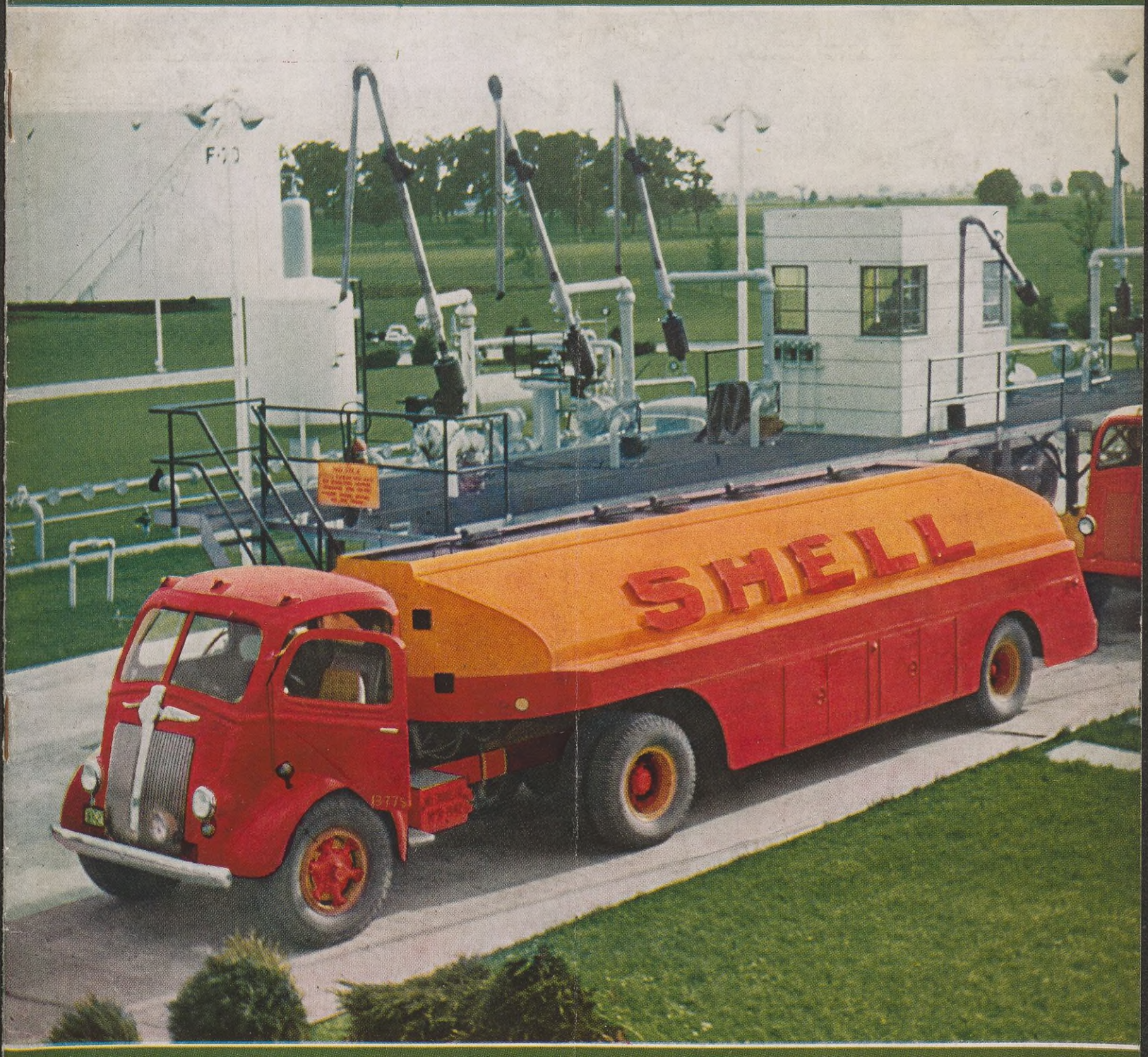
SHELL NEWS



SEPTEMBER · 1944

-matters of *Fact*

How they started. The first jobs of some of the men at Shell who have risen from the ranks . . . we can't show them all, but these are typical

THERE ARE 11 MARKETING DIVISION MANAGERS EAST OF THE ROCKIES

3 were Service Station Salesmen back in 1923, 1924, and 1926
1 was a Construction Engineer in 1923
1 was a Depot Agent in 1923
2 were Clerks in 1924 and 1925
1 was a Lubricants Sales Engineer in 1928
1 was a Real Estate Appraiser in 1929
1 was a Fuel Oil Salesman in 1931
1 was a Salesman in 1932

THERE ARE 8 PRODUCTION DIVISION MANAGERS

4 were Engineers in 1926, 1927 (2), and 1938
3 were Roustabouts in 1919, 1923, and 1927
1 was a Rodman in 1931

THERE ARE 3 PRODUCTS PIPE LINE SUPERINTENDENTS

1 was a Safety Inspector in 1926
1 was an Engineer in 1932
1 was a Loading Rack Helper in 1939

THERE ARE 3 REFINERY MANAGERS

1 was a Car Cleaner and Filler in 1916
1 was a Tailhouse Man in 1917
1 was a Junior Technologist in 1926

THERE ARE 3 SHELL PIPE LINE CORPORATION AREA SUPERINTENDENTS

1 was a Line Construction Supt. in 1917
1 was an Oil Switcher in 1928
1 was a Material Clerk in 1916

SHELL NEWS

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

SEPTEMBER • 1944 Vol. 12 • No. 9

The Cover: Syd (Products Pipe Line) Smith has put his camera to work and once again a color cover is the result. The Harristown (Illinois) Products Pipe Line Terminal is one of the many picturesque stations and terminals discussed in "Buried Weapons . . . Petroleum Pipe Lines," page 12. Third in the series of articles discussing the petroleum situation in occupied countries or those under attack, is "Netherlands East Indies." But this is not only the story of these islands but of America's super-bomber, the B-29. This story of the super-bomber and the destruction of the Jap's greatest source of petroleum products begins on page 2. "The Doodlebug Is Here to Stay" discusses a fascinating era in the petroleum industry . . . but one that is not quite gone; page 7. The G. I. Bill of Rights is something of interest to all of us . . . what it is and what it does is related on pages 10 and 11. "Heaven in the Army" is a story which must be read to be believed. The article was suggested by an Air Forces officer; it begins on page 15.

On page 18 can be found the Norco Refinery Chart; page 19 has more Victory Garden Photographic Contest winners; while a new feature, "'Round the Refineries, Areas and Divisions," begins on page 20. This is an answer to your requests on the SHELL NEWS questionnaire.

CONTENTS

Published by Shell Oil Company, Incorporated, (Alexander Fraser, President; E. C. Peet, Vice-President, Treasurer; C. S. Gentry, Vice-President, Secretary), for its employees and those of Shell Pipe Line Corporation, Shell American Petroleum Company and Shell Union Oil Corporation. Address communications to the Industrial Relations Department, Shell Oil Company, Inc., 50 West 50th St., New York, N. Y.

The B-29 Superfortress . . . in early August the B-29's made the first raid on the Netherlands East Indies. The huge ship can do well over 300 miles per hour and has a ceiling of over 30,000 feet. Its armament has been removed from the photograph for security reasons.
(Army Air Forces Photo)

. . . NETHERLANDS EAST INDIES

THE MOST POWERFUL BOMBER AND THE MOST POWERFUL GASOLINE COMBINE TO DESTROY THE GREATEST SOURCE OF THE JAP'S AVIATION GASOLINE

by Alan Miles

The third in a series of articles discussing the petroleum situation as it existed in pre-war days in countries being re-occupied, or under attack, by the armed forces of the United Nations

EARLY in 1942 the torch was applied to the Netherlands East Indies. Whole settlements . . . villages and towns . . . were utterly demolished. Oil installations, wells, machinery, mines, factories, stores, and homes were put to the torch rather than have them fall into the hands of the Jap invader. The scorched earth policy of these Netherlanders hindered the Japs in their efforts at seizing almost 90% of the total petroleum available to them near the Jap homeland.

The Netherlands East Indies for over a quarter of a century have been one of the world's greatest sources of petroleum. Oil companies such as Standard-Vacuum, Standard of California, The Texas Company, and the Shell Group, have had extensive holdings on the islands of Sumatra, Borneo, Java, and New Guinea, which comprise the East Indies.

The islands lie along the Equator, both to the north and south, between the Asiatic mainland, the Philippines, and Australia. Java is the most densely populated land mass in the world with over 800 persons to the square

mile; its capital, Batavia, is the largest city in the islands. Of the 67 million people who live in the Netherlands Indies, only 250,000 are white.

The islands have an enormous natural wealth. In pre-war days they exported 85% of the world's pepper, 82% of its kapok, and 33% of its natural rubber; its other riches are chiefly oil and tin.

The early Dutch settlers had to import practically everything they needed to colonize and modernize the islands. Every piece of machinery came from Holland, England, or America. But the Netherlanders did more than that . . . they imported all the customs of their native land and then proceeded to adapt nature to make a countryside as nearly like home as the tropics would permit.

The oil fields in the Netherlands East Indies are many and productive. The average well in the Ceram district produced 21 barrels per day, in Central Java it rose to 24 a day. But in Palembang each well averaged 75 barrels and in northern Sumatra it was as high as 180 barrels per well each day.

There were nine refineries located in various parts of the islands . . . each of them had been designed and located for convenience to nearby oil fields. Their capacity, 140,000 barrels a day, was approximately equal to the total production.

The largest refinery in the islands was operated by an affiliate of Standard Vacuum, at Palembang, South Sumatra; it received its crude from the company's wells in that district. Shortly before the war Standard's affiliate completed a cracking plant which increased its capacity tenfold to 40,000 barrels a day.

The Shell Group's affiliate company in the Netherlands East Indies, Bataafsche Petroleum Maatschappij, operated five refineries. One of these was Pladjoe, at Palembang, with a capacity of about half that of Socony's plant. Another refinery, the largest of the Shell Group, was at Balik Papan, in eastern Borneo, with a capacity of 35,000 barrels daily. Both refineries had cracking plants. The other refineries of the Group were Pangkalan Brandan, Sumatra, Theope, Java; and Wonokomo. The first had a capacity of 12,000 barrels a day; the second, 14,000 barrels, while the last had only a 2000 barrel capacity.

The total yearly output of all refineries in the Netherlands East Indies in 1942 was over 62 million barrels. The Japanese, naturally, made the islands a major target along with the Philippines. The 62 million barrel annual output could keep the Jap supplied with fuel for a long war.

In December, 1941, and January of the following year, the first attacks were launched. Parachute troops landed at Medan in the northern part of Sumatra. But

Carrier-based planes raided Sourabaya in Java on May 17th, 1944. The bombing caught the Japs by surprise. The only oil refinery on the island was set aflame, docks and warehouses were heavily damaged and many ships and planes were destroyed.

(Acme Photo)

(Acme Photo)

The Jap invaders receive the Dutch answer . . . the torch is put to almost all property of any value to the enemy. This is a Japanese photo brought to the United States via Brazil.

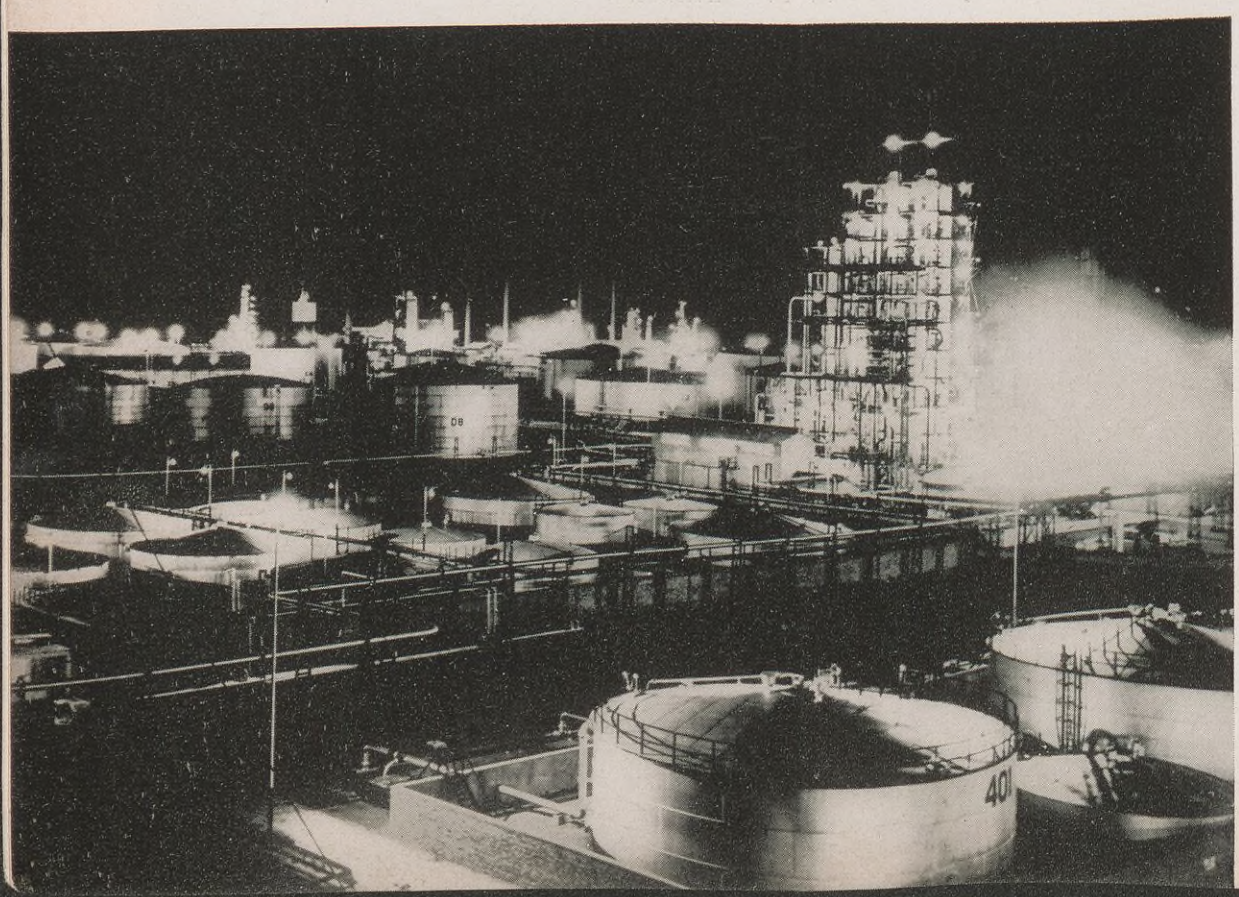
long before the actual attack all the islands' refineries had been mined, and preparations had been made to destroy the wells, before they could be seized.

As the Jap hordes landed, each island, in turn, became an inferno. Employees of Shell and the other companies dynamited well after well, and building after building. The Jap was forced to rebuild and repair, wasting precious time.

But unfortunately for the Allies most of the wells were so shallow that it was a comparatively easy task for the Japs to redrill. The chief handicap which faced the Nipponese was the transportation problem. They were unable to construct adequate pipelines to replace those destroyed, and they did not have the necessary trucks or ships to transport the crude from fields to refineries.

But the Japs could not allow this prize to remain idle. They therefore decided to rebuild only a few of the refineries, concentrating on those near the richest fields.

Evidently they felt that the Shell Group's Pladjoe refinery offered the best facilities for manufacturing aviation gasoline. Into Pladjoe went their best efforts. The Japs were aided by technical advice from Nazi experts who were rushed to the scene at Tojo's urgent request. And so Pladjoe was converted to enemy use. Intelligence officers of the Netherlands, British, and American armies estimated, conservatively, that 78% of Japan's high-octane aviation gasoline and 22% of her fuel oil came from this one refinery.



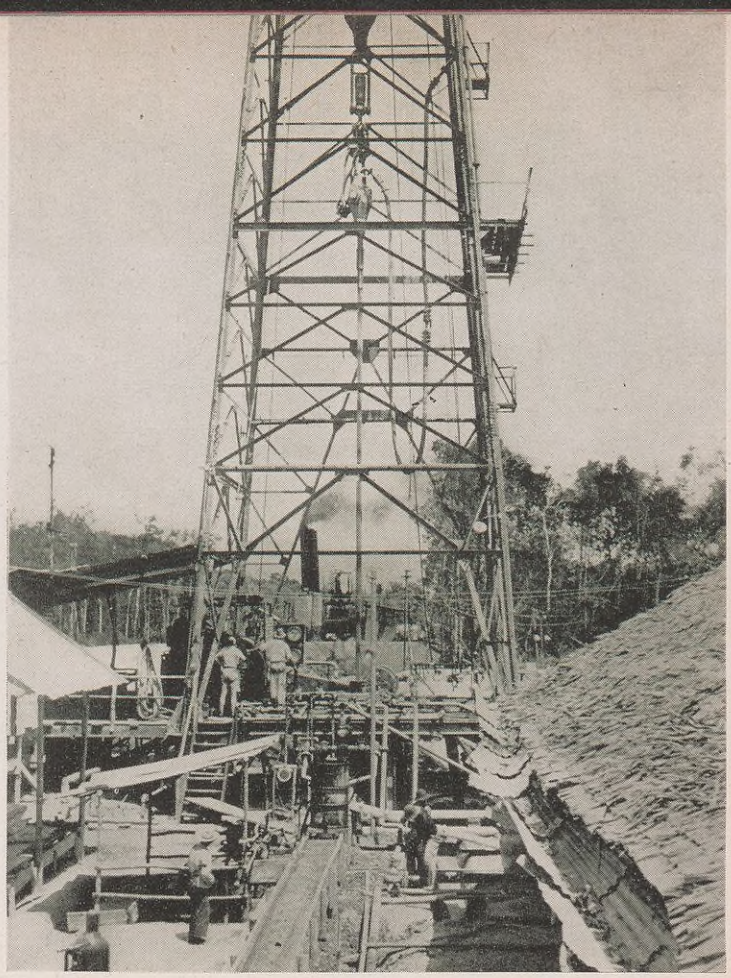
A refinery "somewhere" in Sumatra . . . one of the main targets of Allied bombers.

In mid-August 1943, the first United Nations' attack on the islands was made. Liberator bombers made a 2500-mile round-trip flight to bomb storage tanks at Balik Papan. During the months that followed, scattered raids were made from carrier-based planes. On August 11th the world heard the news of the longest bombing mission ever flown . . . Target: Pladjoe refinery.

The B-29's which attacked the Palembang refinery flew 3600 miles from a new secret base in the Southeast Asia Command. The largest land-based aircraft made the trip using the most powerful gasoline perfected by man . . . higher than 100-octane; a super-plane and a super-fuel.

Thousands of fire bombs were dropped on the Pladjoe refinery. Great leaping fires were started by the attack, according to returning fliers. Reports state that the damage to Pladjoe cannot be repaired by the Japs in less than a year. One of the pilots who brought his B-29 back safely, said, "Our aiming point was already demolished when we arrived. Flames from exploding gasoline were rolling like a tidal wave from the refinery and tanks."

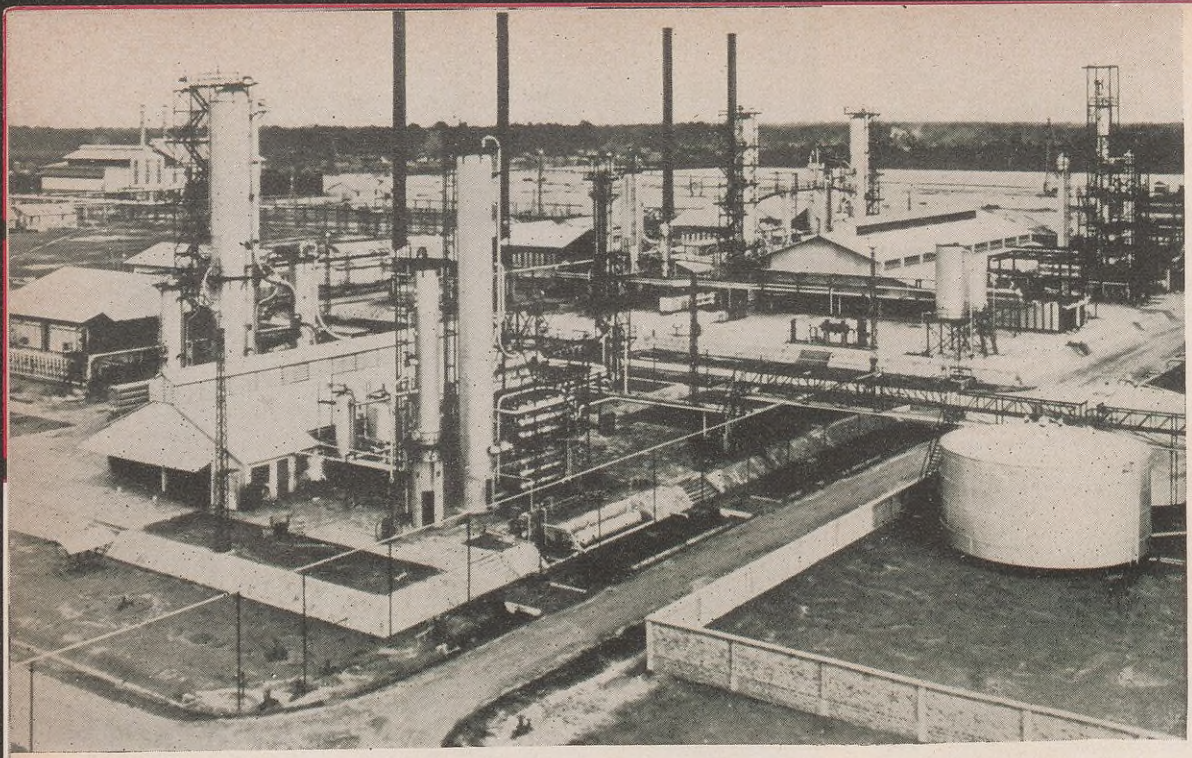
After the war there is no doubt that the fields and refineries can be put in operation in short time. The shallowness of the wells which aided the Japs will, of course, make it equally easy for redrilling should the Japanese destroy the wells when they are forced to leave. The technical skill and available materiel after the war should make reconstruction in quick time a definite possibility.



Some of the richest oil fields in the Netherlands East Indies are in the Palembang sector of Sumatra. The Shell Group has wells in the Pladjoe Area near Palembang as well as a large refinery. This was the area of the recent B-29 bombing

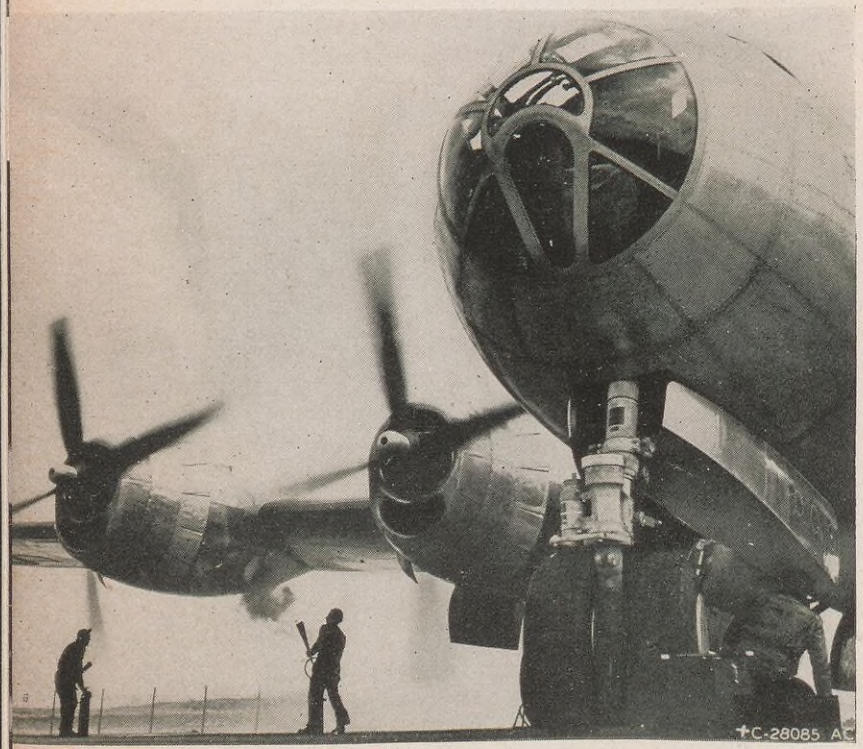
One point at which the Japanese war machine is aiming in its drive on Borneo is Balik Papan on the coast of the island. 30,000 natives work in the refineries. This is the Shell Group's installation at Balik Papan.

(Acme Photo)



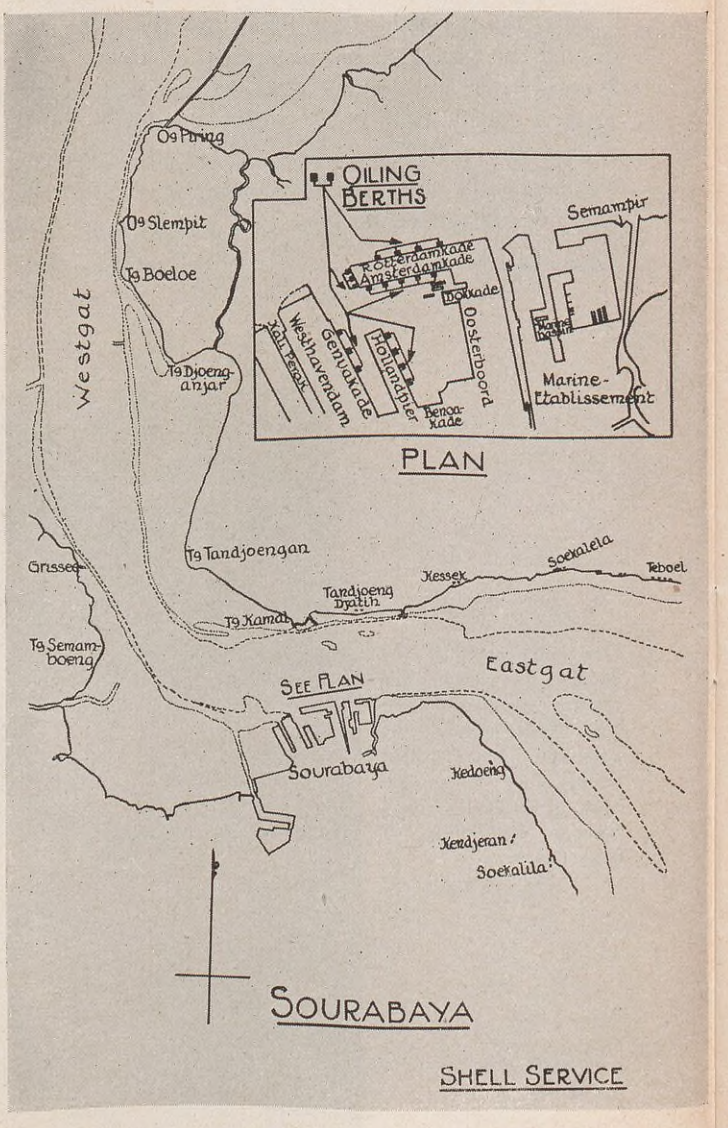
Pladjoe Refinery of the Shell Group . . . seized in 1940 the refinery was partially destroyed but has since been repaired by the Japs. The Army Air Forces believe that 90% of the Jap's aviation gasoline came from this one refinery.

The B-29's will fly again and again before the Jap is brought to unconditional surrender. The Netherlands East Indies are certain to play an increasingly important role in the offensive action of the United Nations' forces until the day when the islands are returned to those who live and work there in peace.



The B-29 is ready for the takeoff . . . fueled with airplane motor fuel, believed to surpass all other gasolines in the world for performance and volatility.

(Army Air Forces Photo)



Sourabaya Harbor, showing Shell's installations.

THE DOODLEBUG IS HERE TO STAY!

by Daniel O'Connor

WHAT is a doodlebug? If you were to ask the first ten people you meet, probably nine of them would answer, "Well, it might be some sort of insect" . . . and they'd be right. A doodlebug, according to Webster, is the larva of an ant lion—or any of several other insects.

But wander around an oilfield and ask the same question. Chances are, ten out of ten will say, "A gadget that's supposed to find oil." They, too, will be correct, because the term has come to mean any unscientific device used in attempts to locate petroleum or other minerals.

These latter doodlebugs are also known as divining rods and have been used, in some form, for centuries. Before men began to search for petroleum they dug for water and believed their discoveries of springs and wells were brought about through the aid of a water-witch. The witch was a Y-shaped stick of hazel or willow with a shank about eight inches long and prongs about twelve inches; its operator would hold one of the forks in each hand and traverse the ground. Popular superstition was that the shank would turn downward when the holder of the stick walked over water.

Early in the 19th century, when the value of petroleum began to be recognized, there were many theories about finding oil. For many years the discovery of petroleum was largely a matter of luck. It is said that some people believed gases were present in the atmosphere near petroleum deposits and that they would change the appearance of babies' eyes; consequently prospectors showed as much interest in children as did candidates for election. A few thought insects could point out oil pools . . . that certain insects were attracted by oil and would roll over, then burrow into ground containing petroleum. Operators of divining rods gave up their pursuit of water and began

to hunt for black gold. The magic wand was more intriguing than insects and babies' eyes . . . or perhaps it was better publicized. Anyway, as the oil-finding rod took hold of public imagination most other ideas were dropped. The insect theory survived in the name given to oil-locating instruments, which became known as doodlebugs.

Stories about the doodlebugs grew, as such stories have a way of doing. A farmer in Illinois heard about a fellow in Pennsylvania who not only could find oil-bearing strata with his doodlebug but could predict the depth to which the well must be dug. Someone else was told that another special kind of bug would indicate the number of barrels of oil a well could be expected to produce.

Thus, territory anywhere near a petroleum discovery was the land of opportunity for the man with a divining rod. And the doodlebug wouldn't work for just anyone; its operator had to have divine power to receive the vibrations of the wand. The gentleman who was fortunate enough to be filled with this power (or sharp-witted enough to recognize a new way of fooling the people) was set for an easy living. Doodlers, as the gifted men were called, drifted in and out of the oil country, persuading many with small plots of land that the oil discovered in the next county might be a sign that the whole state was rich with petroleum. For a small fee the land owner could be sure; it was a gamble, but there was the possibility of undreamed-of wealth.

The doodler, of course, would share in the good fortune if, by coincidence, oil were discovered. He always prepared a contract with those who drilled on the land he had doodlebugged, and he always was on hand to collect his percentage when the oil began to flow. If the well failed to produce and the doodler still was in town he had a million and one excuses; he suddenly would recall that the weather or the temperature had been

affecting the reactions of his doodlebug and that he had thought, but had hesitated to say, that the doodling of that particular land should have been postponed. A pipeline might have hindered his bug; if he had known about the line he would have turned his back to it, as the bug never could be influenced by something behind it.

Just to prove that he meant well the doodler might even refund the drillers' money . . . if he hadn't spent it.

The doodler still can be seen around the oil fields. In spite of increased knowledge of the earth's structure and its relation to petroleum deposits there are many hopefuls who base their dreams of riches on doodlebugs.

There are three main types of "modern" doodlebugs. The first of these, probably the most popular, is the

forked stick. It is like the ancient water-witch, except that it has an additional part—a container about three inches long and an inch and a half in diameter. The owner, naturally, refuses to say what is in the container; all doodlers insist that their particular doodlebug is better than all others and jealously guard the secret of its power. It is commonly supposed that the little package —which may be wood, ordinary leather or fine chamois skin—is filled with crude oil from the nearest producing well.

This doodlebug shows the depth of the oil by its pull on the hands of the operator. If the shank bends only slightly the oil pool is deep. A shallow pool will cause an extremely great twist; the strain may show in the wrists of the doodler.

A variation of this instrument is the electric-doodlebug. It may be used in a car or by a walking man and differs from the other only in its attachment; the container is covered with tape from which two electric wires protrude. After the presence of oil has been noted the wires are connected to dry cells . . . carried in the pocket of the operator or on the floor of the car . . . but the electrical hook-up must be made dramatically. The doodler stands over the pool, holding the stick upright. When he calls "Contact" an assistant touches the wires to the battery terminals, and the bug begins to count feet. That is, the doodlebug dips toward the earth, returns to its original position and bends again; every dip indicates 100 feet between the surface and the oil.

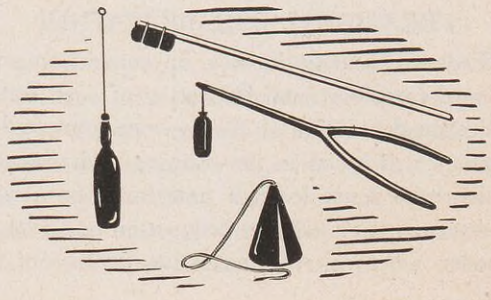
The second kind of doodlebug, the single stick, is a willow wand about 30 inches long and not more than three-quarters of an inch in diameter. It, too, depends for some of its effectiveness on a package of mysterious substance at one end. The doodler puts both hands in the center of the stick and holds it out ahead of him as he walks or rides. When he comes near an oil pool the loaded end of the bug—the one with the package—waves toward the pool. The doodler then turns in the direction of the pull and moves toward the oil; as he gets nearer the deposit the waving becomes stronger. If he stands directly over the oil the doodlebug will bounce violently up and down.

Thus the exact location of the petroleum bed is found. The operator stops the bug's bobbing by putting one hand on the loaded tip, holds it quietly, then lets it vibrate again . . . to determine the depth to oil. Each bob represents 100 feet. But this doodlebug has a special talent; it can show the presence of petroleum at different levels. Suppose a pool is 2500 feet below the surface. The bug will move up and down 25 times, make several swings from right to left and stop. If there is another pool the bouncing will begin again, and the doodler can count the feet. This bobbing, swinging and stopping continues until all deposits have been indicated.

The third type, simpler than all others, is not frequently used. It is a half-pint grapejuice bottle suspended from the doodler's index finger by a twelve or fourteen-inch copper wire attached to its neck. A secret potion is in the stoppered bottle. When a petroleum deposit draws the mixture the bottle will swing in a curve. If the oil is to the right the bottle will make an arc in that direction. The doodler follows the direction of the curve until he is directly over the pool; he is on the right spot when the bottle describes a complete circle. It is odd that the bottle bug is not used more often, since its operators claim it not only indicates the depth of the pools and their number but estimates the production. If there is not much oil when the instrument begins its circle the gyrations will be slow; the speed of movement and the size of the circle depend upon the quantity of petroleum. Perhaps the reason for neglect of this bug is that it necessitates more counting; one complete circle is equal to one foot, and counting into the thousands is a tiresome job. Type three works in the same manner as the single stick when indicating the number of pools . . . hesitating after the first count before bobbing the depth of the second layer.

According to "World Petroleum," an adaptation of this principle is found in a doodlebug used in Texas. The original maker is said to have netted more than $1,000,000. The present operator is a friend of the maker and is supposed to be well started toward his million-dollar goal. Construction and material differ from the bottle doodlebug, but operation is the same. The medium with an affinity for petroleum is inside a cone-shaped piece of leather instead of a bottle, and the copper wire is replaced by a fifteen-inch leather thong. Nobody but the owners ever has been allowed to handle the bug . . . and no wonder! To a confirmed doodler nothing is more precious than a real fortune-making doodlebug; when a bug brings better than average luck it is guarded even more carefully than the ordinary type which just makes a living for its operator.

Most present day doodlers live from hand to mouth. If they make a strike they live in luxury and spend freely; when down on their luck they drift from one oilfield to another, hoping for a great discovery which will prove to unbelievers that the doodlebug truly has wonderful powers.



THE G.I. BILL OF RIGHTS

by Norman Walters

WE'VE all heard and read a great deal about the G. I. Bill of Rights. We know that it gives protection to the man and woman in uniform. But how much? What does it guarantee? How will it affect those of you in uniform? How will it affect YOUR husband, your brother, son, or friend?

It is the purpose of this article to outline some of the governmental benefits which are available to veterans of this war. In the August issue of SHELL NEWS we described the policy of the affiliated Shell companies toward the returning veterans. The Serviceman's Readjustment Act of 1944 (commonly called the G. I. Bill of Rights) is the government's established policy toward those in the armed forces. It became law in June, 1944.

Steps had previously been taken to provide reemployment assistance to returning veterans. Regulations of the Selective Service System direct the local boards to establish adequate facilities to render aid in replacing veterans in their former positions, or securing new positions for them. All persons who entered the service subsequent to May 1st, 1940, are entitled to this aid. Local boards are utilizing the services of the Veterans' Employment Division of the United States Employment Service. Discharged veterans are advised by the Army and Navy to report to their local Selective Service Board for general assistance.

MEDICAL CARE

Many veterans will be unable to fill their old jobs or any other job. They may be battle casualties, they may have service-connected disabilities or may require rehabilitation, hospitalization, medical appliances, or many other forms of physical care. Under these circumstances the veteran is entitled to the assistance of the Veterans' Administration. Offices are located in cities throughout the country. When it is not possible to visit one the veteran should contact either the American Red Cross or one of the veteran's organizations such as the American Legion or Veterans of Foreign Wars.

VOCATIONAL REHABILITATION

The Federal Security Agency, in connection with the State Board for Vocational Education of each state, supplies vocational training in non-service-connected cases. This agency will assist in the training and education of those men who must learn a new trade or occupation before returning to a civilian occupation and who do not come under Veterans' Administration because of the nature of their disability. Those who do come under its jurisdiction are protected by the G. I. Bill of Rights.

PENSIONS

The Veterans' Administration adjudicates war-time pension claims of all veterans who served after December 6, 1941, and who were discharged under conditions other than dishonorable, and who were suffering from service-incurred pensionable disability received during the war. (NOTE: This does not refer to length-of-service bonuses paid discharged veterans, but only to those disabled. The Veterans' Administration is the sole judge of whether a pension is to be issued.)

FILING CLAIMS

In order to receive the pension a veteran must file a claim with the Veterans' Administration and secure a rating. The American Red Cross, American Legion, Disabled American Veterans, and Veterans of Foreign Wars, together with some other organizations, have been authorized to process the necessary papers involved in these claims.

INFORMATION CENTERS

Veterans' Information Centers will be established and operated by the Local Veterans' Service Committee whenever such Committee determines that a single information service is necessary and that there is an appropriate location with necessary facilities. The function of the Information Center will be primarily to furnish advice and information.

SERVICEMEN'S READJUSTMENT ACT OF 1944 (THE G. I. BILL OF RIGHTS)

The bill provides for hospitalization; claims and procedures; education of veterans; loans for the purchase or construction of homes, farms, and business property; employment of veterans, and readjustment allowances for former members of the armed forces who are unemployed.

It further provides for adequate organization of the Veterans' Administration to administer all veterans' benefits except employment. Veterans are entitled to adequate hospital facilities, a discharge certificate, final pay, and an explanation of the rights with regard to the benefit of the laws. The veteran is entitled to prosthetic appliances (artificial limbs) and necessary training to effect the greatest possible benefits in case of the need for such

appliances. In cases of irregular discharge or release from active duty veterans may have their cases reviewed by a board authorized to determine the correctness of the discharge or dismissal except in the case of separation by sentence of a general court martial.

EDUCATION

A veteran is entitled to education and training for not more than four years, depending upon his length of service. Those eligible are veterans who served in active military or naval service on or after September 16th, 1940, and prior to the termination of the present war. They shall have honorable discharges and shall have served for more than 90 days unless their discharge in shorter time was the result of an actual service-incurred injury or disability.

AT SCHOOL VETERAN CHOOSES

The education and training will be at an approved institution in such subjects as the veteran chooses. To be eligible the veteran must have been not over 25 years of age at the time of entrance into service, or if over such age, his education or training must have been impeded, delayed, interrupted, or interfered with by reason of entrance into service.

TUITION PAID

The act provides for the payment of all tuition and other fees such as the cost of books, supplies, equipment, and other necessary expenses not to exceed $500 per school year. In addition a subsistence allowance is given while pursuing education or training of $50 per month for men without dependents, and $75 a month with one or more dependents.

PART-TIME

For those who want to attend part-time sessions, provision is made for payment of tuition and other expenses but with reduced subsistence allowances, or in some cases without these allowances.

The veteran may retain, as his personal property, any books and equipment furnished, provided that he satisfactorily completes his course of education or training.

LOANS

The act provides for the guarantee of loans for the purchase or construction of homes, farms, and business property or for the alteration or improvement of buildings, or equipment owned or to be acquired by a veteran. The eligibility is the same as for education excepting that there is no age limitation. The amount guaranteed may not exceed $2,000. Loans may be made by an individual or by private or public, State or Federal lending agencies or institutions. The interest rate is not to exceed 4 per cent per annum. The loan must be practical and suitable to the veteran's circumstances and must be repaid within 20 years.

EMPLOYMENT

A Veterans' Placement Service Board is provided for. It consists of the Administrator of Veterans' Affairs as Chairman, Director of Selective Service, and the Administrator of the Federal Security Agency. The board is to determine all matters of policy relating to administration of the Veterans' Employment Service (a part of the U. S. Employment Service). The Chairman has the authority and responsibility for carrying out the Board's policies.

UNEMPLOYED

The act provides for unemployment benefits not in excess of $20 per week while unemployed. Eligibility is similar to that of the requirements for those securing loans. The allowance is not payable to a veteran who is receiving subsistence allowance for education or training, or who is receiving increased pensions for vocational training. To receive the benefits of the Act, the veteran must reside in the United States, be unemployed or partially employed at wages of less than $23 per week, be registered with, and report to, a public employment office, be able to work and available for suitable work.

Readjustment allowances are given to veterans who were self-employed for profit in an independent establishment, trade, profession, or any other vocation in an amount equal to the difference between the net earning of such veteran less than $100 per month and the sum of $100 per month.

Veterans are disqualified from receiving an allowance if they leave suitable work voluntarily or if suspended or discharged for misconduct. Disqualification also comes as a result of failing to apply for suitable work; to attend free, available training courses; participating in, or directly interested in, a labor dispute which causes a stoppage of work.

A limit of 52 weeks is set as a total period during which unemployment allowances may be paid. Eight weeks of unemployment allowances will be paid for each of the veteran's first 3 months of service, and 4 weeks of allowances paid for each additional month or major fraction thereof. No allowances may be paid for any period more than 5 years after the end of the war.

THE RETURN TO CIVILIAN LIFE

It is the sincere hope of all that Shell's returning veterans will have little need for the benefits given by the G. I. Bill of Rights, but will be able, under Shell's military leave and reinstatement policy plan, to come back to their places in Shell with the minimum need for assistance from other services. But if such a need does exist, the G. I. Bill of Rights may supply the answer.

A Shell station on the Plantation Pipe Line near Doraville, Georgia. In the center is a calibrating machine and manifold, on the right, tank-cars ready to be loaded; on the left, a loading-rack for trucks; in the rear, the laboratory. Shell is one of the companies operating the line.

BURIED WEAPONS . . . THE PETROLEUM PIPE LINES

by Thomas Kearns

A PERSON flying from California to New York looks down on war plants belching smoke or bright with the flame of welding torches. He sees army camps filled with men and the fields which provide food for a country at war. But he may not realize that beneath all these things . . . under the highways and rivers . . . are other weapons of war. These are the pipe lines which network the country.

In addition to the two government-owned War Emergency Pipe Lines, familiarly known as the Big Inch and the Little Big Inch, and several other smaller government projects, there are many lines owned and operated by private industry. Some are common carriers with services available to all comers, and others are the private facilities of oil companies. Shell Pipe Line Corporation, one of the larger common carriers, alone operates more than 5200 miles of crude lines, while Shell Oil's Transportation and Supplies Department operates 850 miles of products pipe lines.

One section of this tremendous underground system, operated by Shell Pipe Line, handles crude oil and natural gasolines produced in the oil fields. The main source of supply, New Mexico and West Texas, is connected by a 450-mile line to the Houston Refinery. It is also connected by a 910-mile line which runs northeast through Oklahoma and Missouri to the Wood River Refinery. Additional crude oil and "natural" from Oklahoma and Kansas enters this line at Cushing, Oklahoma. Another main line used in the prewar period to run East Texas oil to the Houston Refinery is now operating in a reversed direction as a connecting link between the Southwest Emergency Pipe Line and the Big Inch.

In addition to its crude lines, Shell Pipe Line operates a 296-mile line—The Bayou Pipe Line System—for itself and five other owners. Bayou delivers refined gasolines and kerosene from Texas Gulf Coast refineries to the initial station of the Plantation Pipe Line at Baton Rouge, Louisiana.

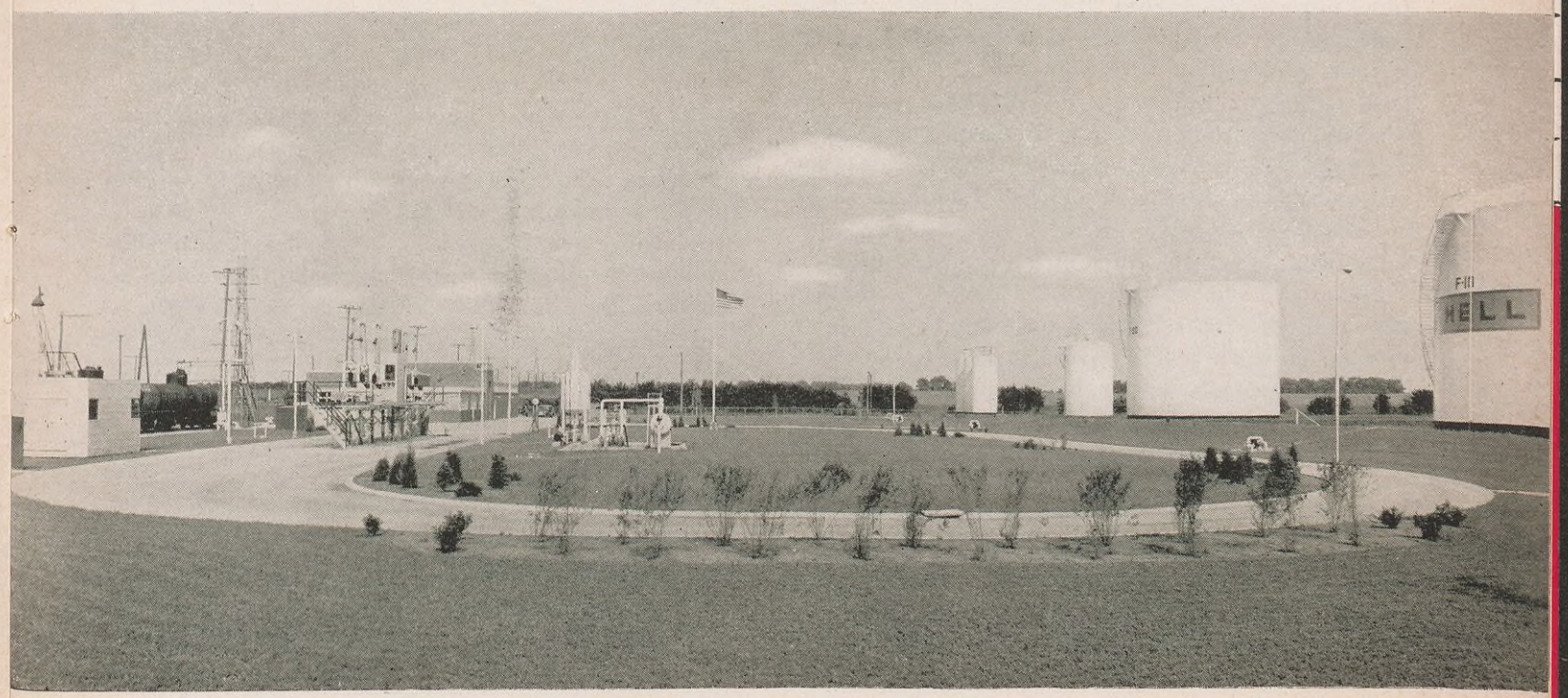
On the crude oil lines, petroleum from the wells is first run into "lease tanks" where it is measured by gaugers. Much of this oil is produced by Shell Oil's Production Department while the balance is purchased from other operators by the Crude Oil Department. After the oil is measured, and gravity, temperature and sediment content are recorded, it is gravitated or pumped through gathering lines connecting with the trunk pipe line station. Here it is collected in larger tanks where gauges are taken again to check the totals of the runs from the lease tanks.

The next step is the pumping of the crude from the fields to "tank farms" composed of enough large tanks to keep substantial stocks of various types of crudes separate. Segregation is necessary because not all kinds of crude are used for the same purpose. Some petroleum, for example, is especially suited to the manufacture of aviation gasoline or lubricating oil, while another kind may have a high sulphur or wax content that necessitates extra treatment at the refinery. The natural gasolines are pumped into the trunk lines so as to blend with the crudes with which they can be refined to best advantage. These comprise from 5 to 15 per cent of the fluid in the several trunk lines.

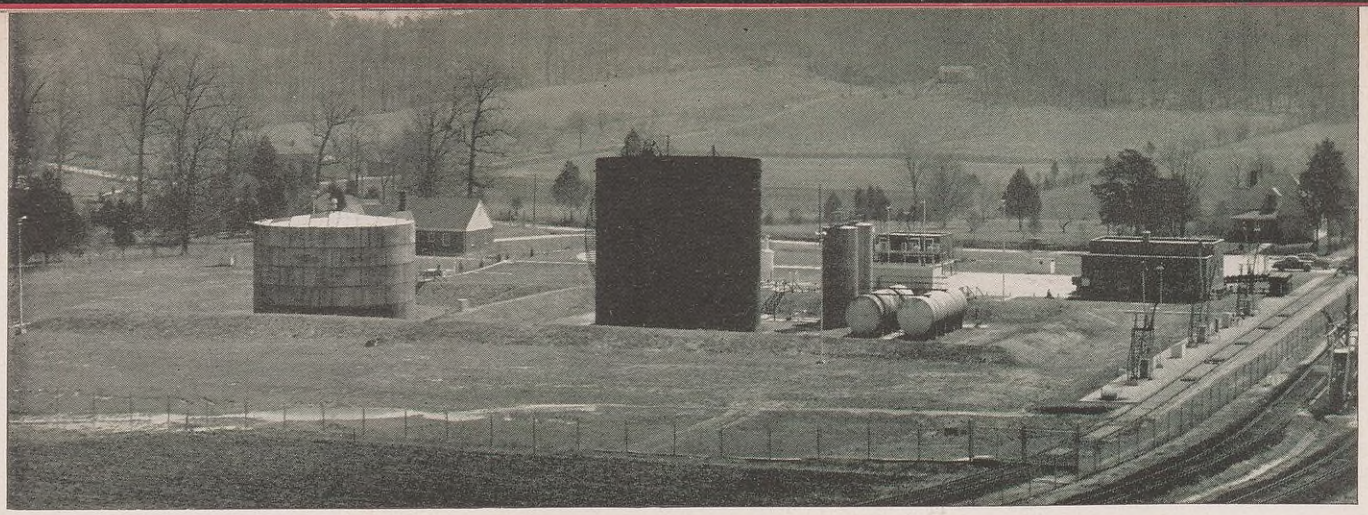
The immediate movement of these oils is directed by three staffs of area dispatchers. The chief dispatcher of Shell Pipe Line, at Houston, correlates the work of the area dispatching staffs and arranges with shipper's representatives (Manufacturing Department in case of Shell Oil) to schedule the delivery of batches of the right amounts and types of crude oil and naturals to the refineries or exchange-points intended to receive them. Trunk line movements are scheduled about 30 days in advance, but the lines are always full, with previously scheduled batches continuously flowing through them.

One of the chief operating problems is to avoid contamination of the better crudes. Often refining, particularly of "lubricating oil" crudes, will be hindered by the presence of even a small proportion of an unwanted crude, especially if the latter has a high "pour-point." To keep the more important crudes separate, often a "pilot" . . . which is another crude that will not affect the refining . . . is run ahead of and behind the batch. Progress of the oil along the line is very closely followed, and the dispatching offices can give almost the exact location of each batch or pilot at any time.

On Shell Pipe Line, through the use of station control equipment, not yet common to most other crude oil pipe lines, each section of line between major collection points and refineries operates as a single unit. The intermediate pumping stations serve as pressure boosters, with automatic equipment regulating line pressures to keep the oil flow uniform. The appearance of pressure fluctuations may indicate several things to the station engineers . . . a break in the line, an obstruction in the pipe, or perhaps a damaged pump. These are reported, by telephone, to the area dispatcher who initiates whatever action is necessary. If a line breaks during pumping of an ordinary batch, the stream is switched into the stock tank of the station behind the break, and an equal amount is taken



The Harristown, Illinois, Products Pipe Line Terminal.



Station at Knoxville, Tennessee.

out of storage, at the station ahead. Thus the line can operate at capacity except in the damaged section.

Pipe line maintenance crews are located at strategic points and keep in contact with the dispatcher. They are called on for repairs when leaks are noted. Prompt repair avoids loss of pipe line capacity and oil contents.

Transporting crude from oilfields to refineries is a big job, but that isn't the only function of pipelines. The Bayou Pipe Line System delivers about 65,000 barrels of gasolines and kerosene daily into Baton Rouge. This war emergency line is manned by personnel transferred from the crude oil lines, and is dispatched by a special staff.

Shell Oil Company, Inc., has four privately-owned products pipe lines. Two 8-inch lines originate at Wood River and terminate at East Chicago, Indiana, and Lima, Ohio, respectively. A third . . . a 6-inch line . . . runs from Lima to Columbus, Ohio, and another of the same diameter connects Fall River with Waltham, Mass. These lines transport refined products to take-off terminals from which they are sent by truck, railroad tank car or tankship, to industrial centers and the fighting fronts. The operation and problems of these lines, although the general set-up appears the same, differ in many respects from those involved in the transportation of crude oil and naturals.

The products lines handle various kinds of marketable gasolines, kerosene, Diesel oils and other finished products . . . which are moved in smaller batches than crude. A line may contain several different types of products at one time . . . products requiring simultaneous delivery at different terminal points. This means that flow control must be absolutely accurate, and that the exact position of each batch in the line must be known at all times.

At the terminals along the line are located storage tanks where products are taken off to be stored or delivered. Loading racks lined with tank cars and trucks serve the latter purpose. Individual lines connect each tank to the receiving manifold and to the loading racks to keep contamination at a minimum and to permit flexibility in shipping. Controls in the terminals and pumping stations are automatic, and all receipts and deliveries are measured by accurately calibrated displacement meters.

Shell Oil's products pipe line dispatching is coordinated in New York, where a special "board" permits constant check on the streams. On this device the streams are represented by tapes . . . scaled 100 barrels to one-eighth inch. Various grades of gasoline and other products are represented by different colors at the edge of the paper tape, a new color being introduced whenever a new batch leaves the point of origin, and from there on it moves with the stream.

Pump stations and terminals are indicated by metal clips which fit onto the board. Although the distances between stations do not change, the distances between clips are altered to compensate for temperature and pressure changes along the line. The tape is scaled on the basis of 60° F. temperature and atmospheric pressure, and it is much simpler to indicate divergence by increasing or decreasing the distance between station clips on the board. Every station reports by teletype to the dispatcher on duty every hour. The dispatcher keeps them informed of the progress of the batches so that each product can be taken out of the line at terminals as required. The dispatching office, like the line, never closes.

Maintenance work on the products lines is handled in much the same way as on the crude lines, after trouble has been reported to the dispatcher. Constant vigilance, however, is perhaps even more important, because the lighter and more valuable refined products can escape more easily and cause a greater loss.

In the ten states covered by Shell's pipe lines there is every type of war industry, using a wide range of petroleum products. Today the pipe line system is an important road of distribution to industry and the armed forces . . . burrowing its way through miles of land producing other things necessary to victory.

The World's Playground now has a more serious task . . . redistributing returned veterans. On the extreme left is the Ambassador Hotel, home of enlisted men who are the guests of the Air Forces in Redistribution Station No. 1. The long building in the left center is the tremendous Convention Hall with its normal seating capacity of 70,000 persons. The "Million-Dollar" Pier is the first one in the photograph, while Steel Pier can be seen directly in back of it. The large building toward the far end of the boardwalk, just before Steel Pier, is the Army's England General Hospital. During the first years of the war all the hotels shown in this picture were taken over by the Air Forces for use as barracks; they have since been returned to their original owners, with the exception of the few still used by the Redistribution Station. (Acme Photo.)

HEAVEN IN THE ARMY

By Martin Edman

Several weeks ago an Air Forces officer came to the SHELL NEWS office to tell of his idea of a great story. "It's wonderful, I've just been to heaven in the Army." Of the 3500 Shell employees east of the Rockies, several hundred are with the Army Air Forces. This is the story of what will happen to those who return from service overseas, while they await reassignment. It is also the story of an experiment so successful that other branches of the service are going to use the same idea.

THEN . . . a crowded train with happy, thrill-seekers . . . young and old . . . vacation bent.

Now . . . a crowded train with sober, excited people . . . young and old . . . a few vacation bent, others . . .

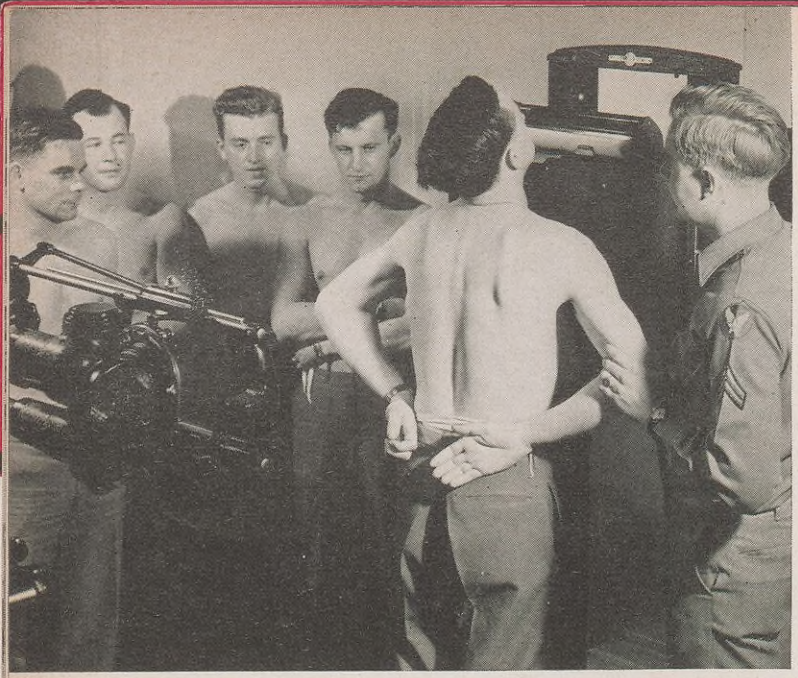
The platform at Philadelphia is crowded with persons who have converged from north, south, and west. Here is a woman with two children, there a young mother with a new-born baby . . . all along the platform are small groups. Then there are the couples, mostly elderly, and the many young women. Some look tired from long trips, weighted down with suitcases . . . others have come short distances and have no luggage. The Atlantic City Express pulls in and the crowd shuffles aboard . . . most of them bound for the Army Air Forces Redistribution Station at the seashore resort.

As the train chugs along a series of poignant episodes takes place in one car and presumably is repeated throughout the length of an extraordinarily long train. There aren't enough seats to go around . . . but those who stand in aisles or wander up and down can catch the drama which otherwise might be missed. Snatches of conversation are overheard, questions are hurled at the harried conductor, strangers ask each other unanswerable questions.

"I haven't seen him for almost three years. Then yesterday I got a telegram, he's here. How come he didn't get a twenty-one day furlough like the others?" The answer is probably that "he" is a patient at the Army's giant England General Hospital, on the boardwalk in Atlantic City.

"He was home for three weeks and now he writes he's living a life of luxury down here. I'm spending one more week with him before he's shipped over." "He" is one of the thousands of Army Air Forces men who are stationed, temporarily, at the Army Air Forces Redistribution Station, No. 1, at the World's Playground.

As the train nears the boardwalk city the skyscraper



Returned combat veterans undergo thorough medical examinations and are interviewed by classification experts before being given new Air Force assignments. Here a group of returnees await their turn while the man in the foreground is having his chest x-rayed.

hotels are plainly visible. It slides into the station, jerks to a sudden, as though unexpected, stop. Immediately there is a rush for the platform. The stream of humanity goes toward the exits, past the burly M. P.'s who check the passes of any military men who were on the train. A large crowd awaits those coming in, many of the gathering are soldiers. The reunions are joyful, yet tearful, as the soldiers and wives and children rush to each other. The station is a madhouse.

The walk to the boardwalk is past old, dilapidated boarding houses. The first impression is that the city is not merely crowded but actually bulges with human beings. "No vacancy" signs are on each house. The hotel doormen politely inform everyone that there are no empty rooms. But visitors know that the AAF has considered their problem. Special rooms are always available to them . . . and at nominal prices.

The boardwalk is crowded, too . . . but here it is even more evident that Atlantic City is a soldier's town. Uniforms predominate. Soldiers walk along with members of their family hanging on their arms as though afraid to lose even a minute. The first unusual thing noticed is the number of ribbons and decorations the average G. I. wears. Then you see "Beach reserved for military personnel and their guests" . . . whole, huge sections are roped off with these signs proclaiming the restriction. Further down is the USO Beach Club, and then the sign on the world's largest auditorium . . . "Headquarters . . . AAF Redistribution Station, No. 1."

Here in the Atlantic City Convention Hall, a building so large that New York's gigantic auditorium, Madison Square Garden, could be put in one corner, is the organization which made this Air Forces project so unique.

Perhaps the whole achievement is best summed up in the words of General H. H. Arnold, Commanding the Army Air Forces, who said, "We took our Air Force personnel from the cream of America's youth. They've been put to severe mental and physical tests abroad, and they have come through with flying colors. First, they deserve a rest, and then a chance to do what they're best fitted to do. Finding out what that is, is the function of Redistribution."

Redistribution of Air Forces men takes place at three stations, picked for geographic reasons as well as for the physical facilities available. In addition to the one in Atlantic City, there is another at Miami Beach, Florida, and a third at Santa Monica, California.

Two rest camps are run in connection with the Station . . . where men can be sent who need rest in addition to that gained while on leave. These camps are located at Lake Lure, North Carolina, for Easterners, and Castle Hot Springs, Arizona, for men on the Pacific Coast.

General Arnold sees in the redistribution project an invaluable instrument for siphoning personnel with combat experience back into the AAF's training program. Thus, not only will the knowledge these veterans gained abroad be placed at the disposal of young fliers in training centers, but officers who have never had the opportunity to go abroad will be relieved from domestic duties and given their chance to go overseas.

Before redistribution is started, every returning member of the AAF is given a chance to go home on furlough or leave. When he reports to the redistribution station, he is interviewed by some of the AAF's finest medical officers and classification and personnel experts.

His teeth may need attention, or he may need eyeglasses. Perhaps the rest he got on his furlough wasn't enough. All of these things are taken care of before the individual is reassigned. But chiefly the emphasis is placed on the physical surroundings. In Atlantic City, for instance, the men can fish and swim, play golf, tennis, and badminton, indoors as well as out. These sports-hungry men who have spent long months overseas find the redistribution station veritable sports paradises.

In and around Atlantic City there are 22 different sports available. Fishing enthusiasts can go deep-sea fishing on a 65-foot, the "Returnee," which leaves early every morning and stays out all day. There are also three 24-footers for inland fishing on the nearby bays, as well as a score of rowboats for bay fishing. Members of the Tuna Club have made their boats available for tuna fishing.

Men who downed Nazi and Japanese planes seem anxious to try their hand at trap and skeet shooting. Tennis is played on nearby courts, and three country

clubs have invited the military personnel to use their golf courses at any time. 200 bicycles are available for a spin on the boardwalk.

In the wintertime the varied facilities of Convention Hall may be used. Here the Station has set up three full-sized basketball courts, two volleyball courts, 7 badminton courts, archery ranges, a boxing ring, punching bags, ping-pong tables, and indoor golf net, and three handball courts. A staff of experts is on hand to supervise each activity.

The life of a soldier at Atlantic City is comparatively informal. He doesn't have to get up early in the morning unless he has a processing appointment; he doesn't even make his own bed. His time is his own with the exception of an hour or so each day, and he has plenty to do. The enlisted men are quartered in the skyscraper Ambassador Hotel, while the officers live at the equally tall Ritz. The lobbies are furnished as they were in civilian days and many a soldier gets a thrill by just being able to walk up to a counter and buy a cigar or a morning newspaper.

When the G. I. finishes breakfast he arranges his schedule to suit himself. The night before he has checked the bulletin board to see what his Army requirement is for the day. It may be a short, but comprehensive, interview; a session with the dentist or an orientation lecture. Both before and after the required session he can stroll up the boardwalk. If his tastes run to machines there are any number of "Pennylands" with their myriad wonders. Steel Pier advertises two pictures, a vaudeville show, a circus and a "name" band for a small admission price. The countless theatres offer movies current on Broadway. There are any number of frozen custard stands, restaurants, bowling alleys, and the usual requisites of a summer resort. Occupation of time is no problem at the World's Playground.

As they stroll up the boardwalk they meet some of the men who are at the England General Hospital. These veterans have suffered combat wounds and have been sent to Atlantic City from overseas. Most of them wear the Purple Heart and other decorations and many a yarn is swapped.

The success of Redistribution stations is evident by statistics released this month which show that 94 per cent of the returning officers (including pilots, bombardiers, and navigators) and 82 per cent of air crew enlisted men (including aerial gunners and radio operators) are found to be physically fit for further flying duties. Up to July of this year almost five thousand combat pilots were examined and processed by the AAF Personnel Distribution Command, and over 90 per cent of them were found still to be fit for flying. However, officers in this category usually are not returned immediately to combat, but are assigned to duty within the continental limits of the United States. They usually take their places at the end of a flow of combat pilots to theatres of operations.

The new duty to which the returnee is assigned doesn't always involve the large amount of flying he had done previously. A variety of assignments awaits him. For example, a pilot might become an engineering, operations, or weather officer; or perhaps his qualifications may place him in a post which involves less flying but utilizes his flying experience or develops his administrative ability, thus making him a well-rounded Air Forces officer. Many become instructors at various Replacement Training Centers.

Many Shell men have passed through the three Stations. Some have returned overseas, others to new and different positions in the states. The success of the Redistribution Stations is measured not only by the statistics but by the human angle. The men themselves are enthusiastic, most of them feel as did the Shell employee who said it was "heaven in the army." They enjoy the semi-civilian life they lead, the opportunity to be with friends or families (since they are generally sent to the center nearest their homes) and the knowledge that the Air Forces is not too big to consider the problem of every G. I.

When the Atlantic City Express pulls out every day the scene is somewhat different from the incoming train. The good-byes are tearful as they almost always are . . . but the soldier is happier for having been with his loved ones, and the wives and mothers and sweethearts seem happier in the knowledge that their boys are being well cared for by this Army. They are comforted, too, by the aims of the Air Forces for the future, as expressed in the words of General Arnold, "We took him out of civilian life when his future was brightest. When he returns, we want his outlook and his chances for success to be just as brilliant."

Returnees listen to an informal indoctrination lecture.

NORCO REFINERY

MANAGER

W. B. STEWART

ASST. SUPT.

R. W. FAULK

TOPPING AND CRACKING

B. J. LEHMANN

GAS

W. P. SVEC

LAB. & TREATING

W. N. DAY

ENGINEERING

D. R. DEAL

TECHNOLOGICAL

S. J. OERTLING

STORES

C. A. BEARDEN

IND. RELATIONS

G. J. BLEAKLEY

MAIN OFFICE

J. L. LAURENT

MARINE

L. C. OUBRE

DISPATCHING

C. J. TROXLER

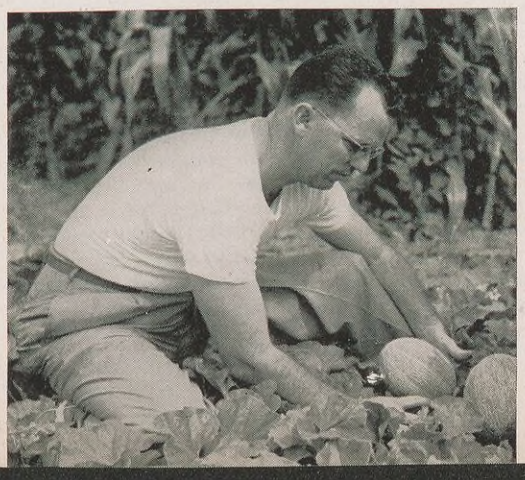
CAR

B. BOND

The Detroit Marketing Division is proud of its model Victory Garden in the heart of one of the city's residential communities. The garden has attracted considerable attention and a constant flow of visitors appear on Sundays and during the evenings. Newspapers and radio stations throughout the state of Michigan have praised the project. One section of the garden is pictured; the inset shows R. L. Duncan, Detroit Office Manager, one of the participants in the work, in his own garden.

MORE WINNERS IN SHELL NEWS VICTORY GARDEN PHOTOGRAPHIC CONTEST

Down south the "Country Fairs" have already been held; in the north and middle west, the 1944 Victory Garden season is rapidly drawing to a climax. The October issue of SHELL NEWS will show pictures of the winners and their displays in the many Shell Victory Garden Club fairs. Five dollar awards in this month's photographic contest go to Cliff Davidson of Wood River Refinery, and A. D. Taylor of the Texas-Gulf Area.



A. D. Taylor, winner of the canned goods exhibit at the Texas-Gulf Area Fair, is shown with his prize canteloupes. Pictures of the Fair will be shown next month.

Cliff Davidson, Wood River Refinery, is sure that his tomatoes will capture many prizes at the Wood River Fair.

Construction of Shell's new recycling plant near Sheridan, Texas, began in early July. When the plant starts operations early in 1945, it will have a daily capacity of 100 million cubic feet of gas. Its daily output will total approximately 6000 barrels of war products, including natural butane, normal pentane, and natural gasoline. From left to right are, Fred Fresh, construction sup't; Fred Burdich, staff engineer; T. R. Goebel, manager of Gas-Gasoline, who is wielding the shovel as the ground was broken for the new plant; John Jordan, staff engineer; M. R. Church, assistant manager, Gas-Gasoline; and H. L. Derby and Paul Raigorodsky, engineer and contractor of the construction company.

'ROUND THE REFINERIES, AREAS, AND DIVISIONS

Editor's Note: Our tabulation of the SHELL NEWS questionnaire showed that well over 75% of you asked for "More intimate news of Shell's refineries, areas, and divisions." In these pages we will attempt to give you items which previously might not have appeared in the magazine. This is just a beginning . . . the format will undoubtedly undergo frequent changes as we make an attempt to satisfy your wishes. If this IS what you want, let us know, if it isn't, don't hesitate to tell us so . . . with suggestions for improvement.

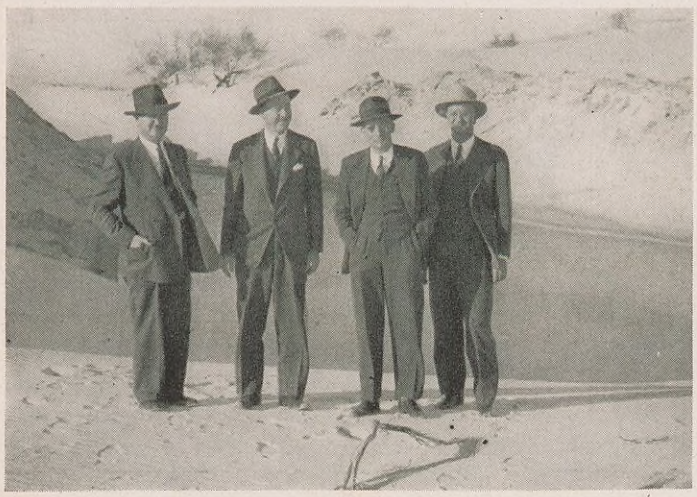
The Minneapolis Marketing Division boasts that their new offices are "as attractive as any of the marketing divisions." They are particularly proud of the soundproof ceiling, and the indirect lighting.

With the increasing demands of the armed forces for men it became necessary for the Houston Refinery to employ women in positions which previously had been considered "man's work." But both the Control and Research Laboratories report that women employees have been doing an outstanding job in their difficult war work.

One of those women now at the refinery is Miss Geraldine Campbell who has been employed as Junior Analytical Chemist, working on problems of water cooling and corrosion control. Miss Campbell was graduated from the University of Texas in June, 1942, with a B.S. degree in chemistry. She was the only girl in her class. Miss Campbell was the second woman to obtain this type of degree from the University of Texas, and is one of two women who hold membership in the National Association of Corrosion Engineers. Miss Campbell is also a member of the American Chemical Society.

Al Harding of the Boston Marketing Division's South Portland Terminal, has been fishing in Maine's Sebago Lake for a good many years. Sometimes his luck was good, more often, bad . . . but . . . One fine summer day Al caught the prize of his fishing career, a 22-inch, 8-pound salmon. To avoid being accused of telling the usual fish story he had the salmon photographed on a scale.

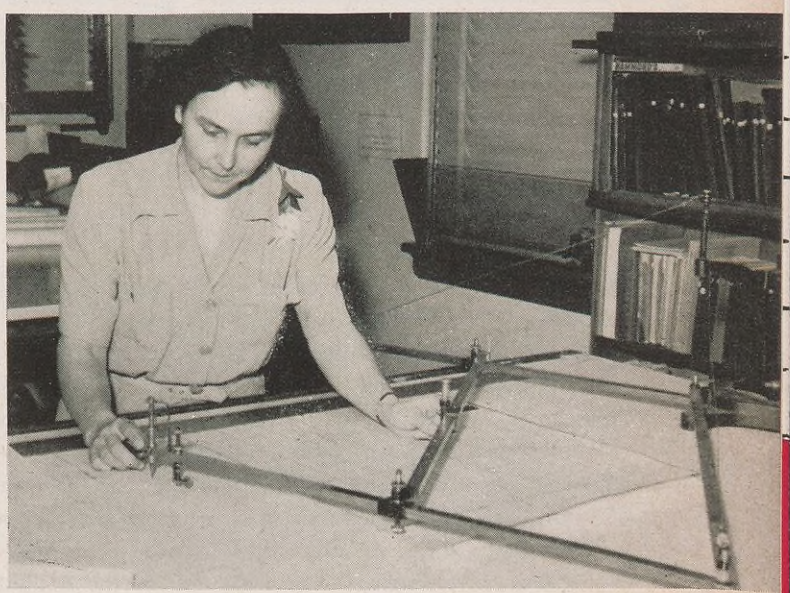
Edward E. Walker, Area Manager at Toledo, Ohio, in the Cleveland Marketing Division is general chairman of the Toledo Chamber of Commerce membership committee. Toledo "Business," a local publication, reports that under his direction the membership committee succeeded beyond their expectations in securing new members . . . the total for one month was 125.



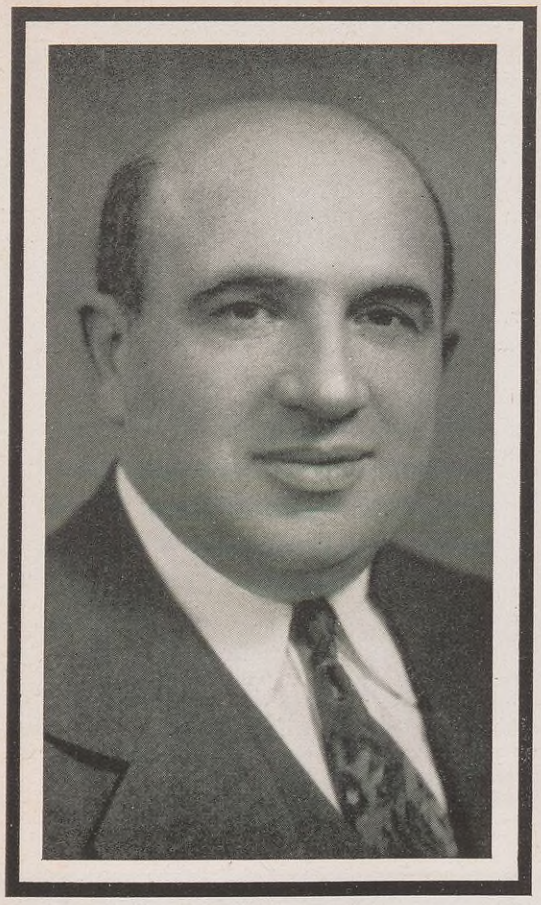
In the desert sands of West Texas, Shell has a man-made lake which has attracted wide attention. When an attempt was made to drill a deep-water well two years ago, it met with failure since there was too much sand, and too little water. However, willow trees and delicate flowers seemed to thrive. It was discovered that only one or two feet below the surface there was moisture.

A bulldozer was brought to the spot to dig a pit six to eight feet deep. It rapidly filled with fresh water and a pump was installed to take the water up to the rig. From that source the water supply has been sufficient for all drilling needs in the vicinity.

On a recent trip to West Texas, E. C. Peet, vice-president and treasurer, was shown the unusual sight. From left to right are, Mr. Peet; J. M. Flaherty, assistant treasurer, Mid-Continent Area; W. A. Baker, assistant treasurer, Texas-Gulf Area; and E. J. Strawn, automotive supervisor.

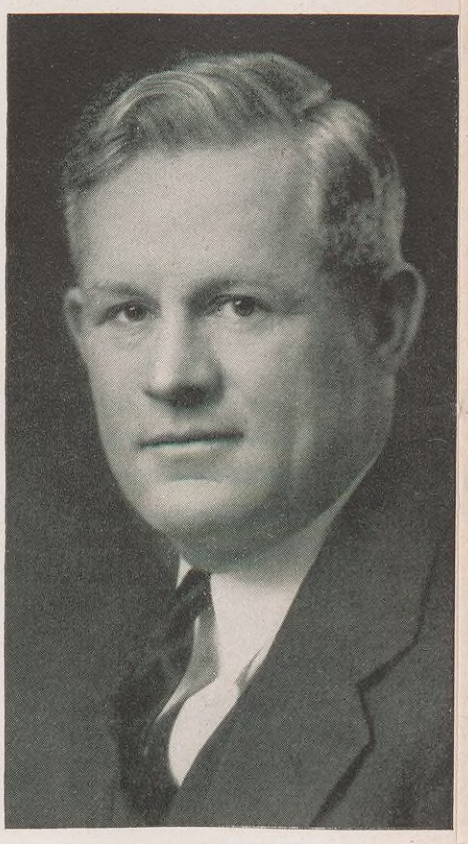


The Texas-Gulf area claims one of Shell's most unusual employees . . . Miss Josephine Boudreaux. Miss Boudreaux studied music in Paris and Budapest, gave violin recitals abroad, returned to the states to form a string quartet, and then became concert master and soloist for the Houston Symphony. For six years Miss Boudreaux played with the Houston Symphony until an arthritic condition forced her to give up her musical career. In 1942 she enrolled in a course of map engineering, and advanced drafting at a Houston school, and joined the Land-Drafting Department in December of that year.



DAVID WAXMAN

DR. E. F. DAVIS



E. D. CUMMING

PEOPLE IN

DAVID WAXMAN, for fifteen years manager of the Marketing Department's Asphalt Sales department, died on August 29th, at the age of 46. Mr. Waxman was born in Philadelphia and educated in the city's schools. He attended the University of Pennsylvania and received a degree in civil engineering in 1919. Mr. Waxman came with Shell as an asphalt salesman in the New Orleans office in April, 1926. Three years later he was transferred to Head Office and a month after was made head of the department. Mr. Waxman was a director of the Asphalt Institute and served as chairman of the Institute's executive committee during 1942 and 1943. He is survived by his widow, his mother, and two daughters.

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DR. E. F. DAVIS, Vice President, has been appointed to the newly created position of Chief Consulting Geologist for the Shell Union Group of Companies. In this capacity he will consult with the various Shell organizations and advise them in regard to all geological and geophysical questions. Dr. Davis obtained his degree from University of California in 1917, and joined Shell in 1919. He was engaged in Geological Exploration and became Vice President and Chief Geologist in 1929, a position he held until 1939 when he became Vice President for the Company at Los Angeles, in charge of exploration and production activities west of the Rockies. Dr. Davis will maintain headquarters in Los Angeles but his activities will cover the whole North American continent.

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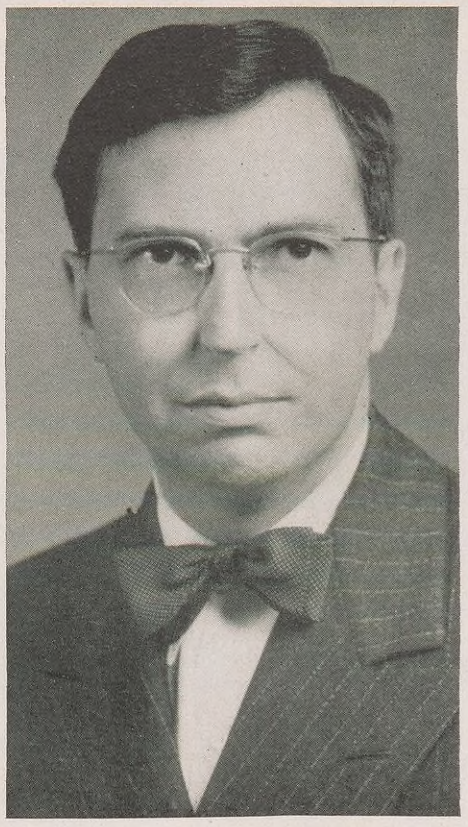
E. D. CUMMING has been appointed to succeed Dr. Davis as Vice President, Los Angeles. He recently returned from a special leave of absence during which he served as Director of Refining for the Petroleum Administration for War, at Washington, D. C. Mr. Cumming was graduated from the Alabama Polytechnic Institute and came with Shell in 1923 as a Fireman at Long Beach, California. In 1930 he became a Technical Assistant in the Manufacturing Department at San Francisco and in 1935 became Assistant Manager of the Dominquez Refinery. Two years later he was appointed Manager of

D. B. HODGES



J. B. HARKNESS

C. A. BEARDEN

THE NEWS

the Martinez Refinery and in 1938 Manager of Wood River Refinery. Mr. Cumming was made Vice President of Manufacturing, East of the Rockies, in 1939 and held that post until his appointment with PAW.

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D. B. HODGES, Manager of Transportation and Supplies, has returned from a special leave of absence during which he served as Associate Director of the Supply and Transportation Division of the PAW. Mr. Hodges attended the University of Nebraska and started with Shell as a Clerk in Ventura, California, in 1926. In 1936 he became Administrative Assistant in the Manufacturing Department at San Francisco and three years later became an Executive Assistant in the Vice President's office. Mr. Hodges came to New York in 1940 as Manager of Shipping and Supplies and in 1942 became Manager of T. & S.

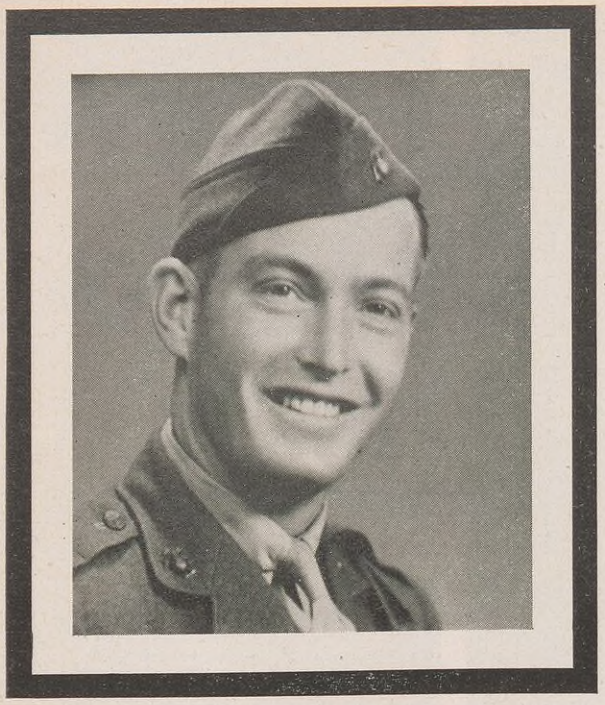
• • •

J. B. HARKNESS has been appointed Chief Chemist at the Control Laboratory in the Houston Refinery. Mr. Harkness is a graduate of the University of Kansas and Northwestern University, and got his Ph. D. at Harvard. He came with Shell in 1937 as a Junior Technologist in St. Louis. In 1940 he became Senior Research Chemist at Wood River Refinery and the following year was appointed Senior Experimental Chemist. In 1943 Mr. Harkness was appointed Chemist in Charge of the Experimental Laboratory at Wood River Refinery.

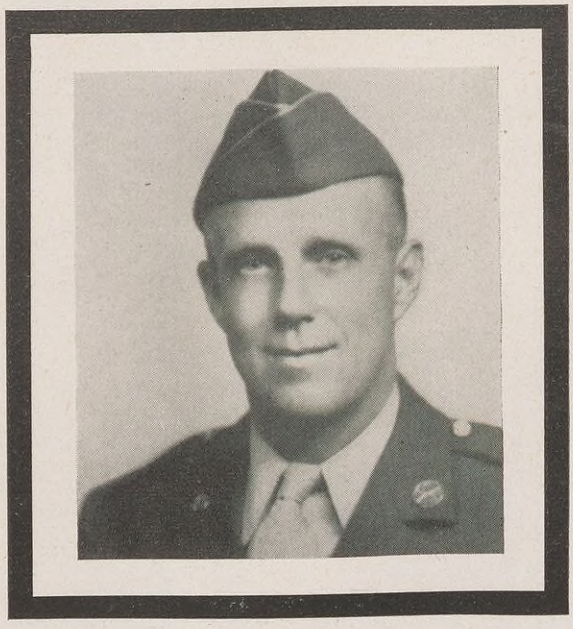
• • •

C. A. BEARDEN has been named Storekeeper at Norco Refinery. Mr. Bearden came with Shell in 1935 after attending Chicago University. His first position was as a Pipefitter Helper at the Arkansas City (Kansas) Refinery. In 1928 he became an Insulator Foreman at the East Chicago (Indiana) Refinery. In 1933 Mr. Bearden was appointed General Material Foreman at the Wood River Refinery. In 1941 he came to Head Office as a Section Head in the Purchasing Department and in the following year became a Buyer.

WITH THE



Corporal G. S. Pulliam, United States Marine Corps, has been killed in action during the invasion of Saipan. Corporal Pulliam was employed in the Cracking Department of the Houston Refinery. He entered the Marines on August 7, 1942, and received his basic training at the San Diego Marine Base, California.



Private Martin H. Suntken, East Chicago Terminal (Products Pipe Line), died in France on July 31, 1944, as a result of wounds suffered in action. Private Suntken was employed as a Linewalker at the time of his induction on December 23, 1943.

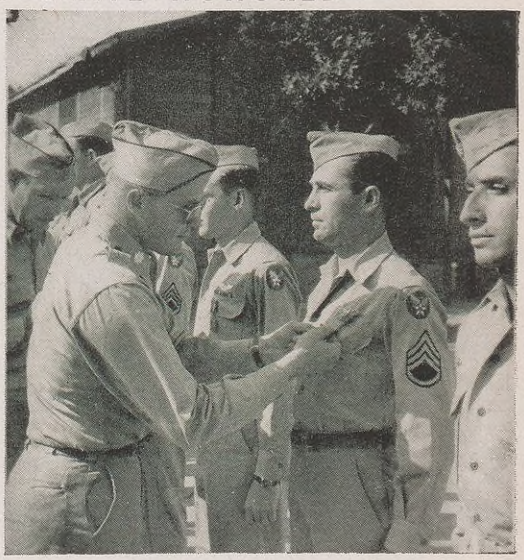
The Marines report that these grinning veterans are "shell-backs" in a double sense. They entered "Father Neptune's Order of Shell-backs" by crossing the Equator; before they entered the Marines both were with Shell. Privates First Class Robert C. Sanders (1) and John W. Timothy renewed old friendships on Guadalcanal. They were both employed in the Mid-Continent Area at Centralia, Illinois. Pvt. Timothy was a drill instructor at the San Diego Marine Base for two years before going overseas.

COLORS

THREE TEXAS-GULF AREA MEN ON MILITARY LEAVE HONORED

Lt. Sidney G. Smith, center, Treasury Dept., received the Distinguished Flying Cross for "extraordinary achievement while participating in aerial flights as pilot of an A-36 type aircraft." Lt. Smith returned to the States in the early part of this year after ten months in North Africa, Sicily, and Italy. He is now teaching combat tactics to French pilots. The D. F. C. was presented to Lt. Smith before an audience of 15,000 gathered to inaugurate the Fifth War Loan Drive in Norfolk, Virginia. The citation read, ". . . as wingman to his flight leader, Lt. Smith took part in a fighter-bomber sweep northwest of Rome. . . . his leader was shot down; although his own plane was severely damaged, with the rudder almost entirely shot away and the oil pressure valve disabled, Lt. Smith immediately assumed leadership of the formation, continuing to carry out low-level attacks against enemy strong points until his ammunition was nearly exhausted and his windshield became so covered with oil that he was forced to pull up to higher altitude."

Lt. Simeon (Sam) L. Rawls, Drafting-Surveying Division, has been awarded the Air Medal and two Oak Leaf Clusters "for meritorious achievement while participating in aerial flights in the European Theatre of Operations." Lt. Rawls is pilot of the B-26 bomber, "Miss Carriage." He reports that he had a ringside seat for the invasion as a member of a 9th Air Force Bomber Group. Lt. Rawls said, "I've been hit pretty badly, and had my doubts about making it back."



S/Sgt. Ike J. Dugas, gauger-pumper at the White Castle station, now attached to the 15th Army Air Forces in Italy, has been awarded the Air Medal "for meritorious achievement while participating in sustained operational activities against the enemy." Sgt. Dugas is an assistant engineer and ball turret gunner on a Liberator bomber. He has flown forty-four combat missions over Toulon and Nice in France; Munich, Germany; Ploesti, Constanta, and Bucharest, Romania. Sgt. Dugas entered the Army Air Forces in October, 1941. He was stationed at Lake Charles, La., and Keesler Field, Mississippi, and received his wings as an aerial gunner at Harlingen, Texas.

Lt. Robert L. Gibson, exploitation engineer in the Texas-Gulf Area, was one of forty-four wounded war veterans flown to Harmon General Hospital, Texas. Lt. Gibson left Naples, Italy, on June 22nd. His hospital ship docked in North Carolina two weeks later. He spent sixteen months in North Africa and Italy with the Corps of Engineers. Lt. Gibson's activities included road- and bridge-building for the Fifth Army.

Wilbur F. Meyer, operating engineer at Wood River Refinery, is congratulated by Comdr. A. M. Cohan, commanding officer of the Naval Training School at Dearborn, Michigan, for being honor man of his Diesel class. His final average was 93.7 and he was given the rating of Motor machinists mate, third class.

Three employees of the Houston Refinery Control Laboratory have been reunited somewhere in the South Pacific. They are (l. to r.) W. L. Darby, Sm 3/c; G. P. Lively, Jr., Cox.; R. O. William, S 1/c. Darby is on the cutter Woodbury, while Lively and Williams are aboard the cutter Tuckahoe.

Corporal H. L. Moss, Control Laboratory at Houston Refinery, is pictured next to a Shell gasoline pump in a North African city. Cpl. Moss is with the Medical Corps.

AFTER HOURS

Teams from the Chicago Marketing Division and the East Chicago Terminal (of Products Pipe Line) have been engaged in a series of bowling matches. Latest bulletins indicate that they are evenly matched. In the back row (l. to r.) are P. Larson, J. Hemingway, J. J. McCann, P. Scheyli, C. P. Woodward, S. Longava, C. Campbell, B. Sowka, S. Dejeske, A. Merritt, and B. Zangert; in the front row are R. Makowski, W. Heiney, W. Werz, H. E. Dischinger, H. Hardeback, W. Lindstrom, J. J. McAuliffe, and H. P. Ingersoll.

In the Mid-Continent Area the annual "Texas Goat Trial" is looked forward to eagerly. The handsome gentlemen are (l. to r.) Jerry Ashabranner, District Attorney; Holmes Miller, Judge; Paul Mason, Bailiff; and Bob Trapp, Attorney for the Defense.

C. F. "Tex" Regan of the Geological Drafting section in the Texas-Gulf Area was elected President of the Houston Shell Club. Others elected were (l. to r.) Roy Deslatte, Land Drafting, vice-president; Nelrose Heineman, Shell Pipe Line Corp., secretary, and Terry O'Neill, Tax and Claims, treasurer; on the right is Mr. Regan.

Staff employees at the Houston Refinery held a barbecue on the staff grounds recently. E. S. Robb, Chief Engineer, is acting as cook, while the hungry onlookers stare at his handiwork.

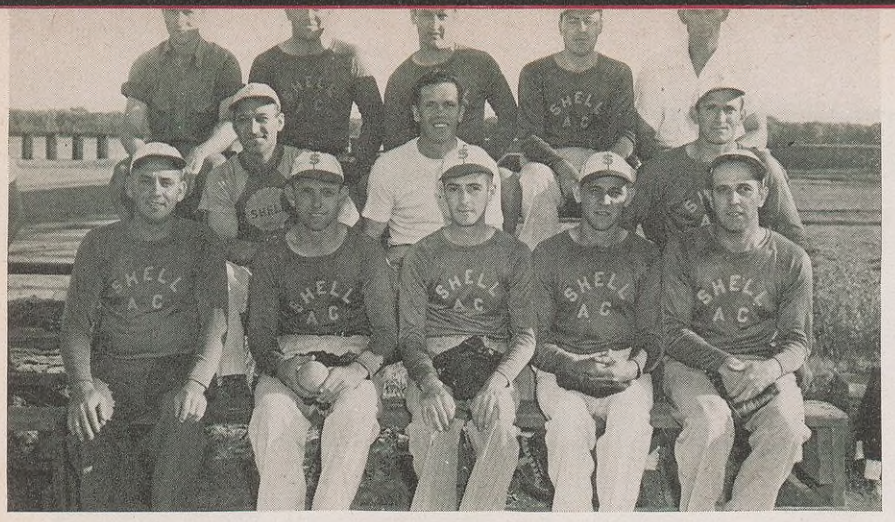
Lillian F. Scarborough, Atlanta Marketing Division, gives her twelfth pint of blood to the Red Cross Blood Bank. Miss Scarborough is President of the Atlanta, Georgia, Gallon Club. Under her guidance the club has been responsible for 282 donors in one month. The Gallon Club now has 192 members; to be a member you must give a minimum of eight pints.

Houston Shell Clubbers had their annual barn dance early in the summer. Mark Storm, Texas-Gulf Area, shows a few of his rope tricks.

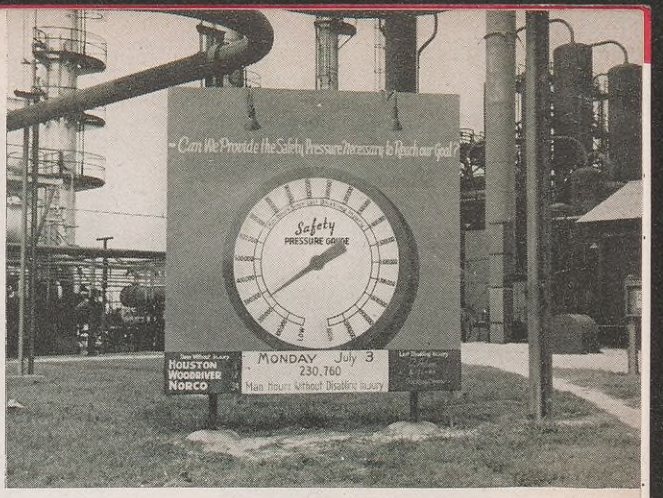
The Soft-ball teams of the Minneapolis Marketing Division and the St. Paul Terminal are involved in an inter-city feud.

From left to right, Minneapolis, (standing): Messrs. Caron, Starn, DeSpain, Byrne, Ardemax, (sitting): Precobb, Seidel, Uelk, Vietor and Rodney.

From left to right, St. Paul, (standing): Messrs. Hill, Norgard, Fitzgerald, Freeman, Schuldt, Lindstron (sitting): Pingley, Haider, Eberts, Burton, Velure, Wasko.



The Shell Athletic Club of Wood River Refinery sponsors soft-ball and base-ball teams in several leagues. Pictured is the soft-ball team in the "Not-So-Good League." Back row (l. to r.) Harold Dolan, Ted Bertier, Ralph Henkhaus, Ken Schubert, Carl Davidson; middle row, Ernie Paulda, J. D. Hake, Ed Hackett; front row, C. A. (Bill) Nicolet, Charles Meyer, Ralph Byron, William Schipkowski, and Joseph Schillinger.



The Houston Refinery current safety drive is in full swing. The signboard with its safety gauge is displayed in a prominent place. The hand on the gauge is movable and indicates the number of manhours completed without a disabling injury. The object is to go at least two million hours without injury.

The Products Pipe Liners at the Wood River Pump Station gave a farewell dinner for R. L. Canaday who was recently transferred to Van dalia Station. In the front row (l. to r.) are W. L. Martin, N. J. Foetz, F. L. Miller, Mr. Canaday, P. M. Moore, E. C. Chrysler; second row, J. H. Jackson, G. H. Hampton, C. J. Loring, I. J. Morburger, T. H. Lathrop, M. B. Hudson, W. A. Kuhn, O. R. Lacey, and P. B. Eckerich.

A familiar sight of Texas-Gulf Area employees is G. W. Herzog's war maps. Mr. Herzog, of the Land Dept. in Houston, set up the maps long before Pearl Harbor. With each advance a new pin goes up on one of the maps.

	-GULF AREA
	ONTINENT AREA
	HOUSTON, TEXAS
	HOUSTON, TEXAS
	EST TEXAS AREA
	EXAS-GULF AREA
	PRODUCTION
	PRODUCTION
	PRODUCTION
	PRODUCTION
C. J.	PRODUCTION
H. F.	PRODUCTION
H. A. SHANKS	EXPLORATION
G. R. SIZEMORE	PRODUCTION

10 years

W. L. BOTKIN	TREASURY
S. N. CROWLEY	PRODUCTION
J. G. DWEN	EXPLORATION
G. J. TEMPLETON	EXPLORATION

TEXAS-GULF AREA

15 years

E. BEANE	GEOLOGICAL
H. W. HUGHES	(mil. leave) LAND
L. N	P
J. W. P. TIMAN	PROD
W. E. SMITH	GAS-GAS E

HOUSTON REFINERY

15 years

P. L. BENSON	GAS
J. A. BROWN	CHEMICAL
B. R. BURLESON	TREATING
N. F. GILLIAM	AUTOMOTIVE
E. B. MADDEN	(mil. leave) CRACKING
J. B. MAY	CRACKING
R. D. MILLER	TOPPING
J. N. NAIL	CHEMICAL
A. E. SHAFER	ENGINEERING
W. J. SNOW	(mil. leave) ENGINEERING
L. W. SMITH	TREATING
R. H. THEIS	CRACKING
C. D. WARREN	ENGINEERING

NORCO REFINERY

15 years

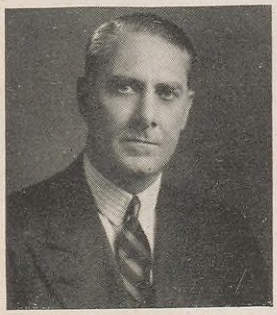
C. J. ABADIE	ASPHALT
A. J. BRAUD	DISPATCHING
S. P. CLOUARTE	CRACKING
J. O. GUIDRY	BOILERHOUSE

10 years

B. M. WILSON	ENGINEERING

SERVICE BIRTHDAYS

. . . TWENTY-FIVE YEARS . . .



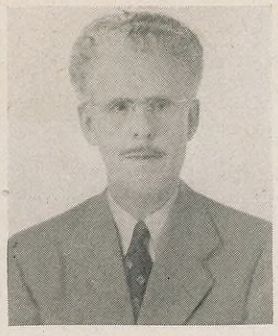
L. T. KITTINGER
General Planning Group
Vice President
Head Office

U. J. LAURENT
Cracking
Norco Refinery

W. C. LUCAS
Boilerhouse
Norco Refinery

H. L. NEWSOM
Shell Pipe Line Corp.
Mid-Continent Area (July)

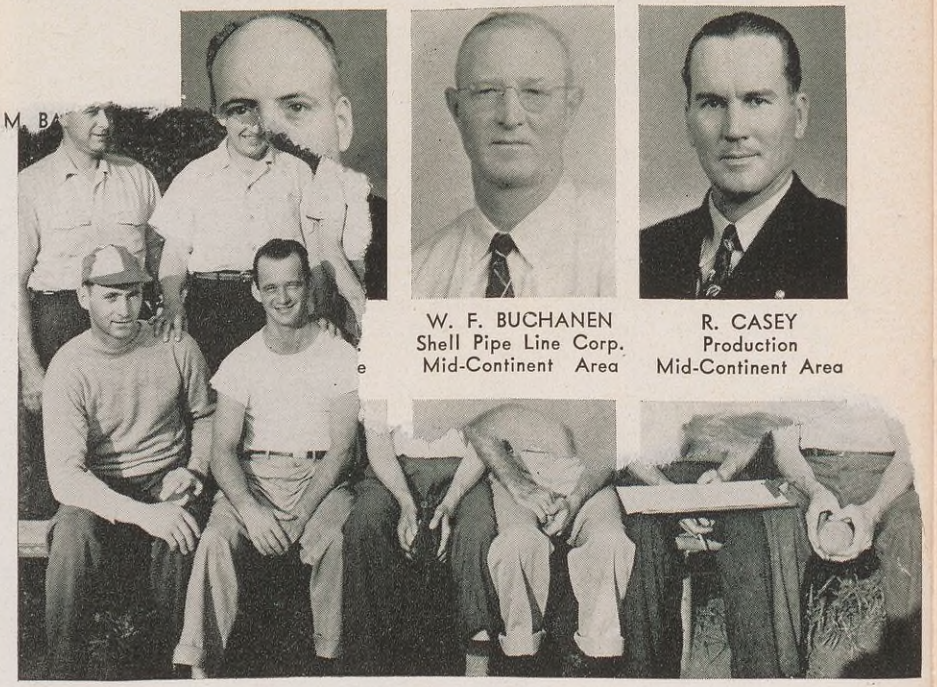
C. SAIZAN
Engineering
Norco Refinery



A. F. TERRILL
Shell Pipe Line Corp.
Texas-Gulf Area (July)

. . . . TWENTY YEARS . . . .

Houston Shell Clubbers had their annual barn dance early in the summer. Mark Storm, Texas-Gulf Area, shows a few of his rope tricks.

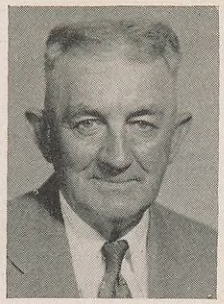


From left to right, St. Paul, (standing): Messrs. Hill, Norgard, Fitzgerald, Freeman, Schuldt, Lindstron (sitting): Pingley, Haider, Eberts, Burton, Velure, Wasko.

W. F. BUCHANEN
Shell Pipe Line Corp.
Mid-Continent Area

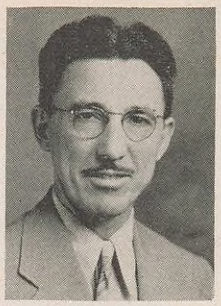
R. CASEY
Production
Mid-Continent Area

G. LORENZ
Marketing
St. Louis Division



J. G. LUEBKE
Lube Compound
Wood River Refinery

O. J. MASTERSON
Genl. Planning Group
Head Office



W. E. McANANY
Cracking
Wood River Refinery

M. M. McBRIDE
Production
Mid-Continent Area

J. A. MORGAN
Production
Mid-Continent Area

J. E. SEAMON
Production
Texas-Gulf Area

J. A. St. PIERRE
Laboratory
Norco Refinery

T. E. SWIGART
President
Shell Pipe Line Corp.
Houston, Texas

G. D. THOMAS
Exploration
Texas-Gulf Area

H. TURNER
Marketing
Head Office

E. J. WOLLARD
Engineering
Houston Refinery

SHELL PIPE LINE CORP.

15 years

J. E. CALCOTE . . . . . (July) WEST TEXAS AREA
A. L. GEER . . . . . (July) WEST TEXAS AREA
H. H. IMAN . . . . . (July) MID-CONTINENT AREA
N. D. COOPER . . . . . TEXAS-GULF AREA
W. H. CRADDOCK . . . . . MID-CONTINENT AREA
P. M. CRENSHAW . . . . . WEST TEXAS AREA
C. E. CROCKER . . . . . MID-CONTINENT AREA
C. FEUERBACHER . . . . . TEXAS-GULF AREA
B. H. KINCAID . . . . . TEXAS-GULF AREA
R. M. LYTLE . . . . . MID-CONTINENT AREA
J. D. McCLINTON . . . . . MID-CONTINENT AREA
P. R. SHAFFER . . . . . WEST TEXAS AREA

10 years

F. F. MIDDLETON . . . . . (July) TEXAS-GULF AREA
J. L. WILSON . . . . . (July) MID-CONTINENT AREA
R. M. BOATRIGHT . . . . . HOUSTON, TEXAS
D. B. HICKS . . . . . HOUSTON, TEXAS
M. L. PAGE . . . . . WEST TEXAS AREA
J. C. PEPPER . . . . . TEXAS-GULF AREA

MID-CONTINENT AREA

15 years

W. L. AULBERT . . . . . PRODUCTION
C. C. BUTLER . . . . . PRODUCTION
W. A. CAMPBELL . . . . . PRODUCTION
O. H. JELF . . . . . PRODUCTION
C. J. PYATT . . . . . PRODUCTION
H. F. SCHMID . . . . . PRODUCTION
H. A. SHANKS . . . . . EXPLORATION
G. R. SIZEMORE . . . . . PRODUCTION

10 years

W. L. BOTKIN . . . . . TREASURY
S. N. CROWLEY . . . . . PRODUCTION
J. G. DWEN . . . . . EXPLORATION
G. J. TEMPLETON . . . . . EXPLORATION

TEXAS-GULF AREA

15 years

E. BEANE . . . . . GEOLOGICAL
H. W. HUGHES . . . . . (mil. leave) LAND
F. J. MARGESON . . . . . TREASURY
H. L. OHLINGER . . . . . LAND
C. R. PLOOG . . . . . TREASURY
I. M. REINIGER . . . . . LAND
E. E. ROBERTS . . . . . GAS-GASOLINE
J. T. MORGAN . . . . . TREASURY

10 years

A. M. ADAIR . . . . . PRODUCTION
B. J. ADAMS . . . . . PRODUCTION
R. R. BROWN . . . . . (mil. leave) PRODUCTION
C. P. FIELD . . . . . EXPLORATION
M. P. GOODMAN . . . . . TREASURY
P. P. GUIZERIX . . . . . LAND
T. W. HOLLIS . . . . . PRODUCTION
L. NEWTON . . . . . PRODUCTION
J. W. PITTMAN . . . . . PRODUCTION
W. E. SMITH . . . . . GAS-GASOLINE

HOUSTON REFINERY

15 years

P. L. BENSON . . . . . GAS
J. A. BROWN . . . . . CHEMICAL
B. R. BURLESON . . . . . TREATING
N. F. GILLIAM . . . . . AUTOMOTIVE
E. B. MADDEN . . . . . (mil. leave) CRACKING
J. B. MAY . . . . . CRACKING
R. D. MILLER . . . . . TOPPING
J. N. NAIL . . . . . CHEMICAL
A. E. SHAFER . . . . . ENGINEERING
W. J. SNOW . . . . . (mil. leave) ENGINEERING
L. W. SMITH . . . . . TREATING
R. H. THEIS . . . . . CRACKING
C. D. WARREN . . . . . ENGINEERING

NORCO REFINERY

15 years

C. J. ABADIE . . . . . ASPHALT
A. J. BRAUD . . . . . DISPATCHING
S. P. CLOUARTE . . . . . CRACKING
J. O. GUIDRY . . . . . BOILERHOUSE

10 years

B. M. WILSON . . . . . ENGINEERING

WOOD RIVER REFINERY

15 years

A. J. ALBERS . . . . . CONTROL LAB.
O. H. BLAIR . . . . . ENGINEERING
H. C. FRAZIER . . . . . TOPPING
A. W. HABBE . . . . . GAS
R. R. HOOVER . . . . . STOREHOUSE
C. C. NEUNABER . . . . . ENGINEERING
A. C. TAYLOR . . . . . GAS
W. THOMPSON . . . . . ENGINEERING
E. F. THOMAS . . . . . ENGINEERING
C. A. WENTZ . . . . . ENGINEERING

10 years

P. H. COLLINS . . . . . CONTROL LAB.
A. HARTLER . . . . . ENGINEERING
O. KASSAK . . . . . LUBE OPERATING
O. P. MARLINGHAUS . . . . . ENGINEERING
H. J. MILLER . . . . . LUBE OPERATING
M. T. REFFETT . . . . . ENGINEERING
B. W. RUNION . . . . . ENGINEERING
R. F. RUCKSTAHL . . . . . ENGINEERING
A. SPENCE, JR. . . . . ENGINEERING
A. L. TEDRICK . . . . . ENGINEERING
A. WIDDICOMBE, JR. . . . . RESEARCH LAB.

HEAD OFFICE

15 years

R. D. BURLESON . . . . . MARKETING
C. H. CUNNINGHAM . . . . . T. & S.
D. C. MARSHNER . . . . . MARKETING
H. M. FISH . . . . . (June) (mil. leave) TREASURY
J. S. SAWYER . . . . . MARKETING
P. E. KEEGAN . . . . . (August) PERSONNEL-IND. REL.
R. E. MORGAN . . . . . (June) SHUTTLE GROUP

PRODUCTS PIPE LINE

15 years

H. WINDRICK . . . . . EAST CHICAGO

10 years

Z. E. BAYLIS . . . . . TOLEDO, OHIO
H. T. DULS . . . . . DORAVILLE, GA.
S. L. SMITH . . . . . GREENSBORO, N. C.
W. N. SMITHSON, JR. . . . . CHARLOTTE, N. C.

SHELL AMERICAN PETROLEUM COMPANY

15 years

D. E. GRIFFITH . . . . . SALES

ALBANY MARKETING DIVISION

15 years

J. O. HIZA . . . . . SALES

10 years

C. D. BUCKNER . . . . . SALES

ATLANTA MARKETING DIVISION

15 years

S. CANNON . . . . . OPERATIONS

10 years

C. R. JONES . . . . . SALES SERVICE

BALTIMORE MARKETING DIVISION

15 years

M. J. LOMP . . . . . MARKETING SERVICE
S. J. MARTINDALE . . . . . MARKETING SERVICE
G. H. STOUT . . . . . SALES

10 years

W. F. BRITTAIN . . . . . SALES
C. McD. JONES . . . . . OPERATIONS
E. O. KENDRICK . . . . . OPERATIONS
A. W. WILLIAMSON . . . . . TREASURY

BOSTON MARKETING DIVISION

15 years

J. E. CARLETON . . . . . SALES
W. J. McDONOUGH . . . . . (mil. leave) SALES
W. R. PARKER . . . . . SALES

10 years

D. J. AHERN . . . . . (mil. leave) DIVISION SALES

CHICAGO MARKETING DIVISION

15 years

L. A. BARON . . . . . MARKETING
A. S. PENTLAND . . . . . SALES

10 years

G. H. DELZELL . . . . . MARKETING
J. M. CERNEY . . . . . MARKETING
C. LAACK . . . . . MARKETING

CLEVELAND MARKETING DIVISION

15 years

L. F. CHRISTOPHER . . . . . SALES
M. S. DUNHAM . . . . . SALES
L. A. McABEE . . . . . SALES
F. E. MILLER . . . . . SALES
J. J. RILEY . . . . . M. & P.
A. B. TIPTON . . . . . TREASURY
L. M. COLLARD . . . . . MARKETING SERVICE
K. M. PRENDERGAST . . . . . ADMINISTRATIVE
W. A. BURNETT . . . . . STORES

10 years

L. T. McCRODEN . . . . . (mil. leave) SALES

DETROIT MARKETING DIVISION

15 years

R. R. MERYDITH . . . . . SALES
J. T. REGAN . . . . . SALES

INDIANAPOLIS MARKETING DIVISION

15 years

A. I. SHUPPERT . . . . . TREASURY
F. H. SIPE . . . . . MARKETING SERVICE
J. B. JACKSON . . . . . SALES
M. T. GISLER . . . . . SALES
A. J. WELLS . . . . . OPERATIONS
L. H. MATTHEWS . . . . . OPERATIONS
W. R. CARBAUGH . . . . . OPERATIONS
J. CURRAN . . . . . OPERATIONS
C. SCOTT . . . . . OPERATIONS
V. L. JONES . . . . . OPERATIONS

MINNEAPOLIS MARKETING DIVISION

15 years

J. N. KOLB . . . . . SALES
A. W. KYNDBERG . . . . . MARKETING

NEW YORK MARKETING DIVISION

15 years

J. A. BRAUN . . . . . M. & P.
H. EULER . . . . . DRIVER-SALESMAN
T. J. FOLEY . . . . . INDUSTRIAL
H. A. GEORGE . . . . . PAINTER
W. J. HART . . . . . SALES
M. H. LEE . . . . . SALES
J. A. LOEFFLER . . . . . SALES
P. F. MULLANE . . . . . SALES
P. M. SCHMIDT . . . . . OPERATIONS

ST. LOUIS MARKETING DIVISION

15 years

R. A. DALTON . . . . . TREASURY
W. G. EVANS . . . . . SALES
F. X. MOORE . . . . . SALES
K. W. OSTERHAGEN . . . . . TREASURY
L. STANLEY . . . . . MARKETING SERVICE

10 years

L. L. EISFELDER . . . . . TREASURY
W. P. MILLER . . . . . TREASURY
R. W. MAUTZ . . . . . TREASURY

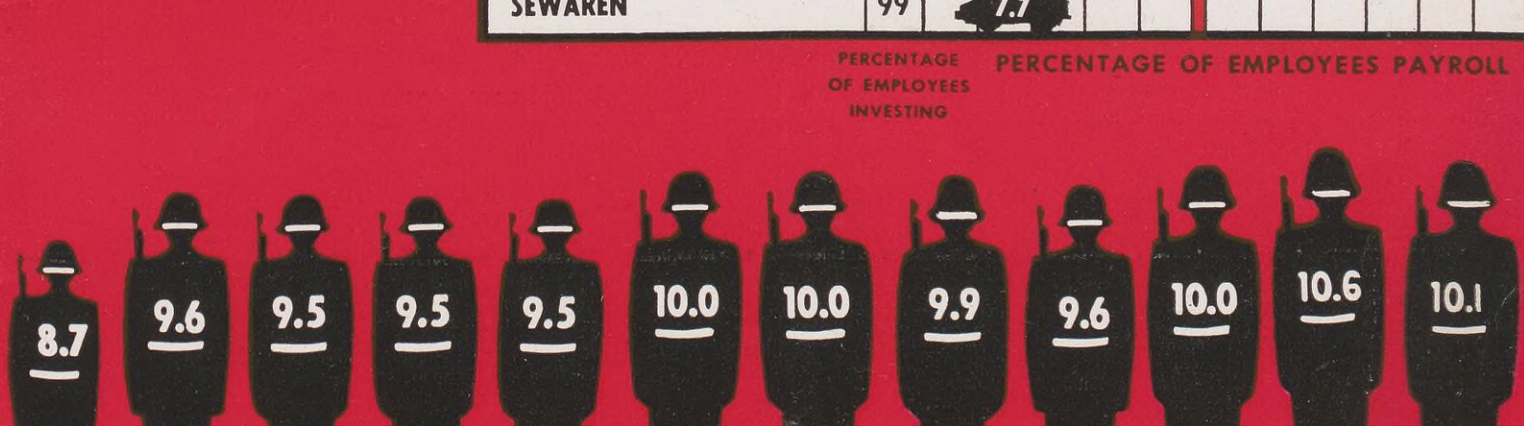
WAR BOND CHART

AUGUST 1944

$7,649,053.50

SHELL

	PERCENTAGE OF EMPLOYEES INVESTING	PERCENTAGE OF EMPLOYEES PAYROLL
NORCO REFINERY	100	14.3
SHELL PIPE LINE CORP.	100	13.1
PRODUCTS PIPE LINE	97	13.1
CLEVELAND DIVISION	100	11.8
BALTIMORE DIVISION	100	11.7
TEXAS-GULF AREA	90	10.8
BOSTON DIVISION	99	10.7
DETROIT DIVISION	95	10.6
ATLANTA DIVISION	99	10.2
MID-CONTINENT AREA	92	10.2
MINNEAPOLIS DIVISION	99	10.1
CHICAGO DIVISION	100	9.4
HEAD OFFICE	94	9.2
ALBANY DIVISION	100	9.1
HOUSTON REFINERY	85	9.0
INDIANAPOLIS DIVISION	99	8.9
WOOD RIVER REFINERY	94	8.8
SHELL AMERICAN PET. CO.	100	8.5
ST. LOUIS DIVISION	95	8.5
NEW YORK DIVISION	96	7.9
SEWAREN	99	7.7



AVERAGE OF PAYROLL SUBSCRIPTION OF ABOVE AFFILIATED SHELL COMPANIES

SHELL OIL COMPANY
INCORPORATED
50 West 50th Street
NEW YORK, N. Y.

RETURN POSTAGE GUARANTEED

Miss Esther Parsons
3820 Glasgow
St Louis 7 Mo

PREVIEW OF AN ADVERTISEMENT TO RUN IN LIFE AND SATURDAY EVENING POST

It may be handled only with chamois-faced forceps. It rests on a quartz plate, sealed under double glass bells, in the U. S. Bureau of Standards. Ninety per cent platinum, 10% iridium, it is the primary standard of weight in the United States— U.S. PROTOTYPE KILOGRAM NO. 20

HOW HEAVY IS A POUND?

YOUR POUND of coffee or bacon or butter is based on Acts of Congress and International Conventions . . .

It is 1/2.204622 of a kilogram. To be exact, a pound is this precise fraction of U. S. Prototype Kilogram No. 20, produced for this nation by scientists of the International Bureau of Weights and Measures.

Why be so fussy? Because a change in the reference standard which determines "how heavy is a pound" would upset our whole economy—knock the foundation from under *everything* bought by the pound.

But suppose, instead of property alone, the reference standard involved life or death! There's another standard which DOES . . .

Known as S-Reference Fuel, it is the measure used to determine the usable power in 100 Octane Aviation Gasoline. It is a product of the "University of Petroleum." Shell's research laboratories. It is supplied to the huge aviation gasoline industry, and Government testing agencies, only by Shell.

A shipment of 100 Octane which fell short in performance could wreck the engines, lose planes and flyers—and 100 Octane is now produced by the millions of gallons a day.

Unlike that sacred kilogram S-Reference Fuel is destroyed—burned up in laboratory test engines—every time it is used. It must be replenished constantly *and never vary*. Shell Research grew ino the critical responsibility of providing it through a series of achievements reaching back to 1934, when Shell delivered the first 1000 gallons of Iso-octane—the "makings" of 100 octane—sold to the Army Air Corps at Wright Field.

Producing the quantity of S-Reference Fuel now needed is a feat of ingenuity which only a petroleum scientist could appreciate. Shell technologists accomplished it.

The accomplishments of Shell Research have a direct application to your own future. Right now—as far as your own gasoline is concerned—it's *quantity* that interests you. Later on, when it's *quality* . . . Shell Research will provide a new "reference fuel"—a high mark to try for!

First oil refinery to win the Army-Navy "E"—Shell's Wood River Refinery

ARMY (E) NAVY

SHELL
SHELL RESEARCH
Sword of Today
Plowshare of Tomorrow
SHELL OIL COMPANY, INCORPORATED