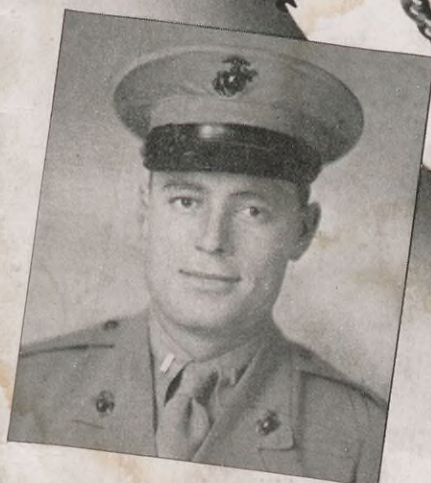
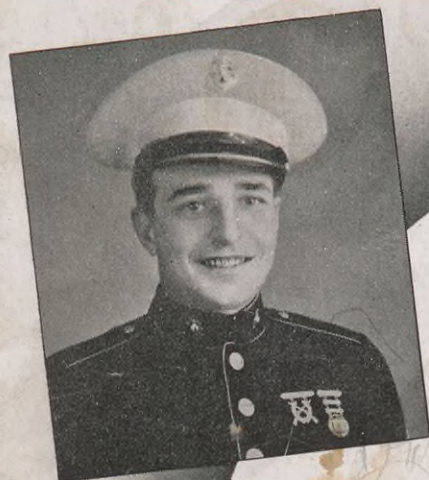


SHELL NEWS



JUNE • 1945

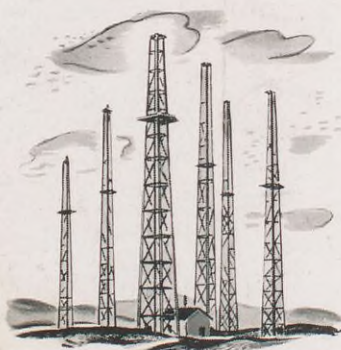
-matters of *Fact*



Contributing to the nation's supply of vital oil for war, Shell has

8,737

producing oil and gas wells in various parts of the United States.



Each day these wells turn out more than

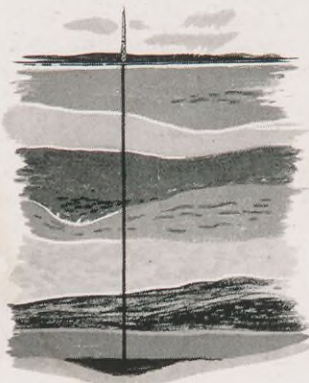
200,000

barrels of crude.

Among them is the

Deepest Producing Well

in the world, at Weeks Island, Louisiana, where Shell is producing petroleum from a depth of 13,505 feet—more than 2½ miles below the surface of the earth.



The success of Shell's exploration and production activities depends upon the skill and experience of the men on the job. At Weeks Island, for instance, the drilling foreman and his crew had an average of more than 15 years' experience with Shell.

SHELL NEWS

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

JUNE • 1945

VOL. 13 • No. 6

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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 20, N. Y.

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The Spotlight this month shines on the small gold pin which is the symbol of an honorable discharge from the armed services of the United States. To all men and women who have served honorably during this war goes the privilege of wearing the gold pin with the spread eagle.

Know this pin for what it stands for; during the next year millions of men will be wearing it and in the following years it will be the badge of the more than eleven million men and women who have made up our Army, Navy, Marines and Coast Guard.

The pin is reproduced at the bottom of the above plaque which hangs in reception rooms in Shell's offices over the country. Pointing to the figure of 587 (now 666) returned veterans is M. L. Mott, New York Marketing Division, a veteran, himself.

The Cover: Marine Corps insignia and four of the Shell employees who are with the Corps. The men are (upper left) Corporal P. C. Catano, Sewaren Plant; (lower left) Lt. A. Nobles, Texas-Gulf Area; (upper right) Private first class V. J. Braud, Norco Refinery; (lower right) Pfc. J. Conley, Jr., Boston Marketing Division. All are veterans of overseas service. For a complete story of the Marines turn to page 2.



A marine raider must be at home in a treetop. A hundred yards away it would be hard to spot this man. (United States Marine Corps photo.)

“...TO THE SHORES OF OKINAWA”

by Alan Miles

Several hundred Shell employees on military leave are serving with the United States Marine Corps. Most of them have seen action in the Pacific; some have given their lives. This is the story of the Marines, some of their work in helping to win the war, in helping to beat the Jap.

IN the American Revolution Marines fought with John Paul Jones on the sea, with Washington at Trenton and at Princeton. The Marines were with Andrew Jackson at New Orleans in the War of 1812, and with Scott during the Mexican War. From 1861 to 1865 the Leathernecks fought at Fort Sumter, Hampton Roads and with Farragut at Mobile Bay. In the first World War, Marines were at Belleau Wood, St. Mihiel, Blanc Mont, and in the Argonne.

During the first four and a half years of this World

War, the Marines have made brilliant records at Guam, Midway, Wake, Manila, Bataan, Corregidor, the Solomons, Tarawa, Iwo Jima, and now on Okinawa. And it is certain that they will be among those present in Tokio when V-J Day comes.

When all of this was called to the attention of one prominent Marine general, his only comment was, "Not bad." But then the by-word of the Marines is, "There is nothing we can't do."

Nine years ago the Marine Corps consisted of only

17,000 men. When war came the Corps was so small that only "token" groups were present at most Marine bases. Today the Corps is twenty times its size in 1936. But Lieutenant General Thomas Holcomb, former Commandant of the Marine Corps, had one complaint: "In a war of this size there simply aren't enough Marines to go around. Every major land operation in this war starts as an amphibious operation: ship to shore."

When the U. S. found itself with such a war on its hands, the Marines were all set to teach what they knew. And to date most Army and Navy units which have led American landings in any theatre of war have been trained by the Marines. Thus, even if there aren't enough Marines to go around, what they have taught is used daily by them and by the other branches of the service.

Actually, of course, the Marines are a part of the Navy. But they are an autonomous branch somewhat comparable to the Army Air Forces' relationship with the Army. Marines, peculiarly, do not use naval designations, preferring Army terms. Ranks of all Marines are similar to those of men in the Army, and the stripes and bars are generally identical.

In spite of the rapid expansion of the Marine Corps their basic principles of training have not been changed. The emphasis is always on the individual. General Holcomb's credo, continued by his successor, General Alexander A. Vandegrift, was, "Unless a man is a person, he can't be much of a Marine. We try to train each man to feel that the outcome of the entire war depends on his personal success. There's no soldier harder to beat than one who's got a gun he's used to, understands and—at 5000 yards or 50—can shoot to kill. He's hard to beat because he is sure of himself."

Marines are trained at several Recruit Depots on the east and west coasts. Typical is Parris Island, South Carolina. Here, raw recruits draw their uniforms, take their physical examinations, and learn the fundamentals of being a good Marine. They receive their training from rough, tough sergeants who glory in their Marine background and in the tradition of the Corps; these are no moving-picture imitations of the tough sergeants . . . they are the real thing. Recruit Depots are unpleasant places where the accent is on work, more work, and hard work. But those who successfully complete the twenty weeks of training say (and most do) that when you leave a Depot you agree wholeheartedly with the words of the Marine Hymn . . . "We glory in the title of United States Marines."

At New River, North Carolina, on the wind-swept shores, the Marines have an advanced training base which covers more than 200 square miles. Here, Marines get down to the real business . . . at all hours of the day and night they train in combat dress: riflemen,



This ditch with its barb wire is a warning to keep your body near the ground. (USMC photo.)



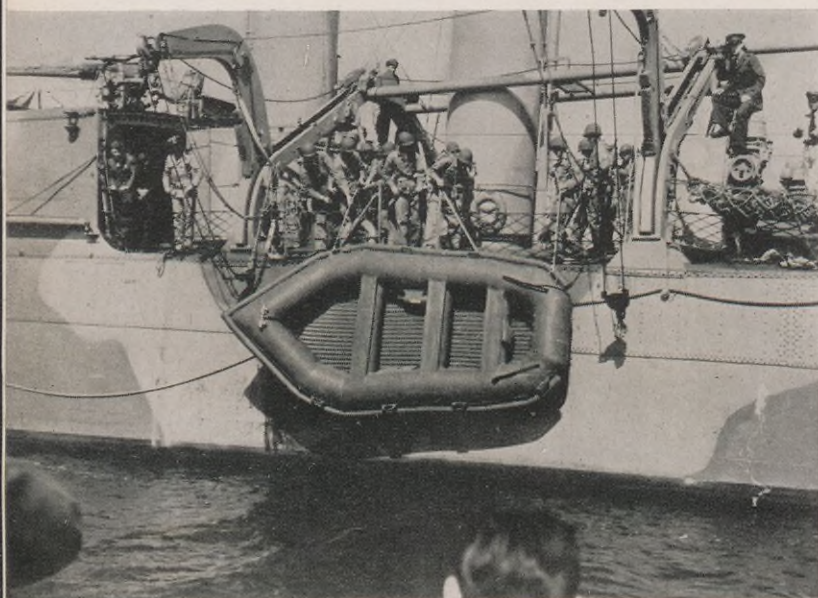
A bayonet attack in a gassed area at New River, N. C. (USMC photo.)



A class in tactics at Camp Pendleton, California. Rain doesn't interfere with the training. (USMC photo.)



Snipers wear coveralls to protect themselves by blending with foliage. (USMC photo.)



Rubber landing boats are lowered over the side. (USMC photo.)



Each man in his assigned seat ready for invasion. (USMC photo.)

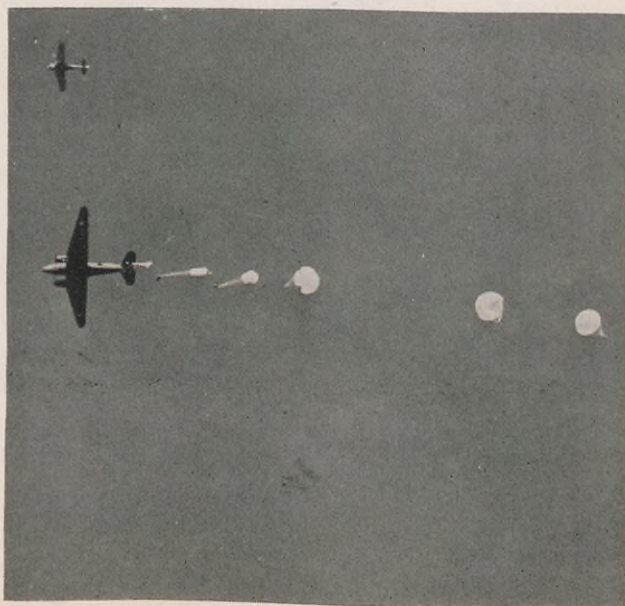
artillerymen, tankmen, engineers, signal-corps men, paramarines, fliers, scouts, service troops, special troops, hospital-corps men . . . all undergo their varied courses.

The paramarines are a special, hand-picked group of outstanding physical specimens who must be able to think as quickly as they move. They are required to leap from planes at low altitudes . . . so low that they may be on the ground ready for battle in four minutes. These paramarines, during a typical day of training, spend a half-hour in calisthenics, a mile run before breakfast, after which comes training in demolition, interpreting air photos, tumbling, hand-to-hand combat practice, and then more calisthenics and running. Most Marines are also intensively trained for close-in fighting with or without weapons. They must fight with fists, boots, and knees; learning not only to disarm an opponent but to give him a crippling or killing blow.

At the New River base, landing operations are regularly performed. Fully equipped men come ashore in waves of boats under simulated battle conditions. Veteran reporters who have witnessed the real thing say it is impossible to tell the practice operation from an actual battle. Realism is the keynote of Marine training.

At Camp Elliott in California, Marines are trained in the operation and tactics of tanks. Their battalions are divided into two sections: Maintenance and Operations. In the latter are Tactics, Driving, Gunnery, Communications, and Mapping. All men in these battalions are volunteers who, preferably, have had experience with motor vehicles and special qualifications in gunnery, radio operation, machine-shop procedure, or other related subjects.

At these and other camps, thousands of Marines have



Paramarines bail out from a transport plane, ten men take only five seconds each to get out. (USMC photo.)



Sgt. T. H. Bosse, Houston Refinery, in the Pacific.



Marion Mygatt, Wood River Refinery, also was in the thick of it at Okinawa.



Gino Ferrari, Wood River, now back at the Refinery was injured on Bougainville.



William D. Fellows, Texas-Gulf Area, fought in many Pacific campaigns.



G. E. Foley, Boston Marketing Division, is another veteran of Okinawa.



Lt. L. R. Folsie, Norco Refinery, in the Pacific.



Robert Sanders, John Timothy, Mid-Continent, are also "somewhere" in the Pacific area.



J. B. Charles, Jr., Atlanta Marketing Division, is at an "undisclosed point."



Donald Neutzman, Wood River Refinery, also fought at Okinawa.



Landing barges disgorge their cargo of human freight (USMC photo.)



Marines land in trucks, jeeps, and must pick a precarious way ashore. (USMC photo.)



On Saipan, the fierce struggle . . . flame throwers and high explosive charges were used. (USMC photo.)

been processed and trained for combat every week. The complex operations of the Corps, and it includes almost every type of work done by the Navy, the Coast Guard, and the Army (as well as the Air Forces), are carried on in many centers. Newspaper headlines tell how well the job is performed in actual combat.

The entry of the United States into World War II found several units of the Marine Corps already participating in the Atlantic. The First Brigade had landed in Iceland in June, 1941. Marines had also been sent to guard some of the bases obtained from Britain in exchange for fifty old destroyers.

An outstanding chapter in Marine history is Wake Island. The story has been told and retold and will be told again many times in the future. This was defeat, but if a defeat can be called "glorious," this was it.

Wake Island is a sand and coral atoll, tiny, almost lost in the vastness of the Pacific. Its chief claim to fame was as a stopover for the west-bound Clippers. It was a dreary, treeless waste with few buildings to cover its sands. When word came by radio of the attack on Pearl Harbor, the officers of the island knew they were isolated, beyond aid. The long-expected signal came with a message, "Carry out pre-arranged plans."

Major James Devereux was commander of that part of the Second Defense Battalion which was stationed on Wake. He ordered the Marines to their guns. The island had pitifully weak defensive forces. There were only 365 enlisted men, and thirteen officers; fifty to a hundred Navy men, and a handful of Army personnel there to service bombers that dropped in now and then. There were twelve fighter planes, four used for patrols, no bombers, forty-eight machine guns, a dozen three-inch anti-aircraft guns. Each Marine had his Springfield rifle, and in the ammunition dumps was a small supply of hand grenades, bombs, and depth charges.

1200 civilian laborers (building a new airfield then unfinished) were there when war came to Wake. A Clipper had only a few hours before taken off. Devereux sent out an emergency call for the Clipper and ordered it to return. It was to be pressed into service as a reconnaissance patrol. But the flight was destined never to be made.

Two minutes before noon on December 8th the Japs hit the island. Countless planes dove from every direction. The aim of the Japs was uncannily accurate as they smashed at the fighter planes. These were the first targets . . . the planes and their pilots. In a matter of minutes Wake was strewn with wounded and dead.

Devereux took stock. Seven planes were wrecked beyond repair, an eighth damaged. Twenty-five of the aviation personnel were dead, men who had never before seen action. Civilians had been killed and so had other

personnel of the armed forces. But Wake wouldn't agree to the Japs' demands for surrender.

The Clipper was loaded with as many passengers as she could carry and took off toward the east.

The following day the Japs came again. This time the hospital was a major target, then the barracks, the remaining storehouses and fuel tanks, the contractor's equipment, and the planes. Day after day it was the same story.

On the 10th of December the Japanese radio announced to its listeners that troops had successfully landed on Wake. This was premature as they soon found. Devereux and his men had other ideas. Their few remaining planes waited for the opportune moment and went to work. The first to sink into the sea were two destroyers and a gunboat, then another destroyer, then a cruiser. The fleet turned and fled, but there were only four planes left.

During the days that followed there were ceaseless attacks. On the 13th another plane was lost, the following day only two were left. On the 20th a patrol plane flew in and took off immediately with the last reports from Wake, reports which told of heroic but hopeless defenses.

On the 21st the two patched, battered, bullet-ridden planes took off to battle sixty Jap planes. That same day Wake Radio reported naval action offshore, "but no friendly ships in waters near Wake." On the 23rd the last words of Radio Wake were, "Enemy on island, issue in doubt. . . ." The heroic defense of Wake was ended.

But in this same Pacific the Marines have played their greatest part in the winning of the war. In January, just one month after the fall of Wake, a brigade of Marines together with Marine aviation units, were rushed to American Samoa, to secure that important naval base. And on August 7th, 1942, the Marines landed at Guadalcanal to begin one of the war's most heroic episodes. Their orders were to make the first offensive operation against Japan by seizing the naval base of Tulagi and the airfield of Guadal. It took six months, months in which many Marine lives were lost . . . the price for Henderson Field was high.

But Guadalcanal was the first of the long steps which will eventually lead to Tokio. Makin was next. Here, Captain Evans Carlson made the Marine cry, Gung Ho, famous. And after Makin came those other names which will go down in history with Yorktown, Gettysburg, and the Marne. Each operation virtually a repetition of the one past: landings made under intensive Japanese fire, inching down the island roads, each yard taken only after furious fighting, with casualties at high rates.

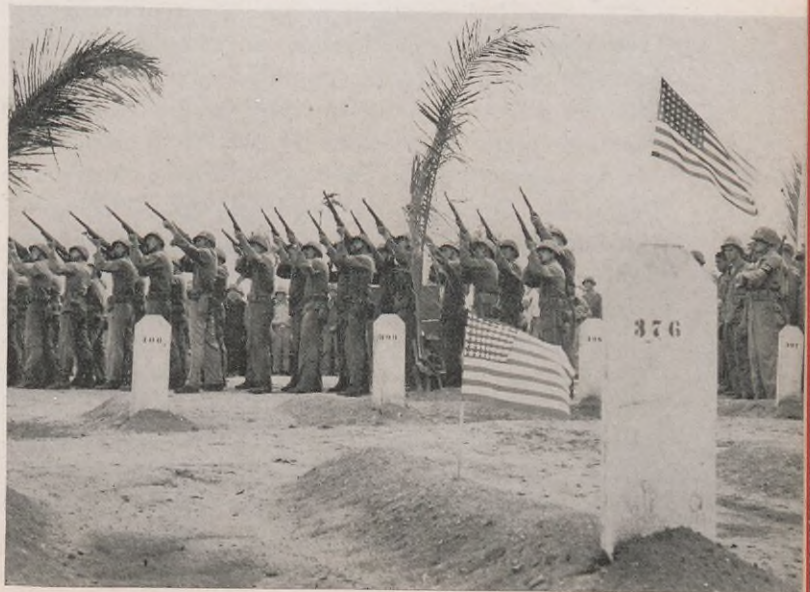
The cost of the Pacific war in Marine lives was and is tremendous. But the Marines know their job . . . they must pave the way in amphibious operations, and "There is nothing they can't do." The rest of this story is written in daily headlines. Today Okinawa, tomorrow, Japan.



Covered by the rifleman at the left a Marine machine-gun crew opens up on Japs on Peleliu. (USMC photo.)



LSTs, commonly called Green Dragons, carry wounded Marines to base hospitals. (USMC photo.)



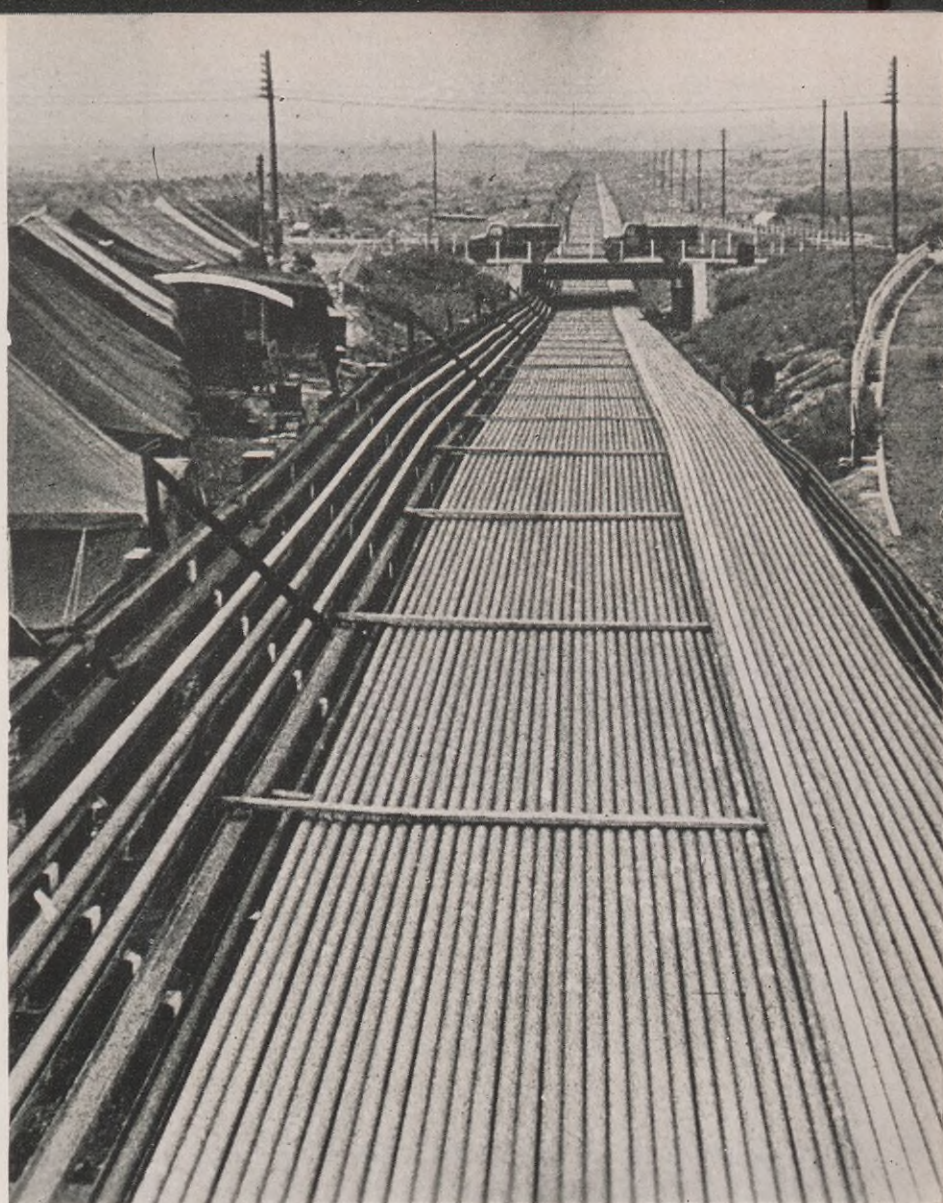
Marines pay a high price for victory. Some never come back. (USMC photo.)

OPERATION PLUTO

by

Herbert Squires

Pipe stored in three-quarter mile lengths is ready for winding on the Conun-drums. About 200 miles of pipe can be seen in this picture.



DURING the month of April, 1942, in that darkest of Springs for the United Nations, the strength of the Nazi was at its height. The small and large countries of Europe had been conquered by Hitler. In the east, the war with Russia was progressing favorably . . . for the Axis. At that time it appeared as though the German forces would sweep through North Africa . . . Dieppe was still a plan, the blitz of London was yet to come, the Japs had not swept through the Philippines, although their eventual conquest was but a matter of time.

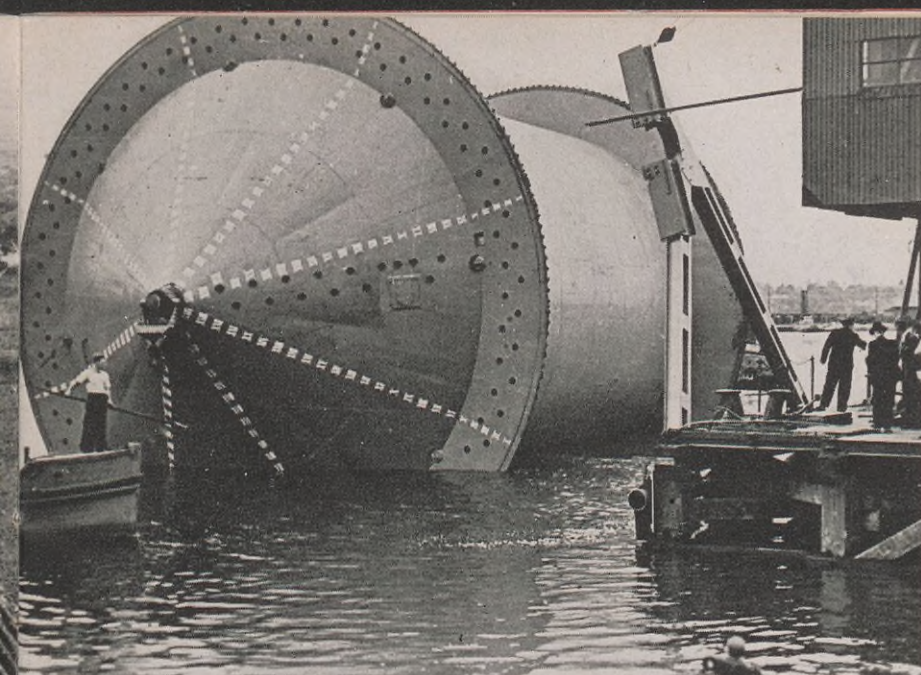
This was close to the zero hour, the hands of the clock were relentlessly closing on the Allies. Those were days when unprecedented action was always necessary, when anything might happen, when radical steps had to be taken to prevent the further advance of the Nazis. Nazi domination had to be crushed by bold methods, with undreamed-of thoughts and plans.

On one such day in that month of April two men were watching a demonstration of one of the wonders which

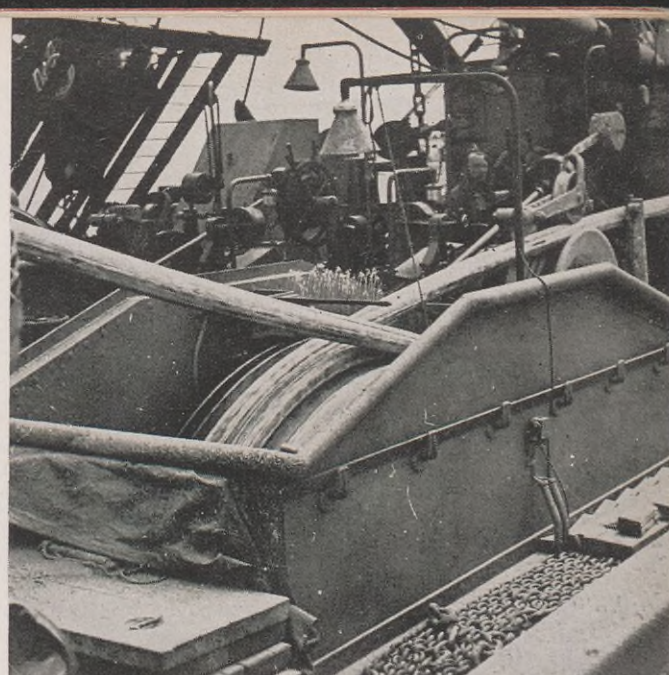
was destined to turn the tide . . . the flame-thrower. The demonstration was in progress for Admiral Lord Louis Mountbatten and Geoffrey Lloyd, British Minister of Petroleum Warfare. It was a day when a casual remark started a chain of circumstances in an action which hastened victory.

The Minister turned to Mountbatten during a dull phase of the demonstration and ventured to ask whether the Admiral thought anything further could be accomplished in the petroleum field to assist the planned Allied invasion of the continent. This distant invasion was not a matter of weeks or months ahead, more certainly it was years. But nevertheless the plans were already started, the wheels of invasion were already in motion. Mountbatten turned to the Minister and equally as casually, replied, "Can you lay an oil pipeline across the Channel?"

A pipeline across the Channel! Those continually angry waters presented a challenge: how could a line be laid, how could working men be protected? The first reaction



A close-up of the Conun-drum being moved into position.



The flexible pipe moves on a drum as it is being laid.

of the engineering experts was an emphatic "No!" But this was a possibility that captured the imagination, and while it might ordinarily have been summarily dismissed from further consideration, it was carefully studied and debated.

This was a problem for the petroleum industry and Lloyd called in experts from several companies, among them the Anglo-Iranian Oil Company, the Burma Oil Company, and the Iraq Petroleum Company. After much research and experiment one group suggested that a pipeline resembling submarine electric power cable, but without the cores and insulation, might fill the bill. A two-inch experimental line was produced and laid in Bristol Channel during December of that same year. Another group was concentrating on a different, simpler type of cable. They decided that if three-inch flexible steel pipe was wound on a drum thirty or more feet in diameter, it could be rolled off in a straight line. Eventually both methods proved satisfactory and each was used for some of the lines. A British firm, Stewart & Lloyds, built a special factory to manufacture 20-foot pipe units in 4000-foot lengths. They completed and stored 350 miles of this pipe. At the same time giant floating docks, called Conun-drums, were constructed to lay the cable. When fully wound with 70 miles of pipe, these floating "bobbins" were ninety feet long, fifty feet in diameter, and weighed 1600 tons.

But Operation Pluto (pipelines under the ocean), as it was now called, met with severe obstacles. The incessant bombing of Britain had destroyed countless factories and it was impossible to manufacture enough pipe to meet the requirements. Here hands stretched across the sea and two of the United Nations cooperated once more to do a necessary job.

The British Government asked American Army Engineers for quick action to secure 140 miles of a special kind of pipe. The request was forwarded to the office of the Chief of the Supply Division, North Atlantic Division Engineer's office. The Chief was an oil man, himself, and was ready to tackle the task. He was Colonel A. K. Eaton, on military leave from his position as Manager of Railroad Sales in the Head Office Marketing Department. His long experience with Shell in the Purchasing Department, the New York office of which he managed for many years, made him eminently suited for his duties in the Procurement and Supplies Section of the Army Corps of Engineers.

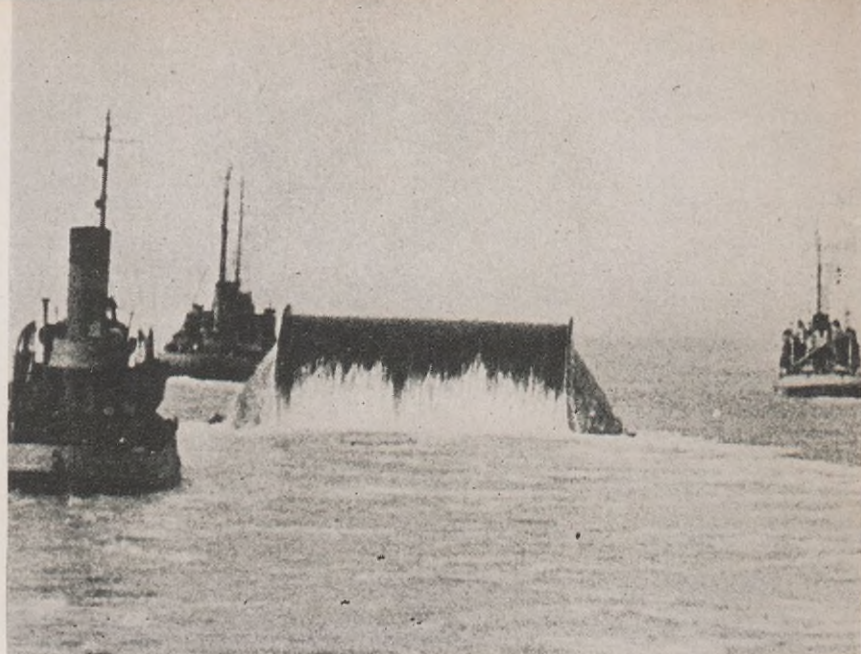
Eaton immediately proceeded to get in touch with several plants which he believed had facilities for turning out the required lengths of pipe. There were four possibilities, the Okinite-Callender Cable Company, General Cable Corporation, General Electric's Bridgeport (Connecticut) plant, and the Phelps Dodge Copper Corporation. The first three companies were forced to limit their production because of limited equipment, Phelps Dodge undertook the largest portion of the work. But even they had little equipment and the job had to be started from scratch.

Colonel Eaton and executives of the corporation consulted in April, 1944, just two years after the original decision for Operation Pluto. It was agreed that a new government-financed factory would be built, and then operated by Phelps Dodge. The site chosen was that of the Company's division in Yonkers, New York, a few miles north of the City of New York.

The building of the plant began on April 5th, and three months later the first length of flexible line was turned out. During the months that followed, the Yonkers factory was the center of attention and speculation. The firm's New



The 3-inch cable carried in the hold of this Liberty ship is in one continuous length for the cross-Channel pipeline.



A Conun-drum lays a continuous steel pipe 47 miles long.

York office was deluged with inquiries, but even those working on the building and the cable did not know exactly what they were helping to construct.

The task was finished by September 16th. The longest single cable unit, forty miles in length, and weighing 3300 tons, was manufactured at Yonkers while the other companies shipped an additional forty-six miles of line to Phelps Dodge to be welded together in one great unit.

In the meantime work had not come to a standstill in England. Just a few days before D-Day, Prime Minister Churchill took a personal interest in Operation Pluto and paid a visit to the scene of activity on the Channel coast. Shortly after his trip, 100 British Merchant Navy officers and a thousand seamen began to lay the pipe in seventy-mile units. Two ten-thousand ton Liberty ships, each carrying 100 miles of cable, and several smaller vessels, were used. The Navy personnel worked in hourly expectation of attack. It was impossible, they thought, that they and their apparatus had not been spotted by enemy reconnaissance. But surprisingly enough, Operation Pluto was unmolested.

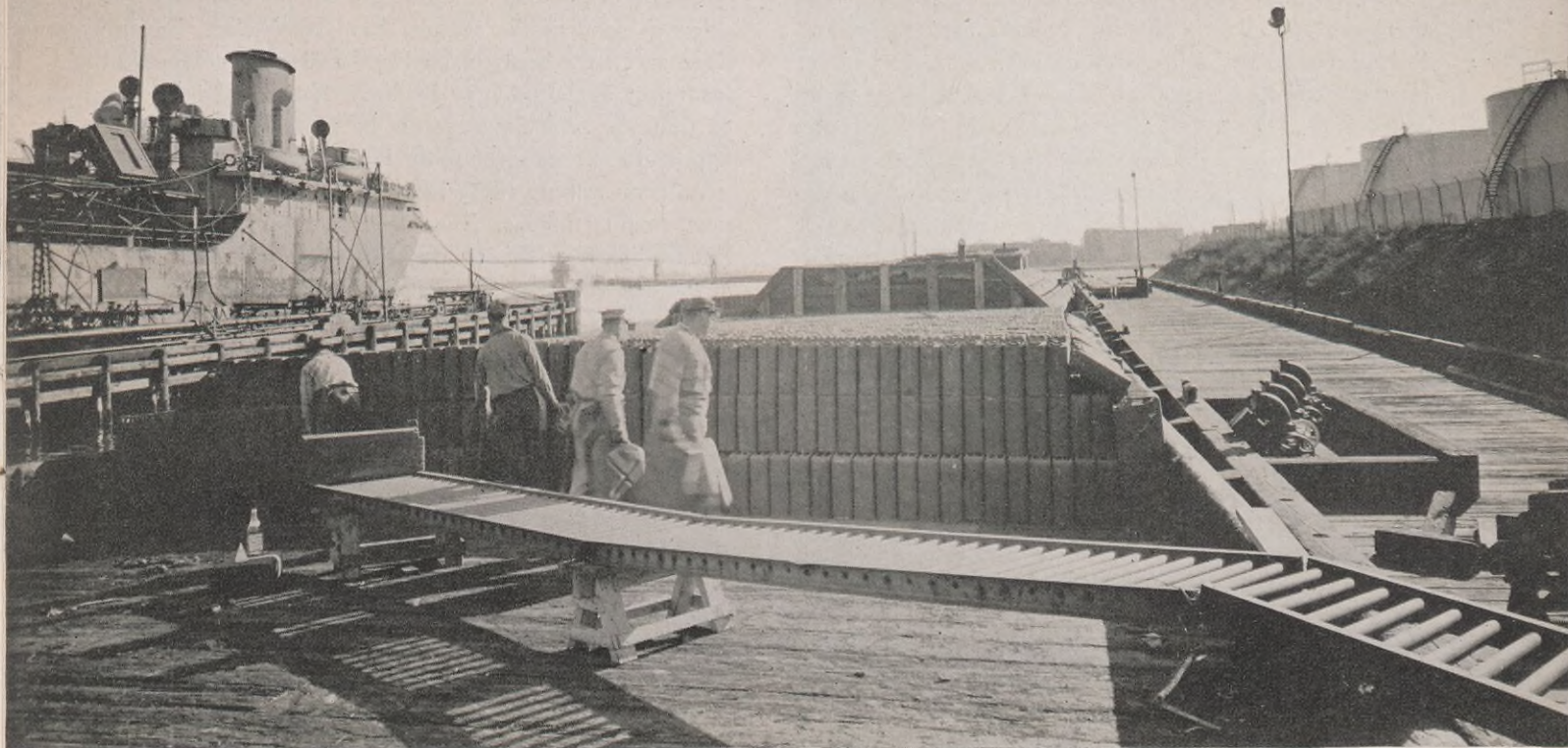
Back in the United States Colonel Eaton was working closely with American companies to rush the pipe to Britain where it completed the system of pipelines under the ocean which served the Allied armies in their drive to final victory in Europe.

Since August 12, 1944, more than 120 million gallons of gasoline have been pumped through twenty lines. The fuel is pumped from England, under the Channel to the Isle of Wight, then again under the Channel to Cherbourg, Boulogne, and through other lines as far as Frankfurt, Germany.



COLONEL A. K. EATON

The use of the Channel lines presumably will be halted once tankers are again available in the Atlantic waters. But although fighting in Europe has stopped, the pipes are in constant use supplying fuel for the armies of occupation. During the months they operated under wartime conditions Operation Pluto's pipelines were a complete success, a vindication of the men who conceived and executed an idea which almost everyone believed impossible to fulfill.



Loading blitz cans at Sewaren.

NOW IT CAN BE TOLD . . . SEWAREN

by Martin Edman

A CONVOY slips out of New York harbor, its tankers loaded with 100-octane, their decks crowded with tanks, jeeps and planes; trucks race to an Army air base with a "RUSH" consignment; Navy planes fly to the South Pacific with emergency supplies. . . .

Since the United States went to war the men and women who make up the personnel of Shell's Sewaren Plant have lived and worked in almost complete anonymity in this New Jersey port not far from Head Office in New York City. For reasons of security before the conclusion of the European War it was impossible to publish a word about the Plant's activities . . . all the average person, or for that matter the average Shell employee, knew was that such a place did exist. Its work was among the mysteries of the war. Now, a great part of the story can be told . . . not all, but enough to indicate how important a part in the war effort Sewaren plays.

A 550-foot tanker rides high in the channel, its rust-spotted hulk lowering almost imperceptibly as gasoline is pumped into the hold. On the inner side of the narrow pier a scow is taking on loaded blitz cans for delivery to

the port transportation officer in New York harbor. This is the Sewaren Plant . . . shipping point for petroleum products which can be loaded into anything from a 1-quart can to a 155,000-barrel tanker.

The Plant was built in 1929 at the tiny resort settlement of Sewaren, New Jersey . . . on the Arthur Kill, a narrow channel separating the mainland from Staten Island, one of New York City's five boroughs.

One tanker, 450 to 550 feet long, and six 175-foot coastwise barges can be accommodated in the Sewaren docks at any one time. When a special shipment is going out there may be five or six tankers standing by in New York harbor, waiting to pull in. They are sent by the petroleum pool, a voluntary combination of oil companies (under government direction) which was formed shortly after the war. Through the cooperation of these companies products for the armed forces are delivered to the most convenient shipping point. Brand names do not enter into the picture when tankers must be filled with more gasoline or fuel than one company can produce quickly.

In 1929 there were 9 storage tanks at the Plant, today there are 105. Before the war tankers used to load at Sewaren in 30 to 36 hours; now, with more and larger electric pumps, Sewaren can fill any tanker afloat in 16 or 17 hours. The average pump rate is 8,300 barrels an hour, but Sewaren set the record for New York harbor with an emergency loading of 9,250 barrels an hour. Consequently, when a tanker has to be drained and refilled or if an extra ship is added to a convoy Sewaren is more than likely to get the emergency loading job.

Tank cars, too, are directed onto Sewaren's two railroad spurs by the petroleum pool. A loading rack near the docks handles 32 cars at once, and another at the opposite side of the terminal has space for 40 more tank cars. Crews drain, clean and reload the cars at the rate of a thousand gallons a minute. Twenty-three different petroleum products can be loaded into the same string of tank cars simultaneously.

One part of Sewaren's tank farm, which holds about 800,000 barrels, is completely leased to the Navy to receive products pumped through the Little Big Inch, government-operated products pipeline running in from the Texas fields.

Most of the products leaving Sewaren go to the Navy, and Shell's laboratory there works directly with them on testing of materials. One or two gallons are taken from every shipment as a representative of the Navy witnesses the sampling; then the product is taken into the laboratory where a schedule of the tests is made out. The sample is split into sections, determined by the number of tests which will be required. When every test is completed the reports are compiled and immediately telephoned to the Navy Department in Washington.

Usually unloading of tank cars coming into Sewaren starts as soon as the samples have been taken, because these cars have been certified and sealed by government inspectors at the point of loading. If the seal is broken en route the tank car must not be unloaded until official approval has been given to the laboratory test results.

As soon as ship tanks have been tested for corrosiveness, loading begins. Then the laboratory samples the line leading from the storage or blending tank to the ship. If the first two tests are clear the pumping continues. A final sample is taken after the tanker is fully loaded to check contamination.

But tankers and tank cars are not the only things loaded at Sewaren. The Plant was the first in the eastern area to fill drums with 87-octane gasoline for the Army and Navy. The gasoline was routed in by tank car and pipeline, poured into drums and rolled down a track to the pier at the rate of 6,000 to 9,000 barrels a day. Base stocks were shipped in and blended into 100-octane gasoline, Diesel fuel and various technical products. In an 8-hour shift 4,000 barrels could be blended and run into drums.

Blitz can loading is an important function of Sewaren. These easily handled 5-gallon containers were first shipped out of the Plant about 2½ years ago for use in the African campaign. They are particularly useful because they can be carried on the sides of jeeps and tanks and dumped off as field supplies.

Today 5,000 cans must be loaded every day except Sunday. Empty cans come in daily . . . 3,000 in a box car and upward of 2,000 on a truck. They are dumped near the docks, where the caps are opened. Then they are lined up in a shed and inspected with electric torches.

Filling the 5-gallon cans.



If, by some chance, rain or other water has entered the blitz cans the inspectors shunt them to another part of the shed, where they are dried with compressed air. The dry cans are set on conveyors, and spigots with overhead connections are pulled down to fill them, two at a time. As each can is loaded an electric check raises the spigots.

The caps are tightened and red tags stenciled 80 are attached. (The present contract with the Quartermaster Corps is for 80-octane, all purpose gasoline. Previously Sewaren filled blitz cans for the Air Forces with 87 and 100-octane aviation fuel.) The closed containers are dropped off one conveyor to a lower set of rollers where they are laid on their sides so inspectors can see whether the blitz cans are leaking. About 90 per cent of the leaks are around the cap and can be repaired; leaky cans which cannot be mended are sent back to the Army and Navy for disposal.

The end of the conveyor is set on a scow and 8,400 or 8,500 blitz cans can be rolled off in an 8-hour shift. A barge will hold about 13,000. Since the beginning of operations Sewaren has handled 2½ million blitz cans; 600,000 were filled from March to July of last year.

Another part of the Sewaren Plant, the compounding plant, prepares marine turbine oils and other special products for war uses. On a Thursday morning shortly before D-day a rush order came in for 25,000 quarts of an anti-rust compound, to be packed in 1-quart cans. The product never had been manufactured in this country, and the formula was brought into Sewaren from England.

The deadline for assembling the ingredients, blending them and then packing, was the following Monday. Sewaren had everything ready a day early. It was taken by truck to an air base and flown across the Atlantic . . . where it kept invasion equipment ready for instant use.

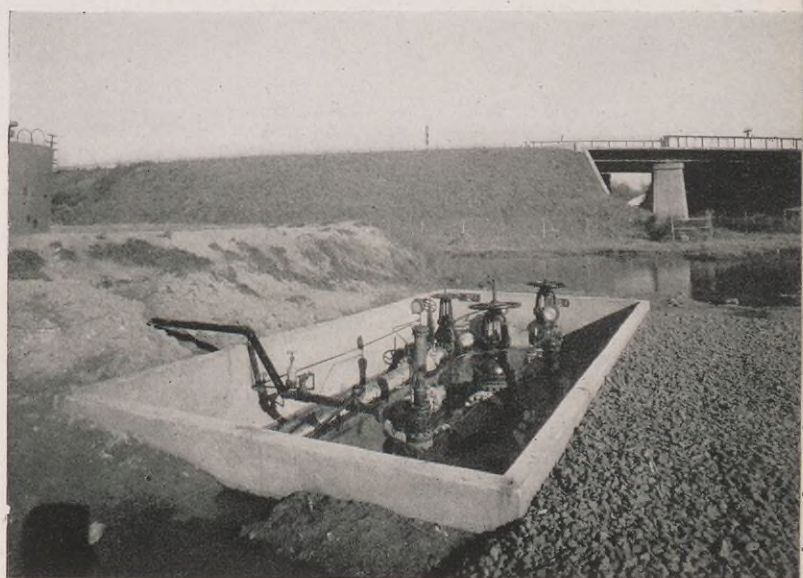
In July, 1943, Sewaren put out a quarter of a million 1-quart cans of slushing oil, a special compound with water-repellent properties, for the Air Forces. In November, 1943, 90,000 gallons of Shell Spray . . . to combat mosquitoes and other insects in the malaria regions of the South Pacific . . . went out in 5-gallon cans. Talpex oil, a heavy-duty Diesel fuel used by the armed forces, was shipped in 70,000 5-gallon containers during February, 1944.

More than a thousand petroleum products are blended at Sewaren, and whenever the Army or Navy needs one of the thousand it will be ready for shipment on time. The plant is so equipped that crews can be taken off one job and put onto another to meet wartime schedules.

The fact that Sewaren's story can be told does not mean that the work being done there is no longer important. The danger of air attack or of submarines' lurking in the harbor is at an end at last. But Sewaren, though not anonymous, still is filling cans, drums, tank cars and tankers . . . in an unending effort to hurry the final V-Day.



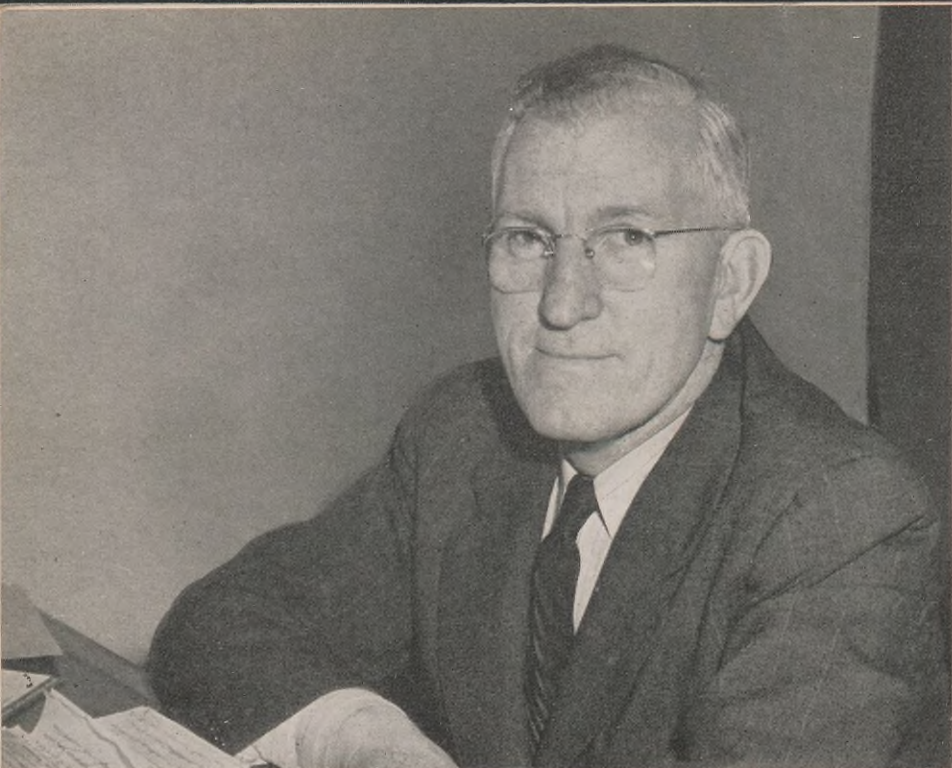
Testing product for the Navy at Sewaren's Laboratory.



Take-off point for the Little Big Inch.



One of the 550-foot tankers at berth in New York harbor.



B. G. SYMON

SPEAKING OF PEOPLE

these are the men and women who make the Lubricants Department function. Seventh in a series telling in words and pictures how many of Shell's departments function, what they do, and who does it.

THE major portion of the Navy's turbine driven combat vessels, including the mightiest battleship and aircraft carrier afloat, are lubricated with Shell turbine oils. Diesel engines on the Missouri-Pacific Railroad are Shell lubricated; and now the Pennsylvania Railroad's first turbine-powered locomotive operates on Shell's lubricants. These are just a few of the outstanding applications of the Company's lubricants . . . there are many others. The Department responsible, Lubricants, is under the supervision of B. G. (Ben) Symon. The Department is concerned with all matters involving the marketing of lubricants. This includes sales prices, contracts, distribution, supply and specifications and application of all lubricants. In addition, the Department gives engineering help to the Marketing Divisions, prepares technical pamphlets and brochures, designs automotive and industrial lubrication charts, secures approval of lubricants from manufacturers, and prepares reports for the Company and associates. But that still isn't all . . . the design, type, and size of containers for the various lubricants originate in the Department; then there is the work done with other departments . . . such as consultation and cooperation with Products Application on the need for new lubricants; Transportation and Supplies and Manufacturing on problems of shipping and supplies; with Sales Promotion on the preparation of promotion and advertising campaigns. Also consultation and cooperation with National Sales, Railway Sales, Retail Sales and the Aviation Department on matters of assistance in the marketing of lubricating oils and greases. Outside of that the Department hasn't a thing to do.

The Department is divided into three groups: Mervyn Nabors, assistant manager, is in charge of general sales activities and, in the absence of Symon, supervises all sections of the Department. Carl Latowsky is responsible for the commercial section which maintains contacts with the Marketing Divisions and all other departments on matters involving lubricants sales prices, sales policies, stock position and sales estimates, analyzing of contract and



MERVYN NABORS



DR. RICHARD STERN



C. E. BROWN



W. H. DAY

D. W. NOLF

P. A. WIETING

sales policies, supervising maintenance of approved price schedules and the analyzing of Divisional sales records, revenue and profit. This section also works on special marketing studies, the preparation of general letters, and the preparation of government bids and contracts. Henry Muller is in charge of the technical section which has close contact with the Manufacturing Department on matters involving development of new products, and major complaints. This group keeps abreast of competitive activities as to the application and development of new products. They assist in all matters involving specifications, help in the preparation of data from which to prepare advertising copy, pamphlets, bulletins, and booklets. They also work on the standardization of sales brands and specifications with other companies in the Shell Group. The technical representatives in this group render technical assistance to the field staff, deal with complaints; maintain contact with customers' engineering staffs, and engine manufacturers; keep up to date on industry trends, and obtain written approval of Shell lubricants from customers. They coordinate their findings with the Products Application Department for the further development of new lubricants.

Dr. Richard Stern, an assistant to Symon, is engaged in special departmental studies.

There are two secretaries, Tora Tillstrom, and Doris Kleine. Miss Tillstrom works for Symon while Miss Kleine acts as secretary for Nabors and Stern.

Earl Bastian handles all Head Office matters and necessary field contacts that have to do with the development and application of metal working oils.

C. E. Brown assists Bastian, particularly on the application of metal working oil problems in the field.

R. M. Cherryholmes is in charge of the preparation and distribution of publications such as news letters, pamphlets, the Panorama of Lubrication and Shellubrication data.



C. R. LATOWSKY

DIRK van der BURCH



HENRY MULLER



C. F. GIEG

F. C. RULE

S. VAN T. JESTER



MARIETTE GRAEF

ADELAIDE ROBINSON



G. J. THIBAUT (Left)

FRANK SHANAHAN (Right)

W. H. (Wes) Day spends his time on rust preventives and turbine oils, as well as other associated lubricants.

Eleanor Deutsch assists in the commercial section on government bids, contracts, and orders. She correlates statistical data and price information and handles general correspondence with the Divisions.

C. F. (Charley) Gieg assists Earl Bastian on metal working oils.

Mariette Graef correlates such technical section records as the turbine log. She also records competitive specifications, and handles routine correspondence.

F. W. (Fred) Hyde is general assistant to Latowsky. He checks on all matters pertaining to outside purchases of lubricants.

S. Van T. (Sim) Jester devotes his time to marine oils and greases.

D. W. (Dale) Nolf handles matters pertaining to the development and application of greases.

G. W. (George) Perry is the technical representative on field activities connected with metal working oil. He supervises the mid-western territory and has an office in Chicago.

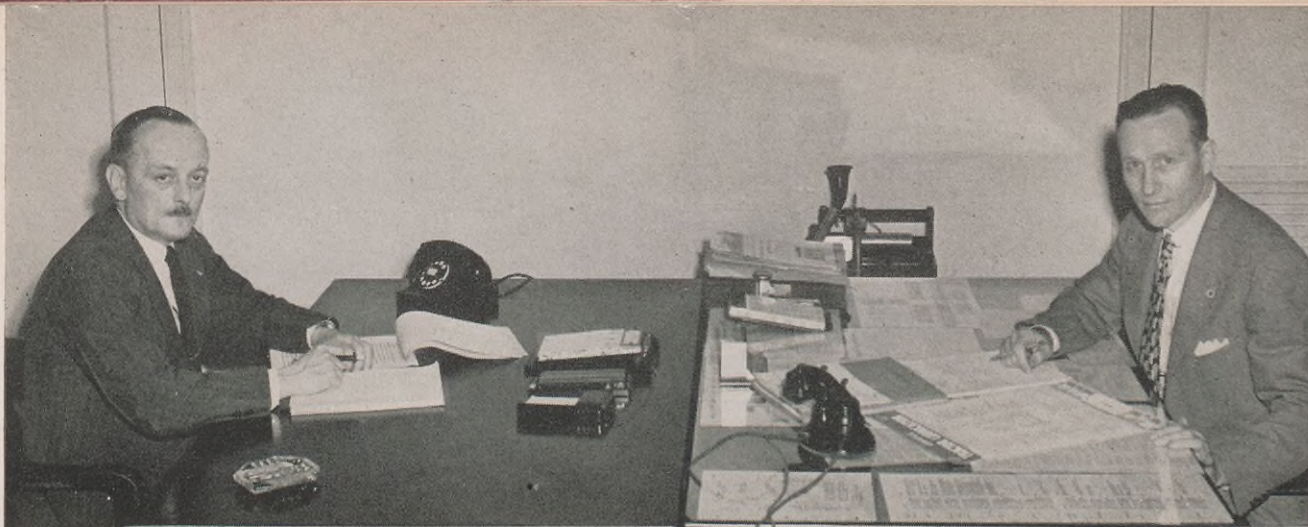
Adelaide Robinson prepares several technical news reports for the Divisions and the Shell Group.

F. C. (Frank) Rule works with equipment manufacturers securing approval on Shell lubricants. He also makes special industry surveys.

H. O. (Herb) Schramm is engaged in problems concerning fleet truck and automotive construction equipment and also works on car-dealer programs.

Frank Shanahan checks on the problems related to the application of lubricants to automotive equipment and generally assists the Divisions on complaints from truck or bus accounts.

G. J. (George) Thibault is in charge of Head Office marine lubricants sales and maintains contacts with shipping companies and agencies, both domestic and foreign.



H. O. SCHRAMM

R. M. CHERRYHOLMES



F. W. HYDE

ELEANOR DEUTSCH



J. P. THOMAS

E. L. BASTIAN



TORA TILLSTROM

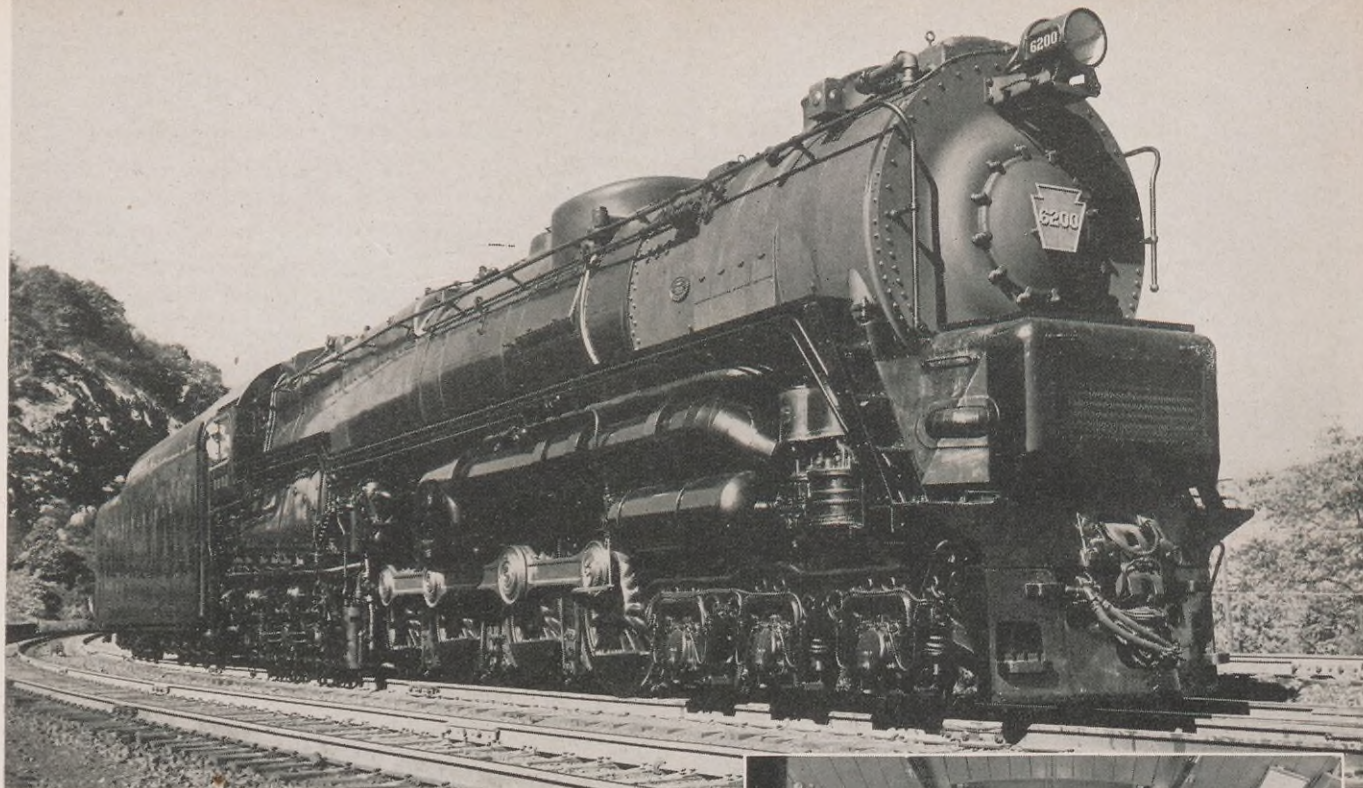
DORIS KLEINE

J. P. (John) Thomas is a specialist on the application of aviation lubricants. He prepares aviation lubricant charts and assists in the development of special aviation oils and greases.

Dirk van der Burch is a technical assistant handling correspondence with other companies in the Shell group. He exchanges information on product development records and specifications.

P. A. (Phil) Wieting is working on special statistical studies. He handles information pertaining to old or slow-moving stocks and coordinates matters relating to lubricants containers.

Thus, you have met the members of the department and know something of their assignments: the next two pages show some of the Department's recent activities.



The new turbine locomotive of the Pennsylvania Railroad. This right-hand view shows the forward motion turbine directly above the connecting rods.

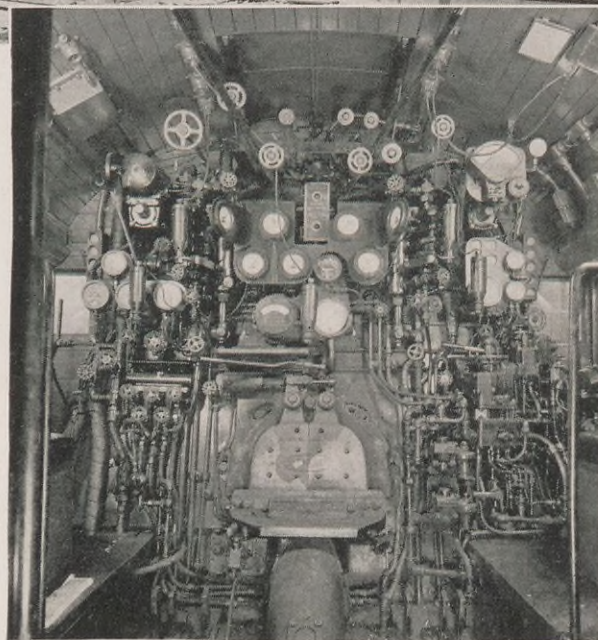
MARKETING Lubricants reaches out into many fields of human endeavor and its activities are truly diversified.

Our Army, Navy and Airforces are speeding on a film of oil; peak war production schedules are to a great extent contingent on dependable lubrication. Therefore every effort is exerted to make a complete line of lubricants that meet stringent Government requirements.

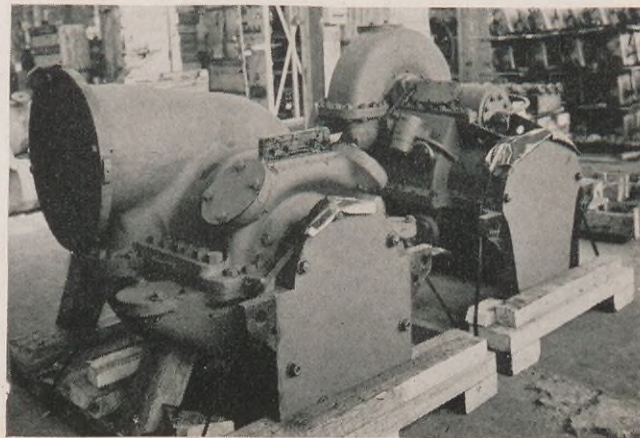
Industry and transportation using equipment of increasingly exacting design, frequently under heavy overloads, require lubricants of high standards. Marketing Lubricants is keeping in step with these developments.

Shell's products are doing their part. X-100 is doing an outstanding job under critical war time driving conditions. Talpex E stands up under the gruelling loads of heavy duty operations. Metal machining is taken care of by our modern cutting fluids either used in emulsions, such as Virgo 84R and Virgo 36Q or straight as in the case of Garia 28G and 29Q. Virgo 36Q has shown excellent performance in grinding of chromium steel even where extremely hard water tends to break down the emulsion. Our steel mill greases, specially processed, have to be tough enough to withstand the high pressures and temperatures in blooming mill bearings, yet sufficiently fluid to be pumped the year around through centralized lubrication systems.

An ever growing field presents itself for Shell lubricants in the processing of materials. Rust preventives keep the toll claimed by rust down to a minimum by pro-



The rear section of the boiler, showing the complicated gage and control mechanism.



The forward turbine and the reverse turbine as they appeared before application to the locomotive.

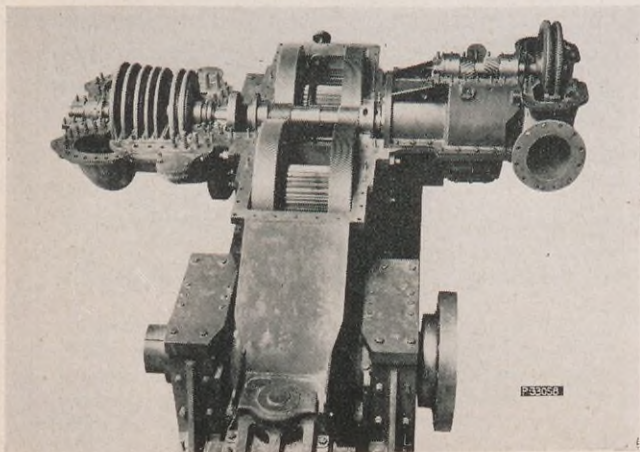
tecting steel against the destructive effect of moisture, salt water and finger prints. Our new quenching oil relieves metallurgical stresses during heat treatment of steels and insures high cooling rates. Our tinning oils just released for sale, help alleviate the critical palm oil shortage and show superiority over fatty oils in many operations.

Lubricants Department is preparing for future developments. The increasingly applied hydraulic principle in machine tools and hydraulic presses is met by our rust preventive Tellus Oils. The use of lubricants for recently developed hydraulic power transmissions, such as fluid drives and torque converters is being studied carefully. New equipment involving the opposed piston drive engine, jet propulsion aircraft, and new bearing materials of the type of powdered metals are under investigation in connection with lubrication problems.

The story of the application of a well-known mechanical principle to a revolutionary new engine design for the generation of locomotive power is so intriguing that it deserves to be told in detail.

Today a vast mechanism, the Pennsylvania Railroad's new turbine locomotive, is speeding over the countryside, demonstrating on a large scale the steam-turbine principle in practical operation; the turbine units are Shell-lubricated.

The railroad's new "iron horse" is the first of its kind in use in the United States. With a rating of 6500 horsepower, it is expected to maintain the schedules of the largest and heaviest passenger trains. This new step was undertaken by Baldwin Locomotive and Westinghouse, two pioneers in the railroad equipment field, who pooled their experience and resources in the building of the locomotive. It should determine beyond doubt whether turbine power is the final answer to the problem of higher speed and greater operating efficiency for the steam locomotive.



The complete assembly of the forward turbine, the reversing turbine and the transmission gearing with covers removed.

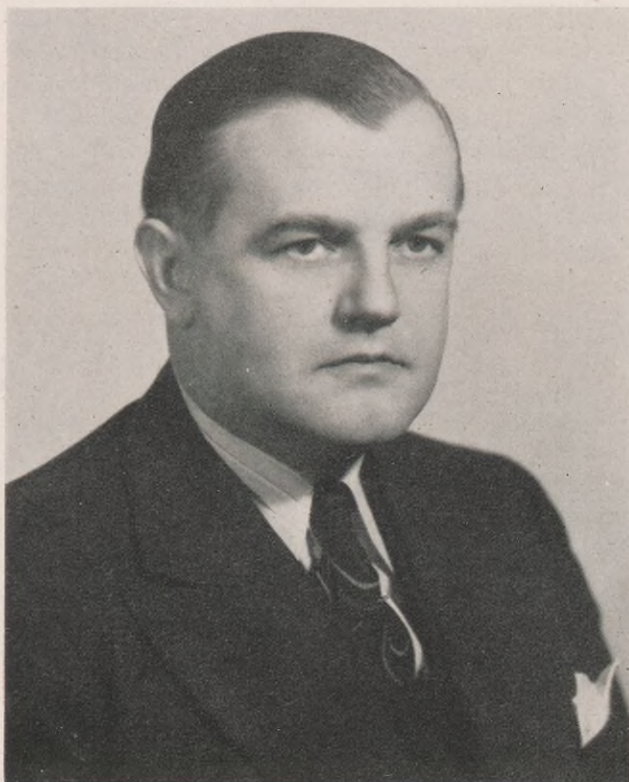
The use of turbine drive does away with piston rods and other reciprocating parts, allowing for perfect balance of the engine's driving wheels. This means that the wheels may be operated at higher speeds than would be practical with the conventional type of locomotive. The driving wheels of a turbine locomotive may be made considerably smaller, leaving more room for the fire box and boiler. The turbines, which spin like vastly-accelerated steel windmills, generate frictional heat. They require special lubricating oils with strong anti-rust and anti-oxidation properties. The oils serve a three-fold purpose: they act as coolants, lubricate the bearings, gears, and governors and protect them from rust. Shell's lubricating specialists who have produced the oil that fulfills stringent specifications for the Navy's turbines now do the same for the turbine locomotive.

The turbine locomotive features one forward and one reversing turbine, both of which are supported by the main locomotive frame. The 6500-horsepower forward turbine is located on the right hand side of the engine and is no larger than an ordinary easy chair. It accounts for less than one percent of the total locomotive weight of 290 tons. More than 1000 chromium steel blades, between one and three inches in length, are mounted in grooves running around a steel spindle inside the turbine housing. When steam is shot into the turbine through dozens of steel nozzles, it strikes the first row of blades at a speed of 2000 miles an hour; this forces the steel spindle to revolve, just as a wheel turns when a stream of water is played on its spokes. When the locomotive is traveling at a speed of 100 miles per hour, the tips of the largest blades will be going at the rate of nearly 700 miles per hour.

Very little power is lost from friction in the gears of the locomotive as they are bathed in lubricating oil every moment. The oil is sprayed over the gear teeth and forced into the bearings by pumps driven by two small steam turbines which circulate and recirculate the entire oil supply. It is pumped from the gear case sump (tank) through a strainer and a filter to a lubricating oil cooler chilled by boiler feed water. Turbine oils lacking resistance toward oxidation may form sludge which may clog the strainers and feed lines and reduce the flow of oil to the bearings. In the Shell-lubricated turbine locomotive, the gear teeth mesh under high pressure with so little friction that 97 percent of the power reaches the axles.

The new locomotive is already speeding wartime and peacetime traffic on the Pennsylvania Railroad. Its successful operation opens the door to what may prove an extensive new field in turbine-powered engines. Large-scale production of turbine locomotives means a greater demand for the best in turbine oils . . . Shell's Lubricants Department is prepared to meet that demand.

PEOPLE IN THE NEWS



C. E. "GENE" DAVIS has been appointed Vice-President of the Manufacturing Department to replace J. F. M. Taylor who has resigned. Davis has been with the Company for 28 years, starting as a shipping clerk at the Cushing (Oklahoma) Refinery. In 1923 he was made Assistant Chief Clerk at the Wood River Refinery and later that same year became Chief Clerk at the Arkansas City (Kansas) Refinery. In 1933 he became Assistant to the Manager of Manufacturing at Head Office, then in St. Louis. Five years later Davis became Assistant to the Vice-President of Manufacturing and in 1940 was named Manager of that Department. In July, 1943, he was given general administrative responsibility for the Department as its General Manager.

During the war he has served on many important industry-government committees, including the Aviation Gasoline Advisory Committee for the Petroleum Administration for War, and is now serving as Chairman of its Catalytic Cracking Subcommittee.

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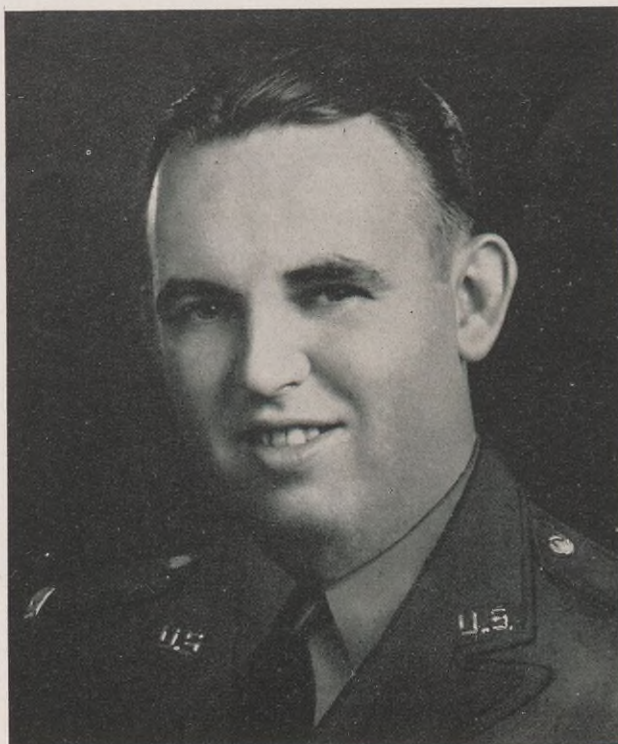


A. T. BARTLETT has been appointed Manager of the Economics Department of Head Office Marketing to succeed H. N. F. Schwall who is now with another Company of the Shell Group. Bartlett came with Shell in 1935 as a Traveling Auditor. In 1938 he became Economic Clerk for the Transportation and Supplies Department and the following year was named as a General Representative for that Department's Purchase and Exchange section. In 1942 Bartlett was appointed Assistant Manager of the Development section of T. & S. In 1944 he went with the General Planning Group as an analyst and early this year became a Technical Assistant in that Group.

• • •

WITH THE COLORS

Lt. J. C. Ebel, acting editor of Shell News until he entered the Army, was killed in an accident in Germany. Lt. Ebel had been in service since May, 1943, and had recently gone overseas. Shortly before the accident he had returned to duty after having been wounded in action.



Captain A. C. Elliott, Texas-Gulf Area, has received the Silver Star, Bronze Star and Purple Heart. The citation accompanying the awarding of the Silver Star, for gallantry in action, said, in part, "Personally leading his company in an attack for which his unit was serving as a spearhead, Captain Elliott, disregarding his own safety under intense enemy fire, directed the aggressive penetration of hostile defenses and successfully led the company to the banks of the Rhine River, where he quickly repelled an enemy tank attack and disposed of numerous pockets of resistance."



S/Sgt. Leonard T. Cain, Shell Pipe Line Corporation, has been awarded the Soldier's Medal and a special citation. Sgt. Cain was on a Corsican road last August when he saw a plane crash and the pilot parachute to earth a mile away. Sgt. Cain fought his way through dense brush, vine and swamp to reach the pilot, whose leg was completely severed below the knee. Cain quickly improvised and applied a tourniquet, gave the stricken man an injection of morphine, and made him comfortable until medical help arrived. The citation stated that "his strong desire to assist fellow-soldiers and his quick and correct action and calm presence of mind reflect great credit upon himself and on the armed forces."

VETERANS WHO HAVE RETURNED



Chief Boatswain's Mate Henry V. Hargis, Texas-Gulf Area, is back with the Company after three years with the Seabees. He went overseas in April 1943, with the 2nd Construction Battalion. His unit underwent several severe bombing raids in the South Pacific. Hargis suffered an injury which forced him to return to the States. For almost a year he was in one after another of the Navy's hospitals. Hargis had been with Shell fourteen years when he enlisted and has returned to his old job of rotary driller. (Official U. S. Navy Photo.)



Pfc. N. F. Coll of the Toledo Terminal of Products Pipe Line has received a medical discharge from the Marine Corps. Coll enlisted on October 23, 1942, and was attached to the 4th Marine Division as a Radio Operator. He received his combat training at Camp Pendleton, California, before going overseas. Coll saw action at Roi and Namur in the Marshalls, later on Saipan and Tinian in the Marianas. His Division received a Presidential Citation for their work on the latter islands.

WAR BONDS BRING VICTORY NEARER



WAC Martha Montgomery, Mid-Continent Area, was with the Air Transport Command, and is one of the first women veterans to return to the Company.



R. B. Creecy, Texas-Gulf Area, has gone back to his job as an oil pumper. Pfc. Creecy was a machine gunner with a Tank Destroyer Battalion in the Allied drive from Kasserine Pass to Bizerte. He then took part in the landings on the Anzio Beachhead and saw sixty days of action in that operation.



Chief Motor Machinist's Mate Harvey J. Rowe, District Service Representative in the Chicago Marketing Division, is back on the job after several years in the Navy.

ROUND THE REFINERIES, AREAS, AND DIVISIONS



Some of Texas-Gulf Area's Utility Fleet drivers get together; in the back are Willie Noble, Hap Harrison, Fuzz Buckley, Bert Gardenhire, Bill Evans, Joe Daniels; in front are G. E. Oliver, Earl Jaeger, Ernest Taft, Stub Summers, and Earl Elliott.

THE average person thinks of a truck driver as a burly giant whose tremendous strength enables him to manipulate a big truck through city traffic or over steep country hills. Actually, the drivers of Shell's Utility Fleet in the Texas-Gulf area find that driving a truck is a relatively simple part of their day's work. On location it is their job to clear fields, build roads, dig pits and move in the casing and complete drilling rig, from the derrick to the last steam connection.

The Fleet operates as part of the Area's Automotive Division and is headed by Bert Gardenhire, who has been "pushin' 'em" for 21 years. It is composed of 30 trucks, ranging in size from the 1½-ton general purpose type to the 18-ton tandem-drive units, and includes eight caterpillar tractors, some equipped with bulldozers. In 1944 the Fleet traveled 987,000 miles, carrying many tons of oil field and drilling equipment. It has no specific base but is dispatched wherever needed. With more than 40 wells being drilled at present the Fleet works steadily throughout the Texas-Gulf Area.

The truck operator's skill is taxed to the utmost in the Gulf Coast area where mud and rain frequently present problems in navigation. Some of the most difficult rig moves occur there. The rig consists of approximately a million and a quarter

pounds of material and machinery, and involves from 65 to 70 truckloads. From three to twelve trucks are used on a job depending on the terrain and the distance to be traveled. If rail transportation were necessary this would fill 19 flat cars to capacity.

The drivers team up with the 15-man drilling crews to dismantle the rig, which is taken down and placed in the trucks in proper order so that the setting-up procedure will be simplified. Four or five boilers, each weighing about 50,000 pounds, as well as an engine, pumps and draw works (machinery which hoists the cable string out of the ground during drilling), must be moved and set in place. The trucks are specially designed for these heavy loads with carefully-engineered weight distribution, and are equipped with power winch, lines and cranes for the lifting. While all this is being done, the bulldozer clears a road and uproots trees on the new location. If the ground is boggy, as it frequently is, the trucks haul in lumber so that a board road and a turn-around may be laid.

The Fleet drivers work with unflurried and systematic thoroughness, and everything moves with precision. If an object appears too heavy for one truck to handle, another rolls up to assist in the moving. The men deal with apparatus of great weight which costs tens of thousands of dollars . . . they know



A caterpillar tractor is loaded onto a truck.



A bulldozer goes after a tree to clear the way.

that careless actions may result in loss of life or destruction of irreplaceable equipment.

Sometimes disaster in the form of a blowout occurs after a well is begun. The Fleet is rushed back to the location with a blowout preventer to replace the one which failed. The call may come in the middle of the night or at the end of a long day's work, but the Fleet is on its way again . . . streaking out of town like so many fire engines. The truck driver is in a sense a fireman; his job in this case is to help the drillers install the preventer and, if possible, save the rig. If the blowout well is burning, the driver dons a fire fighter's asbestos suit to protect himself from the flames. He attaches the winch lines to the machinery, and the trucks pull in unison to drag it out of the way. All steel around the burning well is then removed, for after the fire has been extinguished these hot metals might reignite it.

Teamwork is the watchword of the Fleet, and spectators invariably are impressed with its efficient coordination. The Fleet hands put in long hours on a moving job so that a new well may be started without delay . . . and every driver takes pride in his work.

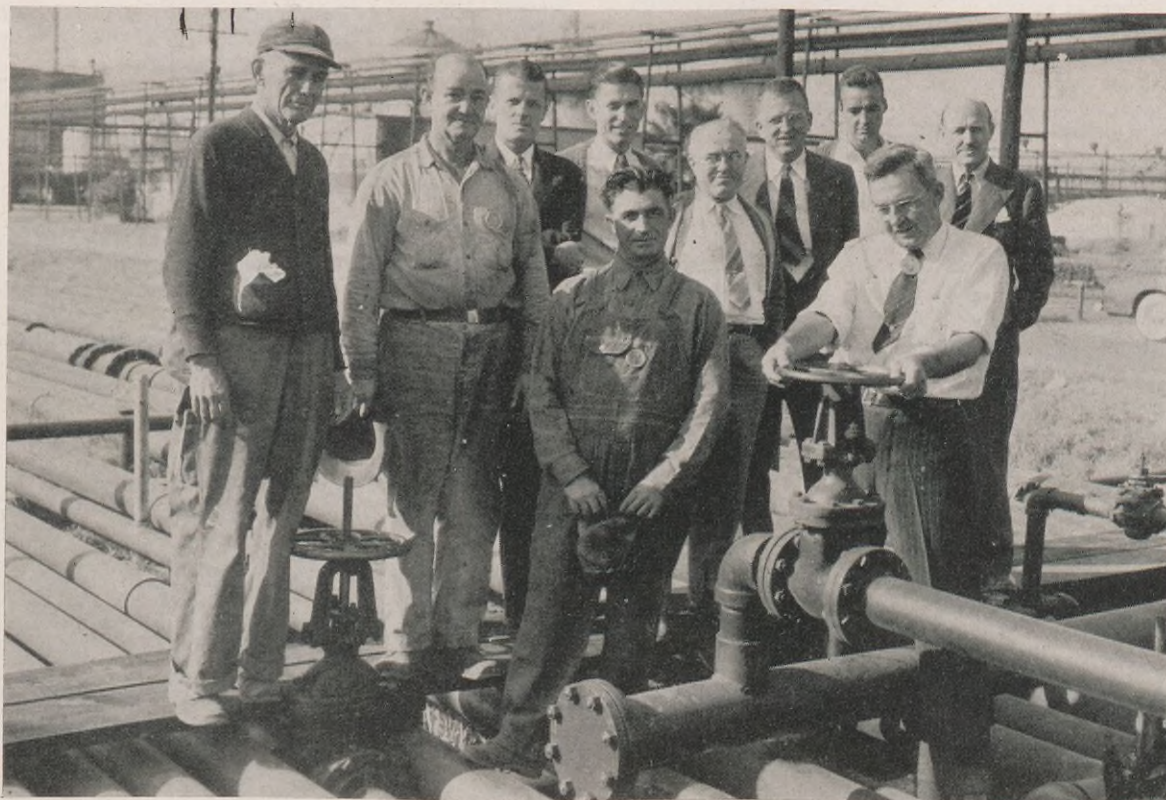


An 800-horsepower engine, weighing 39 tons, is moved from a flat car to a truck.

NORCO REFINERY now has an oilfield of its own. After years of transporting oil to Norco by barge and tanker, crude is being piped in at the average rate of 1,500 barrels a day from the new Goodhope Field 2½ miles away. Shell brought in its first well at Goodhope in February, and now owns three of the eight producing wells in the field with four more drilling rigs in operation. Through an arrangement with the other companies operating in the field, all of the crude from Goodhope is pumped into Norco's working tanks. This

greatly simplifies operating conditions, as barge and rail unloading facilities are not required and the oil is piped in as frequently as it is needed.

Locating at Goodhope Field presented many problems, for it sits in a Louisiana swamp that is subject to frequent flooding. More than half a mile of board road had to be constructed before drilling equipment could be moved in. Shell owns most of the acreage at Goodhope that appears promising, and the present daily average of production is 204 barrels per well.



C. J. Troxler, head of the dispatching department at Norco, turns a valve to let the first crude oil from Goodhope Field flow into the Refinery storage tanks. Witnessing the operation are Messrs. Farberes, Nicolas, Faulk, Rhoades, Foster, Deal, Erickson, Stewart and Weber. All except P. E. Foster of Houston Refinery are from Norco.



A view of Shell No. 2, one of the wells in the Goodhope Field, and a closeup of the drilling.

SINCE December, 1942, the gasoline rationing program at the Houston Refinery has been in the hands of a committee of three men and two women employees. The difficult, and sometimes vexing, task is performed by June Crane, L. L. Fullerton, Otto Cuppy, P. L. Benson, and Martha Brewer.





Boston Marketing Division employees held their annual service award dinners recently. Here are some of the Division office employees with 15 or more years of service.

AFTER HOURS



Employees of the South Maine District of the Boston Marketing Division also gathered together for their service award dinner.



The Shell Kerosene (Houston Refy.) team won the championship for 1944-45 in the Houston Shell Employees Bowling League. The members are Johnny Tiemann, E. M. Maxwell, Rose Leinweber, and Walter Meyer; seated are Gertrude Goggan, Les Phegley, and Bette Dardeau.



J. A. Murphy, New York Marketing Division (left), is presented for the second year with a Red Cross plaque in honor of his outstanding work during this year's drive. The award was presented by Major H. L. Schwamm, chairman of the New York drive.



Employees of the St. Louis Marketing Division went "all out" in the 7th War Loan Drive. The Army cooperated by bringing one of their "ducks" from a nearby field. On the "duck" are some of the Division employees who bought bonds and were rewarded with an Army-conducted tour of the City.

SERVICE BIRTHDAYS

THIRTY



YEARS

J. B. OAKLEY
Production
Mid-Continent Area

... TWENTY-FIVE YEARS ...



H. J. BEST
Production
Mid-Continent Area



P. E. HURLEY
Superintendent
Houston Refinery



C. J. JEFFRIES
Shell Pipe Line Corp.
Mid-Continent Area



A. B. OTTINGER
Production
Mid-Continent Area



E. N. WOOD
Topping
Wood River Refinery



H. L. ROLLI
Cracking
Wood River Refinery

T W E N T Y Y E A R S



A. I. ARBOUGH
Engineering
Wood River Refinery



L. L. ARNOLD
Shell Pipe Line Corp.
Texas-Gulf Area



L. B. BERRY
Exploration
Texas-Gulf Area



R. W. BOND*
Production
Mid-Continent Area



G. K. BRUCE
Engineering
Wood River Refinery



G. W. BURTON
Shell Pipe Line Corp.
Mid-Continent Area



A. CUTBIRTH
Shell Pipe Line Corp.
Mid-Continent Area



P. J. DUHE
Topping
Norco Refinery



D. M. FARRELL
Shell Pipe Line Corp.
Houston



F. C. HACK
Engineering
Wood River Refinery



G. T. HARRIS
Engineering
Wood River Refinery



H. R. HELVIE
Lube
Wood River Refinery



H. A. HENDRIX
Production
Mid-Continent Area



A. H. JOHNSON
Production
Mid-Continent Area



J. E. KENNEDY
Engineering
Wood River Refinery



K. K. KINKADE
Real Estate
St. Louis Mktg. Div.



J. J. KUEHN
Terminal (Lima, Ohio)
Products Pipe Line



L. LANDRY, JR.
Car
Norco Refinery



A. E. MARTIN
Operations
Detroit Mktg. Div.



G. MILLER*
Engineering
Wood River Refinery



J. McFARLAND
T & S
Head Office



H. W. NUNNALLY
Lube
Wood River Refinery



J. W. REID, JR.
Cracking
Wood River Refinery



E. R. SMITH
Production
Texas-Gulf Area



W. A. SORENSON
Shell Pipe Line Corp.
Mid-Continent Area



J. A. SPANHOLTZ
Engineering
Wood River Refinery



H. H. SPANIOL
Engineering
Wood River Refinery



H. C. TICKEL
Shell Pipe Line Corp.
Mid-Continent Area



W. W. WALTERS
Car
Wood River Refinery



A. K. WOODS
Production
Mid-Continent Area

D. R. BROWN
Exploration
Texas-Gulf Area

H. M. MONTGOMERY
Production
Mid-Continent Area

T. C. PETERS
Exploration
Mid-Continent Area

HEAD OFFICE

15 years

MISS A. C. CARROLL SHELL UNION
W. J. DALY TREASURY
T. H. HUGHES MARKETING
F. M. MILLER PERSONNEL
F. C. REEVE TREASURY

10 years

A. T. BARTLETT MARKETING
J. G. CLEARY* T & S
W. C. LEHIGH* MARKETING
B. S. MORGAN* T & S
MISS D. S. RAMOS PRESIDENT'S OFFICE

SHELL PIPE LINE CORPORATION

15 years

E. T. HARKINS WEST TEXAS AREA
O. C. MUDD HOUSTON
E. F. PRYOR WEST TEXAS AREA
W. E. SCHUENEMEYER MID-CONTINENT AREA
J. B. WEBSTER MID-CONTINENT AREA
E. G. STAFFORD WEST TEXAS AREA

10 years

W. H. BUGG* MID-CONTINENT AREA
C. W. GOLD* WEST TEXAS AREA
M. D. POOL WEST TEXAS AREA
F. RHAY MID-CONTINENT AREA
C. B. SHELL HOUSTON
J. KERR TEXAS-GULF AREA

HOUSTON REFINERY

15 years

E. L. CURTIS ENGINEERING
R. G. DANIELS DISPATCHING
S. R. MARTIN* ENGINEERING
L. A. WILLIAMS DISPATCHING

10 years

O. B. ANDERSON* ENGINEERING
L. ARMSTRONG ENGINEERING
F. P. BATES* ENGINEERING
R. BEASLEY ENGINEERING
C. E. BERGFELD ENGINEERING
J. V. CAMPO ENGINEERING
R. F. CLAYTON TREATING
J. R. DEVEREAUX* CRACKING

R. L. DAVIS GAS
J. L. DUNHAM ENGINEERING
M. J. EAGLETON ENGINEERING
H. ECBY ENGINEERING
J. ELLIOTT ENGINEERING
C. D. FISHER ENGINEERING
W. C. FLESCHER* CRACKING
K. E. GLASGOW* ENGINEERING
W. B. GLOGER CHEMICAL
J. S. GÓZALES ENGINEERING
R. HARGROVE CRACKING
R. M. HODGSON CRACKING
J. HOLT ENGINEERING
L. B. JONES TOPPING
M. JUDGE ENGINEERING
T. R. KELLEY* ENGINEERING
Y. R. LEON ENGINEERING
C. E. LEONARD ENGINEERING
E. B. LIERMAN TREATING
J. M. LONG TREATING
L. SIMMONS ENGINEERING
R. W. SMITH ENGINEERING
V. M. STARK CHEMICAL
K. I. STONEQUIST ENGINEERING
T. J. SUDBECK TOPPING

* MILITARY LEAVE.

HOUSTON REFINERY (cont'd)

J. A. SULLIVAN* TREATING
 F. J. SWEENEY TREATING
 E. J. VOLLERS TOPPING
 F. WALKER ENGINEERING
 V. E. WILSON TREATING

NORCO REFINERY**15 years**

A. DUHE ENGINEERING DEPT.
 G. J. BLEAKLEY IND. RELATIONS
 L. KELLER DISPATCHING

WOOD RIVER REFINERY**15 years**

J. F. BAKER ENGINEERING
 L. BEAN TREATING
 R. T. GENT ENGINEERING
 R. G. HEIDINGER CRACKING
 E. J. JONES ENGINEERING
 S. T. LANE CONTROL LAB.
 B. STOLLEY ENGINEERING
 R. H. VINSON ALKYLATION

10 years

G. E. ASH CRACKING
 H. M. BROOKS LUBE
 J. R. D. CREEKMORE* ENGINEERING
 A. J. ELKEY ENGINEERING
 T. C. HARRIS ENGINEERING
 H. W. HEATHMAN ENGINEERING
 J. S. HORVAT CONTROL LAB.
 H. R. KEMMERER RESEARCH LAB.
 C. L. LEONARD ENGINEERING
 C. E. LEXOW CONTROL LAB.
 G. McCONNELL CRACKING
 C. MOORE CRACKING
 J. H. MOURNING ENGINEERING
 J. L. NAGY ENGINEERING
 A. J. OTTE ENGINEERING
 A. PAGE LUBE
 W. J. SCHIPKOWSKI ENGINEERING
 G. A. SINNIGER GAS
 R. P. SKINNER CRACKING
 J. M. STASSI ENGINEERING

TEXAS-GULF AREA**15 years**

H. K. HUBBARD GAS-GASOLINE
 C. B. ROBINSON PRODUCTION
 T. G. WESTBROOK PRODUCTION

* MILITARY LEAVE.

TEXAS-GULF AREA (cont'd)**10 years**

K. R. BOWIE* PRODUCTION
 C. A. COX PRODUCTION
 R. J. DOBSON* PRODUCTION
 E. FINCHER PRODUCTION
 R. R. FORD* PRODUCTION
 E. W. FORT* PRODUCTION
 S. MIRON* PRODUCTION
 A. M. MOORE PRODUCTION
 C. NARDELL PRODUCTION
 S. L. PARHAM LAND
 C. A. RICHARD PRODUCTION
 A. H. ROLLEFSON EXPLORATION
 F. J. TAYLOR PRODUCTION
 E. C. THIBODEAUX EXPLORATION
 W. E. WALKER PRODUCTION
 V. O. WUNSTEL PRODUCTION

SEWAREN PLANT**15 years**

H. J. STANKIEWICZ OPERATIONS

ALBANY MARKETING DIVISION**15 years**

C. F. WAGONER SALES
 H. J. HERZONG OPERATIONS

10 years

C. W. FALL OPERATIONS
 R. C. OSTRANDER* OPERATIONS

ATLANTA MARKETING DIVISION**10 years**

F. L. KINCHEN OPERATIONS

BOSTON MARKETING DIVISION**15 years**

L. J. TAYLOR OPERATIONS
 E. R. HOWARD OPERATIONS
 D. L. SMITH OPERATIONS
 G. E. FITZGERALD OPERATIONS
 C. J. BASSETT SALES

CHICAGO MARKETING DIVISION**15 years**

H. L. FREER SALES
 R. E. RIDGEWAY SALES
 E. H. IDING SALES
 A. B. RAVERA OPERATIONS

10 years

T. N. BATH SALES
 W. D. KERR SALES
 I. D. SCHUSTEK SALES
 M. A. EDINGER OPERATIONS
 L. G. KOENIG OPERATIONS
 E. P. RUMANN OPERATIONS
 W. M. SMITH* OPERATIONS

CLEVELAND MARKETING DIVISION**15 years**

J. L. LEDERMEIER OPERATIONS
 R. H. FUNK OPERATIONS

10 years

W. J. LEISRING OPERATIONS

DETROIT MARKETING DIVISION**15 years**

J. HOLZWORTH SALES
 F. WINKEL OPERATIONS

MINNEAPOLIS MARKETING DIVISION**15 years**

H. A. KORNEGOR OPERATIONS
 P. C. VELURE OPERATIONS

NEW YORK MARKETING DIVISION**15 years**

J. P. BODECKER OPERATIONS
 S. R. BRUCKNER SALES
 P. J. KIRBY OPERATIONS

10 years

P. ROHACK OPERATIONS
 C. A. SPIESSE* SALES

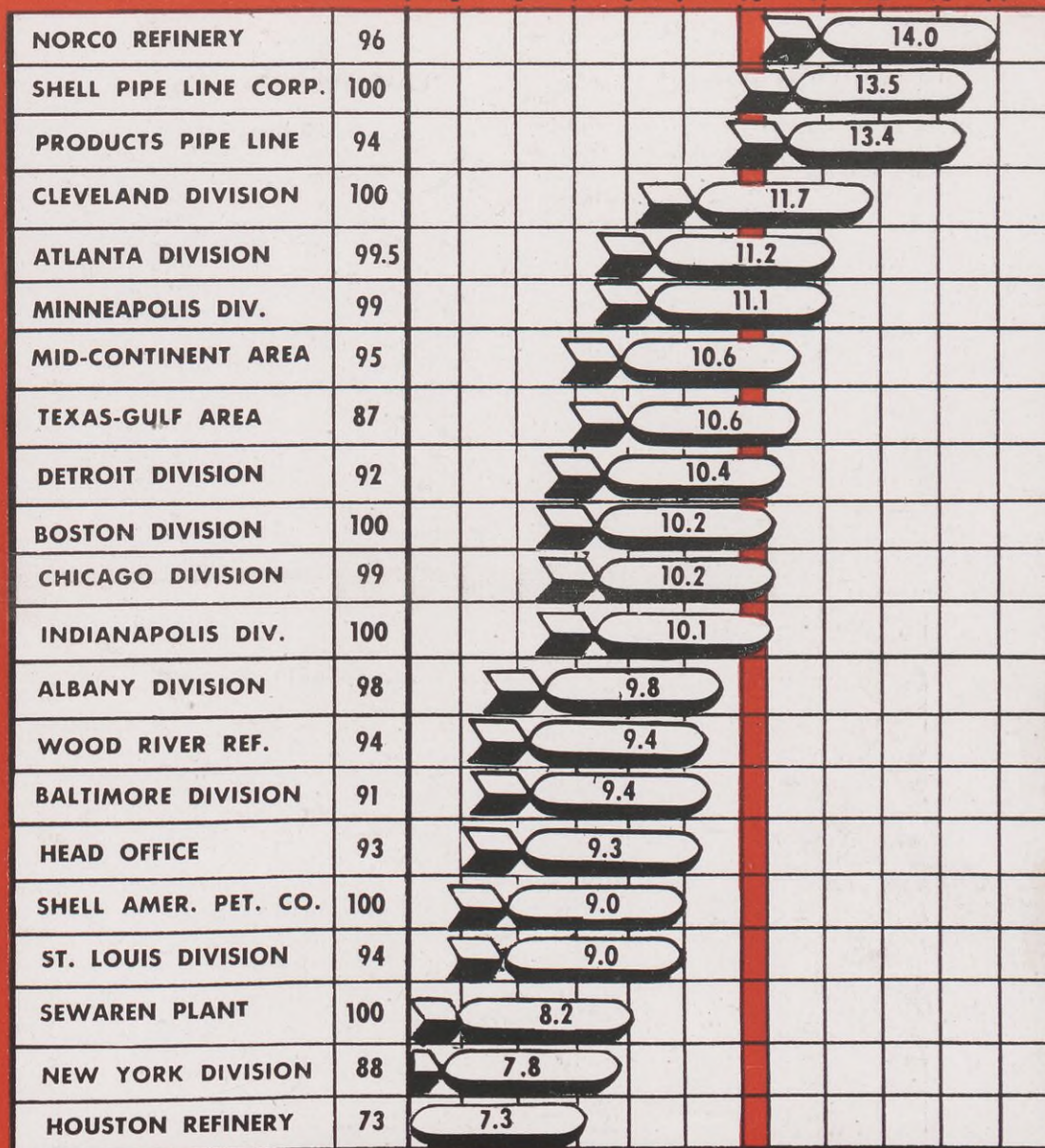
WAR BOND CHART

MAY

1945

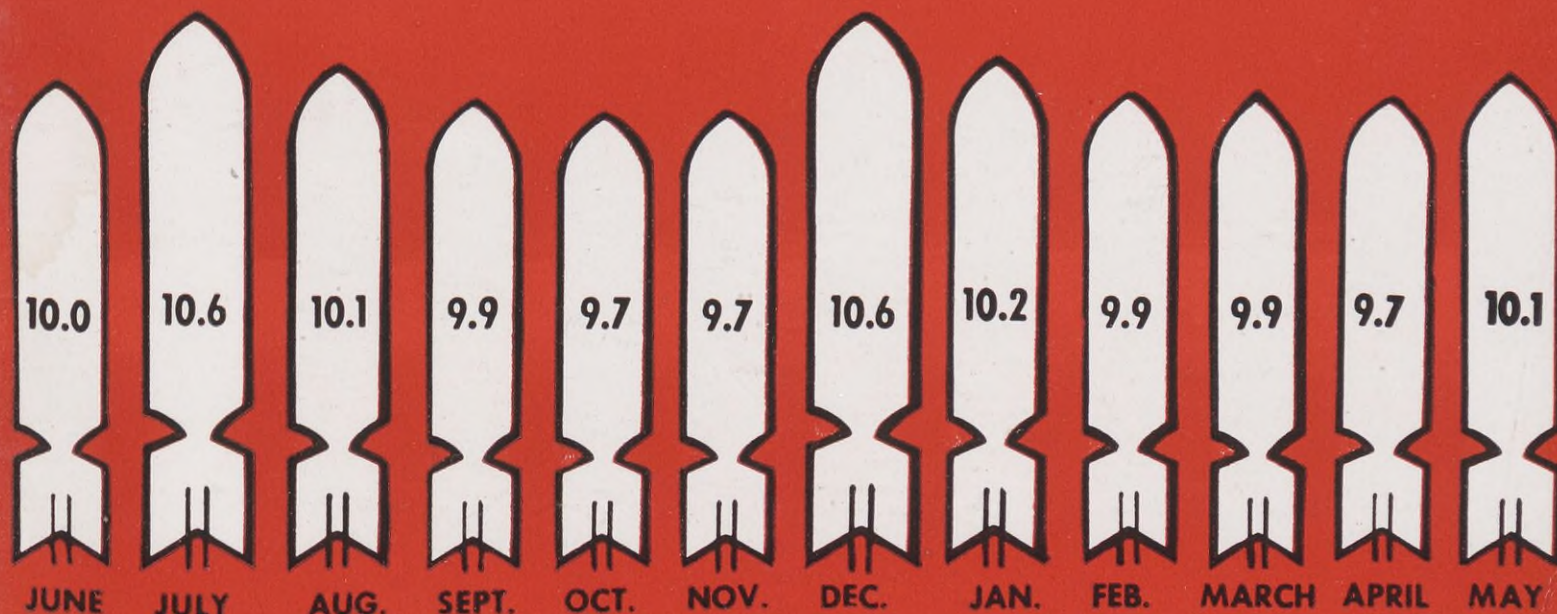
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OF WAR BONDS UNDER
THE PAYROLL SAV-
ING PLAN HAVE BEEN

\$11,234,789.75



PERCENTAGE OF EMPLOYEES
INVESTING

PERCENTAGE OF EMPLOYEES PAYROLL



AVERAGE OF PAYROLL SUBSCRIPTION OF ABOVE AFFILIATED SHELL COMPANIES

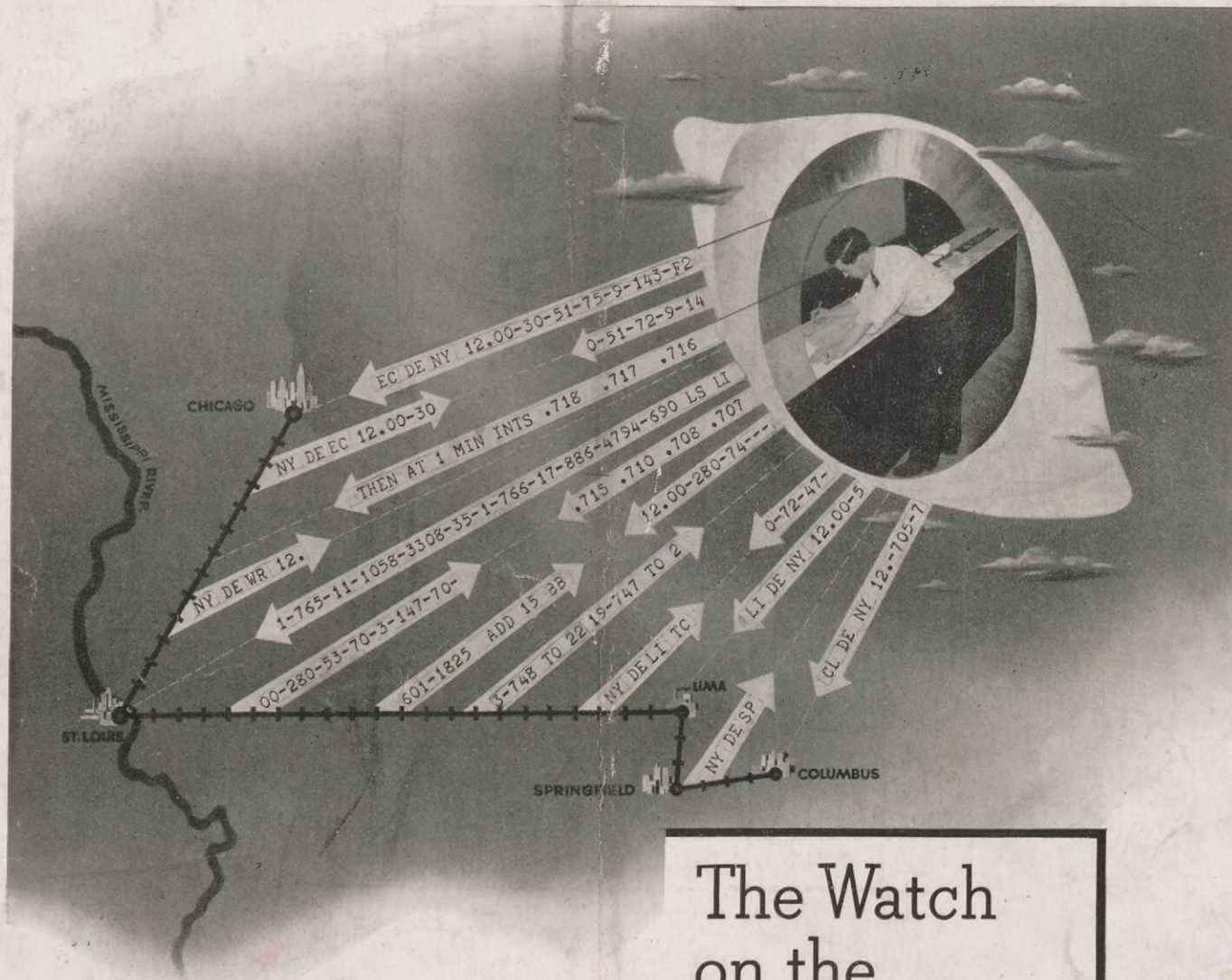
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A SHELL ADVERTISEMENT CURRENTLY APPEARING IN SEVERAL NATIONAL MAGAZINES



THIS WATCHTOWER is on the 37th floor of a New York skyscraper—the eyes of the watchmen ranging over hundreds of miles of the Mississippi and Ohio Valleys, roughly a thousand miles away . . .

To make it more remarkable, what they're "seeing" is all underground. These watchmen *control* the flow of petroleum products through Shell's two main product pipe lines . . . (not to be confused with pipe lines that carry crude oil). They direct the onward sweep of 100 octane aviation fuel, motor gasoline, heating oil, Diesel fuel, and a dozen other products—from refinery toward the embarkation ports, or factories and homes.

All products flow through the same line, one after another—nothing keeping them separate but pressure and the velocity of their flow. They must not mix, must not contaminate each other. And all must keep moving toward their destinations, day and night.

THE CONTROL BOARD in the New York watchtower is a miniature reproduction of each giant pipe line. The miniatures show distances, elevations, pumping sta-

tions, and the points where products enter or leave the lines.

Communication back and forth between the watchtower and strategic points throughout the length of the pipe lines is by two-way teletype.

For brevity, messages are in code. Some of the code messages above, if spelled out, would fill a paragraph. Those from stations on the pipe lines give essential information about the product in the line, and temperature, pressure, and other conditions affecting its rate of flow.

All this is immediately "visualized" on the miniature pipe line in New York—the movement of the products goes on before your eyes. You see the "head" of a shipment of 100 octane aviation fuel . . . how many miles it extends . . . and, in a different color, the product that follows it . . .

Lights on the miniature pipe lines flash off, or on, as return teletypes order certain pumps shut down, and others started.

THIS SYSTEM of remote control has been in operation six years, with 50,000

The Watch on the Mississippi

barrels of petroleum products delivered through the lines *every day*.

As it sped war products on their way, the "Watch on the Mississippi" foretold the fate of the "Watch on the Rhine."

Look to Shell Research for finer gasoline and motor oil. Shell's wartime leadership in petroleum research and technology is your assurance of finer fuels and lubricants for your car. When the time comes, your Shell dealer will be ready.



*Horizons widen
through
Shell Research*