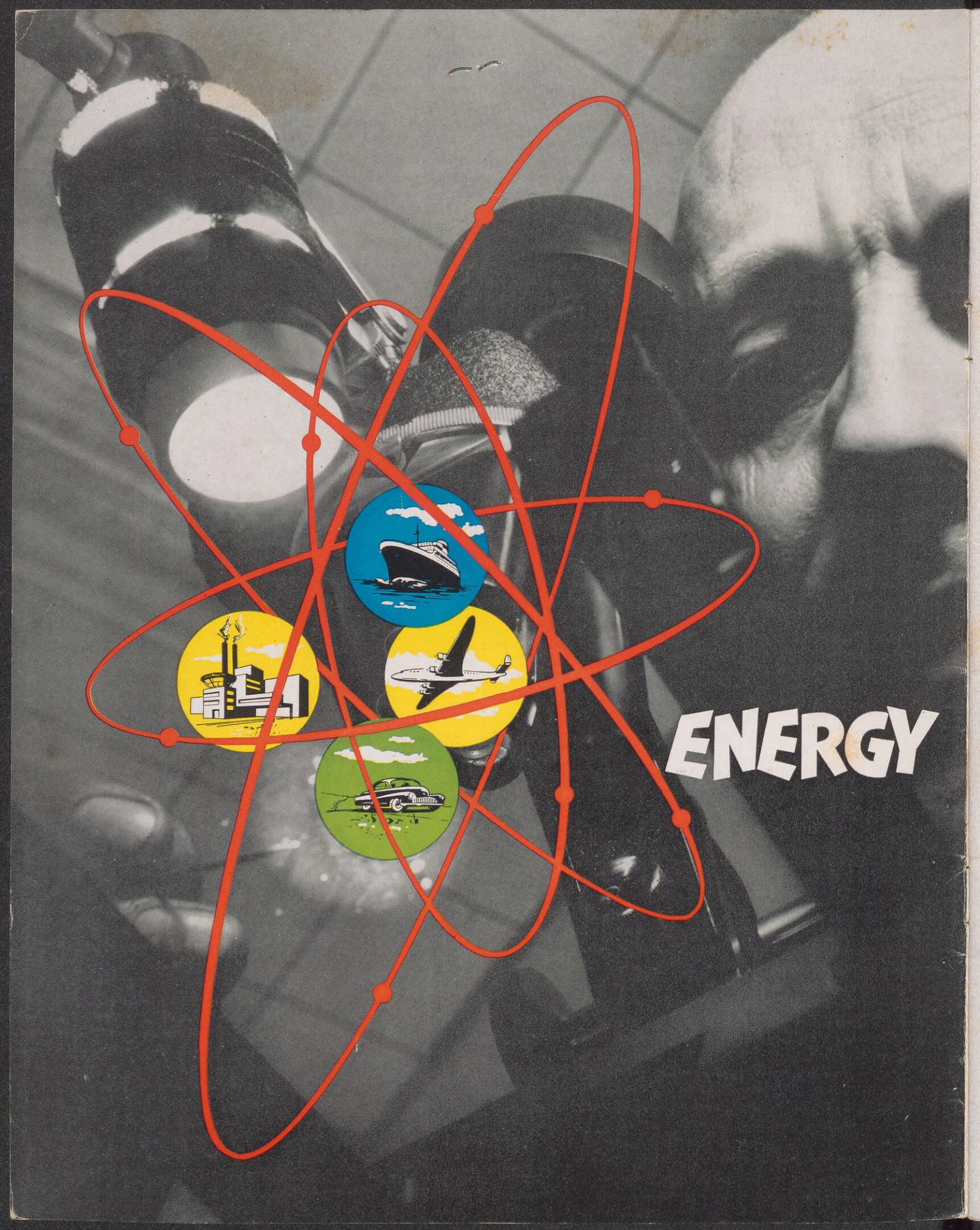
SHELL NEWS

DECEMBER 1953


ENERGY

SHELL NEWS

VOL. 21—No. 12 December, 1953

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

Employee Publications Department
New York, N. Y.

contents

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energy today and tomorrow

Monroe E. Spaght, Executive Vice President, Shell Oil Company, recently presented an address before the California Natural Gasoline Association. Believing our readers will be interested in Mr. Spaght's opinions on petroleum and other sources of energy, SHELL NEWS *herewith presents excerpts from this speech.*

OUR main job, in the oil industry, is that of supplying energy. Let us examine our position as energy suppliers and see what basis for self-criticism might be found there.

If our total physical energy were consumed in merely feeding and sheltering ourselves, we would exist at the caveman level. Indeed, the use of energy other than that supplied by the human body is the most reliable single index of physical progress. The first move of early man was to magnify his own force through tools and through such devices as the lever, the wheel and the pulley. He domesticated animals such as the horse, the ox and the camel and put them to work for him. He then learned to harness some of the energy of the wind and flowing water. Whole civilizations were founded upon the organized exploitation of the human energy of slaves and serfs. Relatively little physical progress followed until energy from coal, in the form of steam power, made possible the Industrial Revolution.

It remained for oil, however, to usher in the standard of living, the unprecedented level of physical civilization, which the western world enjoys today. Our entire pattern of life is founded upon this one thing: the wholesale use of energy from engines —and here over half of that energy comes from oil.

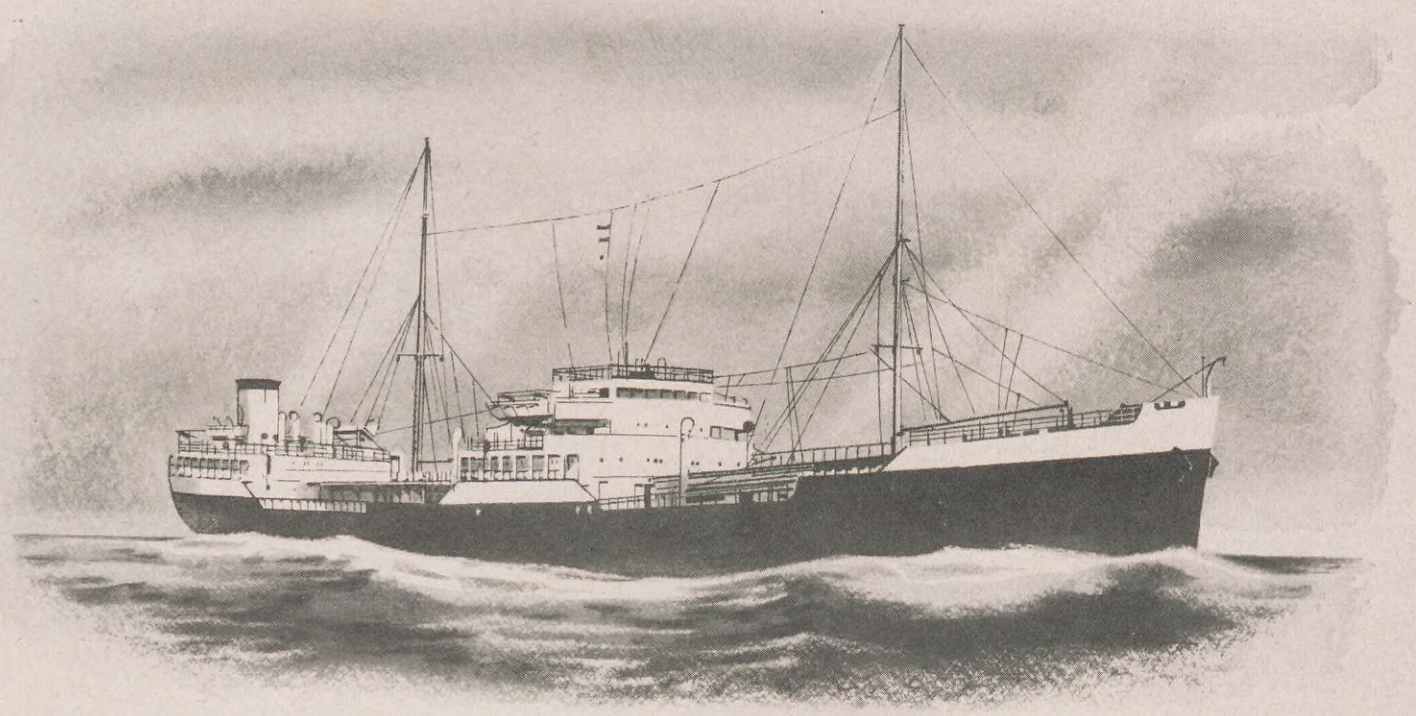
It is impossible to overestimate the role of the internal combustion engine in the evolution of Western civilization. It put its stamp on the American economy to such an extent that about 15 per cent of the country's national output is stimulated by motor vehicle ownership, and about 40 per cent of the average person's discretionary expenditures (above those for food, clothing and housing) are spent on his automobile. Is it too simple then to claim that the people who supply the machines and their fuels are making one of the greatest contributions in that they are giving man the opportunity for pleasure and cultural achievement?

Enormous quantities of petroleum are being used today, and the supply is limited. It is so limited, in fact, that we cannot avoid for long the problem of finding new sources of liquid fuels.

In addition to the proved reserves of petroleum and the quantities of petroleum yet to be found, there are enormous deposits of bitumens, tars, and shales which can be used to produce liquid fuels at costs in the same order of magnitude as those from petroleum. Even with generous forecasts for increases in population and in average energy consumption, these above-named fossil sources should suffice for at least a century. Coal, while also limited in amount, can be converted to liquids. This conversion would postpone for at least another century or so the exhaustion of liquid fuels from fossil sources.

THERE'S A SONG IN THE AIR . . .

. . . and it's symbolized by the choir boys on the cover of this month's SHELL NEWS as they vigorously sing a Christmas carol. Rich in color and variety, the Christmas music which has come down to us from the past is today a time-honored part of our yuletide. The sources of our carols and the manner of their beginnings are discussed in the article "The Herald Angels Sing," beginning on page 4.



First merchant ship to be powered with a gas turbine engine, the tanker *Auris* is owned by the Anglo-Saxon Petroleum Company, a Shell affiliate.

Our industry has been fully cognizant of its responsibility for maintaining a continuing reserve of raw material. It is today at the height of its effort to maintain reserves of crude petroleum. To appreciate this, we need only consider the aggressive programs of exploration and of research to aid that exploration. When tars and shales and coal must be brought in as sources of liquid fuels, our industry will have ready the technology for these new operations.

Atomic Energy

Only during the last decade has the world learned that the energy release in an oxidation reaction is extremely small in comparison with the energy release that can be obtained practically from certain alterations of atomic nuclei. The energy available from one pound of fissionable uranium is equivalent to that from the combustion of about 1,000 tons of coal. In the first decade of practical use of nuclear fission, the breeder reactor has come into our knowledge. Assuming that the breeder principle could be utilized to make available as fissionable material all of the uranium and thorium estimated to exist in the world, we find that the energy therefrom would last the world at its present rate of consumption for something over 2,000 years. Discounting this for practical considerations, we can still assume that here at the very dawn of knowledge of nuclear reactions at least several centuries have been added to our fuel supply.

I think it is important to point out that this new source of energy has come into the realm of practical knowledge only in the last few years. It would seem reasonable to predict that this energy source has been only partially explored and that here lie possibilities for obtaining energy by methods for which we, today, cannot even supply the appropriate words. Suppose, for example, that the fusion of hydrogen 2 can some day be controlled. The world supply of energy would then become almost unlimited.

Oil Industry Obligations

While we can anticipate that at least many centuries will pass before a serious energy problem is faced, we do not escape the obligation of utilizing as efficiently as possible those energy supply materials we consume today. That brings us, then, to the consideration of how well we are processing crude petroleum and how efficient are the machines that consume it. No doubt we must conclude that on neither count do we rate a perfect mark. If we could forget economics, we could make more gasoline per barrel of crude oil, and we could increase the average efficiency of the engine that consumes oil. Yet, both operations are the subject of the most intensive research, a brilliant record of accomplishment lies behind, and progress ahead is almost assured.

In refining, the total complex operation of separation and alteration in the modern refinery consumes as fuel in the order of 10 per cent of the charged petroleum. This figure includes all process energy requirements and losses. Considering the great complexity of operation of a refinery, and remembering that thermodynamics requires some energy supply for these operations, a 90 per cent yield of refined products from crude petroleum is a very commendable performance.

I believe that in our refining procedures, we should attempt always

to upgrade the material with which we work. We are faced with the constant temptation to let the distribution of products go where it will, marketing whatever quantity of low priced residuals and residues that comes easily from our operations. Residuals are not a premium form of fuel. A stationary steam plant can be fueled with coal, but an airplane, a jet engine and an automobile require a liquid. Economics recognizes this in price differentials and encourages us to move ever in the direction of higher yields of distillates and lower yields of residues. I believe that we should use our research and our moral persuasion to continue this trend.

The Gas Turbine

What about the devices that burn liquid fuels and do work? Our industry proclaims that two gallons today do the job of three gallons some decades ago. This is evidence of the progress that has been made in the development of the Otto cycle engine and its fuels. The neck-and-neck race of development between the petroleum and internal combustion engine industries and their units has been a model example of the technical progress that results from competition in a free economy.

Taking the long view, the engineer today tells us that both the gasoline and diesel engine will almost surely be superseded. After all, they are called upon to stop, reverse direction, and start again thousands of times a minute. And they always present the ticklish problem of converting this reciprocating action into rotary action. When you look at them objectively, you have to admit it's a miracle that they run at all. That they do—and continue running faithfully for hundreds of thousands of miles—is a tribute to the designers, the metallurgists and the manufacturers.

From many standpoints — particularly simplicity of design—how much more logical it would be to use an engine which creates rotary motion directly. The engine which does this, of course, is the gas turbine. Its design is based on the principle of compressing air, burning fuel with this compressed air, expanding the resulting hot gas mixture through turbine wheels, creating thereby the power for air compression plus the excess which is the net power output of the machine. The efficiency of the turbine increases as the temperature of the hot gas mixture increases. At today's top practical temperatures, in the range of 1400°F., the efficiency of the simple cycle gas turbine engine is about 18 per cent at peak load. This compares with 25 per cent for the gasoline engine and 35 per cent for the diesel. However, the turbine has many other advantages that account for its rapid strides. One of these is that its fuel requirements are less stringent. Here is the clincher: when operating temperatures can be boosted to 1750°F., the turbine will be 35 per cent efficient—and the gas turbine manufacturers say today that this goal is in sight.

Our engineers predict that gas turbines will replace the gasoline and diesel engines in many applications. This is certainly true to the extent that turbines will become primary markets for liquid fuels. The turbine is already dominating the aircraft industry. There will be conversion of ships and stationary power plants to turbine power. Turbine powered locomotives are in operation. A Shell affiliate is operating a turbine powered tanker on regular runs; it is turning in fine performance and maintenance records. The engineer doubts that the turbine will replace the gasoline engine in automobiles, although some experimental turbine powered passenger cars have already been on exhibition.

Refiners will probably find little basis for concern if the future market is a turbine rather than a gasoline or diesel cycle engine. The refining problems posed are certainly not serious, and the oil industry as a whole can tolerate this transition without any important dislocations or capital requirements.

Potential Competition

We should recognize the possibility that atomic energy may effectively invade some of the market now served by petroleum. The great market represented by the small prime mover seems to forecast such demands on petroleum that the transfer of the very large power installation to another source of fuel should, in my opinion, be welcomed. If atomic energy supplies some of the markets which now use low grade products of refining, it adds inducement to my plea that our industry continue aggressively its program of upgrading crude oil for use in its premium markets.

I believe our industry is showing a high level of stewardship in its technical handling of petroleum. We see a great research effort that endeavors constantly to find new uses for petroleum in all areas that can be of benefit to man. We find that it stands as one of the most aggressive examples of the application of modern science to the improvement of its technology. As an industry, it has worked constructively with the engine manufacturer, the chemical company and, indeed, all of its consumers in the development of more efficient and useful outlets for its products.

We have a record of continuous improvement of operation and techniques, of constantly upgrading and bettering our products, of continuous development of new products in an ever-widening variety. We have a record of maintaining through constantly improving methods a good reserve of raw material while developing simultaneously the technology that will allow the use of substitute raw materials on that day when the supply of crude oil is inadequate for our needs.

Every Year Traditional Songs Usher

The Herald A

The singing of Christmas carols in public streets is one of the traditional forms of spreading the season's cheer. In this picture of the 1880's, a group of Canadian carolers is depicted singing on Christmas Eve.

NO festival celebrated by man is so intimately associated with music as Christmas. Rich in quantity and variety, the seasonal songs of this happy holiday are unsurpassed in appeal. Around the world, in the waning days of the year, people put aside the sterner stuff of life to join together in the familiar songs which celebrate the famous birth at Bethlehem.

Much of Christmas music is magnificent and awe-inspiring, aptly suited to the great cathedrals in which it is sung. But nearer the hearts of the people—in city homes, on village streets or in far spread farmhouses—are the time-ripened folk songs we know as Christmas carols.

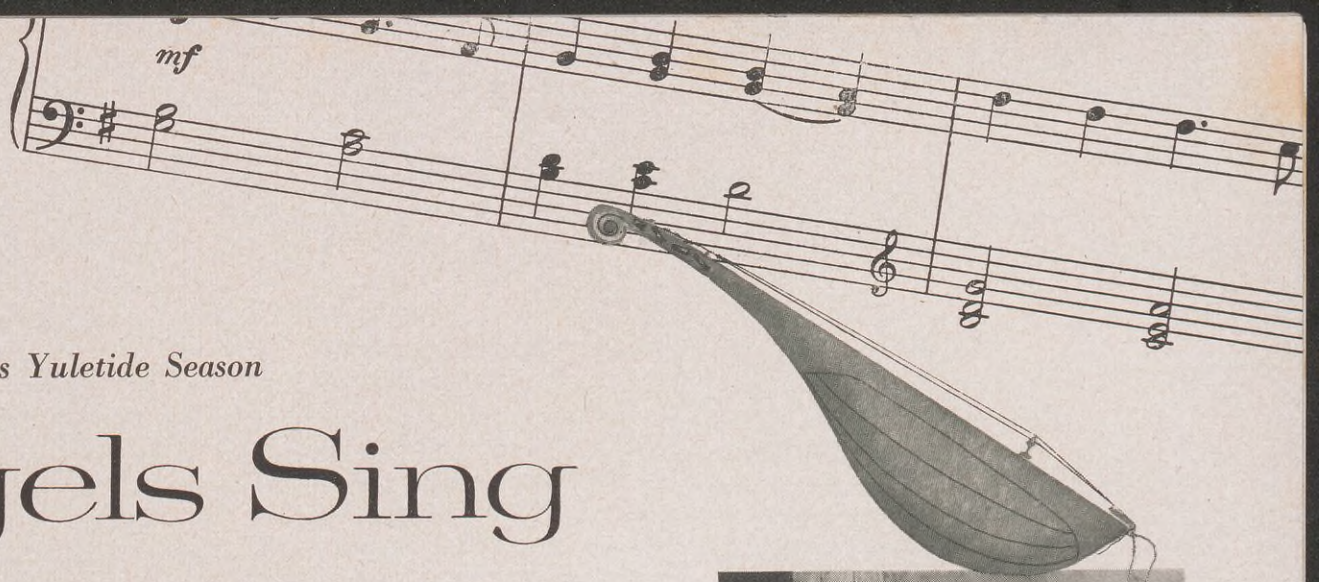
The term "Christmas carol" covers a variety of songs. Some are written in the style of hymns: *Adeste Fideles; Hark, the Herald Angels Sing; It Came Upon a Midnight Clear.* Others tell the legends of ancient days: *Good King Wenceslas, I Saw Three Ships.* Lullabies, or cradle songs, such as the immortal *Silent Night* are popular. Many carols from the French tell parts of the holy story in simple verse: the Annunciation, the star, the wise men, the shepherds. And from the manor halls of England come our vigorous ringing songs celebrating the foaming tankard and the groaning table.

Despite their variety, our carols have these things in common: they are easy to remember, simple to learn, and can be taught in a short time. Their melodic patterns are uncomplicated and unsophisticated. And they have a warmth and direct appeal which touches every heart.

From Ancient Festivals

Scholars attempting to trace the origin of this folk music have been led back 4,000 years to the people of

Through many of the past centuries, instrumental groups clustered around lamp posts on Christmas Eve, braving wind and cold, to play popular carols.



Songs *Usher in the Joyous Yuletide Season*

d. Angels Sing

the Tigris and Euphrates River Valleys and the early Mediterranean world. Year-end celebrations, accompanied by music, took place long before the birth of Christ. The pagan ceremonies in December and January celebrated the rebirth of the sun, the giver of life. Great logs were burned and fires lighted to encourage the sun to shine more strongly, and feasting saluted the annual rebirth of growing things.

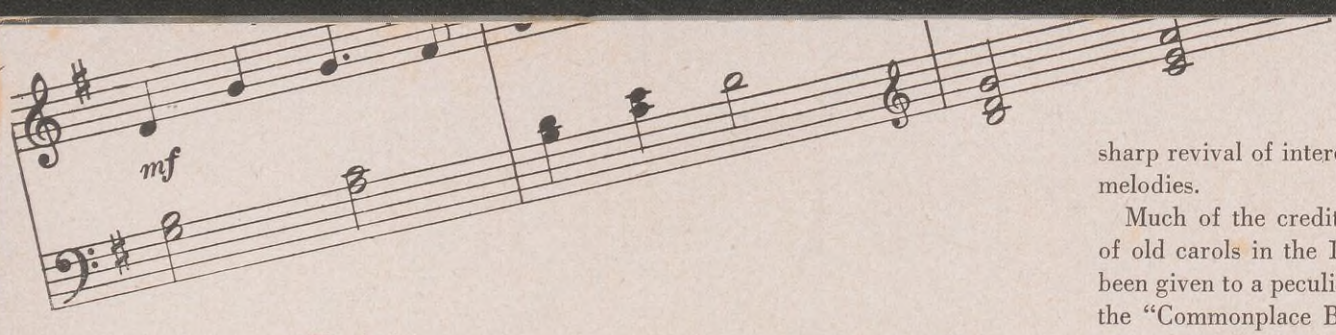
Much of the ancient world joined in 12-day festivals, ending in the New Year. In Rome, the feast was called the Saturnalia, and the major celebration took place in late December when the sun was at its lowest.

At such festivals, presents were exchanged and there were religious processions, plays and songs in great numbers. The term "carol" refers to a ring dance of long ago in which people joined hands and danced in a circle.

As Christianity spread, many people accepted its new creed but were unwilling to give up their old ceremonies, so the churches preserved many of them. Over the centuries, dances and songs were offered in honor of the Christ child. Mummers (bands of actors) acted out the miracle and mystery plays—dealing with the life of Christ—in the churches of the Middle Ages, often to the accompaniment of music.

The oldest Christmas music we know comes from the Gregorian chants, that medieval collection of Christian music for occasions throughout the year. Some scholars consider the oldest Christmas musical selection to be noted down as *Joseph, Dear Joseph Mine*, found in a 14th century manuscript but evidently sung several centuries previously. It was not until the 16th century, however, that carols were printed in any number.

Christmas in Holland has long been a merry time. Urchins, in the old scene to the right, are shown singing and dancing in the streets. In Yorkshire, England, below, a group of town carolers of yesteryear have gone out to bring Christmas cheer to the surrounding farms.



The Lullaby

In the early part of the 13th century, about 1224 the legends tell us, St. Francis of Assisi placed a miniature manger in a local church. A tiny statue of the Christ child was put in a miniature crib within the manger, and rocked to the accompaniment of contemporary lullabies. This practice became popular with the people and was continued each year. From it came the *creche*, the collection of The Holy Family, wise men, shepherds and domestic animals which is set up in churches at Christmas time. Contemporary songs were woven into medieval mystery plays and some, such as the lovely *Coventry Carol*, are still sung in many countries today.

After the gracious innovation of St. Francis, carols flourished for more than 300 years. The 14th, 15th and 16th centuries saw the bulk of our traditional Christmas songs composed and set down. Many of these were stately ballads sung in Latin; others were more down-to-earth and vigorous, celebrating the pleasures of the season.

In England, in the middle of the 17th century, the Puritans came to power and public Christmas festivities—including carol singing—came to an abrupt halt for a period. Even after this period, carols languished until the 1800's when there was a sharp revival of interest in traditional melodies.

Much of the credit for the revival of old carols in the 19th century has been given to a peculiar volume called the "Commonplace Book," the property of one Richard Green who compiled this record in the 1600's. At that time Green wrote down the things which interested him: recipes, dates, the pedigrees of livestock, riddles, poems, models of business letters—and many of the best-known carols of the day. The book was found in 1850, and proved a valuable source of Christmas music.

Obviously, the credit does not all go to this compiler of contemporary data. Many people, despite the bans of the Puritans, kept the traditional melodies alive and passed them from one generation to another by word of mouth. And there was an outburst of new composition in the 19th century.

In 1818, a young priest named Josef Mohr showed a poem of his to a church organist, Franz Gruber, in the little village of Oberndorf, Germany. As a result of their collaboration, *Silent Night* was first sung on the evening of December 24. Because the organ was damaged, the earliest rendition of this most famous of all our carols was to the accompaniment of soft guitar chords.

America too, has produced many a famous Christmas song. *It Came Upon a Midnight Clear* is a New England carol of the 1850's. In 1857, the rector of a Pennsylvania church composed *We Three Kings*. Other famed American carols include *O Little Town of Bethlehem, I Wonder as I Wander* and *Go Tell It On the Mountain*.

Carols are now an important part of the Christmas tradition everywhere. The chances are that you too will lift your voice in this holiday season—perhaps to sing a thousand-year-old song in praise of the Prince of Peace.

In Germany and other Central European countries, carols were sung from church towers.

Photographs from The Bettmann Archive

Shell People In The News

R. W. McOMIE

R. W. McOMIE has been named Manager of Shell Oil Company's new refinery at Anacortes, Washington, construction of which will commence in the near future. A graduate of Stanford University, with a B.A. degree in chemistry, Mr. McOmie joined Shell Oil in 1927 as a Chemist at the Martinez Refinery. In 1932 he was appointed Manager of the Distilling Department at Martinez, and in 1937, Chief Technologist at the same location. He moved to the Wilmington Refinery in 1943 as Assistant Manager and became Superintendent in 1945. Mr. McOmie was made Refinery Manager at Wilmington in 1946 and relinquishes that position to take up his new appointment.

P. J. MERKUS, JR.

P. J. MERKUS, JR., has been appointed Manager of the Wilmington Refinery, succeeding R. W. McOmie. After receiving his Ph.D. degree in chemical engineering from the University of Michigan, Mr. Merkus joined Shell Oil in 1934 as a Technologist at St. Louis. With the exception of a year at The Hague, he worked at the St. Louis Office until 1939 when he was transferred to the Norco Refinery as Chief Technologist. Mr. Merkus returned to St. Louis in 1940, and later that year moved to New York Head Office as Assistant Manager, Research and Development, in Manufacturing. In 1943 he was appointed Research and Development Manager, and in 1946, Assistant to the Vice President, Manufacturing, a post he held until his recent appointment.

G. C. MONTGOMERY

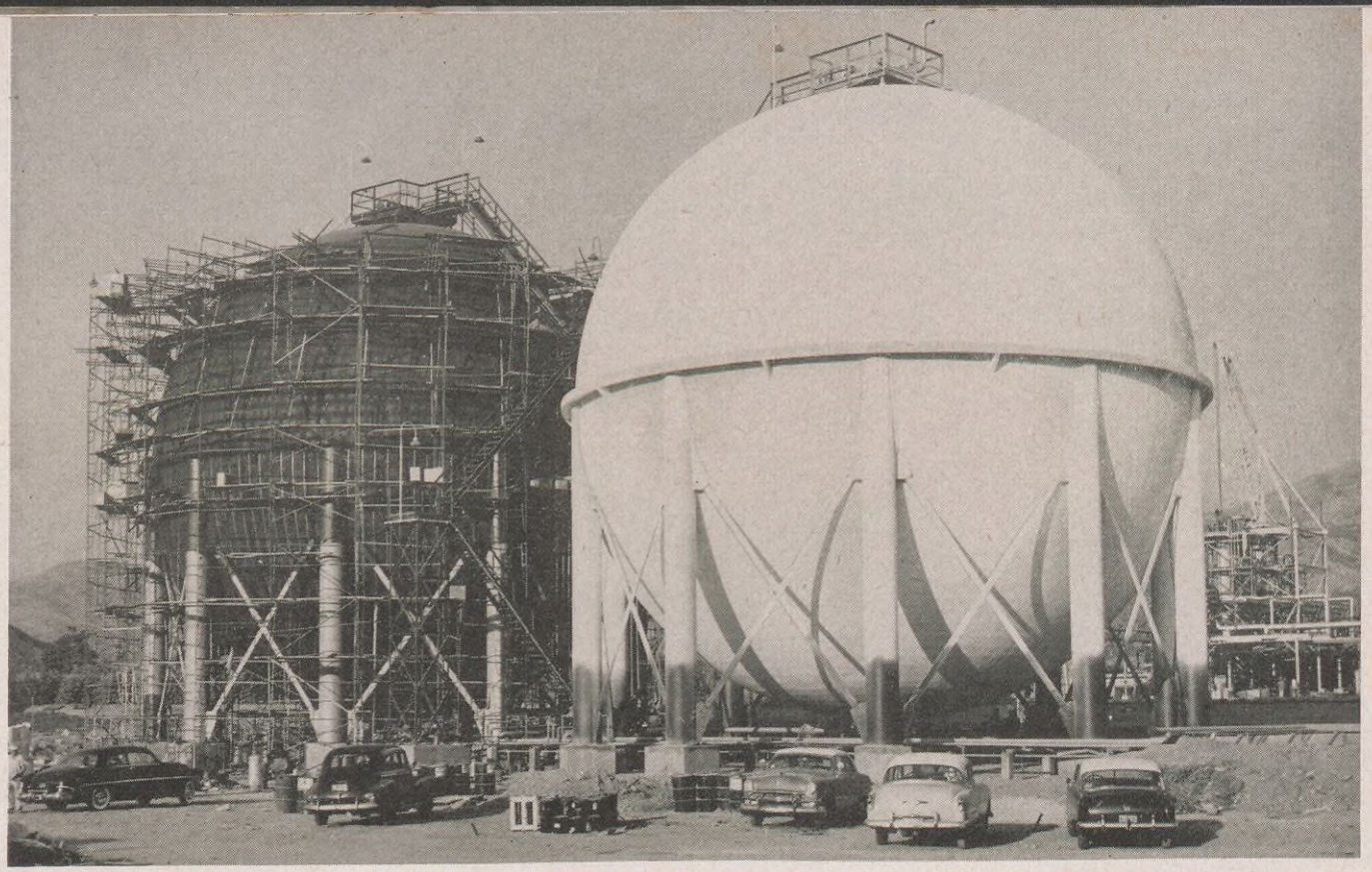
G. C. MONTGOMERY has been appointed Superintendent at the Wilmington Refinery, succeeding the late S. J. Meisenburg. The holder of an A.B. degree in chemistry from the University of Missouri, Mr. Montgomery joined Shell Oil Company in 1926 at Wilmington, California. He worked in a variety of technical positions at Wilmington until 1935 when he was transferred to the Martinez Refinery. Late in that year he returned to Wilmington as a Department Manager. He continued to hold various positions at the Wilmington Refinery until 1945 when he was made Assistant Superintendent—Administrative there, a post he filled until his current appointment.

STANLEY JOHN MEISENBURG, Superintendent at Shell Oil Company's Wilmington Refinery, died suddenly on October 30.

After receiving his Doctorate in chemical engineering from the University of Michigan, Mr. Meisenburg joined Shell at the Wood River Refinery in 1935 as a Research Chemist. He later worked at Shell's Midwestern refineries, moving to the Head Office in 1938 as a Senior Technologist. He was made Assistant Superintendent of the Wood River Refinery in 1944 and remained until 1947 when he was transferred to New York as Assistant Manager of the Manufacturing-Research and Development Department. Mr. Meisenburg went to the Wilmington Refinery in 1949, in the assignment he held until his death.

Mr. Meisenburg's many friends and associates join in paying tribute to his memory.

S. J. MEISENBURG

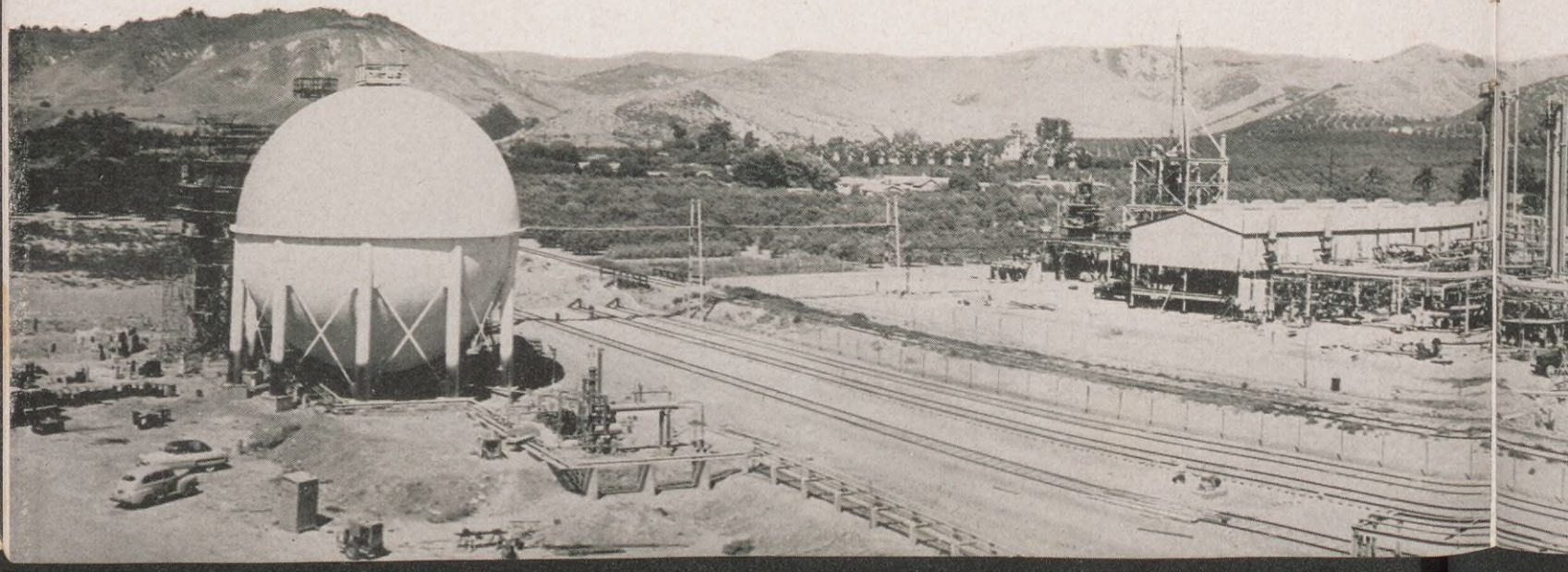


Each storage sphere in the new plant will hold the equivalent of 110 tank cars of liquid ammonia. The ammonia must be stored under pressure.

New Plant For PLANTS

Shell Chemical's New Ammonia Plant At Ventura, California Is Helping West Coast Farmers Improve Their Soils — And Their Harvests

THE air we breathe is mostly nitrogen but air doesn't do growing plants much good, desperate as they are for nitrogen. Most plants get nitrogen largely through their roots . . . from the soil. And once they have depleted the nitrogen in the soil, they are in for lean times unless man remembers to replace the vital element in the ground. Over the years, anhydrous ammonia, which contains 82 per cent nitrogen, has proved the best source of nitrogen for commercial fertilizers such as ammonium sulphate and ammonium nitrate. Shell Chemical's production of anhydrous ammonia and of ammonium sulphate —which contains 21 per cent nitrogen



—plays an important role in helping to maintain California's high record of crop production from millions of acres of cultivated land.

Shell Chemical's newly completed plant at Ventura, California will manufacture 150 tons of anhydrous ammonia a day. The bulk of ammonia produced at Ventura is earmarked for western agriculture and will be applied to the soil of West Coast farms, either by Nitrogation Service*, or by Nitrojection Service*, Shell trademarks used to indicate whether the ammonia is applied via irrigation water or by direct injection into the soil. Part of the output of the new plant will be transported to another location nearby, where it will be converted to ammonium sulphate, thus increasing by a substantial amount Shell Chemical's total production of this product.

The Ventura Plant is Shell Chemical Corporation's second for this purpose. Back in 1931, Shell built an ammonia plant near Pittsburg, California, at Shell Point, the first plant in the world to use natural gas as a raw material in making ammonia. Today, though its original output has been increased on eight occasions, the Shell Point Plant can't meet the demand for the product which has been increasing rapidly on the Pacific Coast.

Shell Chemical's new plant was located at Ventura for two very good reasons. For one, Shell Oil Company's operations in the adjoining Ventura oil field provide the plant with a ready supply of natural gas. Equally important, Ventura (near Los Angeles) is close to the farmers of Southern California, the San Joaquin Valley, and Arizona, and thus complements the Shell Point Plant (farther north near San Francisco) in serving farmers throughout the Pacific Coast area.

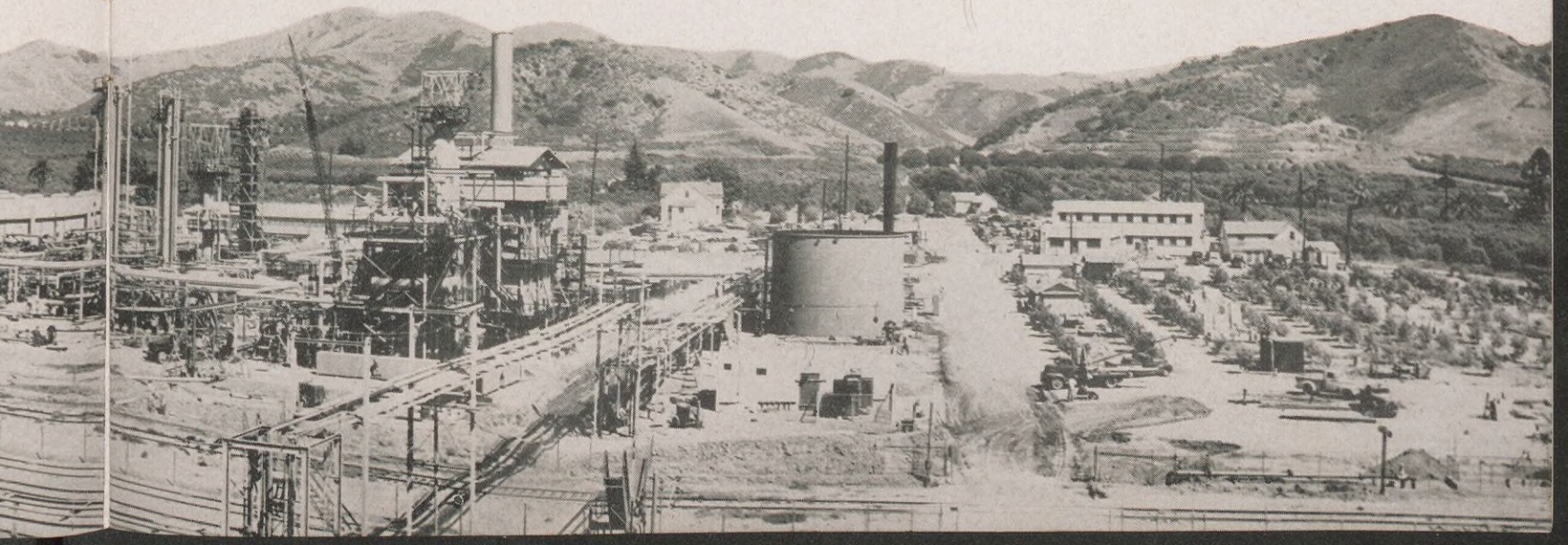
In the new Ventura Plant, the incoming natural gas, mostly methane, is broken down with heat in the pres-

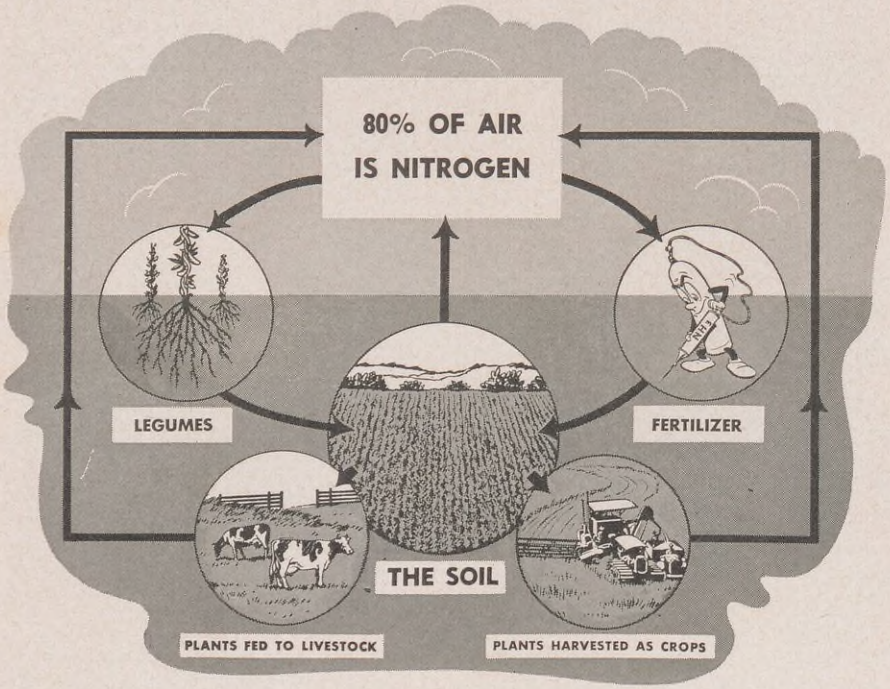
Training—E. S. Starkweather, standing front, goes over various plant operations with H. P. Larsen, standing rear, and W. O. Fisher, C. A. Harkins, E. H. Potter, seated left to right, 1st row; P. D. Eskew, K. N. Rogers, K. W. Visser, 2nd row; E. P. Webb, G. N. Roberts and C. Torjusen, 3rd row.

More training, above—D. E. Glass, foreground, instructs J. A. Stuart, G. S. Cortelyou and E. A. Shuford, from left, at gas purification unit.

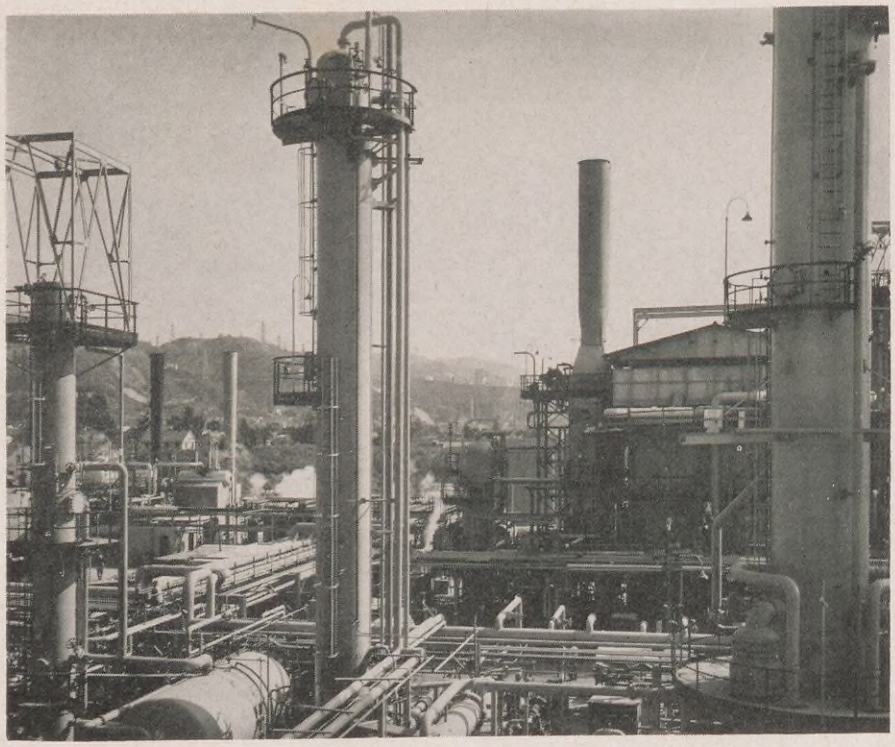
Shell Chemical's new ammonia plant, below, will process some 150 tons of ammonia a day for use in Pacific Coast agriculture and industry.

* Registered Trademark U. S. Patent Office.





The Nitrogen Cycle—Soil draws nitrogen from the air and supplies it to plants. The plants, in turn, grow and are eaten by animals. Death and decay overtake the plants and animals and, eventually, the nitrogen they have consumed is returned to the atmosphere. In areas where crops are harvested frequently, more nitrogen is consumed from the ground than nature replenishes there. In such cases, it is up to man to supplement the nitrogen supply in the soil via fertilizer.



The gas purification columns are shown in this view of the plant. Behind the installation is part of the Ventura Field which supplies the raw material, natural gas, used in making the ammonia.

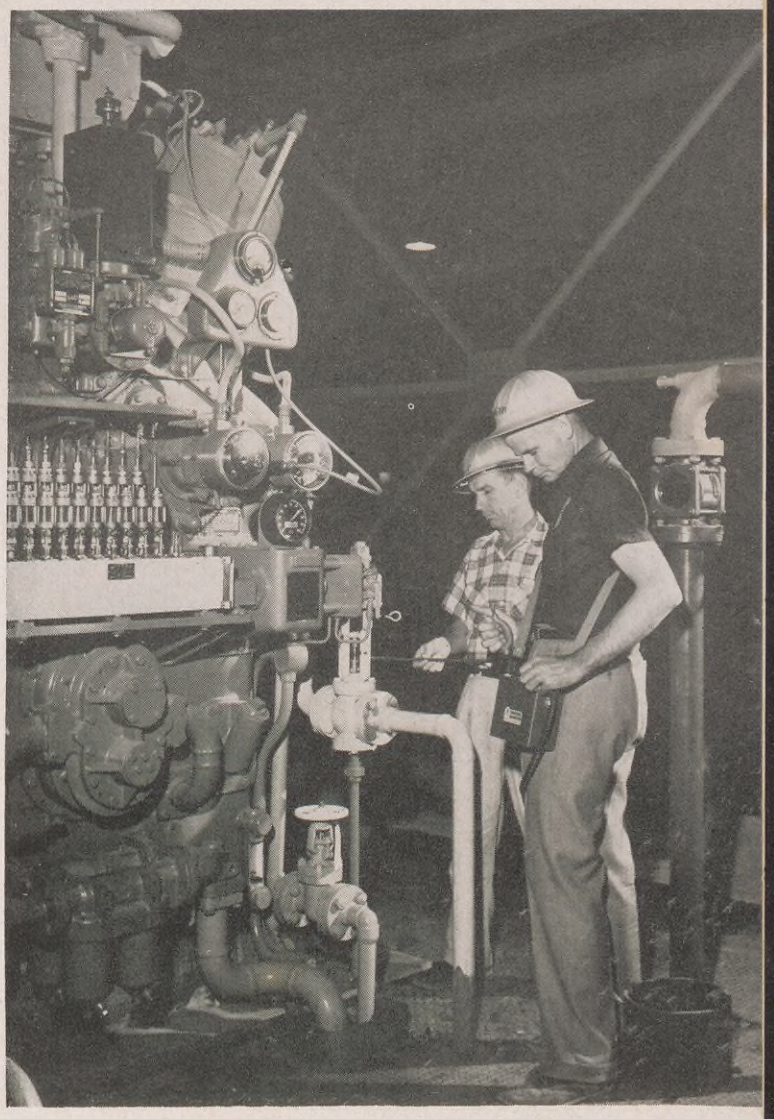
ence of catalysts in a steam-methane reaction process to yield hydrogen and other gases. Air is introduced during one phase of the process; the oxygen in the air is converted to carbon dioxide and removed from the system, leaving the nitrogen. Both the nitrogen and the hydrogen obtained in this operation require further purification before they will react with each other in a later process to form the finished product, NH_3, ammonia.

The finished ammonia is kept under pressure as a liquid. It is stored in huge steel spheres until shipped to its ultimate destination.

For many years ammonia has been used in the form of solid salts. But the nitrogen content of these solids only ranges from 17 per cent up to a maximum of 46 per cent compared to the 82 per cent nitrogen content of pure ammonia. Realizing this, Shell scientists sought to make better use of ammonia itself by applying it directly to the soil. In 1932, the Company pioneered and developed a technique by which controlled amounts of ammonia could be used directly as a fertilizer through application in irrigation water. In this patented process, called Nitrogation Service, the ammonia is absorbed by irrigation water which in turn carries it uniformly over the field. Since the first introduction of agricultural ammonia some twenty years ago, application of this type of fertilization has grown both in scope and popularity all along the Pacific Coast.

Seven years after Nitrogation Service was introduced, Shell Chemical, mindful of the needs of farmers in non-irrigated areas, began experimental applications of ammonia, injecting it directly into the soil through tubes attached to cultivation tools. The newer process, also patented, is called Nitrojection Service. This method has been copied and adapted extensively in the South and Midwest and has met with increased acceptance by farmers throughout the coun-

M. N. Black, Plant Fire and Safety Inspector, gives instructions in first aid with the help of acting patient, W. N. Curtis. Standing, left to right, are R. H. Smith, J. C. Glass, L. A. Medlock, R. M. Curtis and T. C. Mills.



H. P. Davis, left, and N. E. Cowan are shown above checking a refrigeration compressor with a gas detector prior to a test run. Altogether, the ammonia plant will employ about 140 people.

The sugar beets pictured at left give a graphic illustration of the effect of ammonia fertilizer on growing plants. The beets on the left side came from an ammonia treated field, those on the right from an unfertilized area.

try because of its simplicity and the spectacular yield results obtained thereby.

Shell Ammonia Service ranges from advice on timing to actual application. Either applied in irrigation water or injected directly into the soil, ammonia makes possible fast growth rate and high yields of grain, vegetables, fruits, cotton and other nitrogen consuming crops. Its use in the United States, for fertilizer alone, is expected to total 2½ million tons annually by 1955. Agriculture, however, isn't the only consumer of the new Ventura plant production—some of the ammonia produced at Ventura will be used in big refrigeration plants, as a raw material in the manufacture of explosives, rayon and other synthetic fibers as well as nitric acid, and as a base in the manufacture of pulp and paper.

Shell Chemical Corporation's pioneering work and continuing interest in the field of agricultural fertilizer has won it the confidence of the farmer. Today, as a result, Shell is the biggest supplier of nitrogen fertilizers West of the Rockies.

This plaque, "Kings Bearing Gifts," won Mrs. Minard a Grumbacher Award this year in a competition of works on a religious theme.

Marion Minard Plays By The Rules

Shell's Head Office Librarian is an Award-Winning Sculptress in Her Spare Time. Here's How Her Hobby Measures Up to the Rules Of Success.

SOME folks wouldn't know a good hobby if they saw one.

The fact is, most folks with hobbies didn't consciously shop around for spare time activities rated *good*. They simply did the things that interested them most.

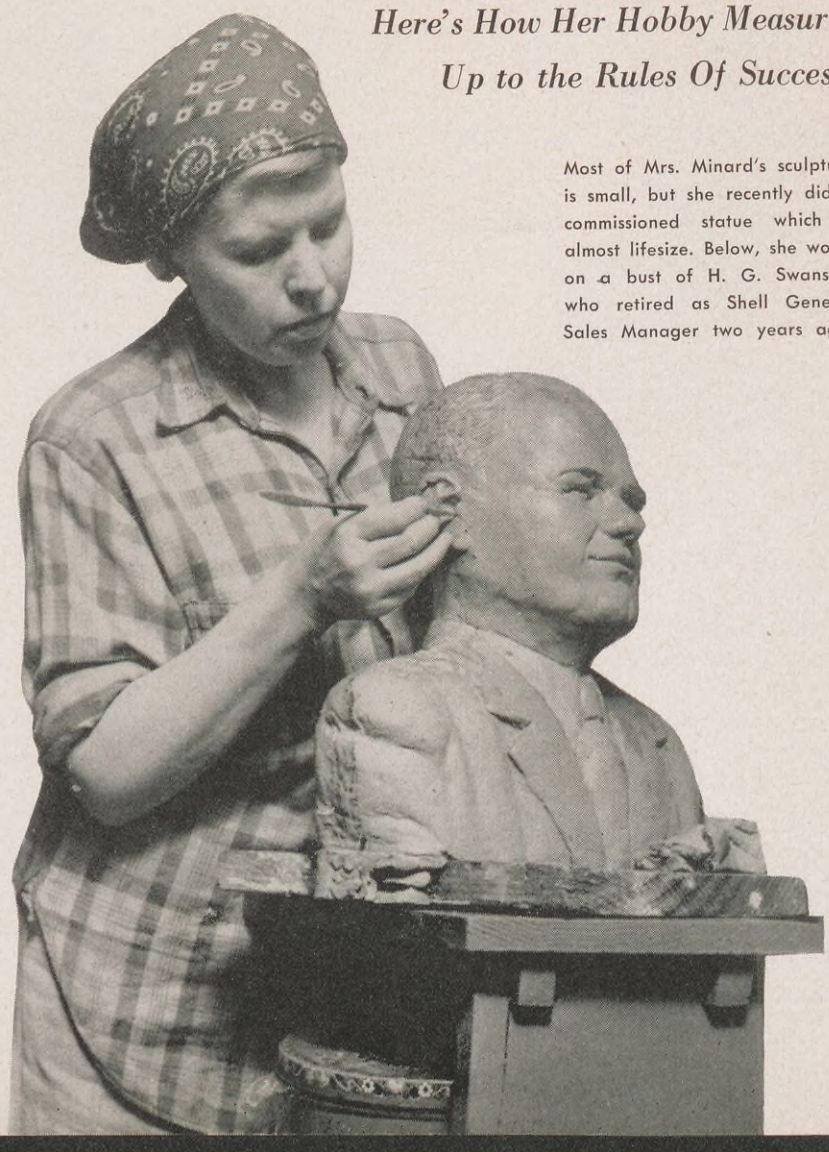
But in case they ever wonder about the merits of their pastimes, a professor at the University of Cincinnati recently set down eight basic rules which characterize all good hobbies. They apply equally to painting, ping pong, politics, and piano playing.

The hobby of Marion Dixon Minard, Shell Head Office Librarian, is a good illustration of what the professor means. In her spare time Mrs. Minard is a sculptress. She is also a wife, mother, grandmother, housekeeper, and commuter. Despite all these time-consuming activities, Mrs. Minard's hobby rates good when measured by the professor's yardstick. Rule by rule, it looks like this:

1. *A good hobby involves a tangible product that can be admired by others as well as the hobbyist.*

Mrs. Minard has done better than average as a hobbyist-sculptress. Her pieces are of sufficient merit to have been shown in numerous art exhibitions in New Jersey and New York. Just recently some were included in a six-weeks show of works by living New Jersey artists at the State Museum.

Another recent achievement was the winning of the 1953 Grumbacher Award for Sculpture, given annually for an outstanding piece on a religious theme. Mrs. Minard's prize-winning entry was a plaque depicting the Nativity and entitled "Kings Bearing Gifts." In 1942 she won the Lula Usher Sculpture Award in a show at Asbury Park, N. J., with a small figure of a dock roustabout leaning on a fire hydrant. Thousands of persons admired the little roustabout, but perhaps none so much as the larcenous art lover who made off with it a few years later.



Most of Mrs. Minard's sculpture is small, but she recently did a commissioned statue which is almost lifesize. Below, she works on a bust of H. G. Swanson, who retired as Shell General Sales Manager two years ago.

November 27, 1953

Dear Mrs. Minard:

Here is an "advance" copy of the December issue of SHELL NEWS with with very sincere thanks to you for the interesting story you have made possible -- "Marion Minard Plays by the Rules". (P. 12). We hope that you will be pleased with the way your story has been presented.

Merry Christmas and thanks for your help in 1953 from all of us in Employee Publications!

Mrs. M. D. Minard
28 Nevins Street
Rutherford, New Jersey

W. M. UPCHURCH, JR.

But to Mrs. Minard, gallery throngs aren't necessary to make her pastime worthwhile. "Even if no one saw my work," she says, "I'd get a great deal of satisfaction from it."

2. *A good hobby fits the hobbyist's age and circumstances.*

There are no age limitations to sculpture, points out Mrs. Minard.

Mrs. Minard received the 1953 Grumbacher Award from the president of the Women's Club of Orange, N. J., where the sculpture show was held. In 1942 she won the Lula Usher Sculpture Award for a small, humorous figure of a dock roustabout.

She has been interested in it since mud pie days and sees even greater interest and possibilities as each year passes. Nor are there many limiting circumstances. The principal one—cost—is negligible, because clay can be used over and over again and other materials are reasonable. For many years she did her sculpturing in the kitchen of her home, but recently the Minards moved to a new home in Rutherford, N. J., and now she has her own studio upstairs.

3. *A good hobby has a group of devotees in whom can be found social contacts, recognition, and acceptance.*

Mrs. Minard is a former member of three art associations and is presently an active member of the Rutherford Art Association and Art Council of the State of New Jersey.

4. *A good hobby is difficult enough to challenge the skill, but not too difficult to prevent some success.*

There is no questioning the fact that sculpture requires skill — both innate and acquired. Nor is there any question about Mrs. Minard's having attained some success. Her awards and frequent invitations to show her work attest that, as does the fact that in 1943 and 1944 she taught her own private classes in sculpture. Nevertheless, she believes there is always something else to be learned. Though she majored in art at Skidmore College and later studied at the Clay Club in New York City, she has since studied—and still does when time permits—with Ulric Ellerhusen, a nationally-known sculptor and member of the National Academy.

5. *A good hobby should further, not interfere with family life.*

That's a hard rule to pin down, says Mrs. Minard. But she feels that any hobby that relieves the family pressures on a mother of two children, or any hobby that can afford a measure of culture and interest in the arts does, indeed, further family life. One thing is certain, Mrs. Minard's hobby hasn't interfered with it. Her husband, Donald V. Minard, who works for the Singer Sewing Machine Company, has encouraged her. Her son, Charles, is now 29 and has a family of his own. Her daughter, Donna, 24, lives at home.

6. *A good hobby should not interfere with one's vocation.*

It hasn't. During her nine years with Shell, Mrs. Minard's hobby has always been a spare time activity. About the only time her work and hobby are even remotely associated is during the two hours she spends commuting each weekday. "You'd be surprised," she says, "how much you can learn about sculpture by studying the ears of people on a bus."

7. *A good hobby should be the hobbyist's servant and not his master.*

Despite Mrs. Minard's apparent achievement in sculpture, she has never had the feeling that it should top other basic duties in importance. Family and job obligations have come first, and her hobby has been allotted the time left over. Even her award-winning plaque, "Kings Bearing Gifts," was done in a rush of last minute preparation. Her spare time was so taken up with other sculpturing projects when the Grumbacher competition was announced that she almost decided not to attempt an entry.

8. *A good hobby should have possibilities for growth and continued interest through the years.*

Since sculpture has no age limitations, Mrs. Minard looks forward to the pleasure of her hobby for a long time to come. With the pleasure there is also the opportunity for further success.

Far More At Ardmore

Modernization of Tired Old Wells Has Trebled Shell's Production In Several Oklahoma Oil Fields

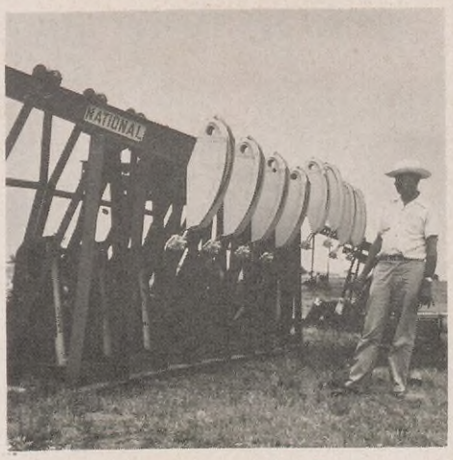
THERE was a time in the early days of the oil industry when the only accepted way of increasing production was to drill more wells. In so doing, hit-or-miss methods often prevailed.

Take the Healdton field in Oklahoma, for example. Legend has it that a wildcatter staked a drilling location near Healdton with high hopes. But when the large steam boilers that were to power the rig were being hauled to the intended location by mule team, one of the boilers slipped and fell off the wagon. Rather than reload the heavy boiler, the wildcatter dumped the other equipment off the wagon and drilled his well on the spot. It was the Wirt-Franklin No. 1, which started the development of a rich oil field.

Today, as if to point up the contrast between early and modern oil producing techniques, hundreds of wells—some of them surrounding the Healdton discovery—are being reworked to increase production in old established fields where oil has been obtained for a long, long time. Production men of Shell's Ardmore District in the Tulsa Area have modernized their equipment and given new life to the tired old wells that have been on the pump for as many as 40 years. In doing so, they have not only increased the current output of the wells, but have prolonged their productive lives.

In all, there are 671 Shell-operated wells in the Ardmore District—and 531 have now been electrified in the modernization program. The largest group, 245, is in the Healdton field where Shell has had production since 1913. There are 65 more in the Hewitt field, which is only ten years younger. When Shell decided to rework and modernize its wells, the Company also acquired a number of old wells in other adjacent fields and included them in the program.

Most of the wells were being pumped —and had been for years—by "central power" installations. "Central power" or "the power" is the term used by



Horsehead pumps, above, looking like they're at a hitching rack, get a check by Owen F. Bennett before installation in the Healdton Field.

oil field men for a single source of mechanical energy which operates a number of oil field pumps. In this type of installation a gas engine drives a large band wheel which is the prime mover for the reciprocating action of a series of metal pull rods. The rods stretch across the field to the well pumps like spokes of a bicycle wheel. As they move to and fro, they work the pumps.

There are some obvious disadvantages in such a system. For one thing, if the central power is shut down, all the pumps it powers are shut down, too. In the event of difficulty with any single pump, it is necessary to manually "hook off" and "hook on" the pull rod from that particular well. This throws the driving mechanism out of balance. There are other difficulties; hence it's not the most effective way to get oil out of the ground.

Now the "central powers" have disappeared in the Ardmore District. Each well is equipped with its own unit pump, powered by its own elec-

Pumper H. T. Cornelius, below, flips the switch on one of the automatic electrical controls which are installed at each well.

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pump, the wel
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tric motor. A set of controls beside the well turns the pump on and off at intervals calculated to the well's best producing rate.

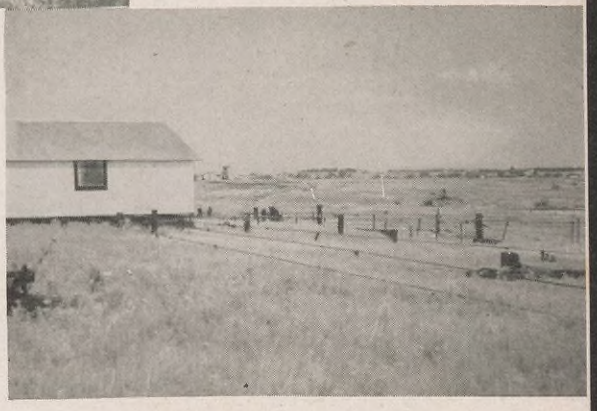
Installing better pumps and controls is only a part of the modernization program, however. The condition of each well is carefully analyzed. In addition to the installation of a unit pump, the well may be completely reworked, cleaned, or the producing formation may be given a hydraulic fracturing treatment to open up the formation and increase the flow of oil. One well which was producing 26 barrels a day, upped its output to a hundred barrels after it was worked over. Another well, which was completely redrilled, increased production from 18 to 312 barrels a day!

A number of new wells have been drilled in the fields as a part of the program. This new drilling, together with the rejuvenation of old wells, has increased Shell's production in the fields affected by 300 per cent since the program began late in 1951. It is due to go higher as the program is completed early in 1954.

Pumper G. R. Sizemore, left, stands beside the well head of the famous old Wirt-Franklin No. 1 well, the accidentally-located discovery well of the Healdton Field.

The 30-year-old wooden pump jack, left, has served its purpose and a modern pumping unit now serves the well.

Under the old pumping system now being replaced, a central power plant, right, pulled a series of pull rods to and fro. The motion worked the pumps.



The thirty-first and thirty-second in a new series of organization charts

Shell Oil Company

December — 1953

CHICAGO MARKETING DIVISION ORGANIZATION CHART

Manager
H. J. Underwood

Operations Manager
R. L. DeSpain

Sales Manager
G. E. Keister

Treasury Manager
F. C. Reeve

Marketing Service Manager
E. H. Quickert

Personnel Manager
A. S. Pentland

Real Estate Manager
M. W. Dischert

Division Engineer
J. T. Byrne

Superintendent Distribution
G. H. Delzell

Asphalt Manager
H. L. Tilton

Aviation Manager
G. J. Hammond

Commercial Manager
B. G. Ziv

Fuel Oil Manager
F. E. Malone

Chief Accountant
H. F. Schmid

Credit Manager
J. H. Ritter

Tax Representative*
I. S. Maxwell

Div. Rep., Public Rel. Advtg., Sales Prom.
R. L. Williams

Purchasing — Stores Supervisor
A. M. Gruenewald

Industrial Products Manager
W. H. Day

Retail Manager
H. O. Krass

Shellane Manager
G. V. Bortner

District Manager Chicago
M. V. Erickson

District Manager Green Bay
J. J. Berscheid

District Manager Milwaukee
J. A. Sheridan

District Manager Peoria
O. E. Siebenmann

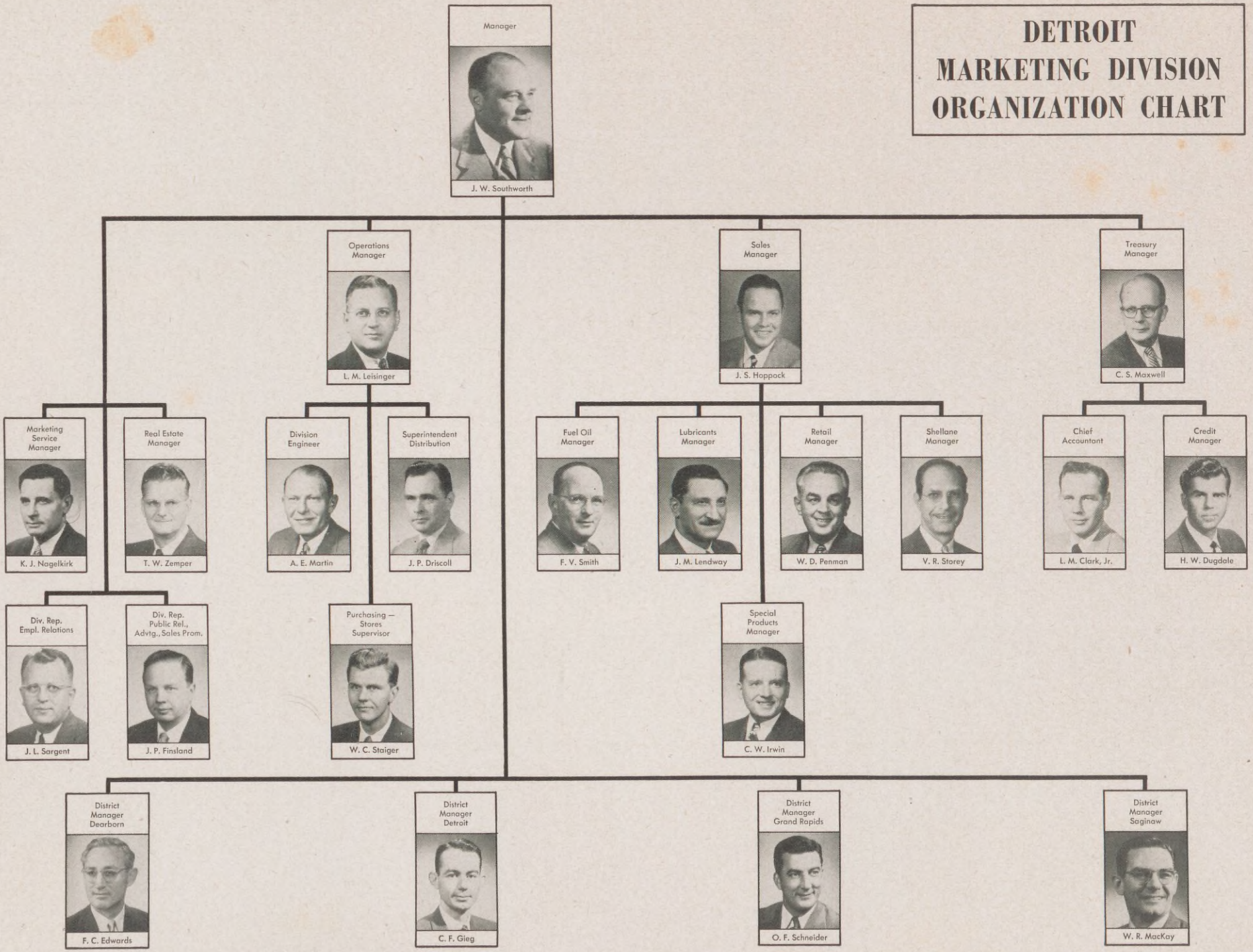
District Manager Rockford
E. E. Walker

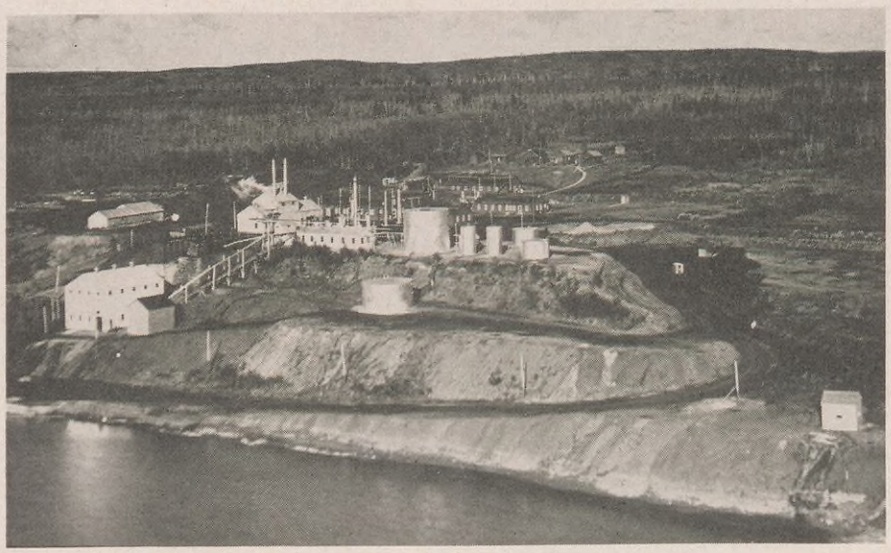
*Also serves Minneapolis Division

Manager

DETROIT MARKETING DIVISION

DETROIT MARKETING DIVISION ORGANIZATION CHART





The pilot plant of the Alberta Government Oil Sands Project, left, sits high on a bank of the Athabasca River at Bitumount, 300 miles north of Edmonton. It went on stream in 1948.

ATHABASCA: The Case of the Frustrated Oil M

One of the World's Greatest Potential Supplies of Oil Lies Exposed for All to See—Yet to Date It Has Defied Attempts to Develop It Commercially

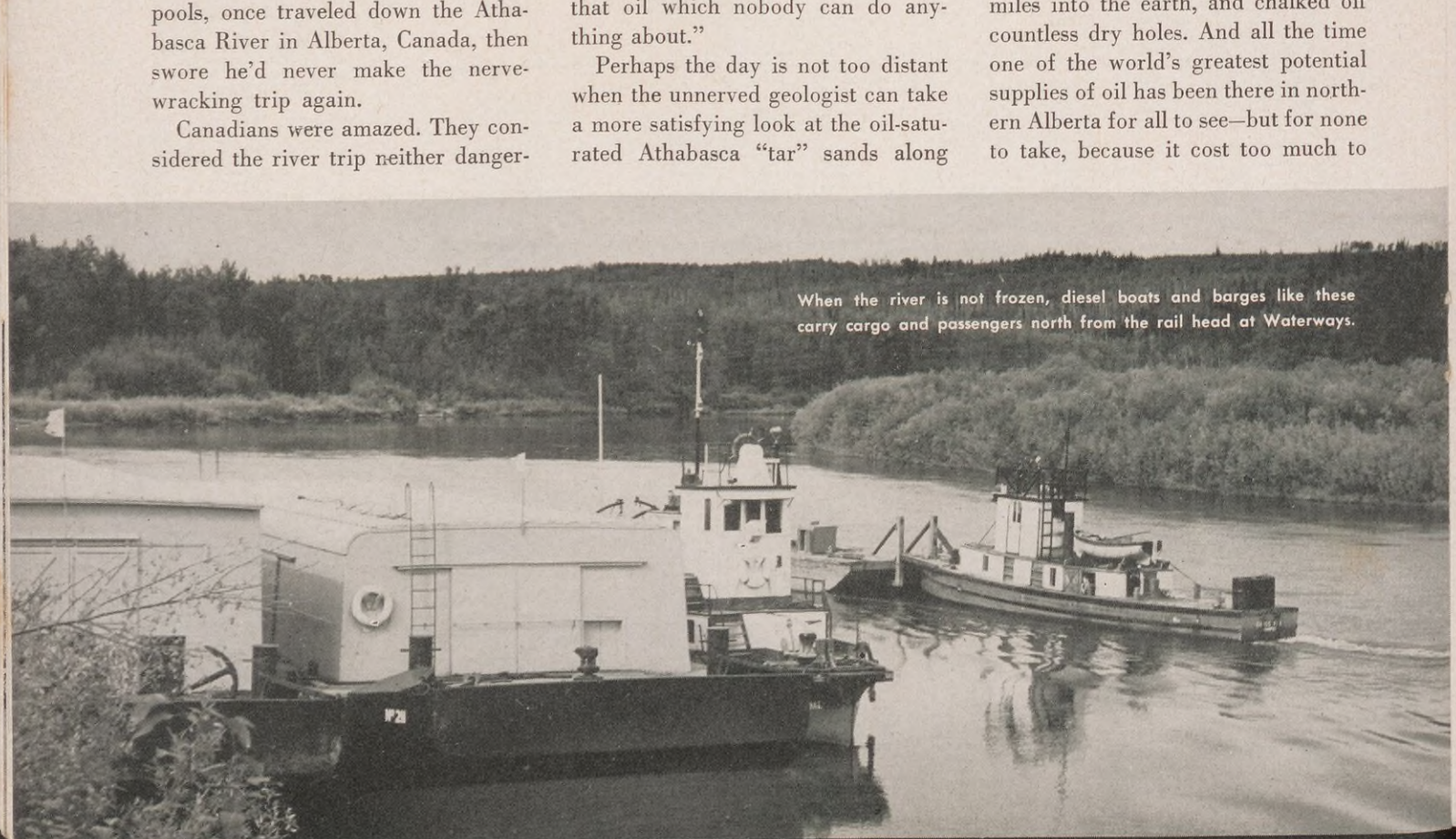
AS the story goes, an oil company geologist, who had roamed the world in search of elusive oil pools, once traveled down the Athabasca River in Alberta, Canada, then swore he'd never make the nerve-wracking trip again.

Canadians were amazed. They considered the river trip neither dangerous nor uncomfortable. That wasn't the point, the geologist said:

"I just can't stand the sight of all that oil which nobody can do anything about."

Perhaps the day is not too distant when the unnerved geologist can take a more satisfying look at the oil-saturated Athabasca "tar" sands along the river. Oil companies and the Provincial Government *are* doing something about them. On the basis of progress already made, some predict that oil can be profitably produced from the sands within the next five or ten years. It will take an initial ante of at least $50 million and a lot of hard work—but it can be done.

The fact remains, however, the Athabasca sands have been a source of frustration for oil men for a long, long time. They have toiled in jungle, desert, and out at sea searching for oil. They have drilled as deep as four miles into the earth, and chalked off countless dry holes. And all the time one of the world's greatest potential supplies of oil has been there in northern Alberta for all to see—but for none to take, because it cost too much to



When the river is not frozen, diesel boats and barges like these carry cargo and passengers north from the rail head at Waterways.

separate the molasses-like oil from the sand.

The gummy mass of sand forms a layer up to 200 feet in thickness, with outcroppings occurring over at least 3,000 square miles. The layer of sand is intermittently exposed to view along a hundred miles of the steep banks of the Athabasca River.

The sand bed may contain 100 million barrels of oil in a single square mile, and the Canadian Government estimates the content of the entire formation at about 100 billion barrels. Others who have tested and surveyed it raise this figure to as high as 300 billion barrels. The degree of frustration for oil men who have so far been unable to develop this vast oil reserve can be better understood in light of the fact that present *total world reserves* of "conventional" oil are approximately 120 billion barrels.

ed Oil Men

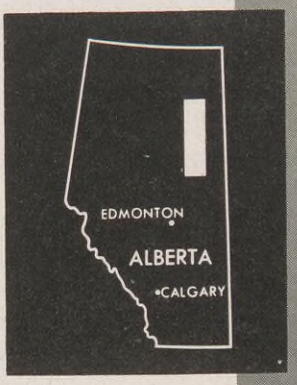
Although oil literally oozes from the Athabasca sands, there is not enough gas pressure in the sands to force it out in attractive amounts, and it defies pumping. For nearly 50 years, Canadian, American and European companies have attacked the stubborn sands—to no avail. All had the moral support, and in some cases the direct sponsorship, of the Dominion and Provinical Governments, because it would mean a great deal to Canada if this huge storehouse of oil could be unlocked.

In 1944, concerned over Canada's wartime oil supply situation, the Alberta Government appropriated funds for a pilot plant to study the feasibility of at least one of the suggested processes for extracting and refining the oil. Perched high on a bank of the Athabasca River at Bitumount, where the sand is only about eight feet below the surface, the plant uses a hot water process to get the oil out of the sand. It is estimated that this oil, on hydrogenation, will yield about 75 per cent gasoline and oil. Of the remainder, 10 per cent appears as gaseous hydrocarbons and 15 per cent as asphaltic material.

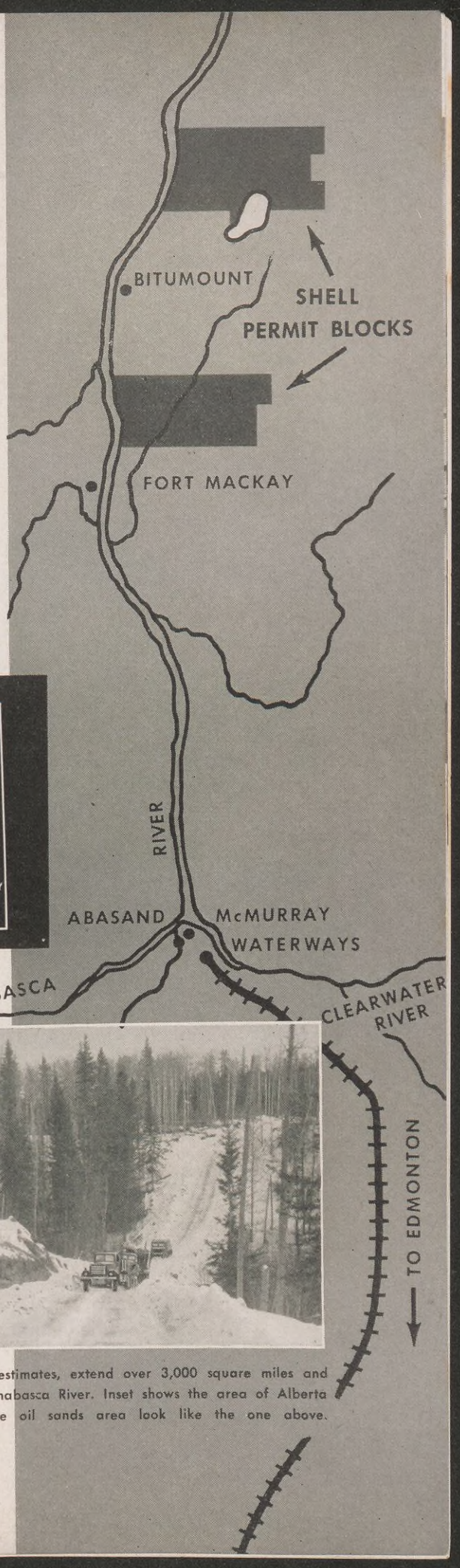
The first test runs made in the Bitumount plant in 1948 were rather disappointing in production. They were, however, highly fruitful from a research point of view, revealing a good deal of information on which was based new designs for some of the plant equipment. The improved plant gave fairly satisfactory results in 1949. The Provincial Government was able to demonstrate the feasibility of hot water extraction in the 500-tons-per-day pilot plant.

The results were at least good enough to renew oil company interest in the Athabasca region. In the last few years a number of Prospecting Permits have been taken on land bordering on the river—including two blocks of 50,000 acres each taken by Shell in 1952.

Meanwhile other methods of separating the oil and sand have been investigated. This year a newly-organized company announced



The oil sands, according to very conservative estimates, extend over 3,000 square miles and are exposed for a hundred miles along the Athabasca River. Inset shows the area of Alberta covered by the map. Shell-built roads in the oil sands area look like the one above.



it has a process involving centrifugal force and pressure which could do the job on a paying basis, and hopes soon to try it out. An American oil company, which has obtained otherwise "unrecoverable" heavy oil by setting underground formations afire, suggests its in-situ ("in place") combustion technique might convince the Athabasca sands to get a move on.

These three processes—hot water, centrifugal force, and subsurface firing—are aimed only at one of the biggest of many problems inherent in developing the Athabasca treasure.

Since the oil sands are near the surface, the easiest method of obtaining them is by strip mining. The scene above is at the Bitumount plant, where the clay, rocks and vegetation atop the sand bed are only eight feet thick. In some areas the layer of oil sand is as much as 200 feet thick.

They are designed to get the crude oil out of the sand. From that point, the problems of refining the crude into products loom enormously because of the nature of the oil.

For one thing, the Athabasca oil has a sulfur content averaging about 5 per cent by weight. When it is realized that anything over one per cent calls for special and costly processing, the sourness of the oil presents a bitter problem. Refining experts figure that extracting the sulfur would constitute about half the cost of processing the oil. On the other hand, the potential reserve of sulfur—if it can be recovered—is very large.

Another problem is the presence in the oil of heavy minerals like silver, nickel and vanadium. They add up to less than 5 per cent by weight, but they also add up to some large scale processing headaches that will require a great deal of pilot plant work before profitable refining can be attained for the Athabasca oil.

Oil companies with holdings in the Athabasca region have not been sitting on their hands while the snags are being worked out of processing techniques. Several companies, including Shell, have spent the last year evaluating their holdings and getting better ideas about their potentialities.

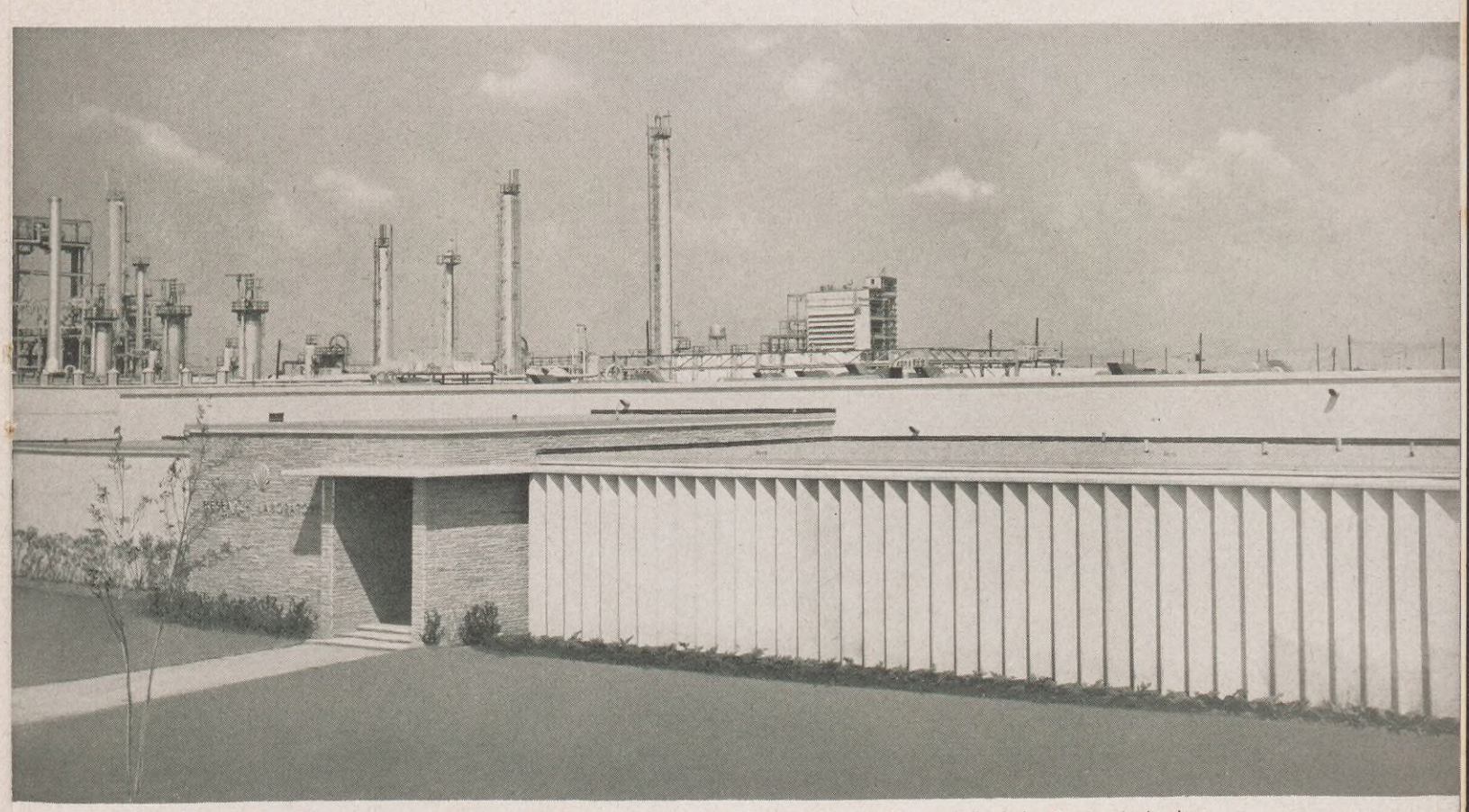
Last February a Shell exploration party established a base camp near the Bitumount air strip, 300 air miles north of Edmonton, then drilled two experimental core holes in Shell's oil sand exploration permits. The main purpose of this expedition was to obtain information valuable in deciding the best method to proceed with further reconnaissance in the area.

With a plan drawn, and 75 miles of road constructed through the wilderness, Shell moved in a contract rig and crew and had a reconnaissance drilling program under way by mid-July. Drilling equipment, vehicles and supplies went by rail from Edmonton to the rail head at Waterways, then by boat and barge down the Athabasca River to Bitumount. When drilling operations switched from one Shell reservation to the other, it took a "cat" train two days to move the equipment the 40 miles.

Even if production and processing plans work out, there are other big problems ahead for developers of the oil sands. The Athabasca reserves, big as they may be, are still far from striking distance of any sizable market. A pipe line would have to be laid over rugged country to Edmonton where the oil could tie into existing trunk lines.

According to the most detailed and authoritative study yet made into the practical aspects of developing the vast Athabasca reserves, a processing plant capable of handling 20,000 barrels of oil per day would be the minimum requirement for economic operation in the light of present knowledge. The capital required for such a plant and its auxiliary equipment would be approximately $42 million. It would take another $2 million worth of equipment to mine the oil sands in sufficient volume to supply the plant; and the pipe line to Edmonton would cost something in the neighborhood of $5 million.

That's not chicken feed, even when the possible reward is so big. But if worked out, development of the Athabasca oil sands can add enormously to Canada's crude oil reserves.



Shell Chemical's new research laboratory building adjoins the Houston Plant, but will serve all of the Corporation's plants.

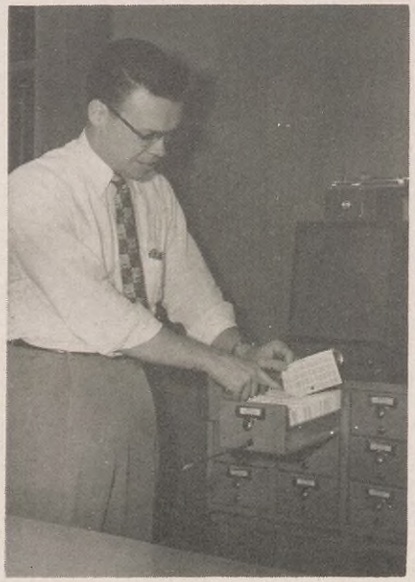
Research Staff Steps Out

SHELL Chemical's research staff at the Houston Plant, pressed for elbow room, has moved out of the Plant's main office building and into its own building which is designed and equipped for investigation of the chemical and physical principles of chemical manufacture. The work of the staff, which serves all Shell Chemical plants, deals with long range studies on plant products and processes.

Current studies include the processes for manufacturing glycerine, ethyl alcohol, isopropyl alcohol, sec-

Laboratory Director John Anderson, extreme left, discusses a research project with George F. Johnson, Process section leader, center, and Richard E. Wright, Physical and Theoretical section leader. Organic and Pilot Plant sections are also in the laboratory's organization.

Shell Chemical Moves Its Houston Research Laboratory Into A Modern New Building



Microfilmed pages of hundreds of books and journals above, augment the laboratory's extensive technical library. Chemist Robert E. Burge, Jr., above, holds a file card which has on it 48 pages of microfilmed printed matter.

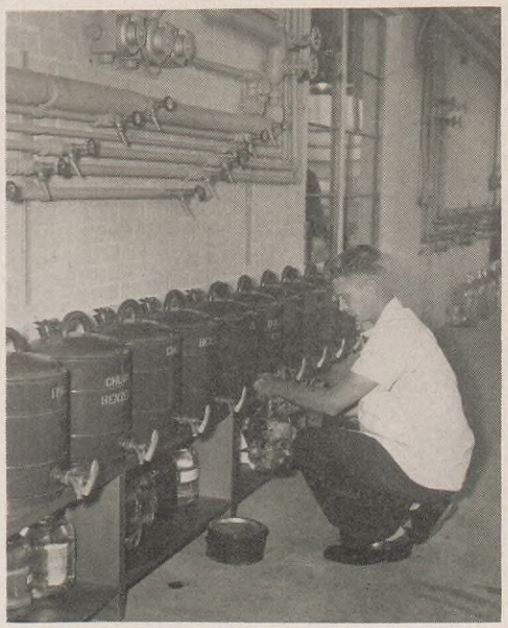
ondary butyl alcohol, and EPON* resins, and of bisphenol, an industrial chemical soon to be manufactured at Houston. The laboratory is not called on to solve short-range plant problems nor to do trouble-shooting work.

The staff is divided into four sections of study: 1) Physical and Theoretical, 2) Process, 3) Organic, and 4) Pilot Plant. The last named will not be fully equipped until early in 1954. Given, for example, an experiment such as finding a better catalyst for manufacturing ethyl alcohol, the four groups would operate like this:

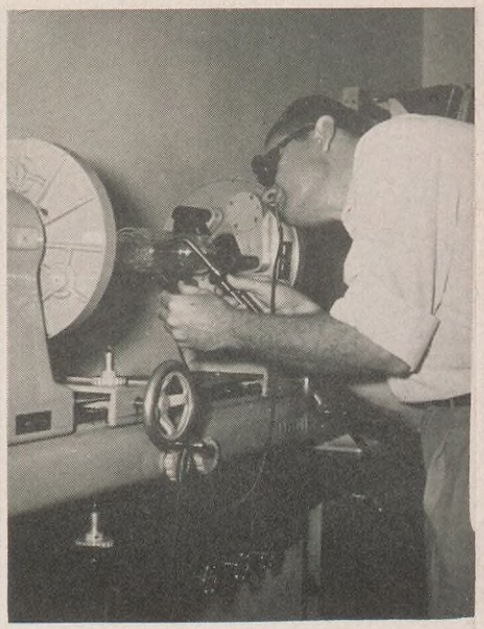
The Physical and Theoretical section would study the part played in the process by the surface of catalysts. Process would test likely new catalyst materials. Organic would study the chemistry of reactions occurring in the process with each catalyst under consideration. And Pilot Plant would carry out large scale testing of new catalysts to obtain performance data.

The new laboratory has been occupied since September. The pictures on these pages show some of the staff putting their equipment to use.

* Registered Trademark, U. S. Patent Office

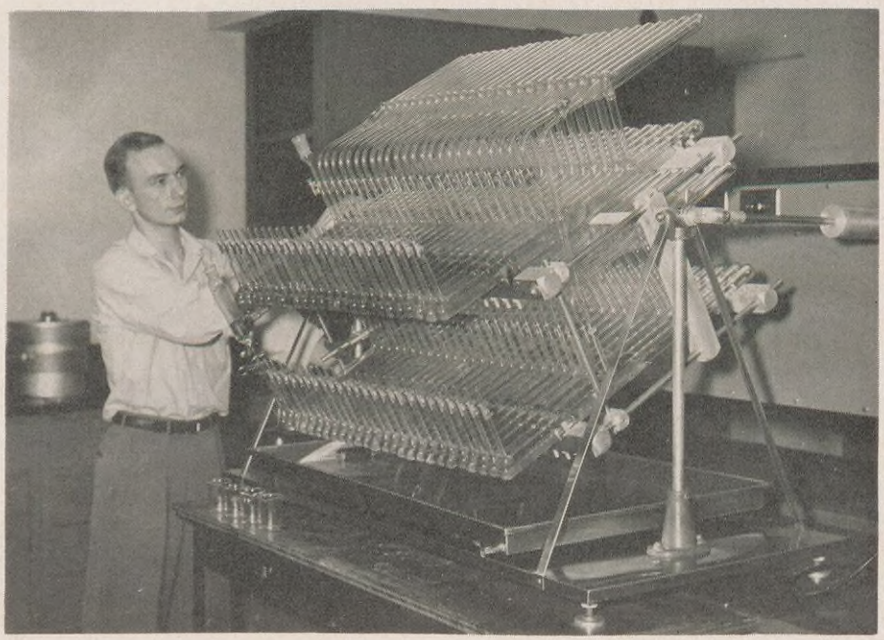


Volatile materials are stored on an open porch, and solvents and other products used in large amounts are piped into the laboratory instead of being hauled in individual containers. Here Chemist Gordon L. Overbey draws a small amount of solvent for an experiment. Pipes above him provide outlets for steam and other utilities.



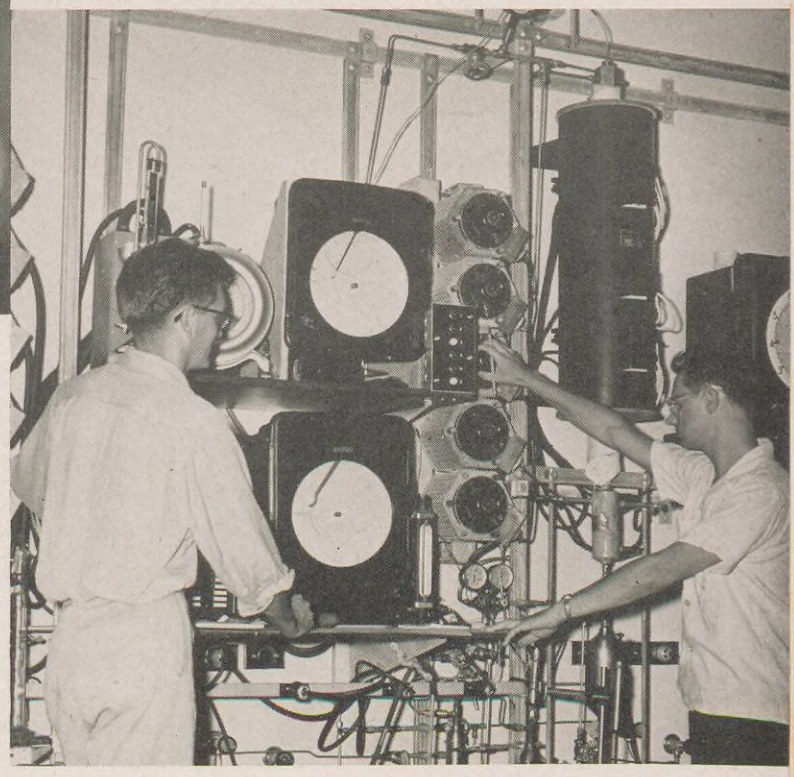
Chrest Johnson, glass blower and equipment curator, above, shapes a glass condenser for a distillation column in the glass blowing room. The miniature apparatus is used in small-scale laboratory units.

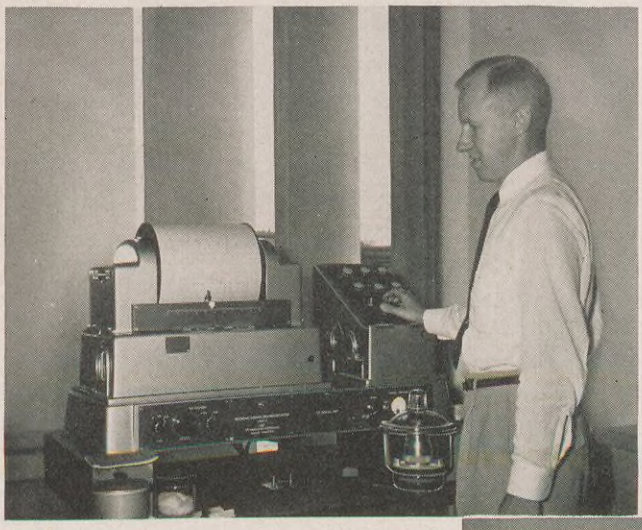
Chemist Robert J. Shrontz, below, operates a 50-tube Counter-Current Extractor, which is used to isolate the components of a solution. Some major problems have been solved in this laboratory.



Ice is used in obtaining many chemical reactions and the laboratory maintains a constant supply with an automatic ice-making machine, right. Chemist Gordon Overbey gets a fresh supply.

In the Process section, small bench scale units such as the one below simulate full-scale commercial operation in chemical plants. The particular unit shown makes ethyl alcohol. The operators are Chemists Don Weaver, left, and Richard J. Bigda, Jr.





In the instrument laboratory, above, Chemist Gerald B. Carter adjusts a Recording Infrared Spectrophotometer as it records the spectrum of a sample under study. The well-equipped instrument laboratory does analytical work for the Process and Organic sections.

Safety is a keynote in design and construction of the laboratory, where certain volatile materials are handled. Where sparks might occur, equipment has explosion-proof coverings, like the telephone used here by Chemist James T. Stokes.

It Cleans As It Lubricates

Shell Begins Marketing a New Lubricant That "Eats" Engine Dirt

FOR the unhappy motorist whose car engine is sluggish and clogged with dirt—or even for the driver who takes fairly good care of his car but doesn't like to take the time for periodic overhauls—Shell now has a versatile new product that doubles in brass both as a lubricant and an engine cleaner. Called Shell Engine Conditioning Oil, it actually cleans your engine while you drive.

Shell Engine Conditioning Oil is not intended as a replacement for good quality lubricants, like Shell X-100. It was designed specifically for car engines which have developed excessive deposits due to 1) inferior oils, 2) neglect of proper oil changes, and 3) for engines which have been subjected to adverse operating conditions, such as continuous short-trip, cold-engine driving. The new oil isn't a "dope" or "flushing oil." Instead, it is a finished lubricant that "conditions" engines while they are running by removing varnish and other deposits. This makes it ideal for putting dirty, sluggish and noisy engines back into good operating condition.

The new oil does its job by "digesting" varnish and deposits. It does it *gradually* and is generally effective when used for about 1,000 miles. Since engine deposits are slowly digested in the oil, there is no danger of them dropping suddenly, thus plugging screens and oil lines.

Shell Engine Conditioning Oil is the result of research studies made at Shell research laboratories. A number of rigid tests were conducted by laboratory personnel before the final product was turned over to the Products Application Department for field trials. Last February samples of the lubricant were distributed to selected dealers and customers in the Chicago and Detroit Marketing Divisions with the request that they try the oil and give Shell's Marketing people their frank opinions of the results. The reports were overwhelmingly favorable, and Shell began marketing the new lubricant on a nation-wide scale. All Shell dealers were selling it by last October. At present it is being compounded and canned at the Martinez and Wood River Refineries and at the Sewaren Compounding Plant.

Among the most favorable reports turned in on Shell Engine Conditioning Oil during its test period were those of truck fleet operators, whose trucks logged a great deal of stop-and-go mileage. This type of "cold engine" driving contributes substantially to the build up of engine deposits. In fact, recent tests show that in winter it takes 14 miles or more of city driving to heat motor oil to normal operating temperature.

Another group reporting good results from Shell Engine Conditioning Oil were used car dealers. They found that often they could bring sluggish engines into good operating—and salable—condition merely by using the new oil. On the other hand, one private motorist who planned to trade in his car because of chronic valve lifter trouble, changed his mind after using Shell's new oil. In another case of valve lifter sticking, the crankcase was filled with Shell Engine Conditioning Oil and the filter replaced. Then the car was parked outside the service station and the engine run at a fast idling speed for two hours. At the end of that time all lifters were free. The owner later reported the engine ran "like new."

The new oil comes in two grades: SAE 10W and SAE 20-20W. For the best results, the following procedure is recommended: Drain oil while the engine is still at operating temperature. Refill with Shell Engine Conditioning Oil and operate for 1,000 miles. Drain and refill with Shell X-100 Motor Oil. In extreme cases, it may be necessary to repeat this procedure for maximum results.


A. J. BEAN
Wood R
Engir

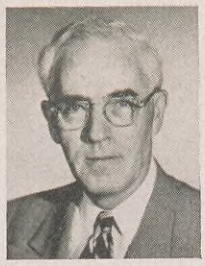

A. D
Pacific C
Prod


M. J. J
Wood R
Engin


L. E. N
Wilming
Engin

They Have Retired

A. J. BEANBLOSSOM
Wood River Refy.
Engineering



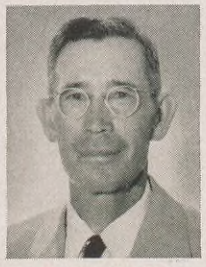
P. J. BONE
Head Office
Personnel

C. C. BRIGGS
Tulsa Area
Production

C. J. BROWN
Martinez Refy.
Engineering

B. R. BURLESON
Houston Refy.
Treating

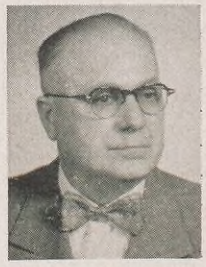
A. DeGEUS
Pacific Coast Area
Production



T. L. FULLER
Midland Area
Production

E. A. GASPARD
New Orleans Area
Production

J. O. HAMMOND
Wood River Refy.
Compounding



J. E. HOLGATE
Boston Div.
Operations

M. J. JENKINS
Wood River Refy.
Engineering

F. M. JONES
Tulsa Area
Production

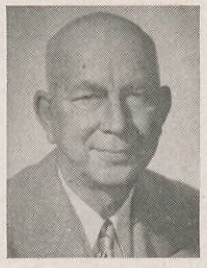
A. A. KOCHERY
Products Pipe Line
East Chicago, Ind.

P. H. KOLLEWIJN
Martinez Refy.
Econ. & Scheduling

J. B. LOVELLO
Martinez Refy.
Compounding

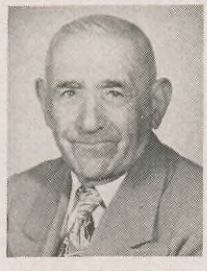
L. E. NORTON
Wilmington Refy.
Engineering

J. W. PALMER
Los Angeles Div.
Operations

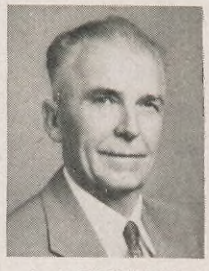


R. M. PENDLETON
Pacific Coast Area
Production

H. R. RAINES
Wood River Refy.
Distilling



M. G. ROMANO
Martinez Refy.
Compounding



S. J. TIPSWORD
Wood River Refy.
Fire & Safety

coast to coast

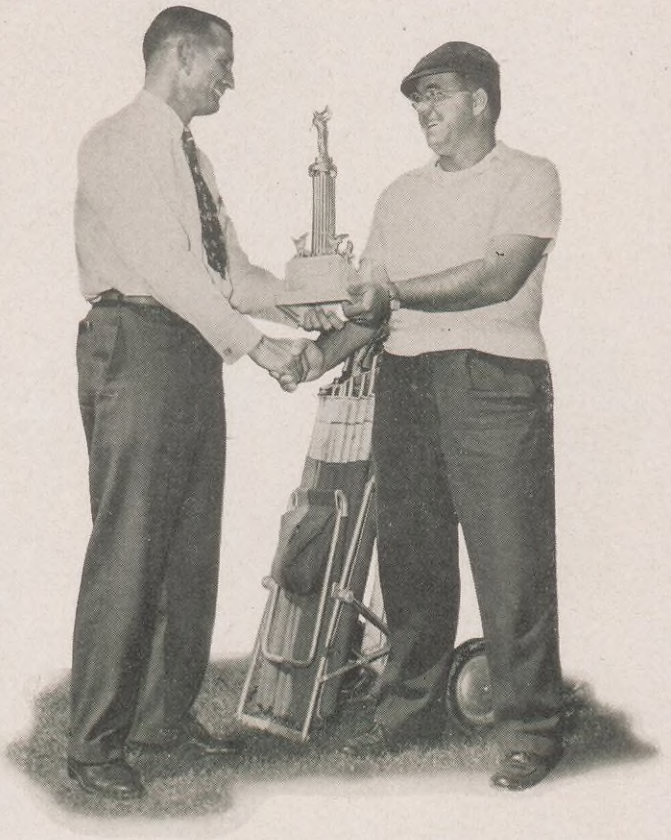
The Albany Marketing Division Mixed Bowling League opens its season at an Albany bowling alley. L. to r., are Ann Heidleman, Joe Metzger, League President Bob Stanton, Phillis Allen, Jack Houghton and Dick Whitaker.

F. L. Zeller, Aviation Manager of the Seattle Marketing Division, has been elected to the board of directors of the International Northwest Aviation Council.

Shown below are some 200 employees of Shell Pipe Line's Odessa Division celebrating, with their families, the achievement of a safety record of more than 2,250,000 consecutive man hours worked without a lost time accident during the last 5½ years, the finest division safety record in Shell Pipe Line history.

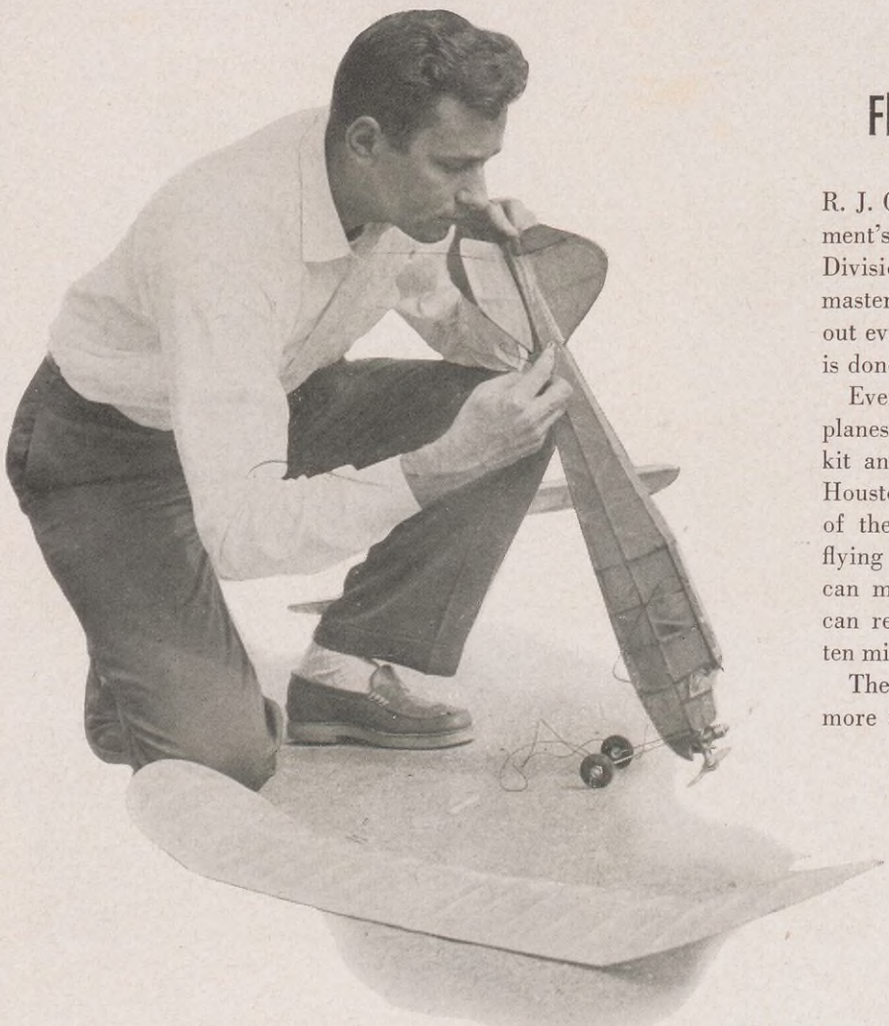
Josephine M. Kelley, of the Personnel and Industrial Relations Department, Shell Chemical Plant, Houston, was recently named as one of the "Glamour Girls" on an NBC Television show originating in Hollywood where she spent her vacation. In this picture, Miss Kelley poses among jewels, perfume, clothes and other attractive prizes she won for appearing on the show.

Shown above are a few of the 456 Norco Refinery employees with 10 or more years of service, along with the 22 pensioners and several guests, as they attended a Service Club Banquet in New Orleans during mid-October.



It's a shiny trophy for smiling Ralph Redburn, Jr., right, Draftsman from the Pacific Coast E & P Area, for winning the Men's Golf Championship of Casper, Wyoming. Making the presentation is Geologist William Finch of the Denver E & P Area, who is a past president of the Casper Community Golf Club.

Robin Douglas, Senior Clerk, Calgary Exploration and Production Area is an active cricket player on the Shell Chinook Eleven. He has been asked to join a Canadian team which has been invited by the Marlyebone Cricket Club of England to visit the British Isles—a high honor in cricket circles.



Flying By Remote Control

R. J. GRABOWSKI, a Chemist in Shell Development's Exploration and Production Research Division at Houston, is a veteran pilot who has mastered loops, rolls and other maneuvers without ever taking his feet off the ground. His flying is done with radio-controlled model airplanes.

Every Sunday, Bob loads his car with his two planes, a radio transmitter antenna and a tool kit and joins a group of enthusiasts outside of Houston for some friendly competition. The skill of the pilot is determined by his precision in flying and landing, the number of acrobatics he can manipulate and the distance and height he can reach. The average flight lasts from five to ten minutes, flying to altitudes of 500 to 1000 feet.

The smaller of Bob's two planes, a veteran of more than 300 flights, is considered one of the best in Houston. He does not buy his planes ready-made but makes his own. He figures it takes him about two weeks' spare time at night for the construction of one plane.

The Houston Area's Corpus Christi Shell Club recently elected several new officers for the season. Shown, below, at their first business meeting, the officers are: (left to right) A. A. Alvarez, vice president; Antoinette Haney, secretary; V. E. Liles, president; Sara Allison and R. W. Rees, directors.

S

J. B. BR
Pacific Co
Produc

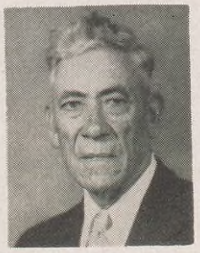
F. J. HU
Wood Riv
Gas

R. W. RU
Head O
Financ

H. W. A
Houston
Engine

Service Birthdays

Thirty-Five Years

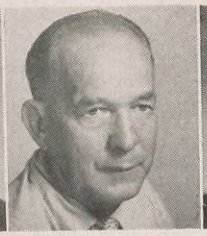


J. RAYMOND
Wood River Refy.
Dispatching

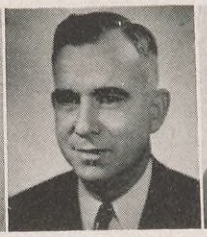
Thirty Years

J. B. BRYANT
Pacific Coast Area
Production

J. T. CHAMBERLIN
Wilmington Refy.
Alkylation



W. B. COURTRIGHT
Pacific Coast Area
Production



A. B. CULBERTSON
Head Office
Manufacturing

L. A. EBAUGH
Pacific Coast Area
Production

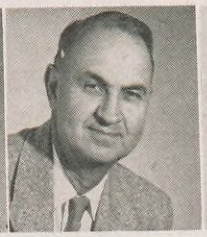
C. J. GILSETT
Pacific Coast Area
Production

W. G. HILL
Pacific Coast Area
Production

F. J. HUBER
Wood River Refy.
Gas

D. L. KORTE
Wood River Refy.
Control Laboratory

E. D. OBARR
San Francisco Div.
Marketing Service



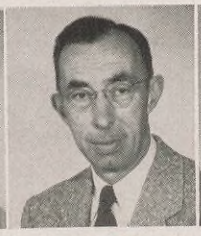
S. P. PICKETT
Wilmington Refy.
Technological

L. C. RAY
New Orleans Div.
Sales

R. F. RHOADS
Norco Refinery
Cracking

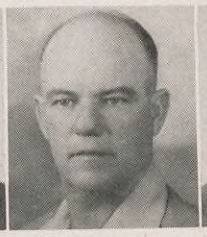
R. V. ROBERTS
Wood River Refy.
Engineering

R. W. RUSSELL
Head Office
Financial

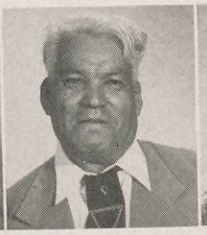


A. W. SHEPPARD
Wilmington Refy.
Dispatching

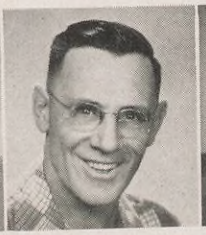
R. M. SMITH
New Orleans Area
Gas



L. D. H. SPAULDING
Wood River Refy.
Dispatching



J. VENTURA
Wilmington Refy.
Engineering



W. J. WALBRIDGE
Pacific Coast Area
Production

C. L. WILLIAMS
Pacific Coast Area
Production

Twenty-Five Years

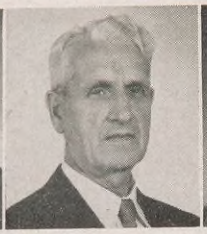
H. W. ADAMS
Houston Refy.
Engineering

H. W. AMERINE
Martinez Refy.
Engineering

D. N. BEERS
Sacramento Div.
Treasury

P. J. BENNES
Wood River Refy.
Alkylation

J. E. BURKE
Pacific Coast Area
Production



R. H. CARDWELL
Wilmington Refy.
Distilling

W. C. CHONETTE
Pacific Coast Area
Production

Twenty-Five Years (cont'd)

E. CHRISTIANSEN
Seattle Div.
Operations

H. P. CHRISTOFFERSEN
Portland Div.
Sales

J. D. CLARK
Pacific Coast Area
Production

R. R. COOPER
Houston Refy.
Treating

J. F. DANIELS
Martinez Refy.
Compounding

L. P. EDWIN
Shell Chemical Corp.
Torrance Plant

J. W. EMERICK
Shell Pipe Line Corp.
Texas-Gulf Area

C. S. FARRIS
Tulsa Area
Production

W. B. FILMER
San Francisco Office
Financial

E. W. FINK
Pacific Coast Area
Production

H. N. FRICKS
Houston Refy.
Engineering

E. S. GATEWOOD
Shell Pipe Line Corp.
Mid-Continent Area

L. H. GIBSON
Shell Pipe Line Corp.
Texas-Gulf Area

D. W. GOLDSMITH
Houston Refy.
Cracking

J. R. GONZALES
Norco Refy.
Engineering

H. R. GRAHAM
Tulsa Area
Production

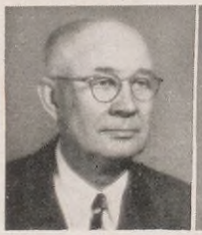
J. H. GRIFFEY
Houston Refy.
Engineering

H. P. GRINE
Tulsa Area
Exploration

C. H. HACKE
Wood River Refy.
Experimental Lab.

T. D. HARRIS
Houston Refy.
Gas

W. W. HAWKINS
Wood River Refy.
Fire & Safety



A. H. HOEKE
Shell Pipe Line Corp.
Texas-Gulf Area

W. T. HUBER
Shell Pipe Line Corp.
Texas-Gulf Area

J. W. LaBOON
Shell Pipe Line Corp.
Mid-Continent Area

J. R. MacLEAN
Los Angeles Office
Transp. & Supplies

A. J. MONTZ
Norco Refy.
Laboratory

G. A. MORRISON
Shell Pipe Line Corp.
Texas-Gulf Area

R. P. OLSON
Baltimore Div.
Purchasing-Stores

H. M. POLAND
Pacific Coast Area
Production

A. L. PORTER
Seattle Div.
Operations

R. O. PRICE
Seattle Div.
Operations

J. E. RAMAGE
Pacific Coast Area
Production

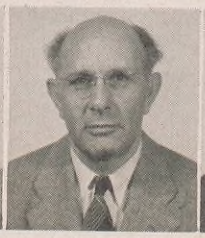
R. N. RANDALL
Shell Pipe Line Corp.
Mid-Continent Area

R. F. ROBINSON
Tulsa Area
Production

H. E. ROUSSEL
Norco Refy.
Cracking

Twenty-Five Years (cont'd)

R. B. SAY
Tulsa Area
Production

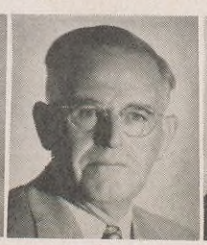


A. A. SCHAERER
Shell Development Co.
Emeryville

A. H. SCHEU
Head Office
Financial

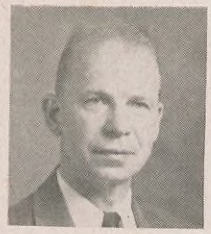
G. B. SMITH
Norco Refinery
Pers. & Indus. Rel.

C. H. STEWART
Head Office
Financial

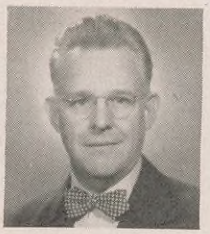


W. S. TIPPINS
Pacific Coast Area
Production

P. A. TORRES
Norco Refy.
Marine Loading

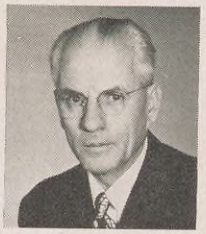


J. VASEY, JR.
Wood River Refy.
Engineering



W. W. VOGT
Tulsa Area
Treasury

R. T. WADE, JR.
Norco Refy.
Engineering



V. B. WHITELY
Wilmington Refy.
Control Laboratory

M. WILLIAMS
Pacific Coast Area
Production

G. WOLFE
Wilmington Refy.
Engineering

SHELL OIL COMPANY

Head Office

20 Years

F. Preu ..... Marketing

10 Years

K. F. Beaton ..... Public Relations
Ann M. Smith ..... Financial

San Francisco Office

20 Years

Lenore R. Martin ..... Manufacturing

Exploration and Production

TECHNICAL SERVICES DIVISION (HOUSTON)

20 Years

J. Chalmers ..... Manager

HOUSTON AREA

20 Years

J. E. Darby, Jr. ..... Land
W. D. Langridge ..... Production
A. Newcomer ..... Legal

10 Years

E. A. Brown ..... Production
B. D. Carr ..... Production
L. A. Cooper ..... Production
R. L. Dodson ..... Production
S. Holland ..... Production
I. F. Jackson ..... Production
S. C. McKnight ..... Production
P. C. Mintrea ..... Production
C. A. Prince ..... Production
G. Stephenson ..... Automotive
O. T. Thornberry ..... Production
A. N. Tise ..... Production
S. F. Willis ..... Production

MIDLAND AREA

10 Years

V. O. Bowden ..... Production
M. K. Main ..... Production

NEW ORLEANS AREA

20 Years

D. E. Jordan ..... Land
C. E. Lay ..... Production
G. A. Tanoos ..... Production

15 Years

R. W. Farlee ..... Exploration
M. G. LaBranch ..... Production
J. P. Landry ..... Production

10 Years

P. Eisenstatt ..... Exploration

PACIFIC COAST AREA

20 Years

C. Barnett ..... Production
E. F. Codner ..... Production
Grace F. Wilder ..... Exploration

15 Years

B. P. Eastin ..... Production

10 Years

O. C. Bibby ..... Production
D. L. Goodman ..... Production
J. R. Robinson ..... Production
L. B. Wilson ..... Production

TULSA AREA

20 Years

R. C. Hull, Jr. ..... Production
R. E. Morris ..... Production

15 Years

L. N. Lain ..... Legal
V. Straughn ..... Gas

10 Years

W. R. Donohew ..... Automotive
R. B. Jones ..... Production
N. E. Rethard ..... Treasury

Manufacturing

HOUSTON REFINERY

20 Years

J. F. Fairleigh, Jr. ..... Distilling
H. D. Smith ..... Engineering
T. B. Viser ..... Engineering

15 Years

I. B. DeWalt ..... Engineering
J. B. Moyers ..... Distilling
J. J. Sandifer ..... Engineering

10 Years

E. Adams ..... Engineering
R. Baker ..... Gas
G. C. Blystone ..... Lubricating Oils
N. Brown ..... Engineering
L. Burnett ..... Engineering
J. C. Cargill ..... Engineering
E. G. Carlson, Jr. ..... Research Laboratory
C. C. Cole ..... Automotive
J. M. Deveraux ..... Engineering
D. R. Dowdy ..... Cracking
J. A. Dowdy ..... Engineering
L. Hinton ..... Engineering
L. J. Landry ..... Technological
H. Mayfield ..... Engineering
J. Payne ..... Engineering
W. T. Price ..... Engineering
W. Rasmus ..... Engineering
R. D. Rice ..... Control Laboratory
E. Stevens ..... Engineering
L. Wallace, Jr. ..... Engineering

MARTINEZ REFINERY

20 Years

P. Censoplano ..... Compounding
C. H. Essig ..... Engineering

15 Years

L. E. Ford ..... Engineering

10 Years

C. Lucchesi ..... Compounding

NORCO REFINERY

20 Years

G. M. McCawley ..... Treasury

15 Years

A. V. Lorio ..... Engineering

10 Years

L. J. Heurtin ..... Gas
I. J. Laiche ..... Distilling
J. E. Munson ..... Engineering
L. Perilloux ..... Distilling
H. J. Waguespack ..... Marine Loading

WILMINGTON REFINERY

20 Years

J. R. Zoeter ..... Control Laboratory

10 Years

H. W. Aton ..... Cracking
F. J. Eversfield ..... Cracking
G. S. Merkley ..... Engineering
C. E. Purcell ..... Dispatching

WOOD RIVER REFINERY

20 Years

H. D. Carter ..... Utilities
C. K. Freezeland ..... Engineering
T. R. Pink ..... Engineering
O. R. Simpson ..... Compounding

15 Years

W. R. Cavner ..... Engineering
B. C. Gibbons ..... Engineering
T. A. Hargiss ..... Engineering
L. A. Hopkins ..... Engineering
G. M. Jaynes ..... Engineering
D. K. Konko ..... Engineering
L. C. Lain ..... Engineering
H. F. Little ..... Engineering
J. W. Lucas ..... Engineering
W. K. Miller ..... Engineering
L. H. Rohde ..... Engineering
R. Travis ..... Engineering
L. F. Waters ..... Stores
O. E. Williams, Jr. ..... Engineering

10 Years

J. Bonifer, Jr. ..... Engineering
R. W. Cress ..... Engineering
J. N. Healey ..... Dispatching
A. Jackson ..... Engineering
J. T. Loftis ..... Stores
L. E. Ornellas ..... Dispatching
J. H. Petri, Jr. ..... Engineering
O. A. Rutz ..... Compounding

Marketing

MARKETING DIVISIONS

20 Years

J. R. Fabre ..... Albany, Sales
W. L. Shaw ..... Albany, Operations
A. P. Kalf ..... Boston, Sales
L. G. Savoy ..... Boston, Operations
L. A. Weston ..... Boston, Sales
B. G. Ziv ..... Chicago, Sales
H. W. Schreiner ..... Cleveland, Sales
H. W. Zielke ..... Cleveland, Operations
H. Ray ..... Los Angeles, Sales
A. Thailer ..... New York, Operations
A. J. Shirley ..... San Francisco, Sales

15 Years

R. C. Higginbotham ..... Atlanta, Sales
B. E. Scanlon ..... Boston, Operations
J. Sanschlager ..... Chicago, Operations
E. Pokan ..... Cleveland, Treasury
H. F. Zink ..... Cleveland, Sales
W. D. Anderson ..... Los Angeles, Operations
C. U. Churchill ..... New York, Operations
J. G. Sarkies ..... Seattle, Treasury

10 Years

O. E. Blackden ..... Boston, Operations
R. J. Forst ..... Chicago, Operations
J. Weber ..... Cleveland, Operations
E. C. Pownall ..... Indianapolis, Operations
Elizabeth P. Walker ..... Los Angeles, Treasury
R. D. Fitzpatrick ..... Minneapolis, Operations
H. Markert ..... Minneapolis, Operations
B. P. Trembley ..... Minneapolis, Sales
F. G. Orth ..... New York, Treasury
H. V. Roberts ..... Seattle, Operations

SEWAREN PLANT

20 Years

T. F. Kath ..... Terminal

15 Years

N. A. Kelly ..... Engineering & Maintenance

Products Pipe Line

15 Years

J. H. Jackson ..... Carbon, Ill.

SHELL CHEMICAL CORPORATION

20 Years

M. M. McMahon ..... Torrance

15 Years

M. H. Thurmond ..... Dominguez

10 Years

H. L. Parry ..... Head Office
F. L. Barr ..... Houston
J. W. Eberman ..... Houston
L. F. Gaines ..... Houston
R. B. Hanning ..... Houston
C. C. McCullough ..... Houston
D. A. Limerick ..... Torrance
Virginia M. Rogers ..... Western Division

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20 Years

C. L. Merkel ..... Julius Hyman & Company

SHELL DEVELOPMENT COMPANY

20 Years

R. A. Pratt ..... Emeryville

15 Years

A. J. Ginther ..... Emeryville
W. A. Landon ..... Emeryville
S. Z. Perry ..... Emeryville

10 Years

P. L. Datt ..... Emeryville

SHELL PIPE LINE CORPORATION

20 Years

C. H. Evans ..... Mid-Continent Area
W. C. Harrison ..... West Texas Area

10 Years

R. H. West ..... Mid-Continent Area

Gas station losing battle with thieves

By David Scruggs

OF THE SENTINEL STAFF

MERRITT ISLAND — One time, they got away with 37 kegs of beer, 30 cases of wine, all the cigarettes, a microwave oven and the sandwiches that went with it.

They almost always get away.

Over the past five years, there have been about 30 burglaries at the Rochette Shell station. Manager John Toscano, 49, estimates he has lost about 35 tires. He has lost count of how many cartons of cigarettes, kegs and cases of beer and wine have disappeared through windows broken on other nights.

Maybe $10,000 worth, he guessed. Marie Rochette, who owns the station on North Courtenay Parkway, said, "No matter what it is, it's too much."

Toscano said he can recall the Brevard County Sheriff's Office making only one arrest.

Rochette said, "They take fingerprints and gather evidence and all those nice things, but we never hear of anyone being arrested."

"I don't know how the system works," Toscano said, "but I personally don't think it works worth a damn."

Maj. Tommy Edwards, commander of the central precinct, said Toscano's business is "sitting in an active area. A great majority of those [burglaries] are what we call 'smash and grabs.' There's no crime scene, there's no nothing."

Edwards said he has five deputies, sometimes fewer, available to work the Merritt Island and central mainland midnight shift.

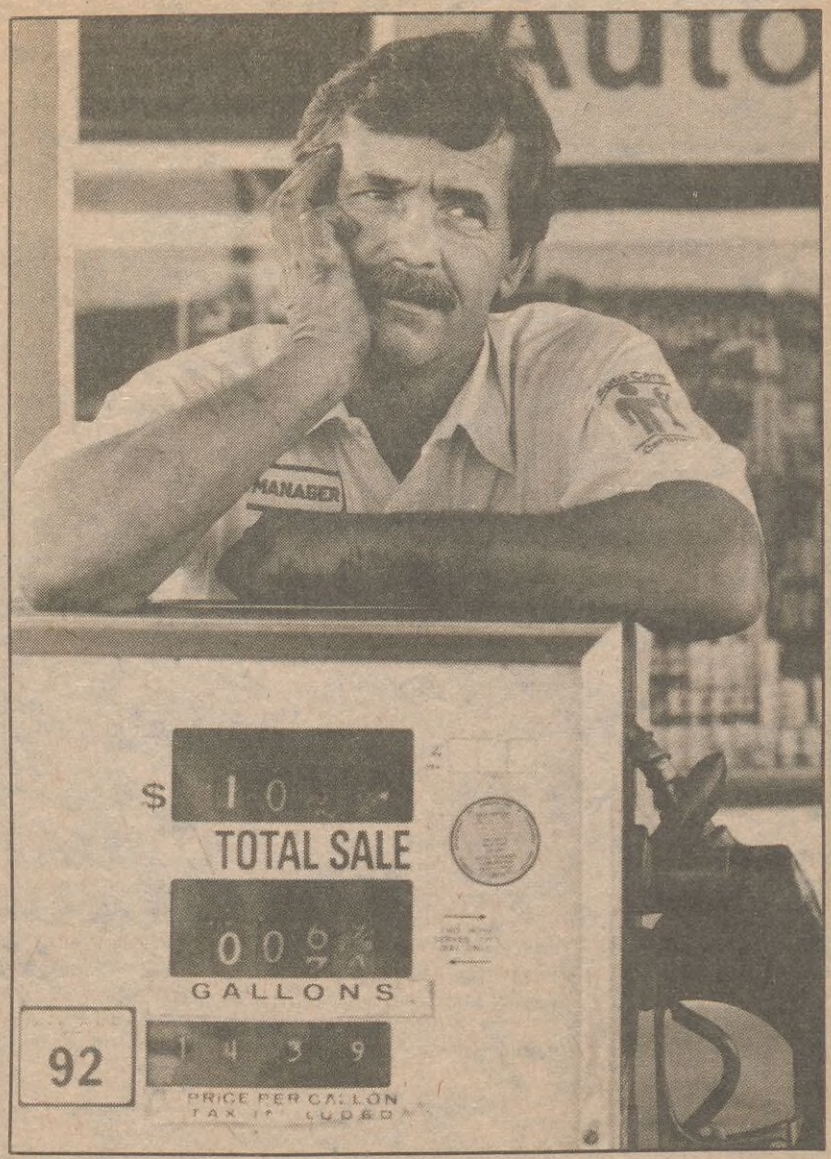
"We cannot provide the kind of service people deserve with that kind of staffing," he said. "We get monitored out here. These guys [burglars] ride around with scanners in their cars — it's illegal, but they do it, and they know when we're short-handed. Give me 10 more men and we'll have this place covered so well you won't hear a peep from anybody."

Toscano's station was hit three times in one week recently. After the third burglary, Toscano called the sheriff's office four times asking that a deputy come investigate. He kept the business closed for two hours before one arrived.

"When stuff like that happens, who do you turn to? And when they *do* do something, the criminals are back on the streets again," Toscano said.

That is why he took his .45-caliber automatic pistol and staked out the station at the end of the recent week of burglaries.

From his car parked across the street he saw someone break in shortly after 5 a.m., but a coincidental near-accident in front of the station scared off the burglar.



STEPHANIE JAMES ELY/SENTINEL

Toscano says he's losing faith in legal system.
. . . business loses $10,000 to thieves in 5 years with only 1 arrest.

M.E. HAYNES
241-5054

Herb Butler June 29, 1986

To M.E. Haynes, 7/10

Would you kindly send the two "metro" magazines back to mrs clark when you are finished with them.

You may keep the 12/53 "Shell News" magazine and the enclosed newspaper articles inside the "Shell News."

Mrs. Clark was very pleased to hear that you might do an article on her.

She's lived in Leesburg 10 yrs., is a widow and has a daughter living in Plainfield, N.J. and a married son who resides in Ocala, Fl..

Thank you so much for your kindness.

Sincerely,

(mrs. C.D.) Hazel E. Minard
mrs. Clarks daughter-in-law.

FLAGS

From C-1

illegal, regardless of what Winslow said he was told by code inspector Norma Santana, who could not be reached for comment.

Santana's written warning states that "banners, pennants and flags" are forbidden.

Winslow said he believes the city changed its story about the flags when he promised to fight.

"To me that's backing down. They're saying they're wrong," he said.

The Shell station at 1595 E. Colonial Drive also was warned Wednesday about decorations. Most of the display was taken down, but an attendant said Thursday that the banners and flags would be put up again today.

Shell's district sales manager, Jim Dillard, said he was "totally shocked" when he learned the promotion trappings were illegal. He said his advice to Winslow would be to try to compromise.

"I can sympathize with his feelings, but if the city of Orlando has an ordinance everybody has to live with, then I can understand that, too," Dillard said.

Tony Canino, a corporate spokesman in Texas, said about 5,550 of Shell's 11,000 stations nationwide are decorating for July Fourth. Outside of Orlando, he said, none have run into any legal problems.

L. G. Walkup, city supervisor of code inspectors, said up to 40 businesses a month are told to take down banners and signs. Usually, he said, the owners cooperate.

"The other 2 percent of the time," Walkup said, "it ends up in a fiasco like we have this time."

Station owner waves flags in city's face

By Dan Tracy

OF THE SENTINEL STAFF

Dick Winslow plans to break the law into little red, white and blue pieces at his Shell service station in west Orlando for the next week — and he hopes the city tries to stop him.

"I don't care what they do ... I would go all the way. A jail sentence. A fine. Whatever," he said Thursday.

Winslow's crime is displaying red, white and blue banners all over his business at 2001 W. Colonial Drive. He says a city code inspector told him Wednesday to take down the banners and 15 American flags he put up this week as part of a company promotion linked to July Fourth.

A city sign ordinance adopted last summer prohibits banners.

"There's no way I'm taking them down. I love my country," said Winslow, who has gathered 11 pages of signatures of customers who agree the decorations should stay.

GORDON WILLIAMSON/SENTINEL

Winslow holds an outlawed holiday flag at his service station.

The city's director of planning and development, Rick Bernhardt, said Winslow is violating city law but he likely will not get into trouble.

"We're not out to burn any flags," Bernhardt said. "It's much ado about very little."

Winslow will avoid any problems, Bernhardt said, if he removes his decorations before July 9, when the city code enforcement board meets. If the decorations stay up, Bernhardt said, Winslow could be fined up to $250 a day for every day they remain. Winslow said everything comes down July 5.

The flags, Bernhardt said, are not

Please see **FLAGS, C-5**

Sour root stock: Why did the turtle cross the road? Yes, I know I promised a ban on "why did" jokes in this space. But I've decided to allow one more in response to an impassioned plea on Friday morning from a member of the Winter Park Kiwanis Club. Answer: The turtle crossed the road to get to the shell station.

Orlando Sentinel (Fla)
Tues. June 24 1986

matters of *Fact*

RIGHT *combination*

Shell's Retirement Program provides financial safeguards for your retirement security.

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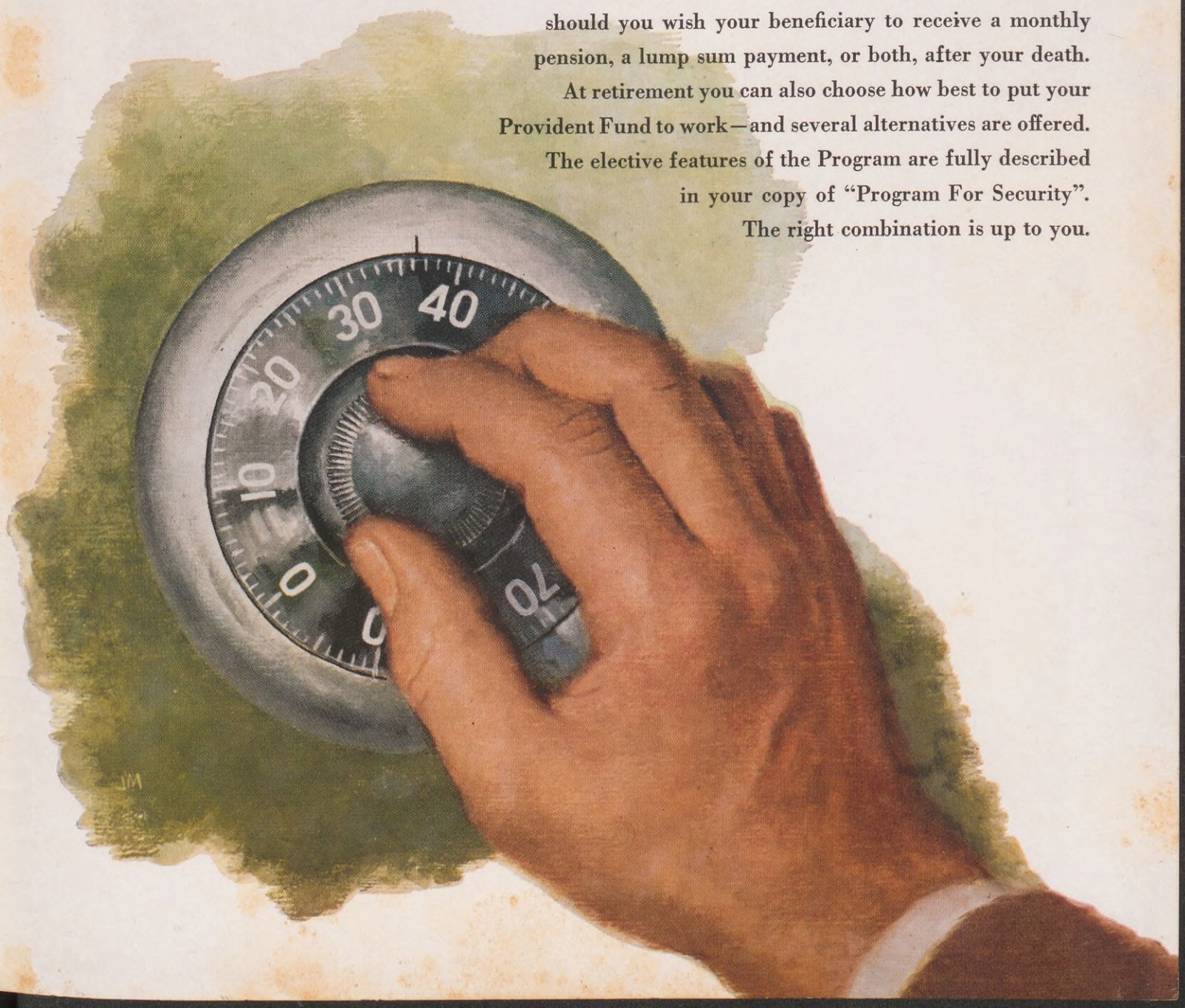

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WHAT DO PLANTS LIKE TO EAT? How do they grow? F. H. Leavitt can tell you. For 27 years Leavitt has studied the miracle of plant life.

Fourteen of these years have been with Shell Chemical Corporation; he is a Senior Agricultural Technologist at San Francisco.

Shell's Nitrogation Service*—the process of nitrogen fertilization of plants with anhydrous ammonia through irrigation water—owes much to Leavitt's development work. He has also conceived and perfected Nitrogation's twin process

underground *Dietitian*

known as Nitrojection Service*, through which anhydrous ammonia is injected directly into the ground to provide nitrogen for plant feeding. Scarcely a day goes by without Leavitt's prescribing a diet for some of the more than 250 crops fed by Shell ammonia.

*Registered Trademark, U.S. Patent Office