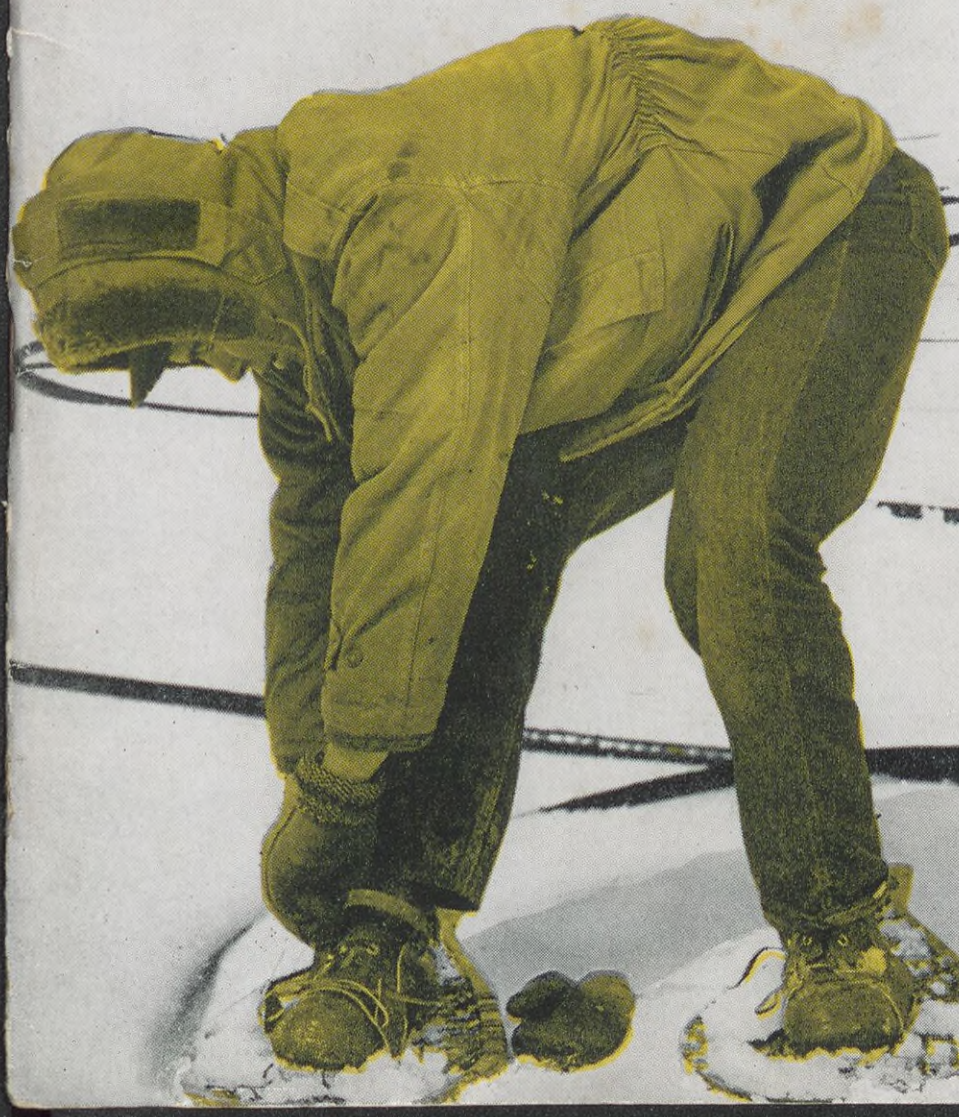
SHELL NEWS



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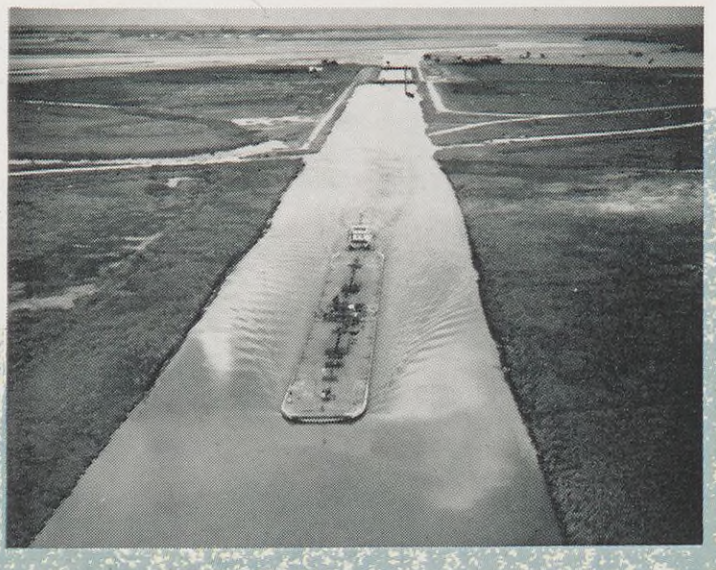
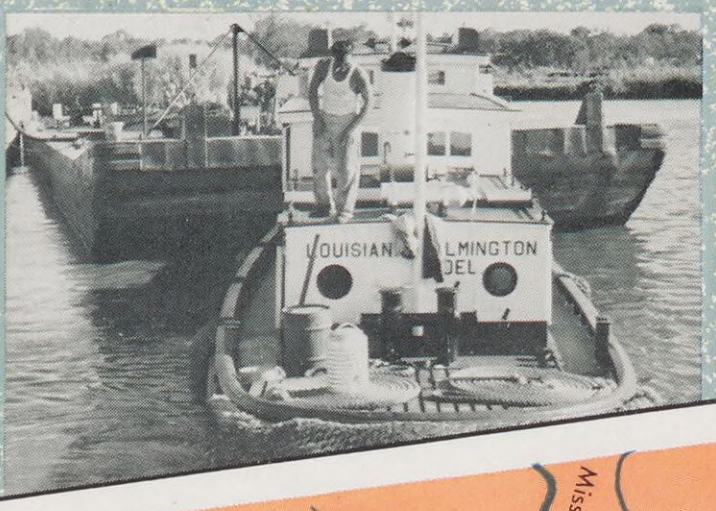




BIG

From Texas to Florida, a 1,000-Mile Protected Waterway Links the Productive Gulf Coast Region with the Mississippi and Inland Ports Thousands of Miles Away on Its Many Tributaries

Bayous and man-made canals, like those surrounding Shell's Weeks Island field, top, twist through much of the Gulf Coast area and give access to the Big Ditch. An oil tow, center, leaves Vermilion Lock, Louisiana, one of five locks along the Gulf Intracoastal Canal. A barge, left, is readied for a long haul.

The Gulf Intracoastal Canal's importance as a link in the U. S. inland waterways system, consisting of 15,500 navigable miles, can be visualized here. The Canal is more than 1,000 miles long.

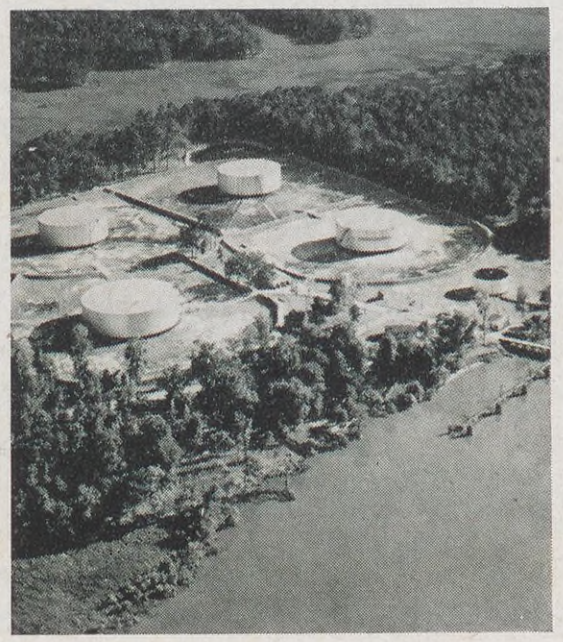
ditch for barges

LESS publicized perhaps than the Panama Canal, the New York State Barge Canal, the Kiel and the Suez, but longer than all of them combined, the Gulf Intracoastal Canal is a 1,000-mile protected waterway on which you can safely sail all the way from Texas to Florida.

Only 125 feet wide and 12 feet deep, it's a narrow channel that starts at the Rio Grande near Brownsville, Texas, cuts around the crescent-shaped Gulf Coast crosses the Mississippi River at New Orleans and swings on to Carrabelle, Florida. Nonetheless, it forms a large segment in the 15,500 miles of navigable U. S. inland rivers and canals. Eventually, it may be linked with the Atlantic Intracoastal Canal, across the top of Florida, so that goods can be towed all the way from Texas to Trenton, New Jersey, by-passing the ocean entirely.

Pouring into barges from points accessible to the Canal, including Louisiana, Houston and Galveston in Texas, Biloxi, Mississippi, Panama City in Florida, and Mobile, Alabama, is the rich produce of the Gulf Coastal area, destined for ports thousands of miles up the Mississippi

On Norco's dock, a loading hose, below left, used for transferring products to barges, is hoisted away as its job is completed. Barge, below center, looks as wide as a city street. Haymark, below right, is one of several Shell crude oil terminals in Louisiana from which barges can load and then haul crude to Houston and Norco Refineries via the Canal.



SHELL NEWS

VOL. 22—No. 11 NOVEMBER, 1954

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

Employee Communications Department
New York, N. Y.

contents

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

EXPLOSIONS IN THE SNOW

The search for oil goes on in every month of the year. Like the better-publicized mailmen, exploration parties are seldom deterred by extremes in weather. Shell Oil's Seismic Party 2-S of the Denver Exploration and Production Area, for example, was setting off charges in snow-covered northern Montana last year, often in sub-zero temperatures. The front cover of this month's SHELL NEWS shows scenes typical of this operation, and a picture story on how the party lived, worked and fought off the cold begins on page 6.

A tug ties onto a crude oil barge at Weeks Island, Louisiana. This crude may be towed to Shell's Norco Refinery or may travel as far along the Canal as the Houston Refinery. The Canal also is used for shipment between refineries of intermediate products requiring further processing.

Like a building on stilts, the ODECO platform, which drills offshore wells for Shell, passes a Canal lift bridge enroute to the Gulf.

and its tributaries—as far distant, for example, as Minneapolis and St. Paul, Minnesota. Iron and steel, cotton, sulfur, sugar, pulpwood, sand and gravel, timber, rice and salt are among the more important items shipped.

Petroleum Products Lead

But, by far the heaviest load is petroleum and petroleum products. Of the record 41,000,000 tons barged last year, the fifth year since the last segment of the waterway was completed, nearly three-quarters was shipped by the oil industry. This was more than ten times the maximum yearly tonnage of 4,000,000 visualized when the Federal Government started the project 49 years ago. The "Big Ditch" was built in stages as the area developed economically.

To underscore the Canal's importance as a vital link in the U. S. inland waterways system, its wide use last year as a barge route carrying Shell products and crude oil is a fitting example. Towboats hauling Shell petroleum move short distances between otherwise inaccessible points along the Gulf Coast itself. Or, sailing through the Canal directly onto the Mississippi, they make deliveries to terminals, refineries and plants on 5,380 miles of navigable water which make up the Mississippi Waterway System.

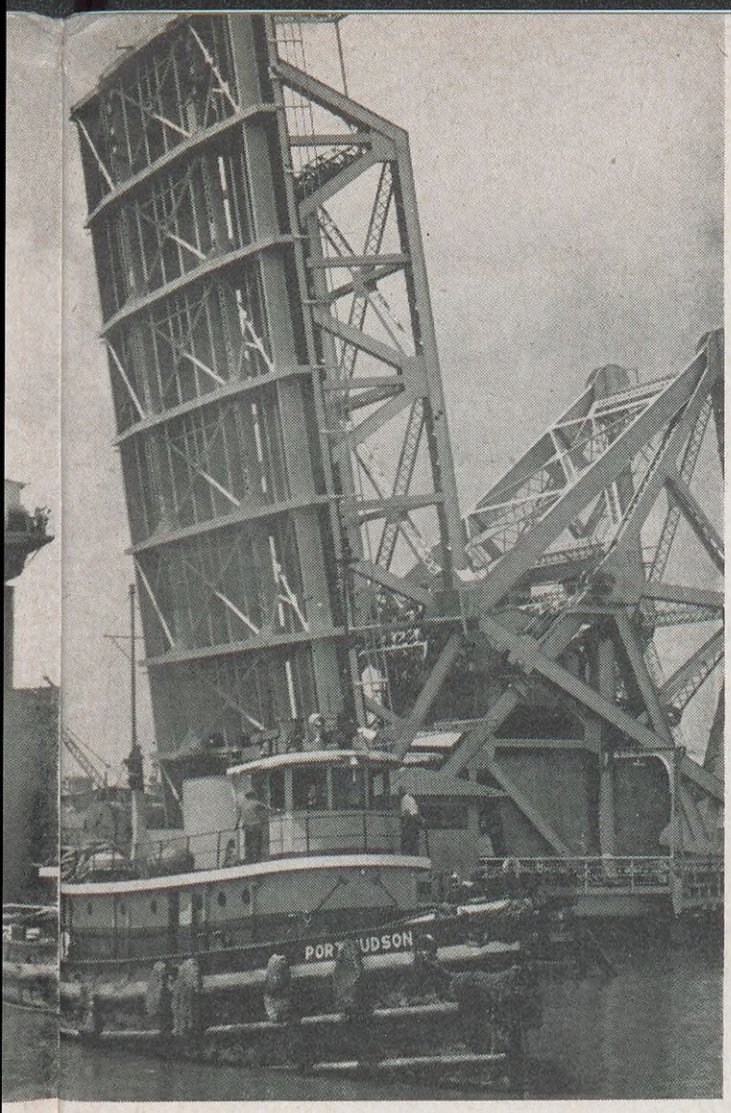
Last year, more than 28,000,000 barrels of crude oil passed through the Canal enroute to Shell refineries at Houston and Norco. Also via the Canal, about 1,300,000 barrels of intermediate products were exchanged between the two refineries for further processing.

With clear sailing all the way from the Houston Refinery, barges delivered 1,600,000 barrels of clean products to destinations along the Mississippi. From Norco, shipments of additional products were made to Panama City, Florida, and Mobile, Alabama.

From Shell Chemical Corporation's Houston plant, 252,000 barrels of chemical products were barged through the Canal and via the Mississippi and Ohio Rivers to Industry, Pennsylvania (near Pittsburgh) and Belle, West Virginia (near Charleston); and via the Mississippi and Illinois Rivers to Argo, Illinois (near Chicago).

Working in conjunction with the Marine Transportation Department, which handles arrangements for Shell's water transportation, the Supplies Department of the Transportation and Supplies Organization in Head Office schedules the movement of products shipped via the Gulf Intracoastal Canal, while the Crude Oil Department in Houston schedules the transportation of crude. The Distribution Department of Shell Chemical, with its carriers, handles the scheduling of chemical products.

Cotton growers, oilmen, cattle ranchers and farmers of the Lower Rio Grande, for years a region isolated from adequate transportation, had good reason for regarding the Canal's completion in 1949 as a moment equally historic as the coming of the railroads.

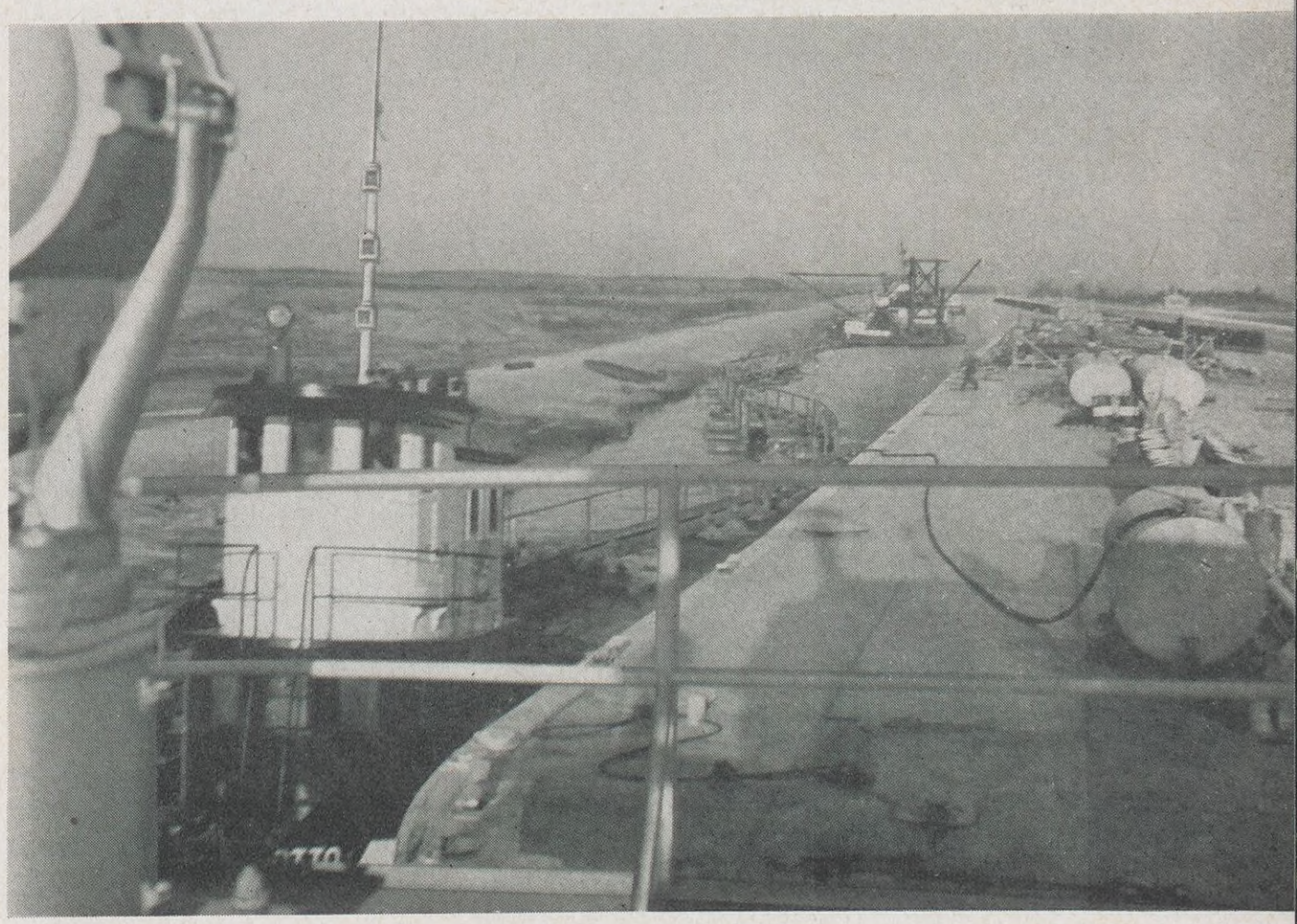


The Gulf of Mexico itself always has been noted for squalls and storms so sudden and severe that small craft, even a short distance offshore, have found it difficult to escape damage. Barging in the unprotected waters was often hazardous. Whenever practical, the numerous bays and sounds that indent the coastal area generally were used when protected passage was desired, but this was never altogether satisfactory. Moreover, the area bordering the coast was a maze of bayous and marshes, hampering the development of other transportation.

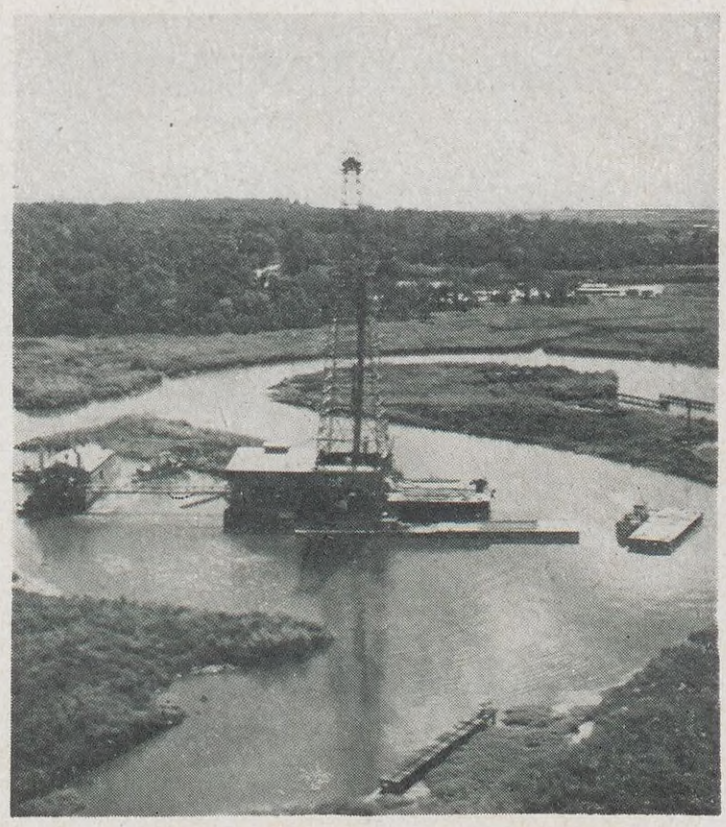
A Wartime Lifesaver

But today, many of the bayous and marshes that once were so troublesome have been connected by dredging to form a part of the Canal. Completed only from Carrabelle, Florida, to Corpus Christi during World War II, the Canal nonetheless proved a lifesaver. While tankers were being sunk by submarines within sight of the coast, the Canal barges were safe from attack. Canal shipping, which reached 7,000,000 tons a year before the war, boomed to a peak of 17,500,000 tons by 1944. And annual tonnage has increased steadily in the last 10 years.

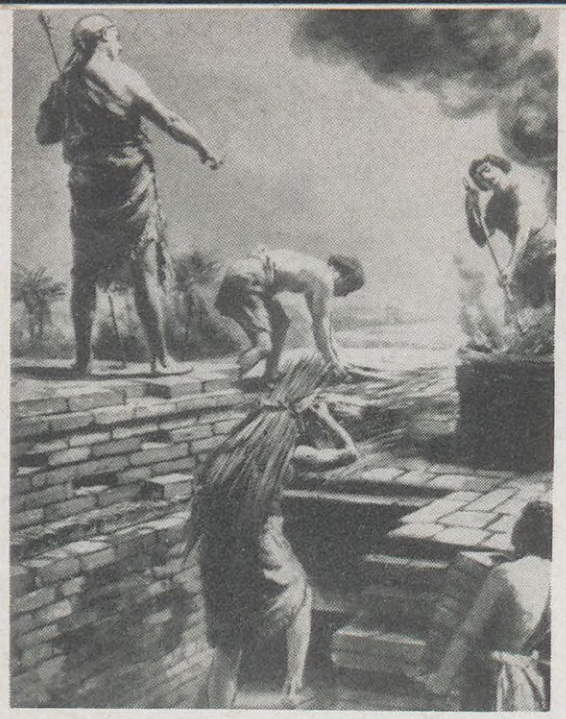
Furthermore, shippers have taken advantage of this important waterway to such an extent that traffic already threatens to overburden its facilities. One bottleneck is the Canal's five locks. Frequently, vessels must line up to clear the locks and delays of a few hours occasionally result. Between December and March, fog and winds frequently hold up transportation for as long as two days. To help ease the traffic problem at the locks and at other particularly busy stretches of the Canal, Government surveys already are underway to determine where widening and deepening would be desirable.



Traffic jams, above, are not uncommon on the narrow Canal. Here, a tug squeezes by on the left of this barge as a dredge crawls up behind. Surveys are determining where widening and deepening would help.



A Shell rig, right, drills in a bayou at Weeks Island. The refinery-bound production of this and other important fields can be moved easily via the Canal, which carried some 28,000,000 barrels of Shell crude last year.



Asphalt was used for laying brick in ancient Babylon, above. Recent excavations showed the asphalt to be almost in its original state.

From Mesopotamia To Main Street

Asphalt Has Recently Become One of Shell's and the Oil Industry's More Important Products

A STRING of tank cars stretching from Maine to California. That's what it would take to haul a year's supply of asphalt at the rate it's used today. This demand—and it is still growing—is fair evidence that asphalt has gained a respected place in the oil industry. It's a unique place, too.

Unlike gasoline and kindred refinery products which are consumed in use, asphalt's merit lies in its durability and long life. The best example of this is the nation's system of paved highways and airports. More than 85 per cent is surfaced with asphalt.

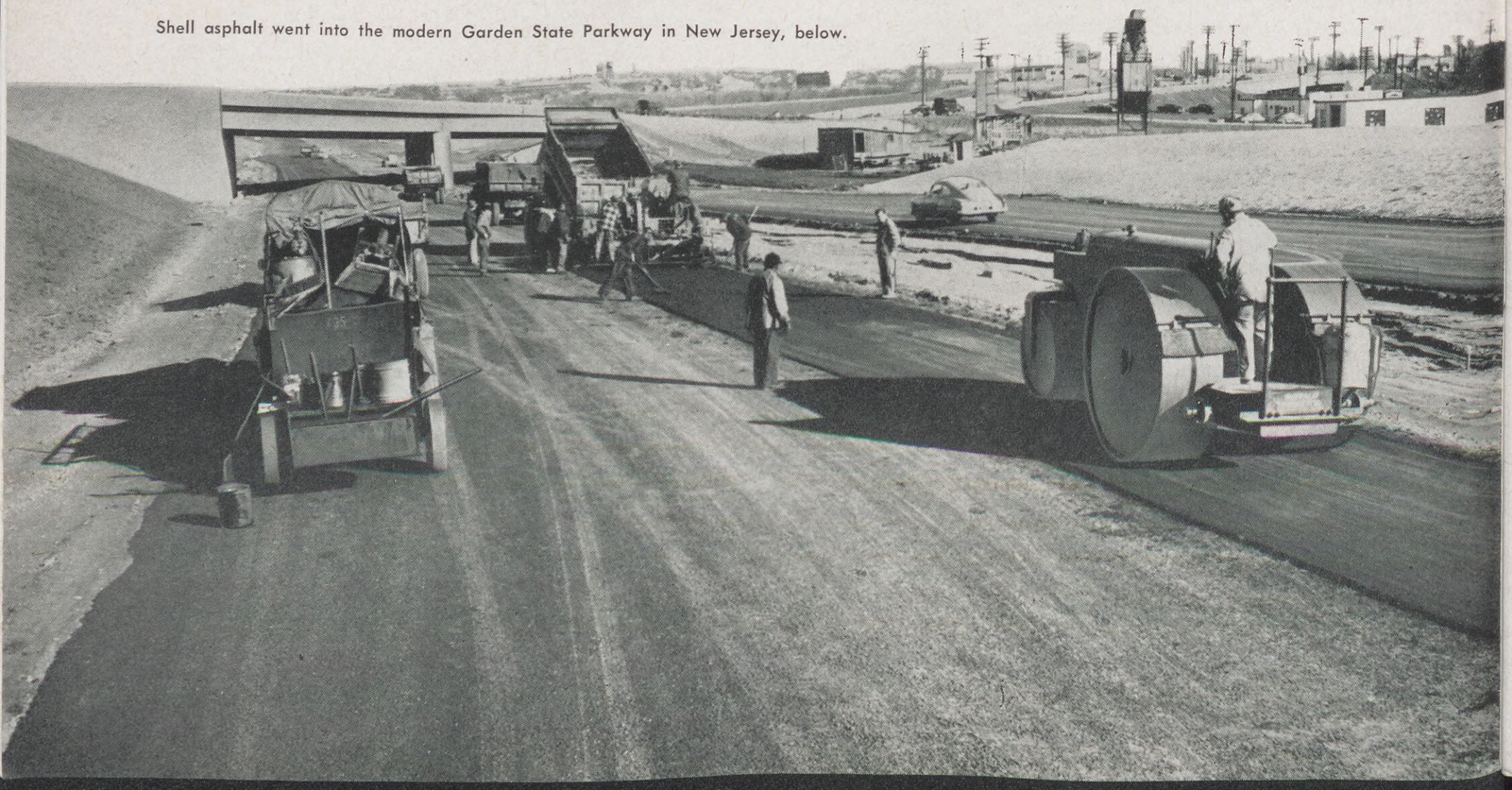
To describe exactly how the present-day asphalt industry evolved is much like trying to answer the classic riddle: Which came first, the chicken or the egg? It goes back to the early, closely linked development of the automobile and refining techniques. Asphalt, a thick black end fraction from certain types of crude oil, began piling up as refineries turned out more and more gasoline to meet automotive demands. More and better roads became a must as automobiles grew in number. Asphalt filled this need, and thus the spiral of development went.

Asphalt is used in the United States today at the rate of about 14½ million tons annually. Shell accounts for about 10 per cent of this.

Of all asphalt consumed, more than three-quarters goes into paving for highways, streets, sidewalks, airport runways, parking lots, all kinds of recreational areas, or to reinforce harbor-protecting jetties or build river bank revetments to help control floods and erosion. The remainder goes into industrial products and processes.

By far the biggest among industrial users is the roofing industry, which consumes more than three-quarters of all the asphalt that doesn't go into paving. Asphalt also goes into the

Shell asphalt went into the modern Garden State Parkway in New Jersey, below.



manufacture of waterproof paper, floor covering, electric cables, storage tanks, storage batteries, brake linings, certain rubber compounds and paints. The oil industry itself uses asphalt—as a protective coating for underground pipe lines.

Among even more specialized users is the shoe industry. Some companies use asphalt to stiffen the backs of certain types of shoes. Some enterprising men even have used asphalt to coat grains of corn before planting them. They've discovered that it kills birds' appetites for their gardens!

With a history dating back 5000 years, asphalt is truly one of the oldest and most versatile products known to civilized man. Recent excavations in southwest Asia, in what was ancient Mesopotamia, have uncovered many splendid examples of asphalt usage. There are water tanks still effectively waterproofed with asphalt and domestic drains and baths lined with it.

Despite its widespread use by builders of Biblical times, knowledge of asphalt and its uses lay buried in antiquity for a surprising length of time. So highly developed was the early industry that modern scientists are astonished that it all but disappeared for so many centuries. Only with the development of the modern petroleum industry has the durable material regained a place in the construction field comparable to that of 25 centuries ago.

In Biblical times asphalt was found in shallow deposits where crude oil had seeped to the earth's surface. Natural processes of wind and sun evaporated the crude's lighter portions and asphalt or "pitch" remained. It was refined even then—at least to the extent of removing water and foreign matter.

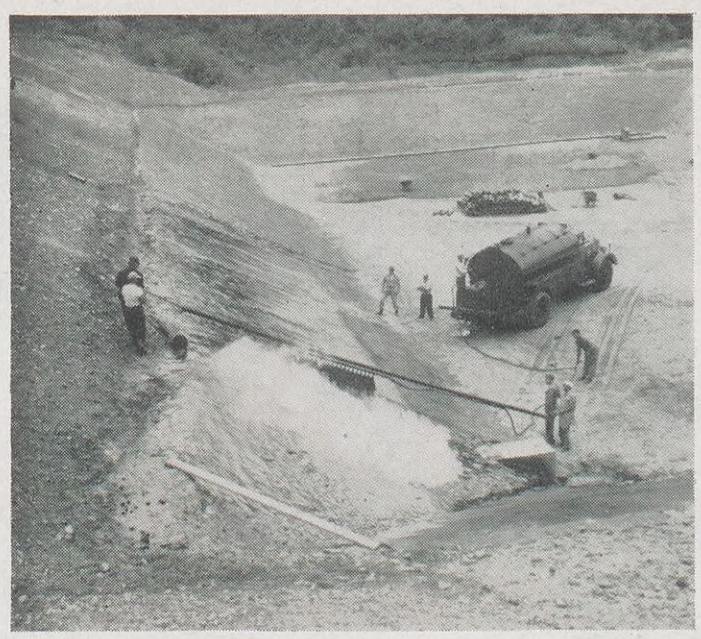
These natural pools exist today, like the famous lake of asphalt in Trinidad. But they're of minute importance compared to the refinery product.

Refining makes many changes in asphalt. Processed in large stills under carefully controlled conditions, it can be made hard or soft, pliable or brittle, thick or thin, with a high or low melting point, or in any desired combination of these characteristics. The purpose for which asphalt is to be used is the determining factor.

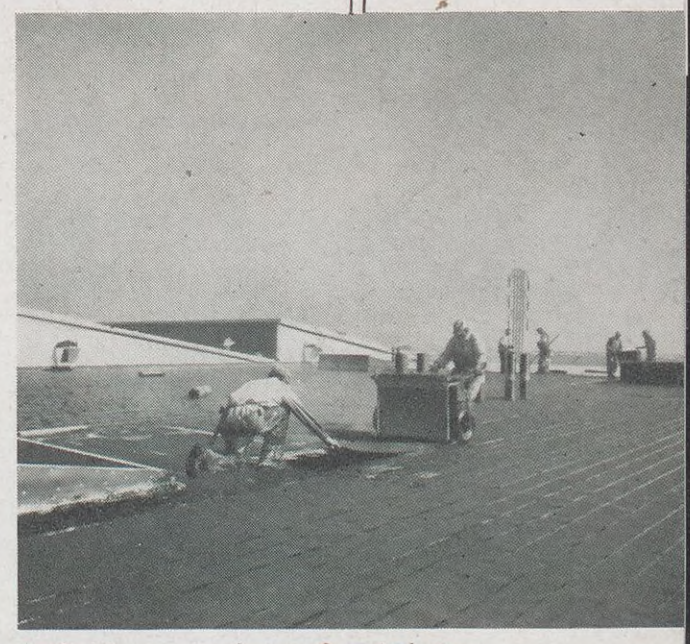
Shell turns out more than 140 grades to take care of hundreds of applications. These are produced at the Wood River, Norco, Houston and Martinez Refineries. Still other grades of asphalt could be produced if the need arose.

Shell has the highest regard for asphalt's potentialities. This is evident from the research facilities maintained for its study at Martinez and Wood River and at the Emeryville Research Center. Among important projects underway is basic research on asphalt's extremely complicated chemical makeup. Researchers also are devising new methods to test and improve asphalt products, developing new applications and providing technical advice.

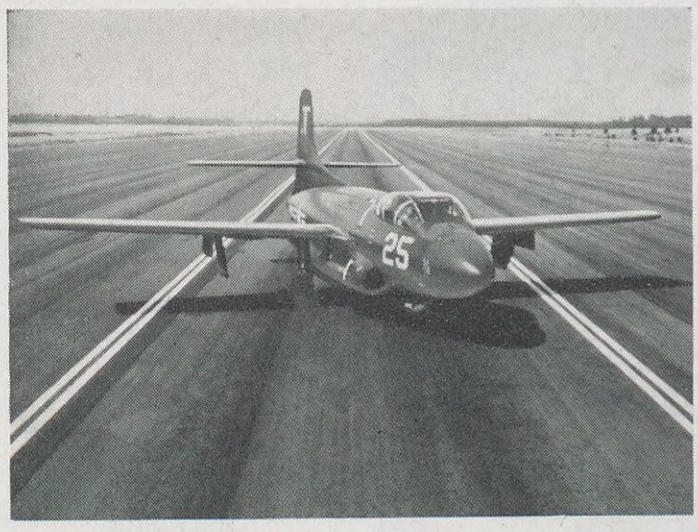
Demand for asphalt has more than doubled in the last 15 years. Every indication is that it will continue to grow. For one thing, four-fifths of this nation's more than 3 million miles of roads are still unpaved.



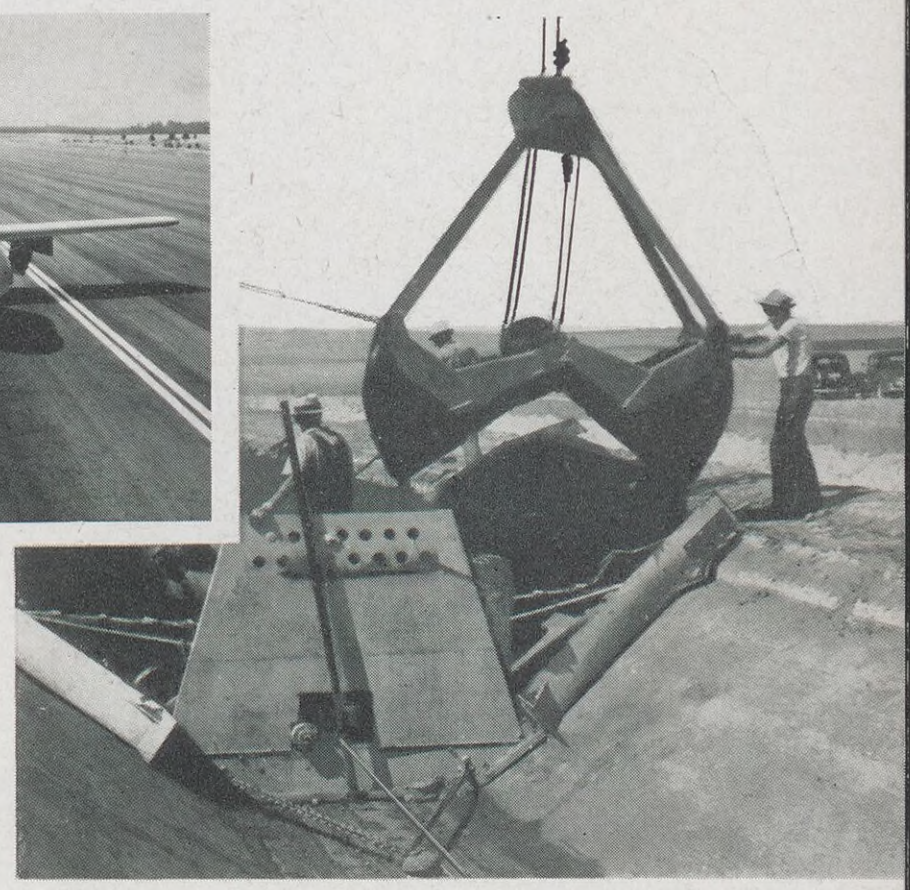
Shell asphalt went into the lining of a new filter bed for the water system of Newburyport, Massachusetts.



Asphalt's use in the roofing industry is shown, above, as it goes on a factory.



A runway, above, at the Marine Air Station, Cherry Point, N. C., shows the smooth surface asphalt affords for aircraft takeoffs and landings.



Ease of application, imperviousness to water, and durability make asphalt an ideal lining for irrigation ditches like that at right in the West.

WINTERIZED

At the Height of Winter, Northern Natural Deep-Freeze—But

OIL strikes are seldom made in the most habitable places. Oil is more likely found in mountainous regions, deserts or even under the ocean floor, sometimes defying man's efforts to bring it to the surface. And there are many hardships in the day's work of the men who search for oil.

Last year, for example, the Denver Exploration and Production Area's Seismic Party 2-S wintered in northern Montana at the Blackfeet Indian Reservation, on the fringe of Canada and 80 miles from the town of Choteau. The men themselves lived in a miniature city of insulated trailers during the work week, generally going to Choteau to weekend with their families.

James Forest collects jugs at completion of a seismic shot.

Mapping a snow-covered field on the Blackfeet Reservation are survey crew members Ardis Hogan, at telescope, and Wallace Martenson, with rod.

OILMEN

Montana Becomes A the Search for Oil Goes On

In winter, sub-zero temperatures are normal and heavy, drifting snow blocks passage of trucks and equipment. But the party's operations were seldom suspended last winter. Trouble sometimes came with a warm chinook wind which descended from the mountains, causing a fast thaw that temporarily turned the land into an impassable morass of slush and mud.

Seismic crews like Party 2-S are the oil industry's advance men. They seek clues that help decide where to drill wildcats in search of new fields. Surveyors first map a prospect as carefully as they would a city lot. Then, hunting for definite information about the underground structure, seismologists follow the surveyed line with a truck-mounted drill rig, sinking shot holes at regular intervals.

These are loaded with dynamite. Then, cables are hooked to cylindrical shock detectors, called "jugs" by oilmen, which are fixed in the ground. When a dynamite charge is fired, seismic waves are reflected from underground formations and register on the jugs. The sensitive jugs, in turn, transfer a record of the waves to graphs in the party's recording truck. The graphs can be interpreted to give a picture of underground formations.

Scenes like those on this and the following pages were typical of the winter camp life of Party 2-S.

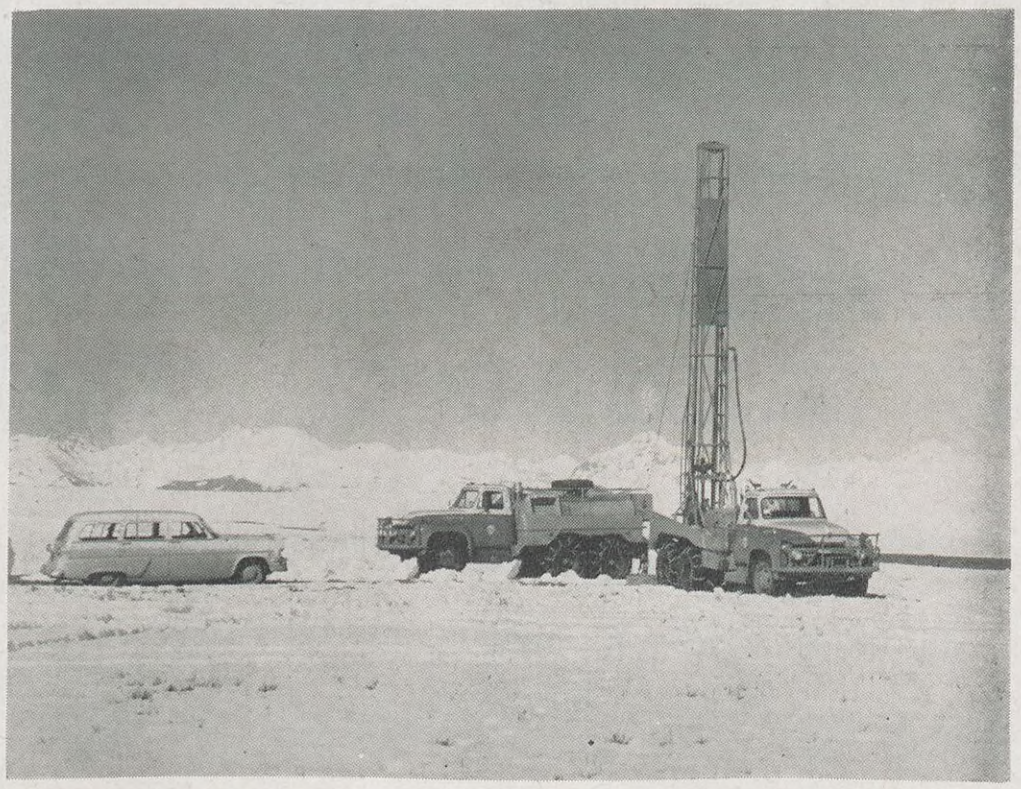
A bulldozer batters away at huge snowdrifts, keeping makeshift roads open for easy movement of trucks carrying men and equipment.

This is a dynamite stick which Lyle Arthur, right, and Allen Pearl, members of the shooting crew, prepare to insert in a shot hole drilled along the surveyed line.

Lauren Swenson digs a hole to plant a "jug," a cylindrical shock detector used to record vibrations from dynamite charges.

Vehicles used by field teams are insulated against the bitter cold. "Canned heat" and heavy-duty heaters are two devices employed.

WINTERIZED OILMEN



At left, an explosion creates a small earthquake that sends up a geyser of mud and water. Shock waves reflected from the underground strata, detected by jugs, are recorded on graphs in the seismic truck nearby. From the many graphs, interpretations made of the underground structure may suggest an oil bearing locality.

Above, the miniature drilling rig (at right) is borne on a truck. Following the surveyors' line across the snow, tiny wells, called shot holes, are drilled at regular intervals. These are later filled with dynamite, and explosions, like that in photo at left, result. Trucks sometimes are temporarily trapped in ice-coated gullies as they follow the surveyed line.

Men Lived in a City-On-Wheels

WHILE exploring the Blackfeet Reservation last winter, Party 2-S occupied a city-on-wheels almost in the shadow of the Rockies. Typical of Shell's exploration field camps, it consisted of seven aluminum trailers—three providing sleeping space for eight men apiece, another used for office work, and three others for showering, cooking and eating. The camp, run by a contract firm, had its own mobile power unit. Heat came from oil stoves and propane-fired burners. Supplies were trucked in from Choteau, the party's home base.

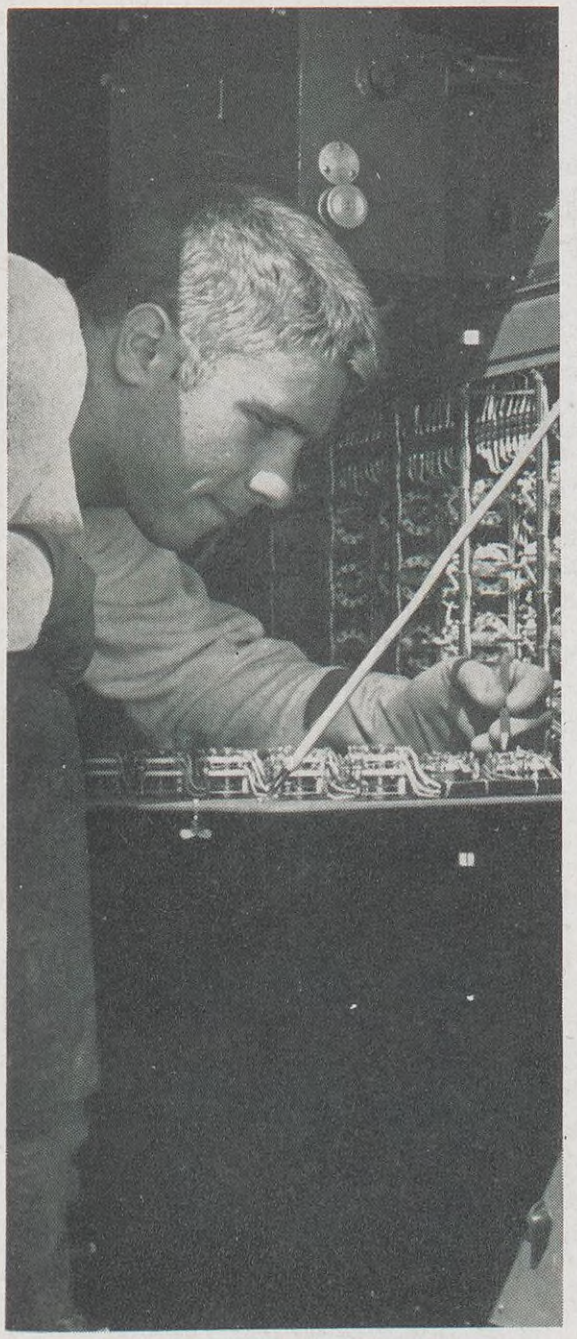
From Choteau, the men drove their own automobiles to the remote camp, returning to town as a rule only on weekends. They rose at 5:50 a.m., breakfasted, made their own lunches, and by seven were boarding trucks that took them into the field.

Of the three teams that make up a seismic party, members of the surveying and shooting teams in Party 2-S were Shell employees, while the drilling team was a crew under contract. Familiar with the tell-tale signs of frostbite and the effect dry climates can have without being felt immediately, the men took every foul-weather precaution in their dress. Because of the snow glare, sunglasses were a necessity.

In the field, bulldozers battered out paths ahead of the party's trucks. Snow-covered creeks or land depressions caused some delays when vehicles got stuck in them and had to be towed out. Moreover, trucks had to be specially protected against the bitter cold, with "canned heat" added to gasoline to prevent the freezing of fuel lines. Engine exhaust pipes were rigged to heat the tanks containing water needed in drilling operations. Trucks also had heavy-duty heaters.

Surveyors' telescopes sometimes misted up at a sudden rise in temperature. If winds were strong, the drilling equipment occasionally became frozen. Instrument cables, however, were especially adapted for cold weather service with a plastic covering that kept them flexible at even the lowest temperatures.

When the work day finished at four, the party returned to camp for a hot supper and perhaps a card game, reading or a bull session.



Walter Nolt checks electrical wiring in the seismic truck. The camp, located far from a town, was set up so most maintenance jobs could be done on the spot, minimizing delays.

After the long day outdoors, members of the party eat a hot meal in the dining trailer. Men came here mornings to fix their own lunches, including quantities of coffee, before trucks took them afield. The trailer city was well equipped with bunks, showers and working areas. Recreation, however, was limited largely to reading or talking, and the men turned in early for the night.

Overshoes of almost every description were worn as protection against deep snow and biting wind.

A mechanic works on the survey truck's engine. Vehicles had few breakdowns, despite the cold.

James Forest puts on tire chains. Trucks could thus travel over otherwise impassable terrain.

WINTERIZED OILMEN

Party 2-S occupied this trailer city while exploring the Blackfeet Indian Reservation. Men drove their own autos from party headquarters in Choteau.

Michael Johnson, Wallace Martenson and Ardis Hogan work in field office, in one trailer.

Maltenson pours a moisture-absorbent liquid into truck fuel tank to keep gasoline lines from freezing.

Nolt tests a cable coupler. Jugs were linked to the seismic truck by long, insulated cables.

The main street of Browning, Montana, the town nearest the location Party 2-S operated in last winter. Men's families lived in Choteau, 80 miles away.

Shell People in the News


W. S. FLOYD


J. R. BRANINE

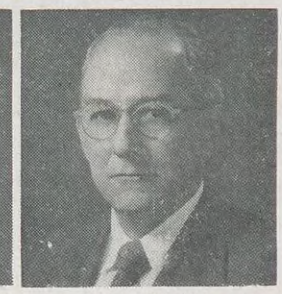
W. S. FLOYD, formerly Manager Purchasing—San Francisco Office, has taken a special leave of absence from the Company to accept an assignment as Assistant Director for Materials in the U. S. Government's Office of Defense Mobilization. Mr. Floyd will be responsible in ODM for determining the quantity of materials required to meet the country's defense and stockpile needs as well as for the development of materials expansion and procurement programs for mobilization.

Mr. Floyd has been succeeded as Manager Purchasing—San Francisco Office by **J. R. BRANINE**, formerly Senior Head Office Purchasing-Stores Representative.

In addition to the above personnel changes, **L. E. ORR**, formerly Purchasing-Stores Manager of the Tulsa Exploration and Production Area, has been appointed Manager Purchasing — New Orleans Office. **C. G. McLAREN**, who has been on a special assignment in Head Office, returns to Tulsa as Manager of Purchasing-Stores. **G. P. WILLIAMS** has been appointed Purchasing Representative in St. Louis to succeed V. H. Eggeman who has retired.


L. E. ORR


C. G. McLAREN


G. P. WILLIAMS


R. W. BALDWIN

R. W. BALDWIN has been appointed Manager—Head Office Plant Division of the Marketing Distribution Department. Mr. Baldwin joined Shell Oil Company in 1929 as a Service Station Salesman at Bridgeport, Connecticut. After serving in various marketing positions in New York and Connecticut, he became an Operations Supervisor in the Boston Marketing Division in 1941. Mr. Baldwin subsequently served as Distribution Superintendent in the New York, Indianapolis and Los Angeles Divisions.

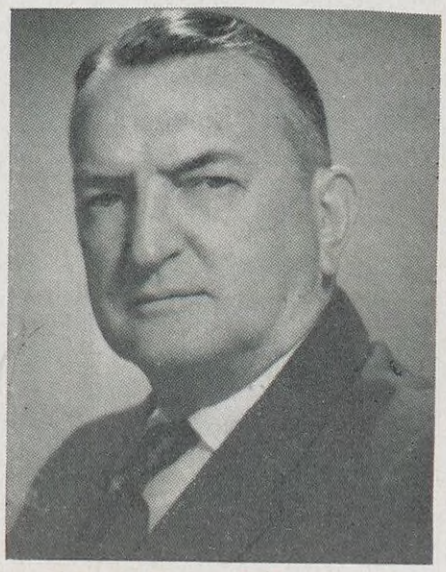

H. W. EGLIHT

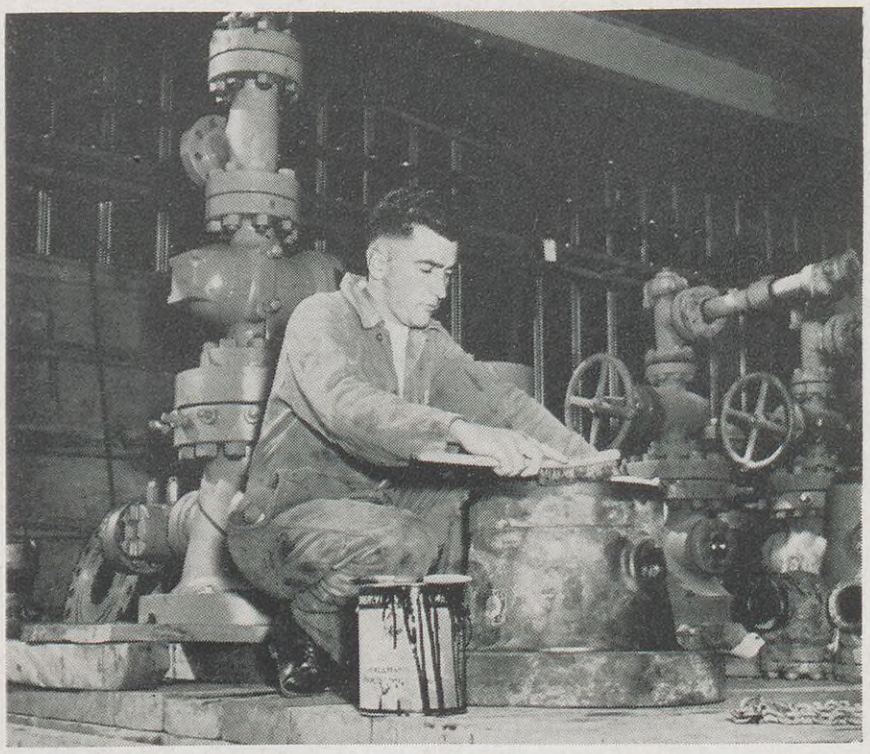
H. W. EGLIHT has been appointed Manager of the Head Office Refinery Accounting Department. Mr. Egliht joined Shell Oil Company in 1924 as a Clerk at San Francisco, California. He subsequently served in various manufacturing and treasury posts at the Martinez Refinery prior to being named Treasury Manager at that location in 1940. In 1948 he was appointed Treasury Manager of the Sacramento Marketing Division.

P. E. Hurley Dies

It is with deep regret that it is announced that **P. E. HURLEY**, Manager of Shell Oil Company's Houston Refinery, died suddenly on October 26. Mr. Hurley had been Manager of the Refinery since August 1, having served in a similar position at the Norco Refinery since 1945. Joining the Company in 1920 as a Gauger at the Wood River Refinery, he served in various positions at that location until 1927, when he became Head Stillman at the Arkansas City Refinery. Between 1935 and 1938, he served as Superintendent at Arkansas City, before assuming a similar position at the Norco Refinery. He moved to the Houston Refinery in 1942 as Acting Superintendent, and returned to the Norco Refinery in 1945 as Manager.

Mr. Hurley, a veteran of thirty-four years of service, was well known and highly esteemed not only in Shell but throughout the oil industry. On behalf of his many friends, SHELL NEWS extends deepest sympathy to his widow and family.


P. E. HURLEY



At a terminal warehouse in the Calgary Area, Roustabout Elmer Smith cleans a well head fitting before putting it in stock for future use. Reclaiming such fittings may also include rethreading and a new paint job.

At the Wilmington Refinery, Welder Shell Walling, assisted by Mechanic Helper Roger B. White, cuts plates and rivets from girders salvaged from reconditioned tanks. Girders will go into a bridge.

How

A lot of mileage can be had out of a salvage project. Below, New Orleans Area Storekeeper J. H. Cranfill (in white shirt) supervises straightening of pipe by a Houston contractor. Pipe came from a Shell line in Illinois and will be used in the East Bay field of southern Louisiana.

As the Norco Refinery recently upped its capacity by 50 per cent, salvage men had a field day with tons of scrap collected from old refinery units and from the construction of the new ones. Much of the big pile above will be reclaimed for use later on.

In the Midland Area, the 500-barrel water tank, above, no longer used by Shell, was sold to a Hobbs, New Mexico, metal firm. The buyer tore it down and moved it away.

w To Stretch Dollars

A Wealth of Used Material and Equipment is Given New Life Through Shell's Salvage Programs

"THOUGH you live near a forest, do not waste firewood."

At Shell locations across the nation, the idea behind this old Chinese proverb is being continuously applied to the enormous amount of pipe, machinery, and other expensive equipment that wear out during routine operations. Diligent salvage programs are saving hundreds of thousands of dollars annually.

Every operating department of the Shell Companies can cite numerous examples where salvage activities have paid for themselves many times over. These activities generally are handled on a local basis, although the over-all activity is coordinated by the Head Office Purchasing-Stores Organization.

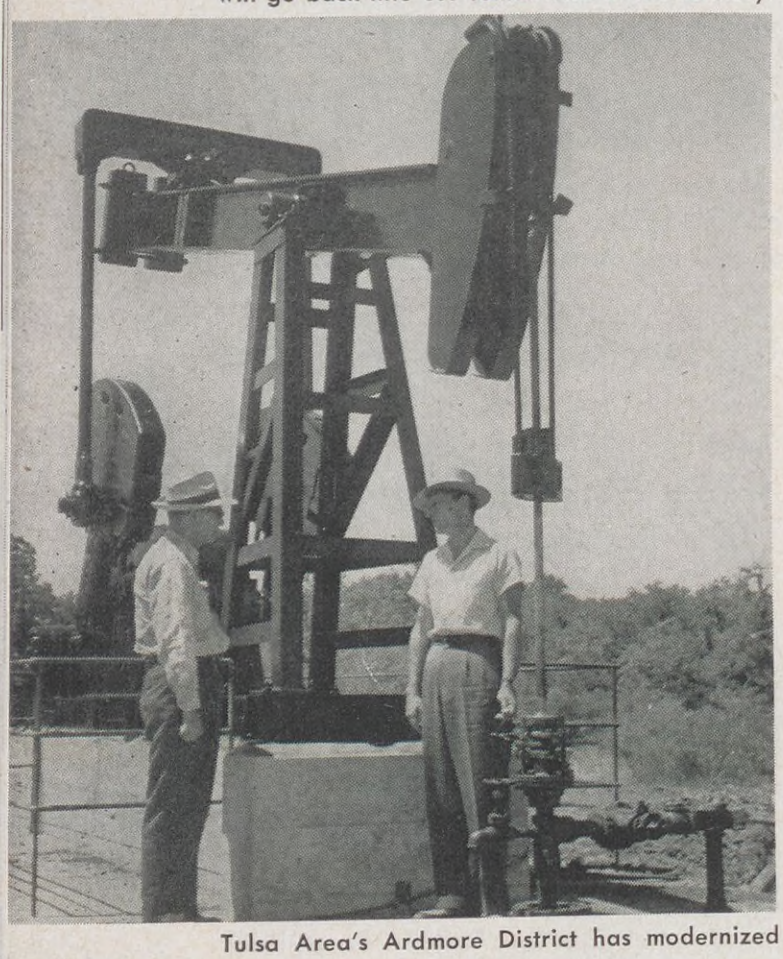
A notable example of salvage work occurred about two years ago when about 325 miles of pipe from the North Products Pipe Line between Wood River Refinery and East Chicago was replaced with larger pipe. Shell kept approximately 75 miles of it for its own use and sold the rest. Becoming available as it did during a period of materials shortage, the 400,000 feet of pipe was shipped to the various Exploration and Production Areas. After testing and reconditioning, the pipe was used as casing in scores of wells. It saved buying new pipe that would have cost about $1 million.

Recently, the Denver Area made wide use of about 100,000 feet of this salvaged line—for low pressure wells, and as casing in many Rocky Mountain stratigraphic tests. The pipe, after reconditioning for use as casing, costs a little over one dollar per foot. New casing for the same jobs would have cost $2.50 to $3 per foot. In the New Orleans Area, some of the pipe was used to build protective structures around offshore well heads.

For every salvage job of this size, there are thousands of small ones which grow out of day-to-day operations. They are too many to enumerate, but certain ones illustrate the many phases of salvage work.

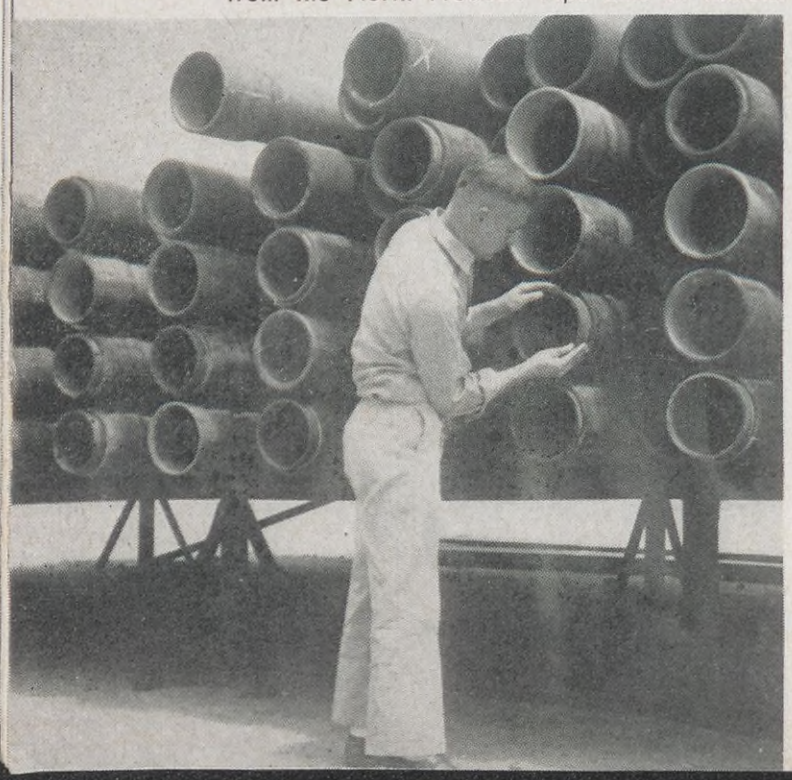
Of major importance in an effective salvage program is the exchange of surplus lists and frequent contact between those in charge of salvage operations in the field. Through such means, much swapping goes on within Shell. The Denver Area recently obtained specific types of tool joints that the Calgary Area had as surplus. The Calgary Area got a set of 300-ton elevators for its Rig No. 2 from the Houston Area. Just recently, the Houston Area got 74,000 feet of tubing that was salvaged in the New Orleans Area. (The tubing couldn't be reused in the New Orleans Area because its wells are usually deep and high pressure. Used tubing and casing from them, however, often is suitable for service elsewhere where pressures are lower.) The New Orleans Area, in turn, obtained from the Tulsa Area

At Wood River Refinery, above, Salvage Man J. F. Ellis cleans threads on a pipe fitting that will go back into use somewhere in the refinery.



Tulsa Area's Ardmore District has modernized 553 wells with reclaimed equipment. Above, Area Storekeeper J. S. Gilbert and District Production Superintendent R. F. Wicks inspect one.

Below, at Sterling, Colorado, Storekeeper Dale Picking checks reconditioned pipe salvaged from the North Products Pipe Line in Illinois.



an additional crude oil storage tank for Weeks Island Field. The tank was taken apart, transported to Weeks Island, and reassembled at considerably less than the cost of a new tank. The Denver Area recently acquired seven 25-horsepower pumping units that Midland no longer needed. New units would have cost $28,000.

This same salvage coordination goes on within the limits of a specific area. Earlier this year, the Tulsa Area's North Texas Division turned up with nine 10-horsepower pumping units that were no longer needed. At the same time, the Area's Eastern Oklahoma District was pondering the purchase of the same number of new units. The simple transfer of the units saved buying new equipment that would have cost about $18,000. In the Tulsa Area during the first seven months of this year surplus or salvaged material valued at nearly half a million dollars was transferred between Divisions in the Area. Transfer of equipment in the other Areas is on the same scale.

Salvage operations often require extensive shopping around and bargaining. During the steel shortage a few years back, the Tulsa Area's Eastern Oklahoma District needed 27,000 feet of flow line pipe. The Area's Kansas Division had about 18,000 feet of salvaged tubing that could have partly filled the need. But even second-hand tubing is usually a rather expensive substitute for line pipe. Too, it would have cost about $4,600 to recondition the old tubing and buy the additional pipe needed. But by shopping around, a trade was arranged with a supplier by which the necessary pipe was obtained for the salvaged tubing plus $600 cash.

A major salvage operation in the Houston Area involved casing and tubing from abandoned wells in the East Texas and Quitman Fields. From January 1, 1953, until the middle of this year nearly 90,000 feet of usable casing and 225,000 feet of tubing were recovered and reconditioned.

Whenever salvaged material or just plain junk is sold at any Shell location, every effort is made to sell them from the original site to save transportation costs and the expense of double handling. In the Midland Area's Wasson Field, a number of crude oil storage tanks were sold this way because their 16-year age made them uneconomical for reconditioning. They were sold to a McCamey, Texas, firm which in turn will sell them for grain storage and other uses. It was this way that the obsolete gas plant in the Dominguez, California, Field was recently sold. Except for a few vessels, it was sold in place. The purchaser will dismantle the plant and move it away.

In many instances it has been wise to spend money to save money. A recent one was at the New Orleans Area's Iowa Field where additional pumping power was needed. Spending $8,000 to rebuild two burned out 250-horsepower electric motors saved buying new equipment that would have cost about $20,000.

This practice also has been widely followed in Shell's Marketing Organization. In recent years, 14,000 tall, old-fashioned gasoline pumps have been cut down to modern size and reconditioned like new at a cost between $200 and $225 per pump. New ones cost about $400 each.

Shell Pipe Line Corporation and the Products Pipe Line Department of Shell Oil Company both make large savings each year by reconditioning pumps and valves and other equipment and material that is used constantly in their operation. An example: Shell Pipe Line built the present 165-mile Elk City-Cushing crude oil line with reconditioned pipe recovered from the original 10-inch Cushing-Wood River line, which was replaced by the larger Ozark System.

At Shell refineries, salvage and reclamation are so important that sizable groups of employees at each location

are charged solely with this work. Each year they recondition a wealth of valves, pumps and other equipment and material that must be kept in perfect working order. After reconditioning, everything undergoes close inspection before being used again.

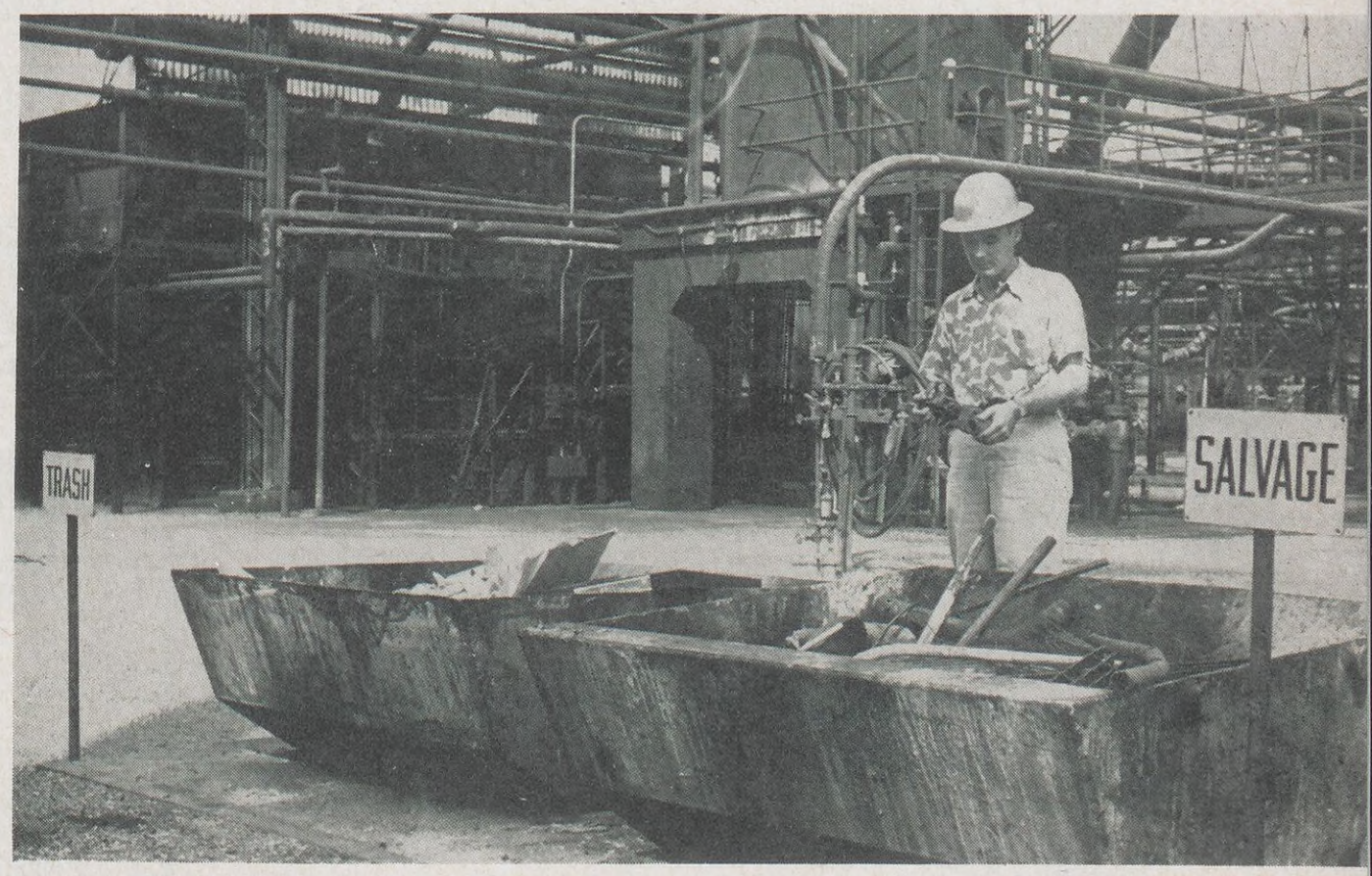
Even after being reclaimed, some material is unsuitable for use in its original job. This is quite common in the case of steel pipe since high temperatures so often encountered in refineries tend to weaken the metal. Salvaged pipe of this type serves well for water lines or other uses where critical temperatures and pressures do not exist. Material and equipment that cannot be reclaimed is sold as junk. Occasionally, though, perfectly good equipment must be disposed of because technological advances make it obsolete.

Although Shell refineries have skilled craftsmen and machine shops for reconditioning as much material and equipment as possible, the fact that refineries normally use such huge quantities of metal makes big junk piles inevitable. Even this scrap proves quite valuable when sold, although returning nothing near its original cost.

Disposal of junk throughout Shell operations is currently at the rate of about 15,000 tons annually—about the weight of a heavy naval cruiser. The price received for scrap depends on the type metal, varying from more than 20 cents for a pound of copper to little more than a penny a pound for scrap iron.

Men charged with Shell's salvage operations need considerable knowledge of equipment and material in order to know best what to do with salvage or surplus. It may be sold, traded, reconditioned, converted or simply scrapped. Their job can be summed up as one of stretching dollars while helping to see that the tools for producing, refining, transporting and selling oil are readily at hand.

Save a little, sell a little. Above, at the Martinez Refinery, Salvage Mechanic John P. Silva cuts a flange from a pipe which will be reconditioned and reused. Flange will be sold as junk. Looking on are Stores Department Foreman George E. Westenrider, left, and Joe N. Martins.



Salvage is so important in Shell's refineries that groups of employees devote full time to the collecting and reclaiming job. At the Houston Refinery, above, special bins have been installed to collect scrap. Operator Baylor O. Bishop, Thermal Cracking Dept., drops in a battered valve.

Below, in the salvage yard of Houston Area's East Texas Division at Kilgore, Roustabout J. G. Montgomery operates special equipment for cleaning used pipe and other fittings.

The fifteenth and sixteenth in a new series of organization charts

Shell Oil Company

November—1954

Sewaren Plant Organization Chart

Manager

C. B. Goodman

Plant Superintendent

D. T. Gilman

Administrative Control

Superintendent Terminal

E. C. Hudson

Assistant Superintendent Terminal

W. L. Tunison

Superintendent Asphalt

T. C. Moriarty

Supervisor Fire & Safety

J. E. Zehrer

Superintendent Chemical

A. L. Jennings

Superintendent Compound

J. E. Murphy

Supervisor Compound

W. M. Roberts

Supervisor Operations

T. A. Crain

Superintendent Depot

D. L. Hickey

Assistant Superintendent Depot

C. P. Ferraro

Senior Engineer P.A.D. Lab.

H. R. Heiple

Chief Chemist

W. K. Smith

Chief Engineer

C. H. Prescott

Personnel Manager

A. A. McLeod

Treasury Manager

H. M. Spinning

Chief Accountant

R. F. Lanter

Norco Refinery Organization Chart

Manager

R. W. Faulk

Financial Control

Superintendent

L. T. Wilson

Chief Engineer

T. O. Larsen

Assistant Chief Engineer

A. L. Cameron

Assistant Chief Engineer

J. A. Carville

Assistant Superintendent

J. D. Davis

Manager Catalytic Cracking

H. A. LeBlanc, Jr.

Manager Distilling & Thermal Cracking

C. D. Cunningham

Manager Laboratory-Treating

W. N. Day

Manager Marine Loading

L. C. Oubre

Manager Dispatching

C. J. Troxler

Manager Gas

S. F. Good

Chief Technologist

S. J. Oertling

Manager Utilities

J. D. Ramsey

Manager Stores

J. R. Noles

Manager Personnel & Indus. Relations

G. J. Bleakley

Treasury Manager

G. M. McCawley

Manager Economics & Scheduling

G. J. Spruill

water wagon

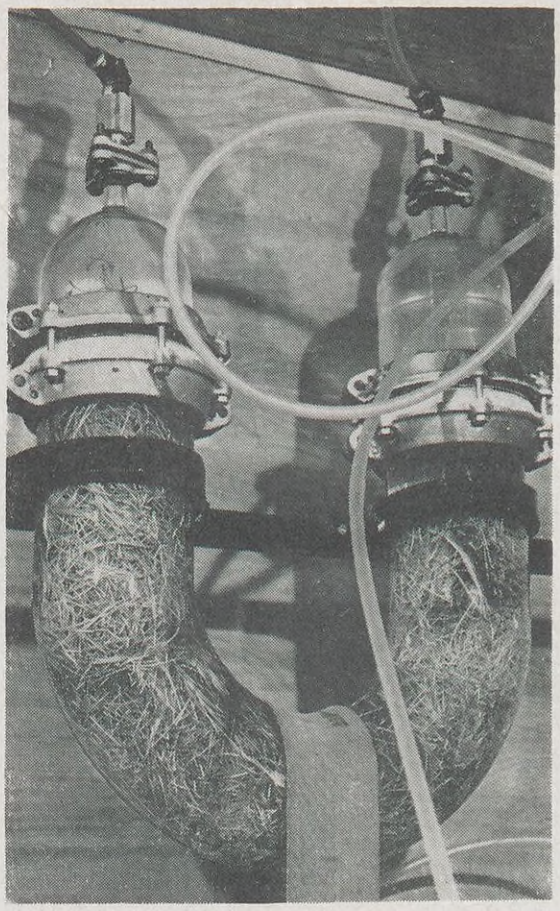
Shell Joins the Bookmobile and

AS water flooding—a means of forcing reluctant oil out of fields where underground pressure is low—becomes a more frequently used technique, Shell's flooding projects become more numerous. This poses a problem for the men charged with testing and injecting the right kind of water into the tiny pores of oil-bearing formations, because they have to move an ornate array of special laboratory testing equipment from field to field. The equipment is expensive. Some of it is fragile, hence difficult to move about.

What can be done, then, when four or more water flooding projects are going at one time? Until the Tulsa Exploration and Production Area recently put its troubles on the road, it had the problem of crating and ship-

The Tulsa Area's laboratory on wheels, left, gets a final check before hitting the road. The portable television aerial is for holding a small stripping tower which eliminates water impurities.

Inside the well-equipped trailer laboratory, below, Chemist Ralph H. Wilson prepares to check a sample of injection water for alkalinity.



Common hay in a transparent U-shaped filter, above, screens out crude oil and other large impurities from water passing through it.

Dr. T. M. Doscher of Shell Development Company, who helped design equipment for the trailer, installs a miniature stripping tower.

Bloodmobile Parade With a "Labmobile" for Testing Water Injection Methods

ping water testing equipment between two water floods in Illinois, one in Oklahoma, another in North Texas. A distance of more than 1,300 miles separated the most remote ones.

Now the Area's Production Department not only takes the testing equipment handily about from one location to another — it takes the laboratory too! Everything needed for testing water at the flooding projects is housed in a glistening new trailer. With a few adjustments, it's ready to use when the trailer arrives. Crates, padding and shipping labels are things of the past.

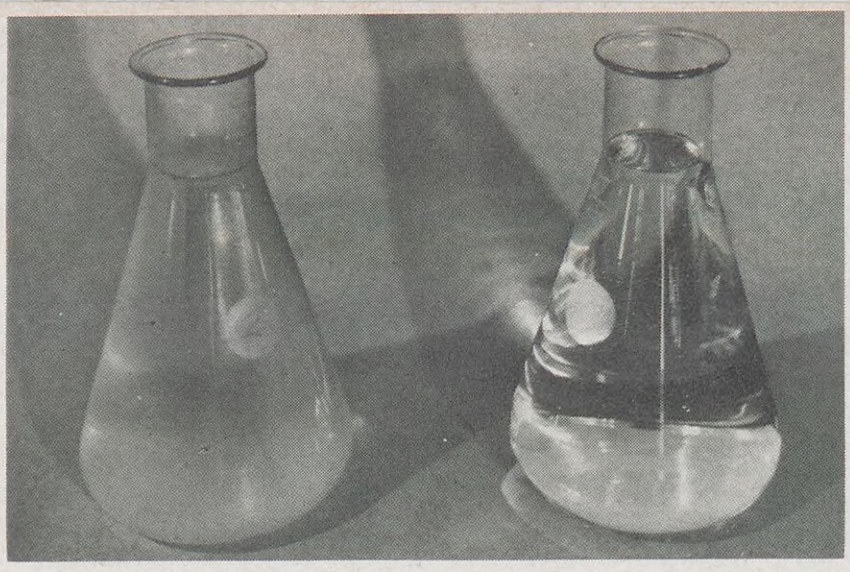
The "portable pilot water treatment study laboratory," as the rolling laboratory is called, was completed and equipped last June, with the assistance of personnel in the Exploration and Production Research Division of Shell Development Company. It has already saved time and money at the water flooding projects where it has been used. These savings, plus the convenience of having laboratory facilities on call, will expand as water floods now proposed in the Tulsa Area go into operation.

The trailer laboratory not only avoids the slow—and sometimes shattering—task of packing and shipping and reinstalling laboratory equipment, it supplements the equipment that was available before it was outfitted. In the trailer, Shell men can make complete water analyses at any flooding project and handle all field testing problems connected with the three principal methods of treating water for injection into oil formations.

Certainty about the purity of the injection water is important, because water, in spite of its being a symbol of cleanliness, can pull some pretty dirty tricks underground. For example, if two types of water, one containing barium and the other containing sulfate, were pumped down an injection well together the combination would result in an insoluble substance that would clog the pores in the formation. Thus the purpose of the water flooding technique would be defeated.

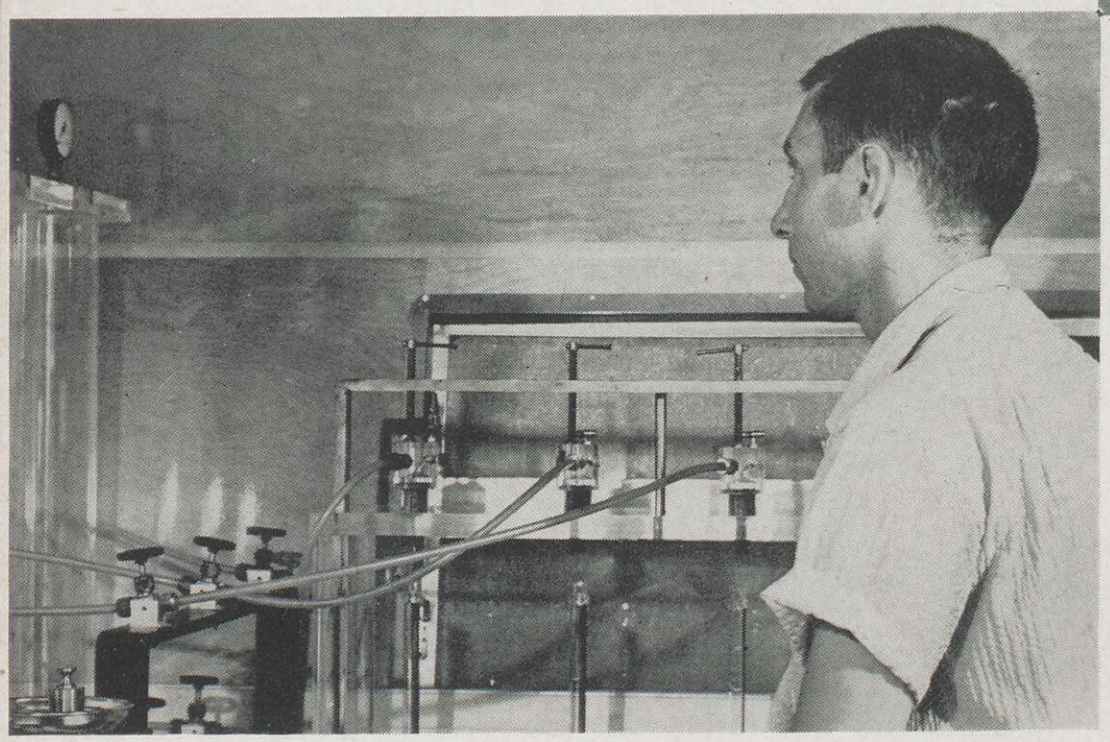
There are generally two types of water available for water flooding: 1) "produced" water, that is the water that comes out of the ground with crude oil and is separated from it, and 2) "source" water, meaning water available from nearby rivers or lakes or from water wells.

Testing these two types of water for their chemical and mineral content, determining if one or both can be used for injection into the oil formation, and prescribing the best forms of treatment and purification, are the functions of the Tulsa Area's new portable laboratory. The equipped trailer can be used to do the initial work as a new water flooding project is installed. It can roll around again and again for trouble-shooting or to make periodic checks.

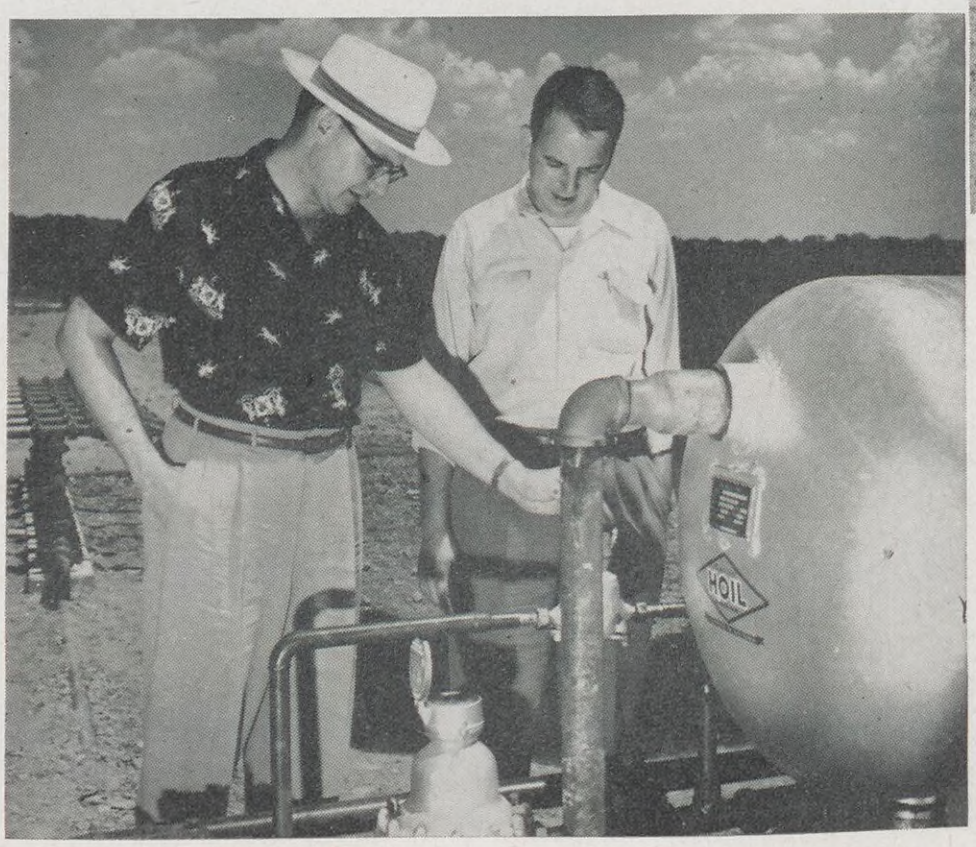


The cloudy sample of water, above left, is destined for injection in the Joy Field in North Texas after treatment. Careful testing and treatment make the water look like the sparkling sample next to it.

After the water has been analyzed and treatment prescribed, it is then tested by pumping it through the tiny interstices of an actual core sample from the oil-bearing formation. In the trailer laboratory, a small plug is cut from the larger core, above, for this purpose.



Above, Exploitation Engineer R. N. Tuttle checks the flow of treated water through core samples in the trailer laboratory. Each test is carefully timed. Decreasing flow indicates that impurities in the water are causing clogging.



With pure injection water assured, a water flooding project works smoothly. Above, in the Canary Field, Eastern Oklahoma District Mechanical Engineer C. R. Reiter checks a flange connection on a typical water injection well. Four oil producing wells surround it. At left, Reiter and Oklahoma Division Mechanical Engineer J. E. Saye (wearing hat) watch the meters on equipment that measures the flow of oil and water from the field. The meters measure the efficiency of the injection method.

An avid jazz record collector is Landman Vance M. Gilmer, Jackson, Mississippi, a past vice-president of the New Orleans Jazz Club.

In the Last 50 Years, Jazz Has Won Respectability— As Well As a Host of Followers

MENTION of the word "jazz" to any group of two or more advocates can get you a lively discussion. How jazz happened in the first place, whether or not it can be called respectable in the musical sense, the seemingly simple question of defining the term—all these seem destined to remain controversial (and unresolved) as long as this musical form is with us.

There is no single standard by which jazz can be described or evaluated.

A mutual fondness for music brought together the men, right, to form a band at the Exploration and Production Research Laboratory of Shell Development Company in Houston. They are, from left, S. Carl Johnson, John A. Schuchs, John C. Berly, Fred J. Barr, and Frank V. Robinson, Jr. They have occasional jam sessions but prefer a "sweeter" music style.

They've Got the Beat . . . (cont'd)

A versatile musician, Houston Refinery's W. D. Antone, left, writes the arrangements for a band he leads. The orchestra has played for several Shell functions in Houston. Antone's taste in music ranges from "Kenton to Khachaturian."

Another Shell musician and jazz fan is M. G. Curry, Production Department, Wichita, Kansas, shown at right, standing, third from left, with a University of Oklahoma band with which he played in 1925, called "Boomers."

Old photographs of a band with which he played in 1932 puts Tom B. Brown, Jr., left, Production Department, New Orleans Area Office, in a reflective mood. In the band were two men who now lead well known New Orleans jazz bands.

George Steffler, right, Process Development Department, Emeryville Research Center, has a collection of jazz records numbering more than a thousand. New Orleans Dixieland is his favorite. He likes practically all types of jazz, but not "Bebop."

In the broadest sense, it is generally popular music as opposed to classical music, which reaches a more limited audience. Most jazz is dance music but there are types which call for listening only.

Kinds of Jazz

Within this broad definition, there is immense variation. The smooth, precise dance music of a big orchestra in a hotel ballroom is jazz; so is the hard-driving, intense blues played by a four-piece combination on New Orleans' Bourbon Street. Some devotees can't bear the thought of violins in a jazz group; to others, anything goes. The jazz purist insists melodies be improvised; the power-band lover sees nothing wrong in intricate written arrangements.

Generally speaking, this much is true of all jazz: it consists of a steady, rhythmic beat, plus one or more instruments playing melody over this accompaniment. Beyond this, jazz breaks down into specialized categories, many with their own dedicated adherents.

DIXIELAND jazz is usually played with a slow, driving beat, heavily accented. Individual players solo, one after the other, then all join in on the last choruses, each improvising melody as he goes along. CHICAGO jazz is generally lighter and faster in tempo. Players improvise, but there is more ensemble work (several instruments playing together) than solo performances. SWING is big band stuff; carefully arranged with a great deal of ensemble work but occasional opportunities for solos. COOL or PROGRESSIVE jazz is the latest to appear; it is complicated, fast and dependent on unusual harmonies which often sound harsh and discordant.

Came from South

These varieties, and many more, all sprang from the simple folk music

which began in the southern part of the United States in the last years of the 19th century. Work chants, dances and occasional street parades contributed the underlying beat which flowered into ragtime — rhythmic, exhilarating music. Softer work songs, spirituals, laments and lullabies gave rise to the blues, the songs of separation and sadness characterizing much of the early folk music in this country.

It is oversimplification to say that the combination of ragtime and blues gave us jazz—but these two elements bulked large in the development of the new music. They were fused in New Orleans and the surrounding area in the early 1900's, and by 1910 jazz was a lusty infant. Many of the jazz greats—Louis Armstrong, Jelly Roll Morton, Baby Dodds, Pops Foster —worked the Crescent City. Their music was considered too crude for polite society but was immediately popular with the sporting set.

Early in its life, jazz began to move. It traveled up the Mississippi on the gaudy riverboats to reach St. Louis, then spread east and west. Itinerant musicians rode the rails with their guitars, taking the music to the people. Speedily and successfully, the new music invaded town after town. In 1917, jazz exploded into New York at Reisenweber's Cafe, and overnight, was the talk of Manhattan.

The nervous tempo of jazz fitted the excitement of World War I and the hectic postwar years, often called the Jazz Age. By the 1930's, serious students of music were bending interested ears to the music, which was becoming more complicated as bigger bands and more intricate arrangements caught the public's fancy. Benny Goodman, Tommy Dorsey and Glenn Miller were riding high in the years of crisis which led to World War II. By the end of the war, a new jazz form, "Bebop," had emerged, and the old freewheeling Dixieland style was enjoying a rebirth.

Jazz never stands still. New forms emerge and old ones are revived to keep the jukeboxes busy. Jazz fanciers with Shell—musicians as well as record collectors—run the gamut of jazz taste. Several of them appear on this and preceding pages.

Like hundreds of thousands of their brethren around the world, they do agree that jazz is one of America's most distinctive contributions to twentieth century culture. About the only other thing they'll agree on is that seldom is there any agreement among jazz advocates.

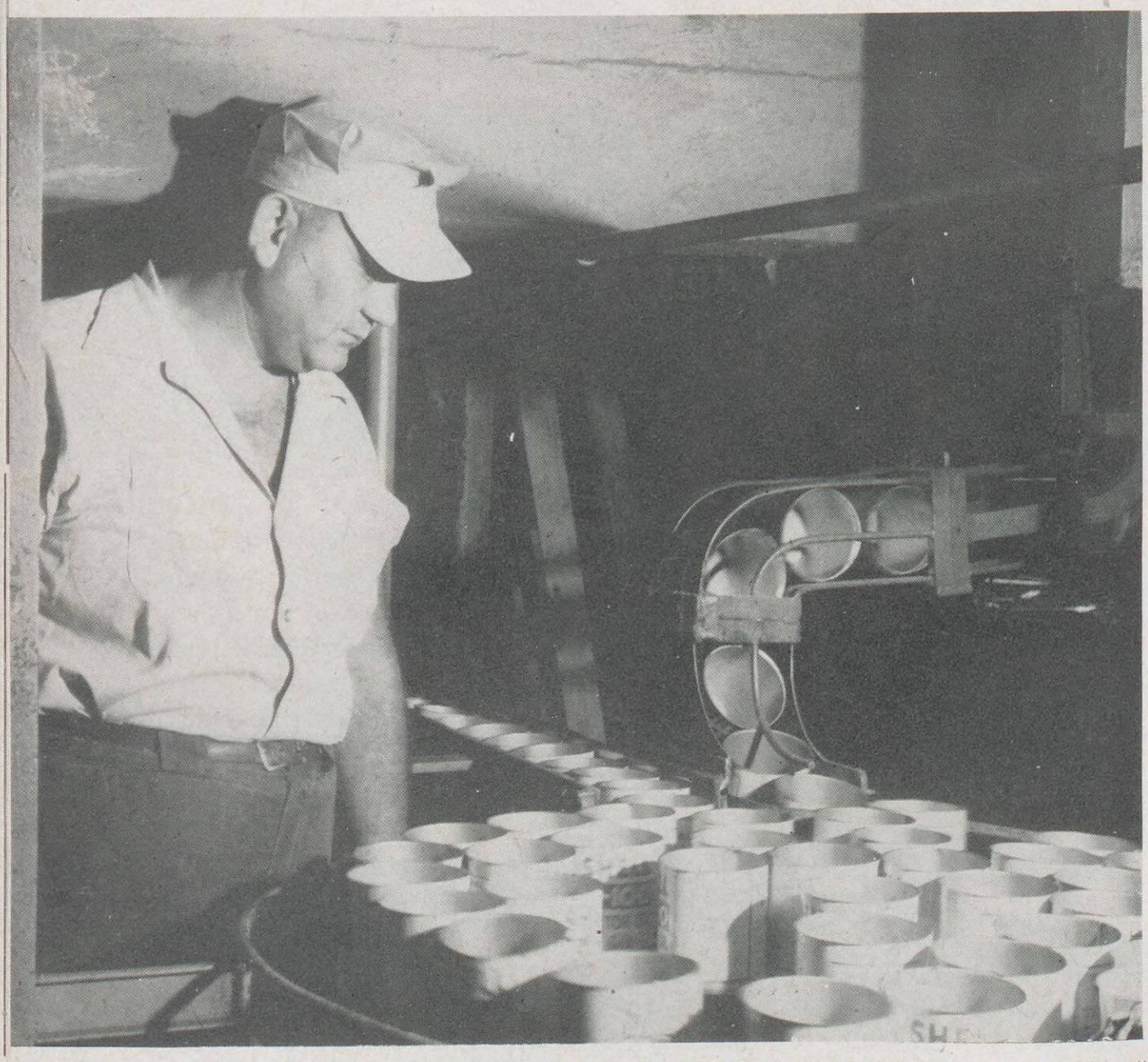
The Denver Area's Fred Hestand, left, with Seismic Party No. 54, first became interested in jazz when he played bass in an Armed Forces band. He considers jazz as music to be enjoyed more by musicians than by the average listener. Besides the bass, he also plays the guitar, piano, banjo, and mandolin.

A New Orleanian, Audrey Keene, above, New Orleans Area Office, says jazz was part of her growing up. She shies away from "Bebop," but likes most other types of jazz, particularly the blues. Her collection of records numbers in the hundreds, but she won't try to pick a favorite.

The Houston Area's Joe Groves and wife Sally, right, are advocates of the New Orleans Dixieland style of jazz that is commonly played now in Bourbon Street nightclubs. Their interest in the music dates from their college days, when jazz was undergoing a revival in the East at such places at Eddie Condon's in New York.

They Follow the Beat Through Big Jazz Record Collections

Bert L. Nichols, left, at the Tulsa Area's Elk City Gas Plant, dates his jazz enthusiasm from World War II days when he served in the Navy with a couple of jazz fans.



Mechanic George Radich watches two lines of cans flow onto the turntable of his "unscrambler." Three of the devices have increased the pace of Sewaren's canning operation substantially.

Unscrambling a Bottleneck

A Miniature "Traffic Circle," Invented By a Veteran Shell Mechanic At Sewaren, Is Speeding the Output of Motor Oils

BECAUSE a veteran Shell mechanic started thinking about a bottleneck in the motor oil canning operation at the Sewaren, N. J. Plant, a miniature merry-go-round is spinning out a substantial increase in the number of cans delivered to the canning machine. Mechanic George Radich calls his invention an "unscrambler" and Shell engineers say it could lead to a minor revolution in the canning industry, because it will work as well in canning soup, beans or beer as it will in canning oil. "Yet," they add, "the idea is so simple it's a wonder it wasn't thought of years ago."

The new device is a simply constructed turntable that speeds up the movement of empty cans from railroad boxcars to the canning machines inside the plant. It operates on the principle of a traffic circle that takes cars from two roads and feeds them into one road.

For the Sewaren Plant, the "unscrambler" has broken a bottleneck that existed as long as a canning machine received empty cans from only one boxcar. The conveyor moved the cans out of the boxcar to the canning machine, and the rate of production was limited to the speed at which cans could be moved out of the boxcar and on to the conveyor. There was no easy way to unload a boxcar any faster and time was wasted as empty cars were moved away, hence the full speed of the canning machine could not be utilized.

George Radich heard this problem discussed many times. In over 18 years at the plant he had devised a number of minor gadgets and innovations, so he started thinking about those boxcars and conveyors. The result: If you can't unload one car fast enough, why not unload two cars at once and feed the combined output to the canning machine? The gimmick was to devise the "unscrambler" that would channel two lines of empty cans into a single line. Radich did it in a week.

The turntable, the main feature of the "unscrambler," is a slowly revolving metal disc about two feet in diameter. A moving metal arm guides oncoming cans to the outer edge of the turntable and keeps them from knocking each other down.

Three of the "unscramblers" have now been installed at the Sewaren Plant's unloading platform. All are not used simultaneously, but they facilitate unloading a line of boxcars without stopping to shunt empty cars away and loaded cars into position. Since their installation, production of canned motor oil at Sewaren has risen from a daily average of 2,800 cases of 24 one-quart cans each to 3,800 cases.

In order that the "unscrambler" may be put to general use, means are being considered whereby it may be made available to other industries.

coast to coast

Prize-Winning Pigeon

TO a pigeon fancier, winning the Chattanooga Race is like a horse owner winning the Kentucky Derby. Joseph Cavey of Shell's Baltimore Marketing Division and his brother, Richard, are the proud owners and breeders of the pigeon that won that Tennessee classic. Their bird, named "Sixty-Two," (shown at left) flew the strenuous 560-mile course in 17 hours and 37 minutes despite a stiff wind and nearly 300 miles of mountains. The bird's closest competitor finished 28 minutes later, thus giving the Cavey brothers a conclusive victory.

There were 400 pigeons participating in the race. "Sixty-Two" is a pedigreed bird descended from "Le Roi", a French bird and one of the all-time greats of pigeon racing. With the racing classic behind her, "Sixty-Two" has been retired and will be used for breeding—the Cavey brothers hope—future champions.

At right, Joseph Cavey displays the Chattanooga Race trophy.

Shell's Albany Marketing Division recently opened its 1954-55 mixed bowling league. Set for the season's first games were, left to right: L. G. Fauth, R. D. Rogers, C. E. Snoody, Jr., Loretta E. Griessel, E. S. Preble, Marge M. Jensen, J. R. Metzger, J. R. Pray, Dorothy J. Hewitt, H. Elston, Edith Baker, D. L. Norris, M. E. Dunning, D. J. Flood and Carmelac Cohan.

Texas Artist

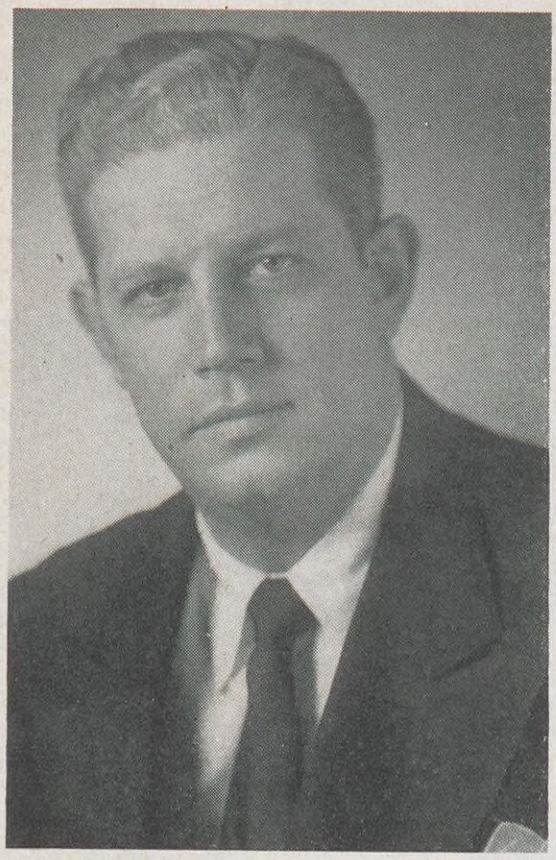
IRELAND REGNIER JR., a Draftsman in the Corpus Christi Division of the Houston Exploration and Production Area, is a practicing artist as well as an instructor. Regnier's talent was recognized at the Centennial Museum Art Show in Corpus Christi, Texas, where his water color entry was judged the best in the show. Recently, he was requested to organize and instruct an eight-week course in portrait painting to be held at the Corpus Christi Y.M.C.A.

In the picture above, Regnier is shown instructing one of his classes, using Patricia G. Taylor of Shell's Corpus Christi Production Department as model. Other Shell employees in the class were E. S. Seal, third from left, and A. A. Alvarez, seated at far right.

Regnier uses oil, water color, charcoal and plastic media for his work. Recently he finished painting the baptistry of his church, a project in oils measuring more than 80 square feet in area.

Recently-elected officers for the new Shell Employee's Association of Billings, Montana, a social organization in the Denver E. & P. Area's Billings Division, are shown above. The officers are, l. to r.: L. A. Scott, pres.; R. D. Haworth, vice pres.; Donna Haggerty, secy. and H. J. Axe, treas.

J. Earl Simpson, Tulsa E. & P. Area, and a veteran of 33 years of Shell service, was recently elected Nat'l Commander of the "40 et 8" at the 36th national convention of the American Legion.



J. H. Sembower, Public Relations Manager, Pacific Coast, has been elected a vice-chairman of the Nat'l Oil Industry Information Committee.

Carolyn Keller, wife of J. D. Keller, Indianapolis Marketing Division, has recently finished singing the leading role in "Oklahoma" at "The Musicarnival"—a musical theatre in Cleveland, Ohio.

The Long Island District of the New York Marketing Division now has a Shell TCP Bowling League comprised of five teams. Prominent among the bowlers are, left to right, J. I. Seymour, F. D. McGrath, M. B. White, B. F. Buzan and H. H. Muller, who last year comprised a Shell bowling team that took first place in the Long Island Petroleum Bowling League.

W. C. Jensen, Shell Chemical Corporation, San Francisco, recently won a fifty-dollar U. S. Government Bond for submitting the winning entry in an ammonia barge naming contest. Jensen's prize-winning name was "Ammonia Mariner." In the picture above, Jensen (center) accepts the bond from L. M. Roberts, Shell Chemical, as R. W. Emerson, also of Shell Chemical, looks on.

Research Center Gets More Space

This five-story Western Electric Co. building was the largest structure included in the purchase.

SHELL Development Company will enlarge by nearly 50 per cent the work space available to its Emeryville Research Center as a result of the recent signing of an agreement to purchase buildings and property adjacent to the Center. A five-story structure, a garage and warehouse, owned by the Western Electric Company and Pacific Telephone and Telegraph Company, were included in the purchase. They will be completely remodeled into laboratories, offices and related work areas, providing the research staff with approximately 190,000 square feet of additional floor space.

Renovation of the purchased buildings is expected to begin about April 1, but the expansion program may require as much as five years.

This is the fifth major expansion of the Research Center since it was established in 1928. It has grown from a small laboratory with about 35 employees to large facilities covering two city blocks and employing nearly 1,300.

They Have Retired

A. H. BALKO
Midland Area
Production

G. O. BEAUDRY
Seattle Division
Operations

L. J. BROWN
Tulsa Area
Production

W. C. BRUNDRIDGE
Shell Pipe Line Corp.
Mid-Continent Area

J. DALE
Pacific Coast Area
Production

H. H. JUHLIN
Wood River Refinery
Operations

V. L. MARTIN
Products Pipe Line
Toledo, Ohio

K. M. PRENDERGAST
Cleveland Division
Administration

P. SAFIAN
Martinez Refinery
Compounding

J. W. STAPLES
Detroit Division
Operations

H. WALKER
Tulsa Area
Production

A. G. WOODWARD
Boston Division
Operations

Service Birthdays

Thirty-Five Years

J. R. HARMAN
Pacific Coast Area
Production

J. C. LIGHT
Martinez Refinery
Compounding

J. F. LORIO
Norco Refinery
Engineering

M. J. LORIO
Norco Refinery
Engineering

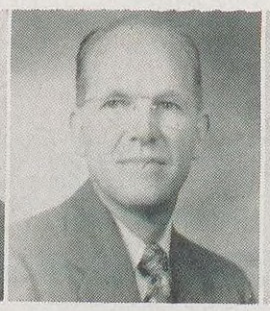
H. C. SHIPMAN
Tulsa Area
Production

U. R. SOUTHARD
Wood River Refinery
Engineering

Thirty Years

W. H. BAILEY
Wood River Refy.
Lubricating Oils

R. M. BARBEE
Martinez Refy.
Cracking

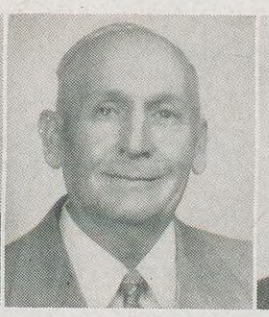


R. T. BROWN
Wood River Refy.
Personnel & Indus. Rel.

D. H. FILBERT
Denver Area
Treasury

A. HELD
Wilmington Refy.
Engineering

J. B. JONES
Wilmington Refy.
Alkylation



F. J. LEE
Martinez Refy.
Dispatching

D. G. McGINTY
Shell Pipe Line Corp.
Mid-Continent Area

M. T. REINES
Sacramento Div.
Treasury

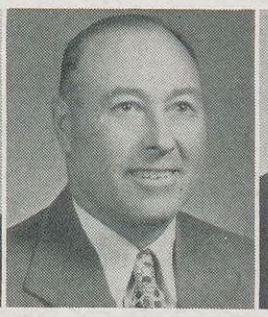
C. A. ROSE
Wilmington Refy.
Dispatching

E. R. SHEETS
Tulsa Area
Production

H. W. SHEPPARD
Wood River Refy.
Catalytic Cracking

W. I. SMOTEL
Pacific Coast Area
Production

O. N. WAGGONER
Tulsa Area
Production



E. WINTERS
Tulsa Area
Production

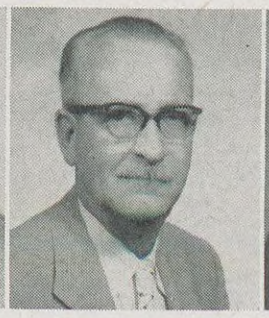
E. J. WOLLARD
Houston Refy.
Engineering

Twenty-Five Years

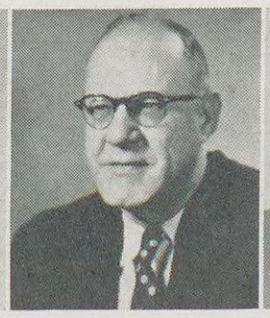
L. ADKINS
Wood River Refy.
Distilling

J. H. ASH
Shell Pipe Line Corp.
West Texas Area

W. L. BALL
Atlanta Div.
Sales



P. A. BELLINGER
Albany Div.
Mktg. Service



R. V. BOARD
Houston Refy.
Stores

G. C. BOURGEOIS
Norco Refy.
Engineering

B. J. BRUSIEE
Detroit Div.
Operations

H. R. BUTLER
Albany Div.
Operations

Twenty-Five Years (cont'd)

W. CALDER
Seattle Div.
Treasury

J. P. CARLUCCI
New York Div.
Operations

F. R. CHASE
Boston Div.
Sales

J. S. CLARK
Tulsa Area
Production

J. W. DOMERMUTH
Albany Div.
Operations

F. EATON
Pacific Coast Area
Production

M. EMERSON
Tulsa Area
Gas

R. J. ENGLADE
Norco Refy.
Engineering

J. J. FOGED
Martinez Refy.
Lubricating Oils

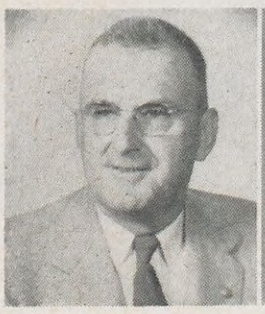
T. A. GARBUTT
Head Office
Marketing

M. J. GILLIGAN
Boston Div.
Operations

R. G. GINLEY
Chicago Div.
Treasury

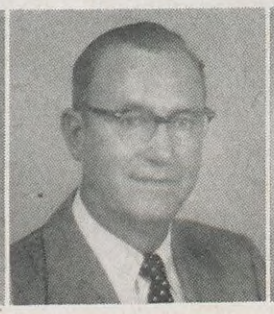
J. GOODART
Pacific Coast Area
Production

L. S. GREENE
Albany Div.
Operations

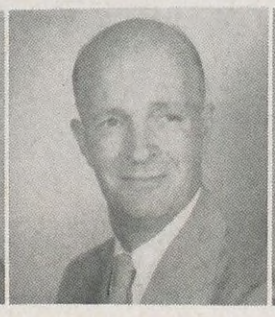


R. S. GROVE
Tulsa Area
Production

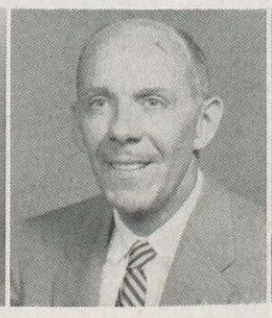
H. HANCOCK, JR.
Baltimore Div.
Operations



J. J. HAVENS
Midland Area
Production



J. T. HAWKINS
Wood River Refy.
Distilling



R. E. KINCAID
Cleveland Div.
Operations

W. C. KIRK
Wood River Refy.
Lubricating Oils

D. LEDONNE
Wilmington Refy.
Engineering

M. H. LEE
New York Div.
Operations

D. W. LEHAN
Boston Div.
Operations

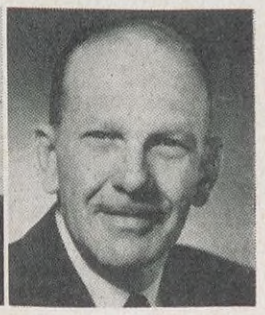
W. H. LUIS
New York Div.
Operations

B. B. MacLEOD
Boston Div.
Operations

M. S. MAGEE
Wood River Refy.
Treating

M. MARCUS
Head Office
Marketing

G. F. MARSH
Atlanta Div.
Sales



J. O. MATHEWS
Los Angeles Div.
Treasury

J. W. MATTHEWS
Houston Refy.
Catalytic Cracking

J. B. MAY
Houston Refy.
Thermal Cracking

H. McCURDY
Baltimore Div.
Mktg. Service

H. J. McDERMOTT
Boston Div.
Operations

R. C. MOBLEY
Shell Chemical Corp.
Torrance Plant

C. G. MOONEY
Atlanta Div.
Sales

A. J. O'KEEFE
New York Div.
Operations

R. D. PERRY
Houston Refy.
Treasury

Twenty-Five Years (cont'd)

J. S. POLLOCK
Sewaren Plant
Engineering

H. S. RANDALL
Head Office
Marketing

L. P. RIPPIN
Sacramento Div.
Operations

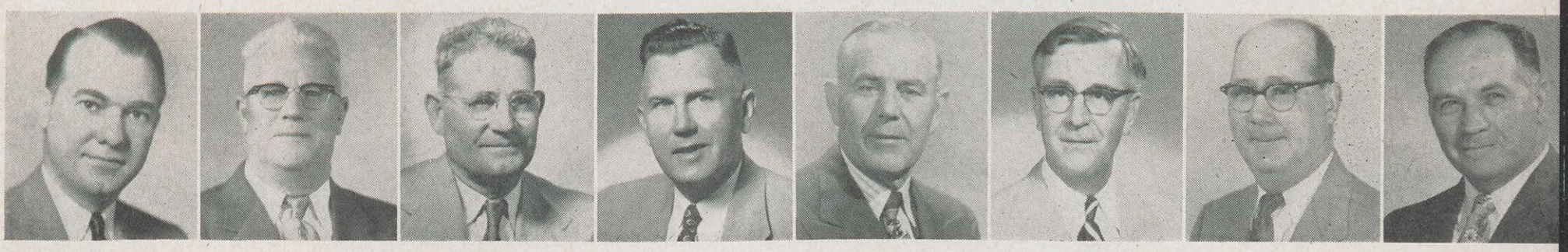
E. P. ROBERTSON
Baltimore Div.
Operations

A. V. ROCHE
New York Div.
Operations

R. K. ROGERS
Pacific Coast Area
Gas

H. W. RYERSON
New York Div.
Operations

S. F. SARDO
Martinez Refy.
Engineering



H. F. SCHMID
Boston Div.
Treasury

F. D. SCOTT
Tulsa Area
Production

A. E. SHAFER
Houston Refy.
Engineering

W. W. STRANE
Seattle Div.
Treasury

H. E. SULLIVAN
Boston Div.
Operations

J. VAN HOOK
New York Div.
Operations

B. VICKNAIR
Norco Refy.
Engineering

C. F. WORKMAN
Wilmington Refy.
Personnel & Indus. Rel.

SHELL OIL COMPANY

Head Office

20 Years

V. R. Bjorkman.....Marketing

10 Years

Colleen Fuller.....Financial
Ruth J. Helmus.....Marketing

San Francisco Office

20 Years

N. V. DuChesne.....Financial

10 Years

Edith M. Johnson.....Financial

Exploration and Production

DENVER AREA

20 Years

H. J. K. Fichter.....Exploration
J. E. Reed.....Personnel & Indus. Rel.

HOUSTON AREA

20 Years

O. E. Simpson.....Production

15 Years

S. D. Rainey.....Exploration
A. Whitley.....Production

10 Years

W. C. Crawford.....Exploration
V. O. Morrow.....Production
G. Ormand, Jr.....Treasury
R. E. Peacock.....Production
W. J. Westhoff.....Gas

MIDLAND AREA

20 Years

H. H. Honea.....Production

15 Years

S. D. Ballard.....Land
J. L. Kennedy.....Production
D. H. Trahan.....Production

10 Years

J. R. Cantrell.....Land
W. E. Jasper.....Exploration
A. J. Overton.....Production

NEW ORLEANS AREA

20 Years

G. S. Cooper.....Gas
E. J. McLain.....Land
W. S. Pike, Jr.....Exploration
H. C. Winfree.....Production

15 Years

W. W. Cloud.....Treasury
C. H. Esterlein.....Marine & Automotive
R. C. Magnuson.....Production

PACIFIC COAST AREA

20 Years

C. C. Ayers.....Production
E. A. Beckett.....Gas
L. L. Lisman.....Production
W. L. Mitchael.....Production
J. W. Moore.....Production
W. F. Rockholt.....Production
T. M. Stoddard.....Production
C. T. Wood.....Production

15 Years

B. C. Daly.....Gas
J. E. Gallagher.....Production

10 Years

F. P. Miller.....Production

TULSA AREA

20 Years

J. S. Brien.....Personnel & Indus. Rel.
D. Rogers.....Production
E. I. Sierer.....Land

15 Years

B. G. Swain.....Exploration
A. W. Trepatz.....Exploration
J. M. Wiggins.....Crude Oil

Manufacturing

HOUSTON REFINERY

20 Years

D. L. Barfoot.....Engineering

15 Years

J. F. Bower.....Thermal Cracking
F. H. Fox.....Engineering
L. O. Hay.....Engineering
F. E. Lee.....Thermal Cracking

10 Years

B. G. Bagwell.....Dispatching
M. G. Clepper.....Effluent Control
R. Culton.....Engineering
J. C. Johnson.....Engineering
T. H. Lockler, Jr.....Engineering
C. D. Mann.....Engineering
W. H. McDonald.....Gas
H. J. McKeown.....Engineering
D. Smith.....Engineering
O. Spriggs.....Engineering

MARTINEZ REFINERY

20 Years

H. J. Fivash.....Cracking
W. D. LaFleur.....Cracking

15 Years

R. Anderson.....Research Laboratory
H. A. Foster.....Compounding

10 Years

I. Tarango.....Engineering

NORCO REFINERY

20 Years

E. E. Duhe.....Engineering
G. E. Songy.....Catalytic Cracking
J. D. Walker.....Personnel & Indus. Rel.

10 Years

A. J. Berthelot.....Catalytic Cracking
E. Duhe.....Engineering
H. L. Foster.....Personnel & Indus. Rel.
W. Romanow.....Catalytic Cracking

WILMINGTON REFINERY

20 Years

D. U. Beaver.....Compounding
H. M. James.....Alkylation

10 Years

F. Bruton.....Dispatching

WOOD RIVER REFINERY

20 Years

J. L. Harris.....Engineering
P. S. Helm.....Gas
J. LeVora.....Alkylation
G. E. Mallory.....Control Laboratory
H. T. Plank.....Lubricating Oils

15 Years

H. E. Dubin.....Engineering
M. D. Frey.....Engineering
R. L. Moore.....Engineering
E. R. Riley.....Engineering
M. E. Sepo.....Engineering
R. E. Sims.....Distilling

10 Years

G. L. Lash.....Distilling
R. L. Morgan.....Control Laboratory
W. N. Roberts.....Engineering
D. O. Runion.....Engineering
B. E. Staley.....Utilities
F. E. Veddar.....Research Laboratory
W. A. Warren.....Engineering

Marketing

MARKETING DIVISIONS

20 Years

V. C. Guptill.....Boston, Operations
H. J. Holihan.....Boston, Operations
S. Murray.....Boston, Operations
F. S. Young.....Boston, Operations
T. Atkinson.....Detroit, Operations
L. W. H. Chock.....Honolulu, Operations
J. F. Burks.....Indianapolis, Operations
R. M. Lampe.....New York, Sales
A. A. Gregory.....St. Louis, Operations
E. R. Heyman.....St. Louis, Operations
J. A. Layton.....St. Louis, Operations
L. Silverstein.....St. Louis, Mktg. Service
A. Trefz.....St. Louis, Operations
J. K. Whittlesey.....San Francisco, Sales
E. S. Wiebalk.....San Francisco, Sales

15 Years

C. J. Gayhardt.....Baltimore, Operations
J. J. Hartell.....Los Angeles, Sales
G. H. Donovan.....New York, Sales
W. D. Walsh, Jr.....St. Louis, Sales

10 Years

I. N. Boileau.....Albany, Operations
J. M. Burns.....Chicago, Operations
A. J. Gorski.....Chicago, Operations
C. H. Nelson.....Chicago, Operations
A. Wisniewski.....Chicago, Operations
A. J. Rohr.....Cleveland, Operations
F. D. Pence.....Indianapolis, Operations
F. C. Norman.....New Orleans, Operations
V. J. Wulforst.....New York, Mktg. Service
B. M. Bierly.....Sacramento, Treasury

SEWAREN PLANT

10 Years

G. E. Hadden, Jr.....Compounding

SHELL CHEMICAL CORPORATION

20 Years

L. C. Caldera.....Shell Point
A. D. Latham.....Shell Point

15 Years

J. Smilek.....Houston
J. V. Kimball.....Shell Point
G. A. Daniels.....Ventura

10 Years

F. A. Barry.....Dominguez
C. H. Gillis.....Dominguez
Mary M. Shea.....Head Office
H. G. Staaterman.....Head Office
J. T. Cutrer.....Houston
M. L. Stroud.....Houston
I. H. Roscoe.....Shell Point

SHELL DEVELOPMENT COMPANY

20 Years

R. C. Archibald.....Emeryville

15 Years

J. R. Weaver.....Emeryville

10 Years

Emmalyn L. Altamirano.....Emeryville
C. H. Deal, Jr.....Emeryville
J. B. Doerner.....Emeryville
Claudia R. Jacobs.....Emeryville
Bessie V. Olson.....Emeryville
A. G. Polgar.....Emeryville
Edna E. Scully.....Emeryville
T. Skei.....Emeryville

SHELL PIPE LINE CORPORATION

20 Years

J. M. Holder.....Mid-Continent Area
W. K. Scudday.....West Texas Area
W. E. Wadsworth.....West Texas Area

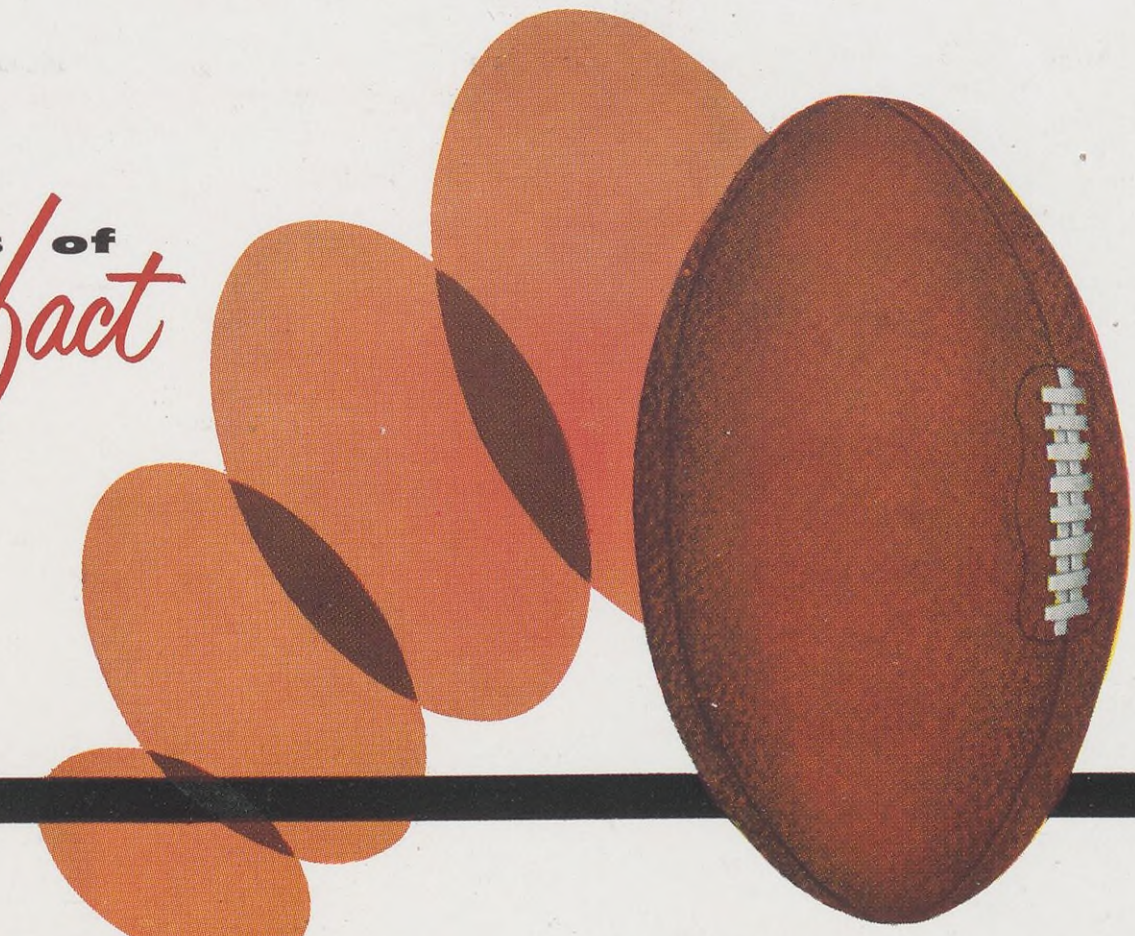
15 Years

E. E. Cox.....Texas-Gulf Area

10 Years

G. A. Brinkman.....Head Office
N. N. Caldwell.....Head Office
J. J. Walker.....West Texas Area

matters of *fact*



important extras

You have many extras in Shell's Benefit Plans, which help you and your family both during your working years and following your retirement.

During your working years, you and your family have financial protection against illness and accidents, as well as vacations and holidays for relaxation and recreation.

For your retirement years, the Provident Fund and Pension Plan combine with Social Security to provide you with substantial capital and regular income.

These and other extras last year cost Shell an amount in excess of 29 per cent of wages and salaries.

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50 West 50th Street
NEW YORK, N. Y.
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4710 Bell
Houston, Texas

SCC

SHELL IN THE AIR

Commercial aircraft in the U.S. fly millions of plane miles every year. Shell serves 11 of the 13 major trunk lines, eight of the 14 local service carriers, and supplies private and business aircraft through more than 400 airport dealers. The Company supplies 29 per cent of the domestic fuel demand of commercially certificated air lines in the U.S., and in addition is a leading supplier to aircraft and engine manufacturers. Besides its five grades of aviation gasoline, Shell manufactures jet fuel and a full line of aircraft oils, fluids and greases.