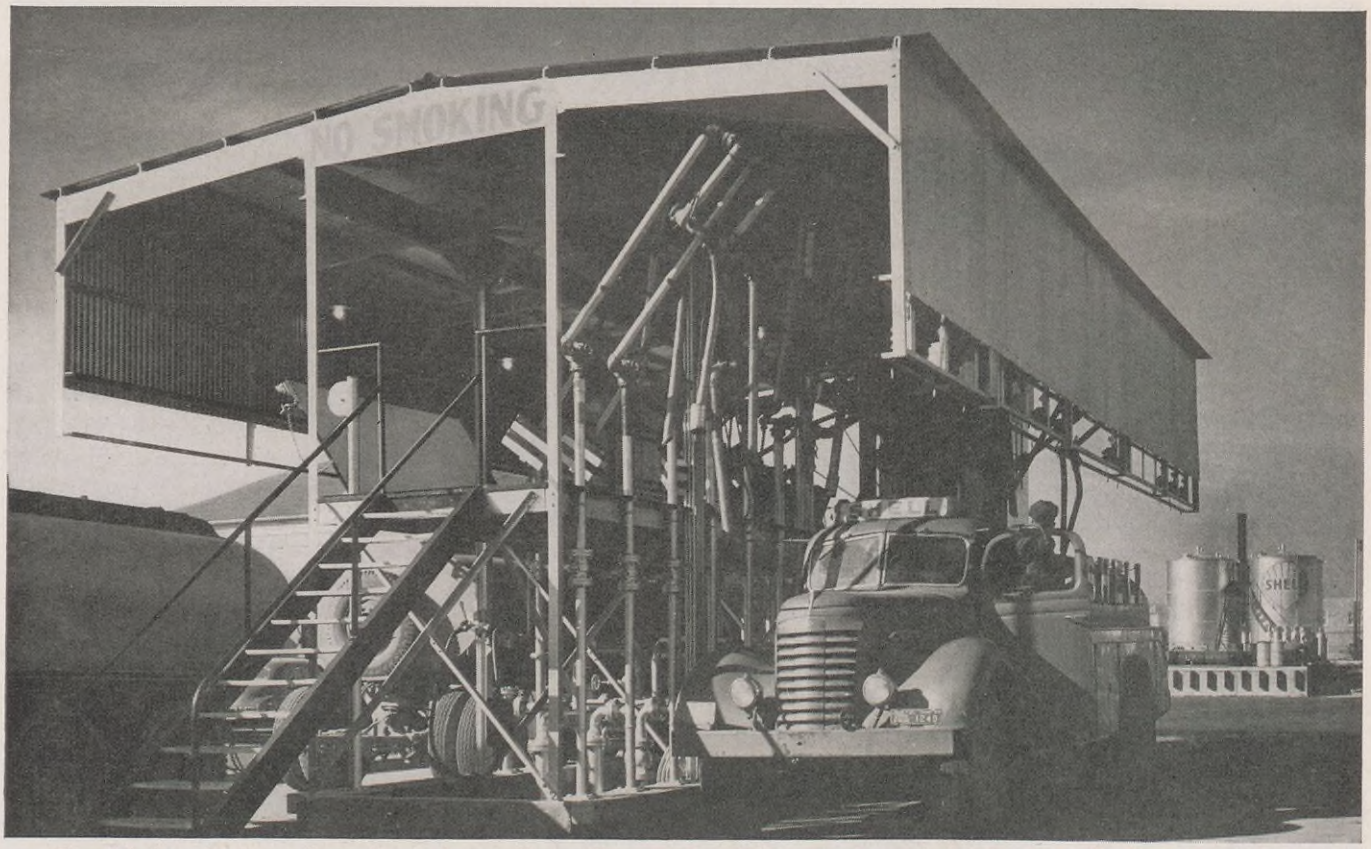
In San Diego, a new 6,000 square-foot warehouse, a new office building, new truck loading facilities, plus other modernization features have been added to the district depot as part of Shell's expansion program in the West.

Latest Safety Devices Installed

All of the latest safety devices and new equipment for efficient and rapid product handling have been built into the new plants. Characteristic of the equipment installed at Tacoma are the counterbalance aprons on the high speed truck filling stand. When lowered to the truck to be loaded, these aprons allow the operator to complete the job without climbing on the truck's surface, greatly increasing speed and safety. Swivel-type counterbalanced loading arms also allow several types of bulk products to be loaded without moving the truck.

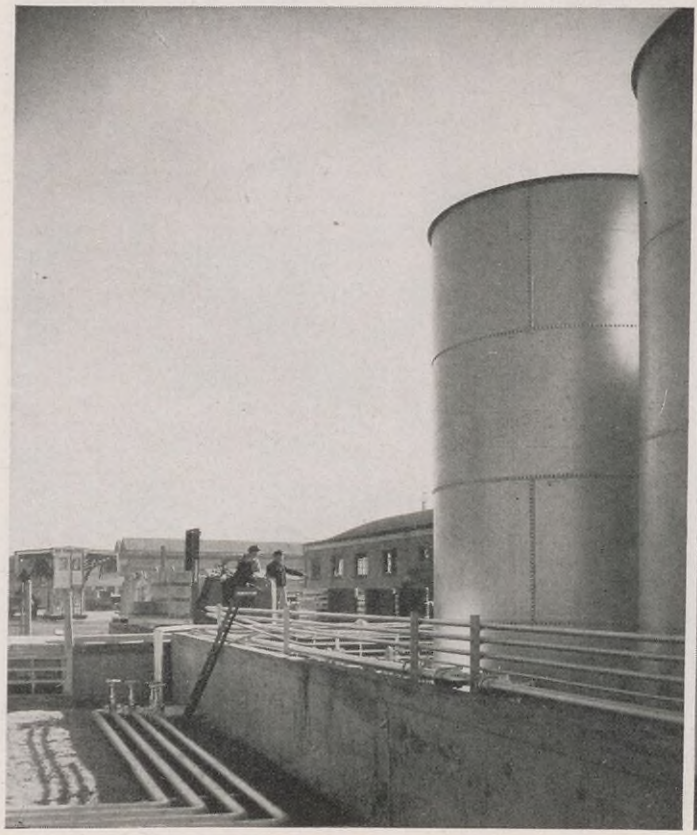
While modernization projects at San Diego and Tacoma stand out as examples of Shell's coast-wide expansion on the Pacific, a great deal of other construction work is still under way or has been completed. Largest of the projects, scheduled for completion sometime in 1950, is expansion of marine terminals at Harbor Island at Seattle and at Willbridge on the Columbia River near Portland, Oregon. Other noteworthy projects include increased facilities at Los Angeles and Redwood City, California; North Bend, Oregon; Yakima and Aberdeen, Washington; and facilities for receipt of barge shipments at the San Francisco Municipal Airport.

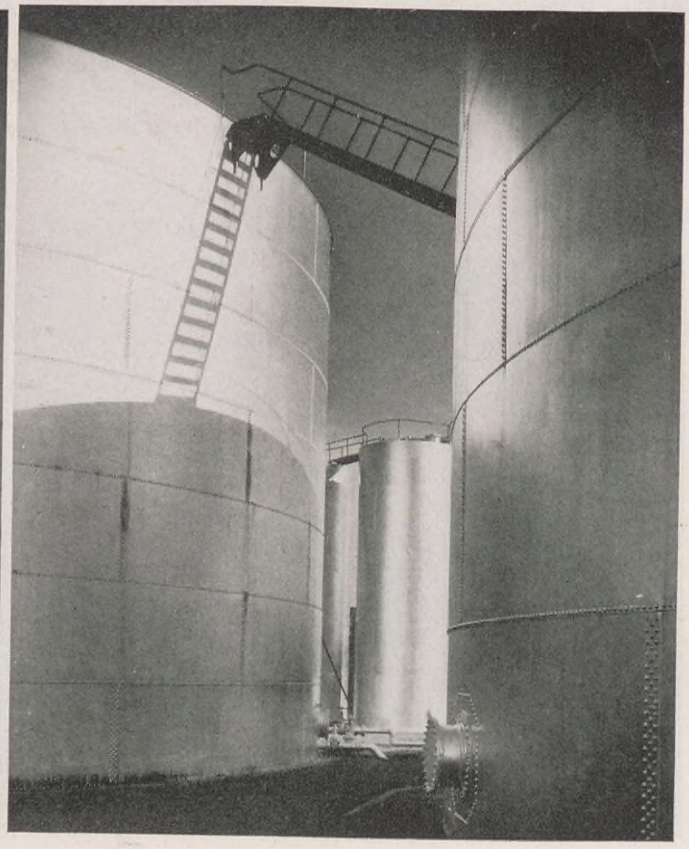
Easily accessible from land and water, Shell's modernized Tacoma Terminal is prepared for growing demand in the Northwest.



Counterbalanced apron footwalks and swivelling filling arms on the new Tacoma tank truck loading rack (above) eliminate extra work, increase safety and efficiency.

Below are some of the twenty-one product storage tanks which replace the original seven. Pipe lines from the tanks (below, left) connect with four areas in the terminal.





Nearly a thousand guests of Shell attending the open house at Tacoma terminal were greeted by Receptionist Caroline Bichler (left) and Clerk Margaret Schamerhorn amid a bank of flowers sent with congratulations by friends and business firms. Guests toured the plant.

Tacoma Mayor C. Val Fawcett (center) attended opening day ceremonies with (left to right) J. E. Pendergast, Seattle Division Mgr.; J. S. Morse, Operations Manager, San Francisco Office; L. H. Hausam, Tacoma District Mgr., and G. S. Redman, Seattle Div. Operations Mgr.

A new warehouse where floor space was increased five-fold can be seen behind the San Diego terminal's offices. A new loading rack and tanks are also visible. A railroad at the left of the property makes bulk shipments of products convenient.

Products from nearby storage tanks are transferred to drums at the new filling rack at San Diego to facilitate distribution. O. J. Graves, Plant Supt. (center), watches Yardmen G. A. Pearson and S. W. Ruhl.

San Diego District Manager S. J. Taylor (center) is shown at his desk in the terminal with Sacramento Division Sales Mgr. W. W. Stevens (left) and Fred Zeller, Los Angeles Division Aviation Representative.

PLANNED RETIREMENT:

Back to the Footlights

After a Quarter Century as Cashier in Shell's Los Angeles Office, Roy Regnier Is Making a Career of Retirement

WHEN Roy Regnier retired from the Los Angeles office, after 25 years as cashier there, he really came *out* of retirement in another career. For Roy, and Mrs. Regnier, had been vaudeville headliners before he entered the oil business, and when he left the Shell office in December, 1947, he just picked up his trombone and grease paint where he had left off years ago. And both the Regniers have other profitable hobbies which add up to a successful and pleasurable retirement—all because they had planned things that way.

"Once an actor, always an actor," Roy says with a grin. "I did quite a bit of radio and club work on the side during my years with Shell and we never lost touch with the profession. As time approached for my pension, we saw the opportunity to devote ourselves to what we liked best while living a life of relaxation free from routine work. We're mighty happy."

Any actor would be happy with the rave notices Roy gets from the critics: "Roy Regnier was priceless as comical old Uncle Smelicue," was the verdict of the Los Angeles Times on Roy's recent appearance in "Dark of the Moon" at the Pasadena Playhouse. "Outstanding," agreed the Los Angeles Examiner, while the Daily News and Pasadena Star-News added other plaudits. Mrs.

Roy once played his slide horn in vaudeville when he and his wife were billed as "The Regniers," a musical team. Now he happily plays it in the town band, does legitimate stage parts on the side.

Regnier played a smaller role in the same production, but one which earned her praise for capable characterization.

Additional accolades were given Roy more recently when he played a "fat" character part as the father of the leading lady in the Anita Loos play, "Happy Birthday." The fact that both the Regniers are "on call" with the Pasadena Playhouse, one of the country's outstanding experimental theaters, is a tribute to their talents.

Foresaw Vaudeville's Decline

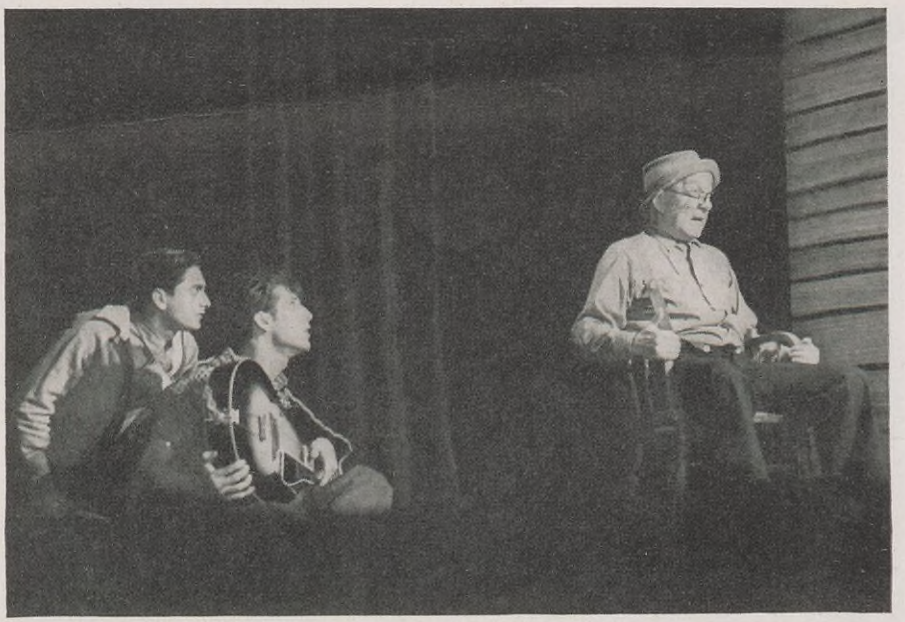
Both were on the stage from 1910 to 1920, billed as "The Regniers," a musical act which rated as a headliner season after season. But Roy, noting the rising popularity of movies, foresaw the decline of vaudeville and decided in favor of a steadier job. He took a position as assistant to the secretary of the Western Union Oil Company in 1921, and the following year, when Western Union Oil became a part of Shell, Roy did, too.

While Roy's stage work was limited during his years as a Shell cashier, Mrs. Regnier's fine soprano voice was in steady demand. She was president of the Hollywood Community Sing in 1934-35. She appeared in several motion pictures, worked in stock company productions and sang and acted on radio programs. She broke into television in a production of "Macbeth."

Now that Roy has retired from Shell and has come out of stage retirement, they are working together as in the old days, but with an important difference—they work only when they want to, with the Shell Pension and Provident Fund as a foundation on which they may "take it easy."

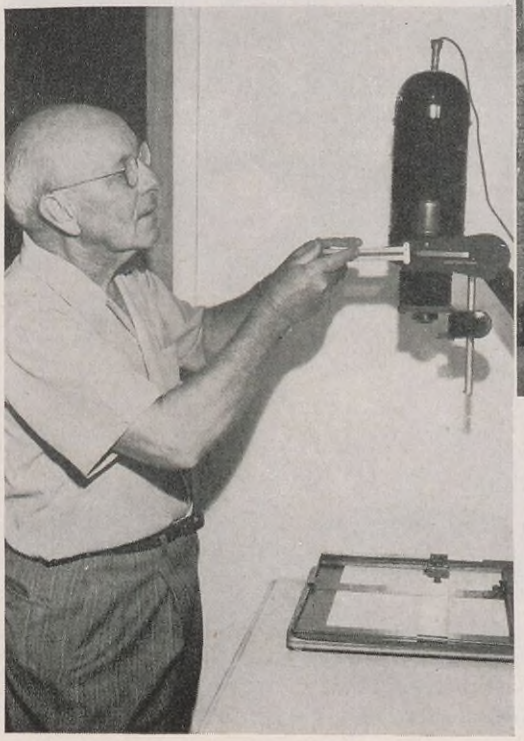
Preparing for Retirement

They had a house in Beverly Hills, but deemed the city too crowded for leisurely living. So they picked a place in Arcadia in the San Gabriel Valley. They are still handy to the city, but the house is shaded and quiet. There is a studio for Roy's photography equipment and trom-



As Uncle Smelicue in "Dark of the Moon" Roy got accolades from every critic who saw the Pasadena Playhouse production.

Back on the Chautauqua circuit in 1920 the Regniers took top billing, but Roy wisely predicted vaudeville's decline.



Photography, with his own darkroom, is just one of several hobbies Roy has in his days of retirement. Others include gardening, music and civic work.

Mrs. Regnier, an ardent hobbyist herself, raises thoroughbred Siamese cats and brilliant parakeets for sale, acts at the Playhouse, sings on radio programs, organized and directs a double trio for local shows, is a director of the Campfire Girls, and tackles many other club activities.

In their garden, Mrs. Regnier and "Uncle Smelicue" pick cantaloupes to add to a swelling larder in deep freeze and on pantry shelves. The Reignier's raise all kinds of fruits and vegetables including lemons, nectarines, walnuts, chard and Brussels sprouts. The surplus finds a ready market and adds to pin money.

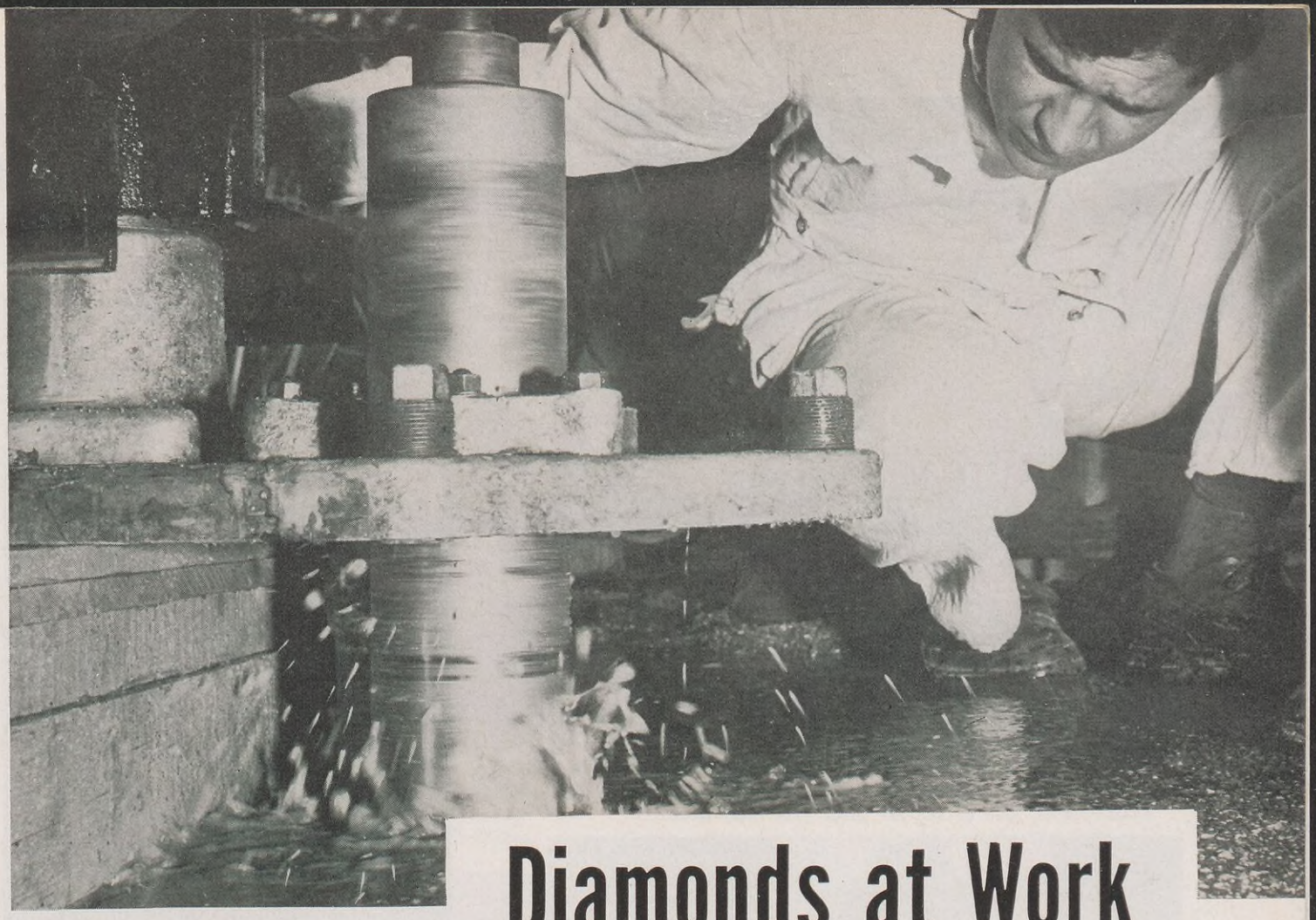
bone practice, a garage, workshop and deep freezer house. The garden is large.

In fact, "Rancho Regnier" has a harvest inventory that reads like a seed catalogue. There are nectarines, black walnuts, English walnuts, satsuma plums, apricots, peaches, oranges, lemons, cantaloupes, Persian melons, boysenberries and raspberries. Vegetables include sweet corn, cucumbers, squash, tomatoes, egg plant, kohlrabi, red cabbage, bell peppers, hot peppers, chard, Brussells sprouts and lettuce. A considerable part of this bountiful larder goes into the deep freezer, of course, and will keep the Regniers' table groaning at small cost when prices are high in the winter. Mrs. Regnier cans still more of it, and the surplus finds a ready market, adding to the family pin money.

Civic Work on Their Agenda, Too

Two of Mrs. Regnier's other hobbies are also profitable. She has always loved cats and birds, and she raises thoroughbred Siamese kittens and brilliantly hued parakeets for sale. Roy adds gadgeteering to his hobbies, making many labor-saving devices for their home. Both the Regniers are active in civic work. As a member of the town band, Roy has a great deal of pleasure playing the trombone for "Family Night" concerts at the high school. Mrs. Regnier directs the dramatic section of the Arcadia Women's Club, has organized a double trio which appears on many local programs, and is a director of the Campfire Girls.

Such is the full, yet leisurely, life of a couple who are making the most of retirement. Its ease is added incentive for the Regniers' son, Robert, an Air Force pilot, to get home leave from his station at Austin, Texas. They all wish he could be transferred nearer home to enjoy it the more. But even with his absence, the growing popularity of Roy and Mrs. Regnier in all forms of entertainment, their civic activities and their home keep them happy — because they are usefully busy.



Diamonds at Work

In a Matter of Minutes, a Coring Device Takes a Clean-cut Sample of Asphalt Pavement for Shell Laboratory Analysis

CORING and slicing asphalt-paved street sections the way grandmother pares an apple, a diamond-studded coring device and a diamond-toothed buzz saw are now playing important roles in Shell's asphalt research activities.

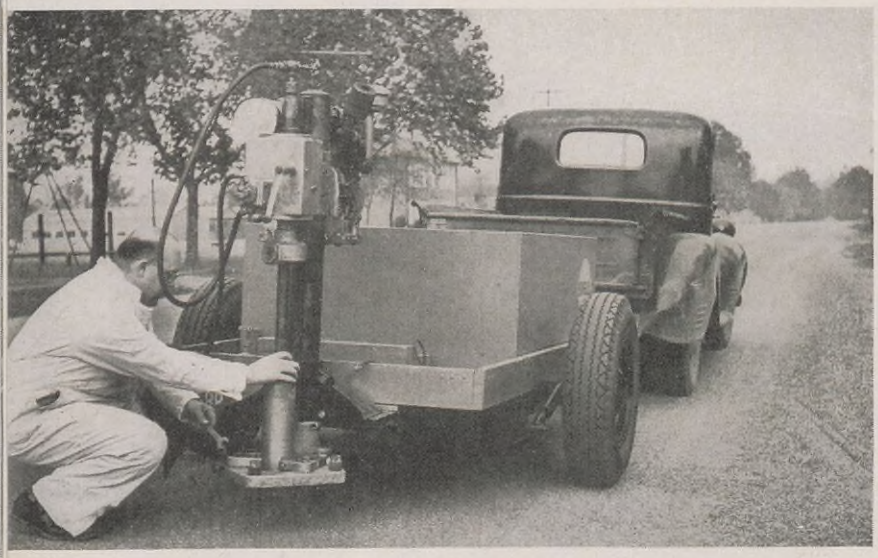
A short piece of steel tube with diamonds set like teeth around one end, the corer is used to cut cylindrical sections out of existing asphalt pavement for use in the testing apparatus of Wood River Refinery's Research Laboratory. Pavement cores are taken with the permission of state highway authorities, and the holes left by the coring machine are filled in as soon as the sample is taken. The corer is mounted on a small trailer along with a driving engine and a tank holding water to cool and lubricate its cutting edge, and is towed from place to place by a pick-up truck. At the laboratory, the asphalt cylinders are cut to proper length for the tests by the diamond-rimmed saw.

Both the corer and the saw make clean fast cuts through sand, stone and asphalt without disturbing the relationship between the asphalt and other paving components.

Laboratory engineers test the cylindrical samples cut from the streets for any possible weaknesses such as shoving, ravelling, and crushing of stone which may occur when excessively heavy rollers are used during construction. Shoving, the displacement of pavement under pressure, is usually the result of too much asphalt in the pavement or of improper gradation of the sand and gravel (aggregate) used in making the roads. Ravelling, where stones are torn from the road surface by vehicle tires, occurs when too little asphalt is employed and when aggregates having a marked tendency to absorb asphalt are incorporated.

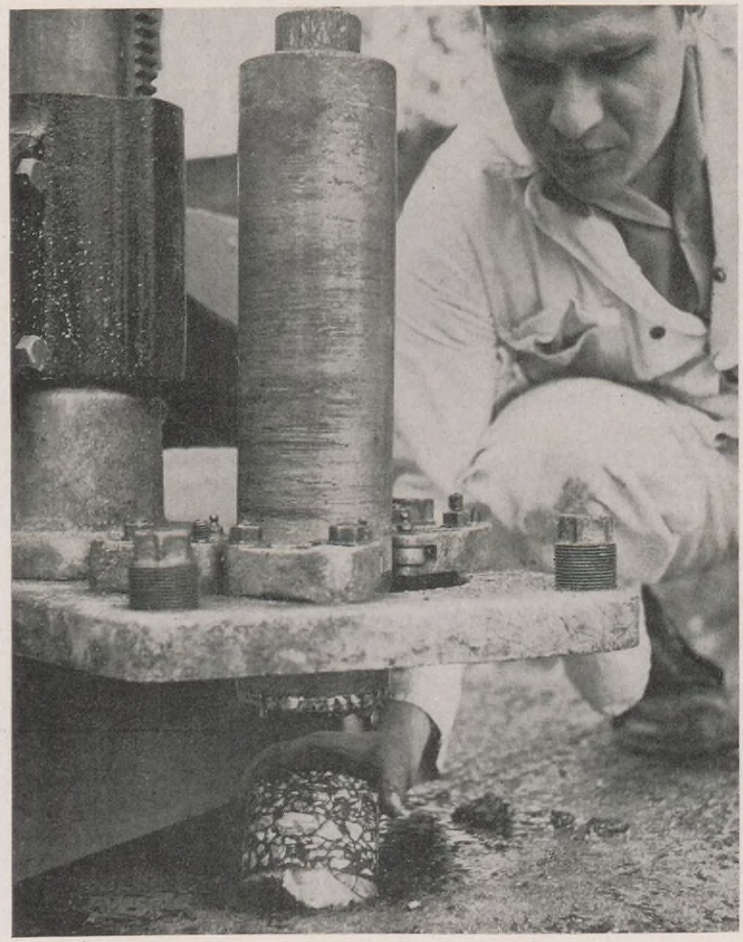
To measure the wearing quality of asphalt pavement, laboratory engineers literally squeeze the cylindrical samples to pieces in two special tests. In the first, called the Marshall test, a core sample is squeezed in from the sides. In the Triaxial test, it is pressed down from the end. The stability of the pavement is indicated by the pressure needed to break the sample.

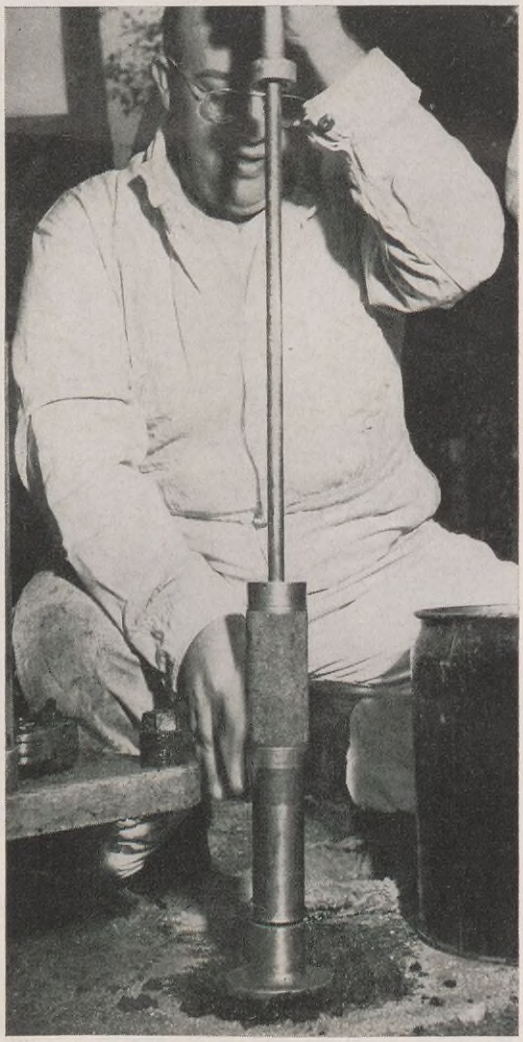
Tests are also made on samples prepared in the laboratory by packing freshly mixed asphalt and aggregate into a metal mold. The results of the various tests serve as guides for the preparation of longer-lasting paving material for the nation's highways.



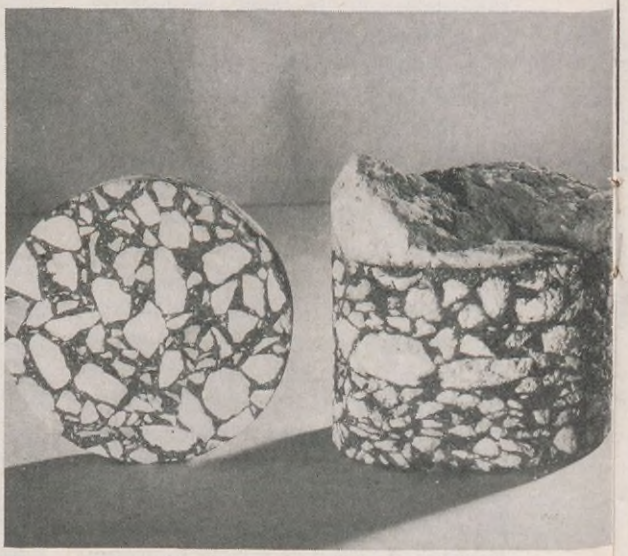
A three-quarter horsepower engine powers the business end of the coring device. Mounted on a light truck, the machine can be set up to drill and extract a deep core before sidewalk superintendents have a chance to gather and offer advice.

Rotating at high speed to produce a clean-edged core, the mobile drill is lubricated and cooled as it works by water from a 350-gallon tank. The easily-removed core represents a typical section of the road, from its surface to its bed.

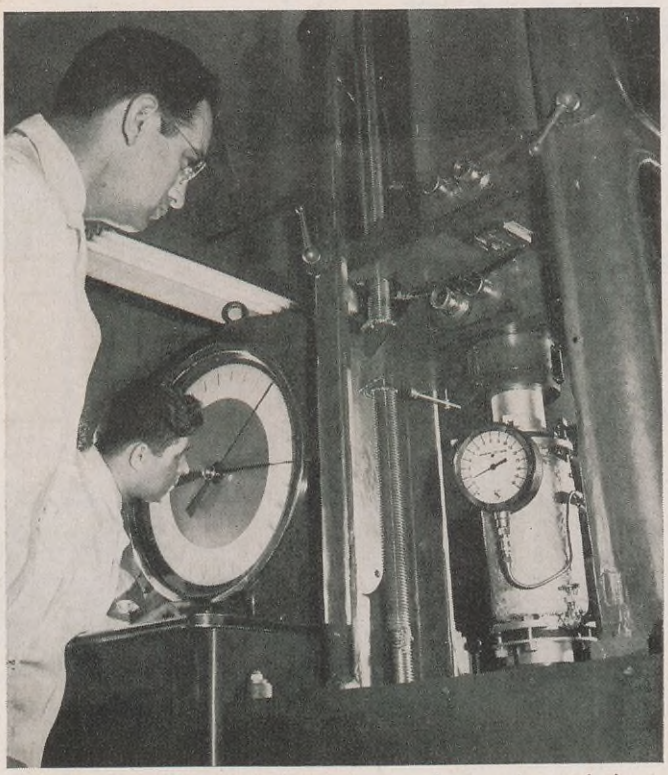




As soon as the core has been cut, the road cavity is filled and the patching material tamped into place. The sample is taken to Shell's Wood River Research Laboratory for various tests and analyses.

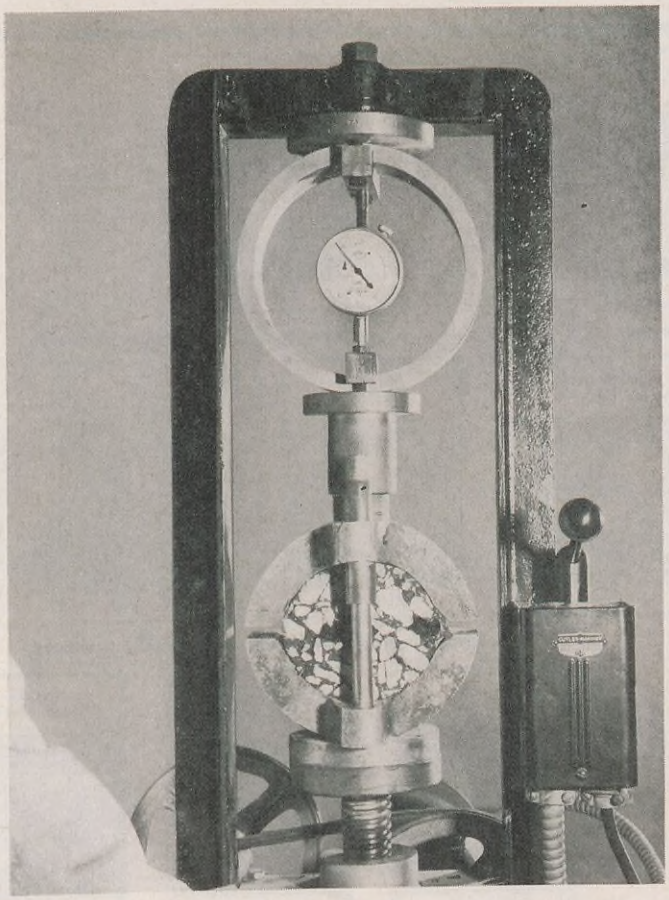


This is the picture of a road which interests the scientists. Study of the arrangement of material in these cores leads to improved highway construction.

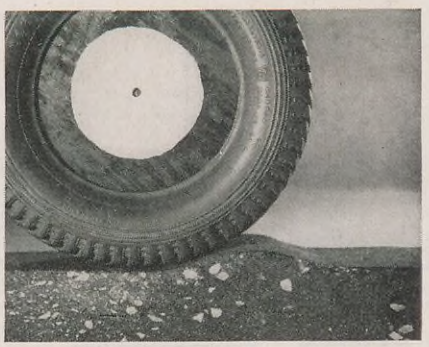


Under tons of vertical pressure, a sample core is watched carefully for signs of deformation, strain and stress. This machine, one of many used for testing, determines the load-bearing capacity of cores, approximating actual road conditions.

Much as a butcher would slice bologna, a technician cuts a sample core into thin slices for study. Though the core contains hard, solid rocks, the cutting edge slices through in a matter of seconds, leaving the core structure unaltered.



< The pressure will be constantly increased in this special testing machine until the road core pops open or breaks down. It would take the constant pounding of hundreds of cars to equal the high pressure easily brought about in a few seconds by machines like this one.



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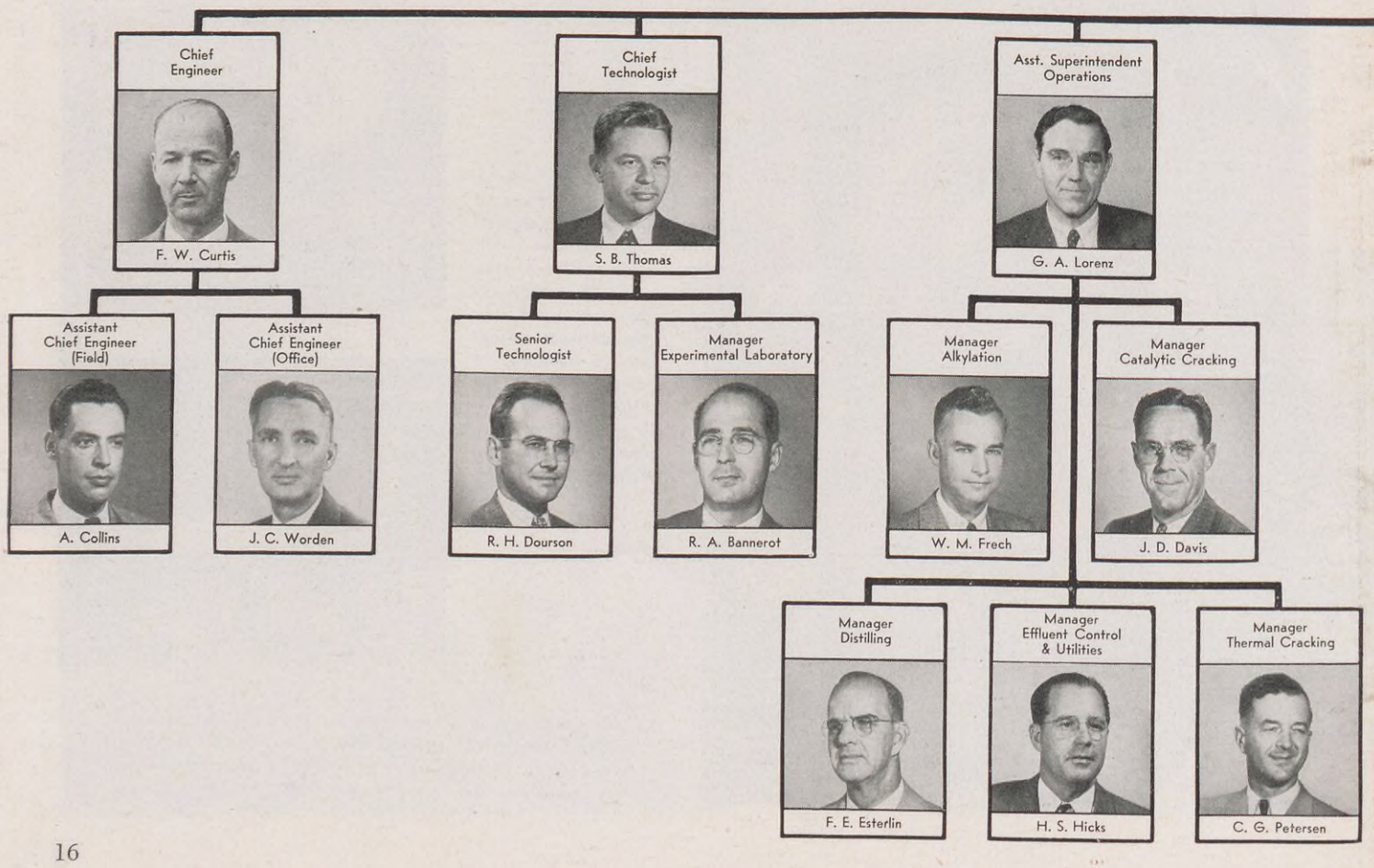
A toy tire (top) on a laboratory molded road demonstrates "longitudinal shoving" which results in "washboard" surfaces; the car wheels (bottom) cause "ravelling" as aggregate fragments are flung out, causing pot holes in the highway.

The eleventh in a new series of organization charts

Shell Oil Company

December—1949



WILMINGTON REFINERY ORGANIZATION CHART

Refinery Manager

R. W. McOmie

Superintendent

S. J. Meisenburg

Financial Control

Asst. Superintendent Administration

G. C. Montgomery

Office Manager

G. C. Rockafield

Manager Compounding

A. M. McClelland

Manager Control Laboratory

L. A. Shaw

Manager Dispatching

I. H. Smith

Manager Personnel & Ind. Relations

R. A. Pratt

Manager Fire & Safety

G. F. Mayse

Chief Accountant

R. F. Kissinger

Manager Economics & Scheduling

J. L. O'Brien

Manager Marine Loading

J. W. Malseed

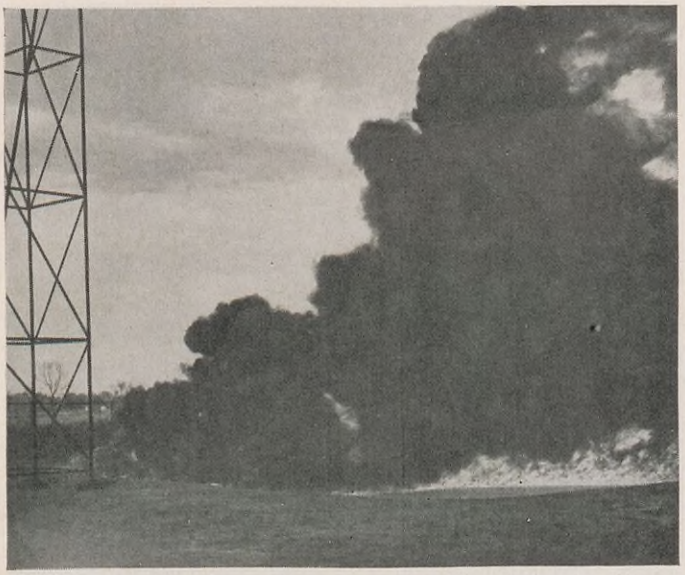
Manager Stores

H. J. Olympius

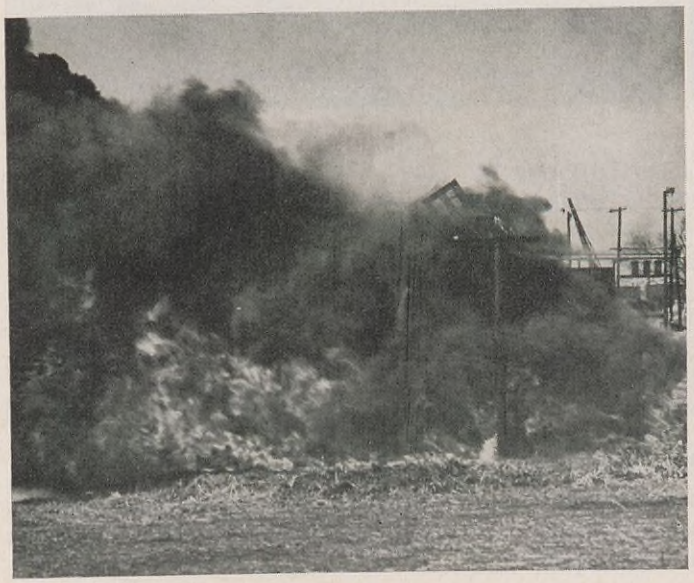
Fighting Fire With Fire

Wood River Refinery Employees Learn the Techniques Of Fire Fighting by Drilling with "Live Fire." They Use the Latest in Fire-Fighting Equipment And Methods While Undergoing Training.

OIL men learned long ago, through experience, that the hazard of fire is as close to the oil industry as the drilling rig. They quickly learned that the first and most important step in fire prevention is to build installations in such a manner that fire hazards are held to a minimum. Through the years they have learned to build with fire-resisting materials, to incorporate special ventilating devices to dispel explosive



These pictures tell the story of how a 40 x 40-foot pit fire was handled with two fog nozzles. The use of fog (a fine water spray produced by special nozzles) is one of the most effective means of handling a wide variety of oil fires.



Enveloped in this mass of flame and smoke is a 10 x 6-foot vessel filled with gasoline. The sprinkling system installed on the vessel, along with fog nozzles, extinguished the fire in the short space of one minute and twelve seconds.

vapors, to install fire-resisting walls and screens at danger points. But even with all of this, the danger of fire is still ever present. In the last analysis, fire safety for any installation demands alert, well-trained fire crews armed with first class fire-fighting equipment.

The Fire Testing and Training Ground at Wood River Refinery was built in 1947 primarily to train firefighters. Those taking the courses given there are faced with actual fires planned as duplicates of various types of refinery fires. They feel the heat, see the glare, swallow the smoke and experience the nervous tension that comes to any man facing fire. They learn to act quickly and methodically without panic. They learn what to use and what not to use. And, most important of all, they learn to act as a team, an essential requirement for men working in a plant which handles hundreds of thousands of barrels of crude oil and finished products daily.

Training Stresses Realism

The training area is equipped with tanks, pressure vessels, trenches, piping, pits, and sheds, all of which were once part of operating units of the refinery. The potential firefighter is called upon to help put out fires in each one of these. When he

< To extinguish liquefied petroleum gas fires such as the one at left, it is necessary to shut off the fuel supply. This can usually be accomplished with the aid of fog nozzles, which not only control the fire but also provide protection for the man making the shut-off. V

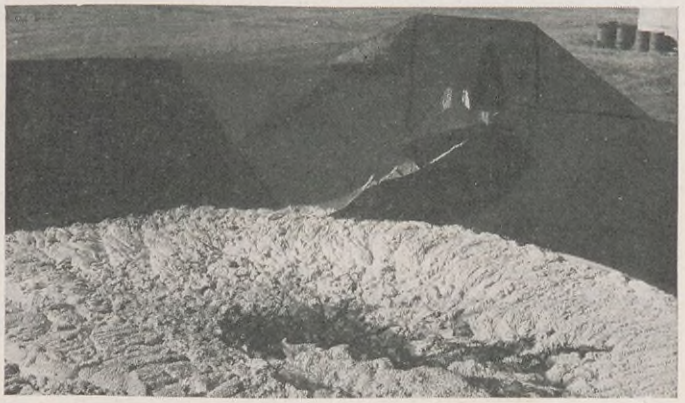
has completed the course he not only knows the characteristics of many types of oil fires but has actually tested the efficiency and speed of each fire-stopping device. The knowledge gained in these practical courses breeds confidence, without which a fire-fighter can be more harmful than useful.

Like any other fire, a petroleum fire depends on the presence of fuel, oxygen and heat. To be extinguished, it must be starved (take away its petroleum fuel), smothered (keep out its oxygen), and cooled (reduce its heat below the ignition point). In regularly scheduled drills, Wood River's fire-fighting crews check on the efficiency of water sprinkling systems and test the effectiveness of fog, steam and foam in starving, smothering and cooling petroleum fires into submission.

New Techniques and Apparatus

As they become known, new techniques and apparatus are examined on the Testing and Training Ground and when found effective, are incorporated into the training program. Mechanical foam, foam slides, the sub-surface application of chemical foam, the extended use of water fog and the water sprays for controlling and extinguishing oil fires are among the developments exhaustively tested at the Wood River Testing and Training Ground.

Determining the materials that do the best fire-preventing jobs is another important function of the Fire Testing and Training Ground.



Less than a minute was required to extinguish the oil fire in this twenty-foot diameter tank with a dry powder foam blanket. The thick blanket of foam (right) collected on the surface of the oil and quickly smothered the fire.

< Fog was used to extinguish the blaze on this twenty-foot diameter tank. It took only one minute and nine seconds to put out the fire with the use of two 1½" fog nozzles. Selection of the correct extinguishing agent for each type of fire is emphasized in the course.

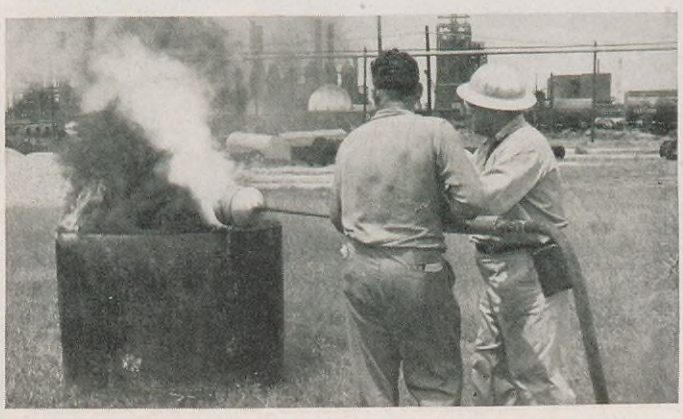
Under the supervision of the Refinery Technological Department, elaborate tests are made on all types of insulation, and on fire-proofing materials and paints to determine their efficiency and applicability for Company use.

Long-Term Program Envisioned

More than 1,000 Refinery employees have already been trained at the Fire Testing and Training Ground, and the program is a continuing one. The current cycle of the supervisory training program at the Refinery is being conducted at the training ground to demonstrate the use and limitations of all types of fire equipment and fire-extinguishing methods.

Many activities at the Wood River Fire Testing and Training Ground are also Company-wide in scope and application. Typical is the recent meeting there at which Shell safety engineers from the United States and Canada joined in investigating the effectiveness and comparative efficiency of the latest fire extinguishing apparatus. Also, during the past year, more than one hundred employees of the St. Louis Marketing Division were schooled there in the use of fire-fighting equipment.

One of the first developed in the industry, and now one of the most complete, the Wood River Fire Testing and Training Ground is aimed at developing fire consciousness on the part of all employees, and the realization that fire-fighting is everybody's business.



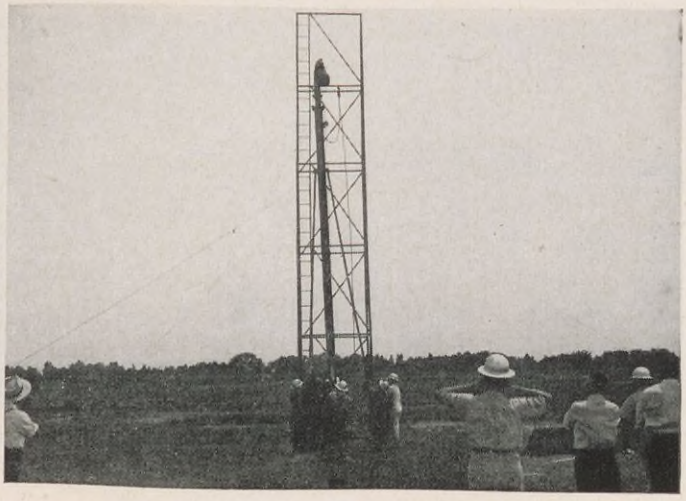
The right way and the wrong way to extinguish an asphalt fire. At left, when water is poured on the fire the asphalt boils over. At right is shown the extinguishing action of low velocity steam when used on the same type asphalt fire.

Investigating new fire fighting developments, Shell Oil Company, Shell of Canada, and Shell Chemical Corporation Fire and Safety Engineers met recently at the Training Ground and participated in the extinguishing of various types of petroleum fires. >

Fireproof paint protected this wooden test building from all but a slight charring though material within was completely burned out.

Fireproofiing materials are put through severe tests. Readings of both the outside metal skin temperature and the air temperatures at various locations within the tested vessel (at left) show the efficiency of the insulating material built into it. The screen behind which the men are sitting is to protect them from the fire's heat.

Wood River fire crews are trained monthly in rapid erection of portable, telescope-type foam towers used for fighting tank fires.



A demonstrator shows the correct way to approach an oil fire with a hand extinguisher . . . with his back to the wind and applying the extinguisher first at the fire area closest to him.

Shell Development Employee Wins Highest Chemical Engineering Award

DR. MOTT SOUDERS, JR., head of Shell Development Company's chemical engineering research section, recently won the top chemical engineering award for 1949.

The $1,000 Professional Progress Award in Chemical Engineering was presented to Dr. Souders at the annual meeting of the American Institute of Chemical Engineers in Pittsburgh, Pa., on December 6. A tribute to his distinguished career in his field, the award recognizes Dr. Souders' "important contributions to separation processes in the petroleum industry, both as an individual and as a member of an industrial team."

Conceived as a means of honoring chemical engineers under 45 years of age, the award was established by the Celanese Corporation of America, and is administered by the American Institute of Chemical Engineers. It recognizes chemical engineering achievement which is also a distinguished contribution to the betterment of human relations and circumstances.

Perfected Penicillin Process

Dr. Souders and his associates, during World War II, were leaders in the successful development of a penicillin recovery process, an achievement typical of the professional activities which led to the award. With a background of knowledge gained through work on Shell Development Company's separation processes, Dr. Souders rapidly formulated methods for extracting and purifying the invaluable mold-drug.

An equally valuable achievement was the process for recovering toluene, used for dyes and explosives, which Dr. Souders and his associates guided to completion. The recovery process was used in a commercial plant without benefit of previous pilot plant experimentation. Ten more commercial plants, modeled after the original one, later provided half the petroleum toluene used in the war.

Dr. Souders is probably best known in chemical engineering for his method of calculating the size of a fractionating column, the Souders method of design having been widely used for more than 20 years.

Emphasizes Teamwork in Research

Throughout his career with Shell Development, Dr. Souders has emphasized the importance of teamwork in research and the development of technical processes. An expert in handling technical questions, he also serves as "chief tutor" for many of Shell Development's young engineers. Dr. Souders has carried the teamwork principle into all phases of his life, and is active in civic and technical groups and societies.

Dr. Souders is the son of outstanding parents. His father, an industrial surgeon, invented the metal surgical stitch and pioneered the technique of setting compound fractures by nailing together the broken bones. His mother, a child prodigy, became a physics professor at 18.

Born at Red Lodge, Mont., Dr. Souders now lives in Piedmont, Calif. He attended Montana State College and the University of Michigan, where he took his doctor's degree in chemical engineering. Before joining Shell Development in 1937, he was

DR. MOTT SOUDERS, JR.

associated with the Smith Engineering Company of Kansas City, Mo., and with Yale University.

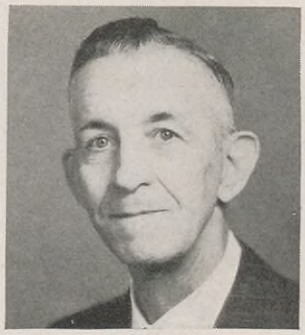
Dr. Souders has published more than 60 technical papers, holds some 20 patents, and has given the language such familiar technical words as "K-value," "absorption factor," "stripping factor," and "extractive distillation."

His hobbies include color photography and quantitative economics, the latter resulting from the application of scientific techniques to the business world. Believing that one of the stumbling blocks in the field of economics is the scarcity of facts and an uncomfortable abundance of hypotheses, he has endeavored to develop correlations between events such as the cycle of birth frequency and building activity.

They Have Retired

Shell Oil Company

C. R. AUBE
Portland Division
Treasury



J. F. BAKER
Wood River Refinery
Engineering

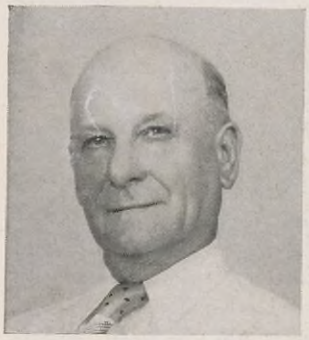
L. E. BLANCHARD
Albany Division
Sales

H. S. BRAGG
Houston Area
Personnel & Industrial Relations

H. E. COLLINS
Houston Refinery
Treasury

J. A. CROSBY
Wilmington Refinery
Engineering

J. T. DWYER
Wood River Refinery
Engineering



W. B. FISHER
Wood River Refinery
Railroad Section

F. W. GILLAND
Houston Area
Production

F. O. GRAHAM
Wood River Refinery
Engineering

T. J. HARGIS
Wood River Refinery
Engineering

W. E. HUDSON
Tulsa Area
Production

W. B. JOHNSON
Wood River Refinery
Engineering

J. A. KALLUNK
Martinez Refinery
Engineering

F. J. KIESECKER
New York Division
Operations

R. G. LEE
Wood River Refinery
Engineering

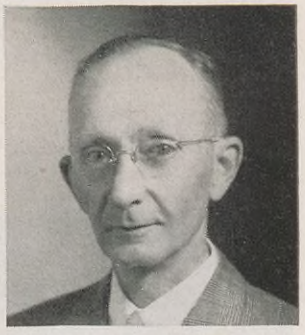
G. R. LYNCH
Wilmington Refinery
Dispatching

F. F. MARKS
San Francisco Division
Operations

M. L. METZ
Tulsa Area
Production

D. H. NELSON
Seattle Division
Sales

B. C. REED
San Francisco Division
Sales



J. J. SCHMIDT
St. Louis Division
Marketing Service

R. L. STRINGER
Wilmington Refinery
Compounding

W. W. WALTERS
Wood River Refinery
Engineering

coast to coast

Selwyn Eddy, New York Marketing Division Manager (second from left), landed this tuna in only 61 minutes while a guest of R. F. Carey (third from left), Manager, Boston Marketing Division. George T. Hopkins, District Manager, Boston, is at the far right.

Mrs. I. N. Kukenbaker (left), retired Shell employee, and Mrs. L. A. Pearce, Accounting Department, received corsages from Personnel and Industrial Relations Manager Lemoyne Porter and Office Manager E. P. Hudson (right) at the Bakersfield service award party.

Miss Anna Mae Snyder, secretary to M. Neil Goff (left), San Francisco Division Manager, christened a Shell-sponsored cable car in a campaign to keep the cars, long a familiar sight in the Bay City, in service. Other Shell girls participating were Mary Tietjen, Mrs. Margaret Burns, Hazel La Dieu, Barbara Engstrom and Katherine Alexander.

Nearly 500 Shell employees attended the recent Martinez Refinery service emblem banquet at the Mt. Diablo Country Club near Danville, California. The head table (right) included A. W. Lindquist, pensioner; Fred Mackley, a guest from Stanlow Refinery, England; W. D. Burnham, pensioner; John Tench, Refinery Manager; E. O. Mitchell, pensioner; and D. M. Sheldon, Secretary, Shell Development Company. >

< S. A. Flint (right) Manager of the Cleveland Marketing Division, presents the Division Manager's trophy to H. J. Sliwa at the golf tournament held in September at the Ridgewood Country Club in Cleveland, Ohio.

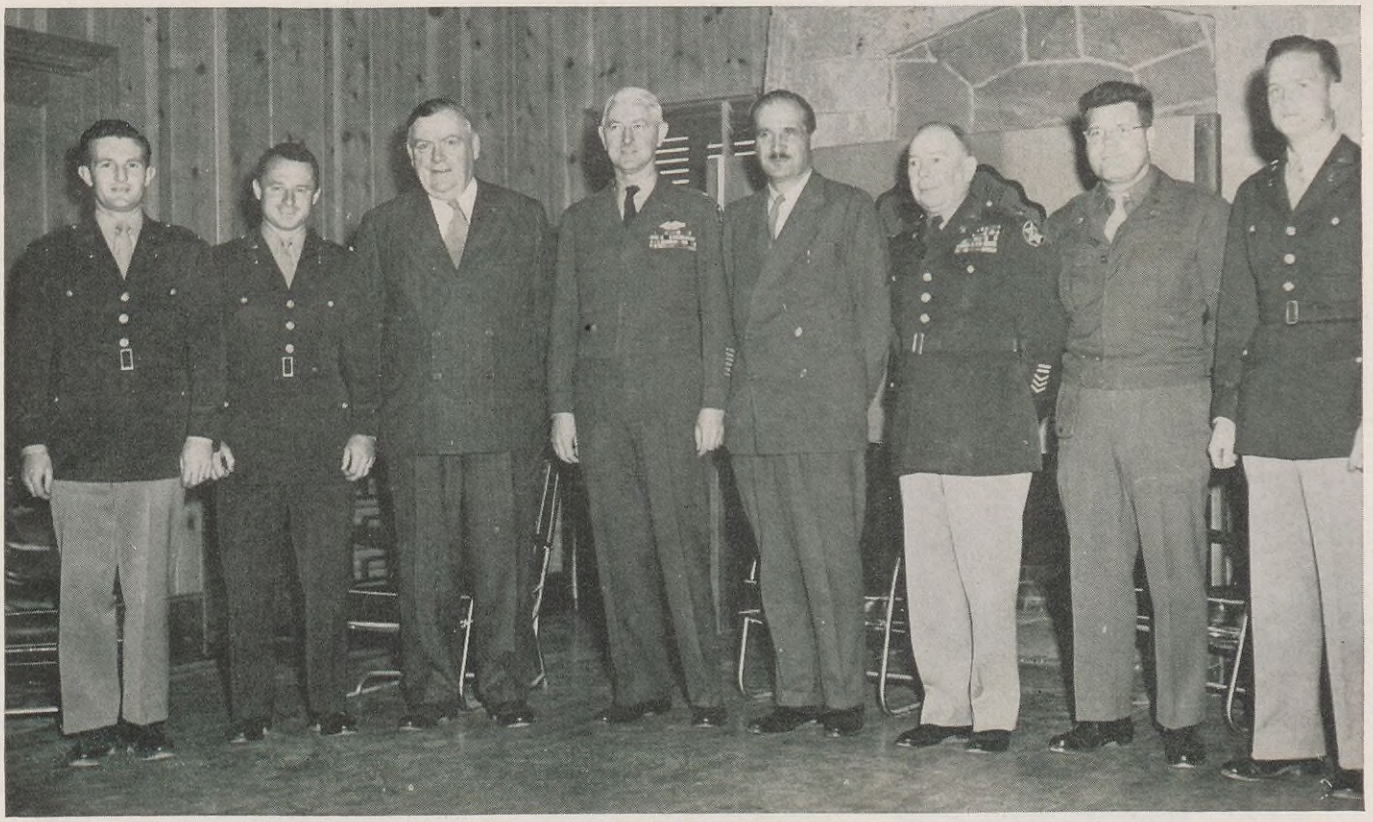
Woodbridge, New Jersey, was the site of Sewaren Terminal's service award banquet which honored 32 Shell ten-years-and-over employees and 8 pensioners. >

H. L. Wineland, H. T. McOmber, J. C. Jensen, C. E. Vickery, V. P. Lamouettee, San Joaquin Production Division employees, helped the entertainer at the recent service award dinner.

D. M. Farrell, Assistant Personnel Manager, Shell Pipe Line Corporation, has been elected Chairman of the Petroleum Section of the National Safety Council for 1949-1950.

Members of the Board of Directors and Company officials were shown through the Sewaren Plant recently by C. L. Lockhart, Manager (2nd from left). In the group at right were Messrs. C. J. Callaway (left), Alexander Fraser, G. G. Dominick, J. H. Doolittle, Harold Wilkinson and J. G. Jordan.

Seven Shell employees from the United States attended the general meeting of the annual research conferences of the Royal Dutch-Shell Group held at The Hague recently. Pictured below are (l. to r.) Messrs. W. J. D. van Dijck, B.P.M., Holland; A. E. Lacomble, Shell Development Company, New York; J. Oostermeyer, Shell Chemical Corporation, New York; J. J. Broeze, B.P.M., Holland; W. P. Gage, Shell Chemical Corporation, New York; W. H. Slotboom, B.P.M., Holland; H. Gershinowitz, Shell Oil Company, Houston; J. H. Vermeulen, B.P.M., Holland; P. J. Garner, Thornton Research Center, England; M. P. L. Love, Shell Oil Company, New York; M. E. Spaght, Shell Development Company, Emeryville; J. N. J. Perquin, B.P.M., Holland; T. W. Evans, Shell Development Company, Emeryville; F. H. Braybrook, Shell Petroleum Company Ltd., England; E. LeQ. Herbert, Shell Refining & Marketing Company Ltd., England; C. G. Williams, Thornton, England.



An Organized Reserve Corps unit, the 479th Quartermaster Petroleum Supply Company (Mob.), was recently formed by Shell under the Army Affiliation Program. Principals in the unit's activation ceremonies at Martinez Refinery included: Lt. G. M. Broderick, Lt. A. W. Clark, F. E. Rehm, Vice President, Personnel and Industrial Relations; Brig. Gen. F. B. Butler, Commanding General, Central Military District; J. A. Tench, Manager, Martinez Refinery; Col. O. W. Humphries, Sixth Army Quartermaster; Lt. R. P. Mahon, commanding officer of the new unit; and Lt. Carl Raaka of Shell Chemical Corporation's Martinez Alcohol Plant.

Arnold L. MacCool, of Head Office Marketing-Accounting Dept., helps develop the finesse and other playing techniques in weekly meetings of the Head Office bridge club.

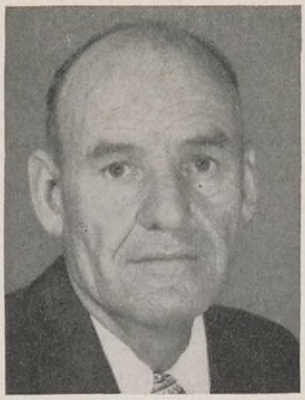
The Rice-Arkansas football game was a feature of the program of entertainment enjoyed by 135 members of Shell Chemical's Houston Plant Service Club in their November 5 celebration.

Service Birthdays

Thirty Years

L. J. ALMOND
Martinez Refinery
Engineering

L. T. McINTYRE
Coastal Division
Drilling



E. B. NICHOLAS
Norco Refinery
Engineering

R. A. ROSS
Los Angeles Basin Division
Drilling

W. C. SHERRICK
Tulsa Area
Production

R. F. SUTTON
Los Angeles Basin Division
Production

C. G. WINTERS
Shell Pipe Line Corporation
Mid-Continent Area

Twenty-Five Years

R. S. BARROW
Los Angeles Division
Marketing Service

H. C. BECKERMAN
Houston Area
Treasury

F. G. BRUNTON
St. Louis
Purchasing-Stores

G. A. DUPEPE
Norco Refinery
Engineering

W. M. GHOLSON
Tulsa Area
Production

R. V. HERMAN
Shell Pipe Line Corp.
Mid-Continent Area

J. B. HILL
Sacramento Division
Sales

C. E. HILLHOUSE
Los Angeles Basin Div.
Drilling

E. S. HOBSON
Products Pipe Line
Doraville, Ga.

R. H. HUMMELL
Albany Division
Treasury

A. M. MUELLER
Wilmington Refinery
Engineering

C. E. MUELLER
Midland Area
Treasury

OLE NELSON
San Francisco Div.
Operations

W. J. PAWSEY, JR.
Martinez Refinery
Compounding

E. S. QUINN
Houston Regional
Office — Gas

L. C. SMITH
Midland Area
Exploration

H. M. TAYLOR
Chicago Division
Operations

E. B. TRUESDALE
Sacramento Division
Operations

SHELL OIL COMPANY

Head Office

20 Years

A. H. Krull ..... *Transp. & Supplies*
J. F. Legg ..... *Treasury*
W. A. Romano ..... *Treasury*
C. J. Smith ..... *Marketing*
L. Szabo ..... *Transp. & Supplies*
S. Toth ..... *Marketing*
E. F. Zimmerman ..... *Marketing*

15 Years

W. M. Thompson ..... *Marketing*

10 Years

W. W. Bridgeman ..... *Transp. & Supplies*
Audrey J. Corrigan ..... *Treasury*
D. Micco ..... *Marketing*

San Francisco Office

20 Years

H. H. Murr ..... *Personnel & Ind. Relations*

10 Years

Lela L. Gordon ..... *Transp. & Supplies*

Exploration and Production

HOUSTON AREA

20 Years

R. M. Flagg, Jr. ..... *Exploration*
J. H. Young ..... *Production*

MIDLAND AREA

20 Years

A. R. Beals ..... *Automotive*
C. E. Faulkner ..... *Production*

10 Years

W. I. Boyd ..... *Gas*
J. H. O'Neal ..... *Production*
C. L. Thomas ..... *Legal*

NEW ORLEANS AREA

15 Years

J. B. Faulk ..... *Production*
L. S. Hebert ..... *Production*
P. I. Hebert ..... *Production*

TULSA AREA

15 Years

A. C. Bird ..... *Production*
N. E. Miller ..... *Production*

10 Years

T. W. W. Baehl ..... *Production*
A. S. Gilles ..... *Personnel & Ind. Relations*

LOS ANGELES REGIONAL OFFICE

20 Years

I. C. Grew ..... *Treasury*
C. R. Skelton ..... *Pipe Line*

15 Years

C. R. Steward ..... *Garage*

COASTAL DIVISION

20 Years

M. P. White ..... *C. & M.*

15 Years

T. S. Bunnell ..... *Production*
E. M. Smith ..... *Production*

LOS ANGELES BASIN DIVISION

20 Years

O. M. Crawford ..... *Production*
R. K. Stewart ..... *C. & M.*

15 Years

J. H. Hardy ..... *Production*
Lenore LeVan ..... *Treasury*
C. H. Orr ..... *C. & M.*

SAN JOAQUIN DIVISION

15 Years

G. Andre ..... *C. & M.*
J. D. Cook ..... *C. & M.*
G. R. Marshall ..... *Production*

PIPE LINE

20 Years

M. L. Tisher ..... *Pipe Line—North*
C. H. Tomlinson ..... *Pipe Line—North*

EXPLORATION & PRODUCTION RESEARCH

15 Years

J. C. Schaff ..... *Service*

Manufacturing

HOUSTON REFINERY

20 Years

B. L. Allen ..... *Utilities*
H. W. Bunkley ..... *Lubricating Oils*
L. L. Burkhalter ..... *Dispatching*
W. L. Caldwell ..... *Cracking*
N. P. Hand ..... *Engineering*
A. A. Handrick ..... *Lubricating Oils*
R. L. Hardin, Jr. ..... *Cracking*
R. E. Lee ..... *Engineering*
R. Pemberton ..... *Engineering*
J. J. Staton ..... *Engineering*

15 Years

R. M. Mace ..... *Engineering*
G. E. O'Neill ..... *Engineering*
J. W. Sanderson ..... *Engineering*

MARTINEZ REFINERY

20 Years

R. G. Knieriem ..... *Engineering*

15 Years

R. C. Barton ..... *Administration*
C. E. Carlson ..... *Engineering*

NORCO REFINERY

10 Years

C. L. Falgout ..... *Engineering*
S. G. Hymel, Jr. ..... *Cracking*
U. J. Keller, Jr. ..... *Asphalt Shipping*

WILMINGTON REFINERY

20 Years

R. Willet ..... *Engineering*

15 Years

R. L. Baker ..... *Laboratory*
V. J. Hart ..... *Engineering*

10 Years

A. L. Brown ..... *Engineering*

WOOD RIVER REFINERY

20 Years

E. R. Harris ..... *Alkylation*
G. L. Witt ..... *Alkylation*

15 Years

F. B. Jones ..... *Control Laboratory*
L. E. Purdy ..... *Alkylation*
H. L. Rohrkaste ..... *Engineering*
R. F. Schrader ..... *Engineering*
T. Vivrette ..... *Engineering*

10 Years

C. M. Adams ..... *Engineering*
E. J. Cole ..... *Engineering*
H. J. Dettmers ..... *Engineering*
O. J. Diveley ..... *Engineering*
E. L. Duncan ..... *Engineering*
D. J. Gibbons ..... *Gas*
C. H. McKnelly ..... *Control Laboratory*
D. A. Rhoades ..... *Engineering*
O. P. Smith ..... *Engineering*
G. W. Sweetin ..... *Engineering*
R. C. Vieth ..... *Engineering*
A. L. Wall ..... *Engineering*
F. L. Whyers ..... *Engineering*

Marketing Divisions

20 Years

D. A. Boardman ..... *Albany, Operations*
E. S. Emerick ..... *Albany, Operations*
J. E. Regels ..... *Albany, Operations*
W. S. Wentworth ..... *Albany, Sales*
R. R. O'Reilly ..... *Atlanta, Real Estate*
T. J. Nagle ..... *Boston, Sales*
J. O'Neil ..... *Boston, Operations*
B. H. Van Mater ..... *Boston, Sales*
L. E. Edwards ..... *Chicago, Marketing Service*
F. A. Lombardi ..... *Cleveland, Sales*
S. Phillips ..... *Cleveland, Operations*
H. T. Richards ..... *Cleveland, Treasury*
Edna P. Ristau ..... *Cleveland, Treasury*
O. R. Rittgers ..... *Cleveland, Operations*
H. L. Watson ..... *Cleveland, Sales*
J. W. Stephenson ..... *Detroit, Sales*
H. G. Stringer ..... *Detroit, Sales*
M. E. McLaughlin ..... *Indianapolis, Treasury*
E. P. Beedle ..... *Los Angeles, Operations*
W. R. Huebel ..... *Los Angeles, Sales*
S. H. Mitchell ..... *Minneapolis, Sales*
F. C. Henrion ..... *New York, Operations*
H. Illian ..... *New York, Operations*
F. T. McDonough ..... *New York, Operations*
O. F. Minor ..... *New York, Sales*
H. H. Muller ..... *New York, Operations*
W. Ter Gast ..... *New York Operations*
G. J. Thibault ..... *New York, Sales*
L. A. Coplestone ..... *Portland, Treasury*
L. W. Killen ..... *Portland, Operations*
C. H. Davis ..... *St. Louis, Operations*

15 Years

A. V. Spencer ..... *Baltimore, Operations*
D. L. Hickey ..... *Boston, Operations*
G. M. Butterfield ..... *Detroit, Operations*
F. L. Plante ..... *Detroit, Operations*
G. H. Graves ..... *Indianapolis, Operations*
J. J. Hassett ..... *New York, Operations*
B. E. Caffee ..... *Sacramento, Operations*
L. L. Greenhill ..... *St. Louis, Operations*
Anna M. Snyder ..... *San Francisco, Administration*

10 Years

D. Thomson ..... *Boston, Operations*
J. J. Riley ..... *Cleveland, Operations*
F. F. Seder ..... *Los Angeles, Sales*
V. G. Sundeen ..... *Minneapolis, Treasury*
H. S. Cameron ..... *Portland, Operations*
C. T. Converse ..... *Seattle, Sales*

Products Pipe Line

20 Years

W. A. Brown ..... *Carbon, Ind.*

SHELL CHEMICAL CORPORATION

20 Years

A. L. Burrow ..... *Houston*
H. W. Fisher ..... *Houston*
B. H. Roscoe ..... *Shell Point*
P. T. Vockel ..... *Head Office*

15 Years

H. D. Atherton ..... *Martinez*
A. C. Erickson ..... *Shell Point*
H. W. Harwell ..... *Shell Point*
V. C. Irvine ..... *Head Office*
H. J. Knapp ..... *Shell Point*
L. E. Morris ..... *Houston*

10 Years

L. O. Benson ..... *Dominguez*
C. A. Curtis ..... *Dominguez*
C. Spivey ..... *Houston*

SHELL DEVELOPMENT COMPANY

20 Years

L. B. Ryland ..... *Emeryville*

15 Years

R. A. H. Wieking ..... *Emeryville*

SHELL PIPE LINE CORPORATION

20 Years

U. W. Clark ..... *Mid-Continent Area*
P. Hughes ..... *West Texas Area*
H. E. Peacock ..... *West Texas Area*

15 Years

C. B. Ramsay ..... *West Texas Area*
J. R. Waldrum ..... *Bayou System*

10 Years

J. A. Brazeal ..... *West Texas Area*
T. E. Chambers ..... *Bayou System*
L. M. Glover ..... *West Texas Area*
P. J. Huddleston ..... *Mid-Continent Area*
A. E. Lain ..... *West Texas Area*
D. Sanders ..... *West Texas Area*
T. Schaffner ..... *West Texas Area*
H. B. Williams ..... *West Texas Area*

matters of *Fact*

Now that housing is becoming more plentiful people are on the move. This year more than 9,000 Shell employees have moved into new homes.

If and when you are about to change your address, be sure to make arrangements for receiving your mail. In the case of your Company mail, all you have to do is notify your supervisor *before* you move and SHELL NEWS, your local Shell publication, and other Company mail will reach you without interruption in service.

FAMILY PORTRAIT

WELDER

SAMUEL W. HOCK

Intricate pipe manifolds, pipe lines, high pressure tanks are just a few of the items tackled regularly by Samuel W. Hock, Welder for the Los Angeles Basin Exploration and Production Division. Sam has been a Welder at Long Beach, California, for twenty-six of the twenty-eight years that have elapsed since he began his Shell career there as a Machinist Helper in 1921.

Father of five girls and two boys and grandfather of five boys and two girls, Sam lives at 4759 Graywood Avenue in Long Beach. He is an active member of Masonic Lodge No. 389 in Long Beach, and goes in for fishing, hunting and bowling in a big way. At one time or another he has traveled extensively through every state west of the Mississippi River looking for good fishing holes.

Throughout Shell 309 Welders like Sam perform the gas and electric arc welding needed to cut, fabricate, install and repair metal equipment of every use, shape and size. Whether engaged in exploration and production, pipe line, manufacturing or marketing operations, they must all be highly trained craftsmen—for not only the operations but the safety of operating personnel often depend upon their performance.