SHELL NEWS

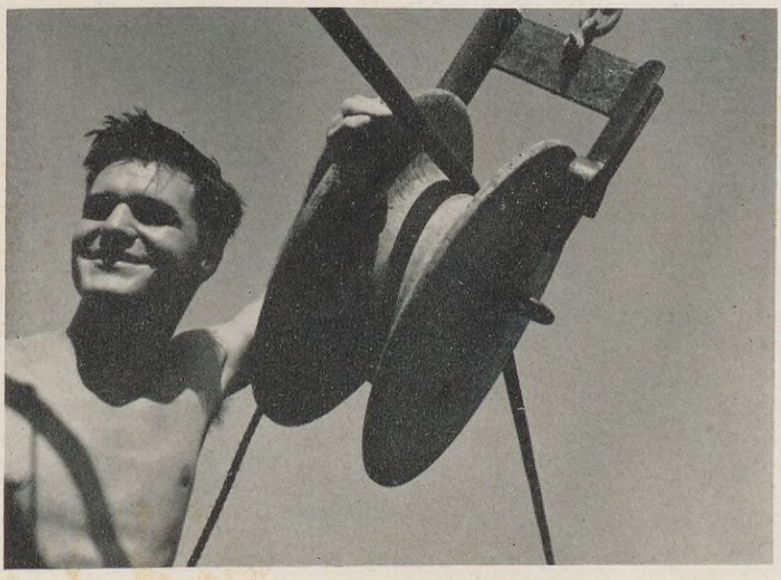
JUNE 1952

Like Their Prototypes On Land, Seismic Explorers Afloat In The Gulf of Mexico Have One Aim—To Find Oil!

TAKE the wheels off the instrument and shooting trucks of a seismic exploration party, float the trucks out to sea, and you have basically the same set-up as that used by Shell's offshore seismic parties in the Gulf of Mexico. There's one nice difference, however. The boys doing the shooting in 50 and 60 feet of water never have to drill a shot hole.

Another difference is the way in which shot points are located. On land, a surveying crew does the job. At sea, the seismic boats use Shoran, an electronic aid to navigation. Shoran is an abbreviation of short-range navigation. Two boats work as a team, and the instrument boat, the larger of the two, gets a Shoran fix from two shore-based stations to pinpoint its exact location in the Gulf, then directs the shooting boat where to drop its explosive charge. As the day wears on, the instrument boat continually checks by Shoran with the shore stations for each successive move about the watery chess board. Spotting and shooting, spotting and shooting, the two boats can criss-cross 400 square miles of Gulf floor in a good month's work.

The pictures on this and the following pages tell the story of a typical day's operations on the boats operated by Shell's Seismic Party 88 off the coast of Louisiana and Texas. The instrument boat is a 136-foot converted Navy mine sweeper named the *Edna S.* The shooting boat, an 85-footer, was used in the last war as an Air Force crash boat.



1. The day's work begins when a 2,400-foot cable bearing ten geophone "jugs" is reeled out to trail aft of the instrument boat. Like "jugs" used on land, geophones pick up reflected shock waves caused by explosions set off by a shooting boat.

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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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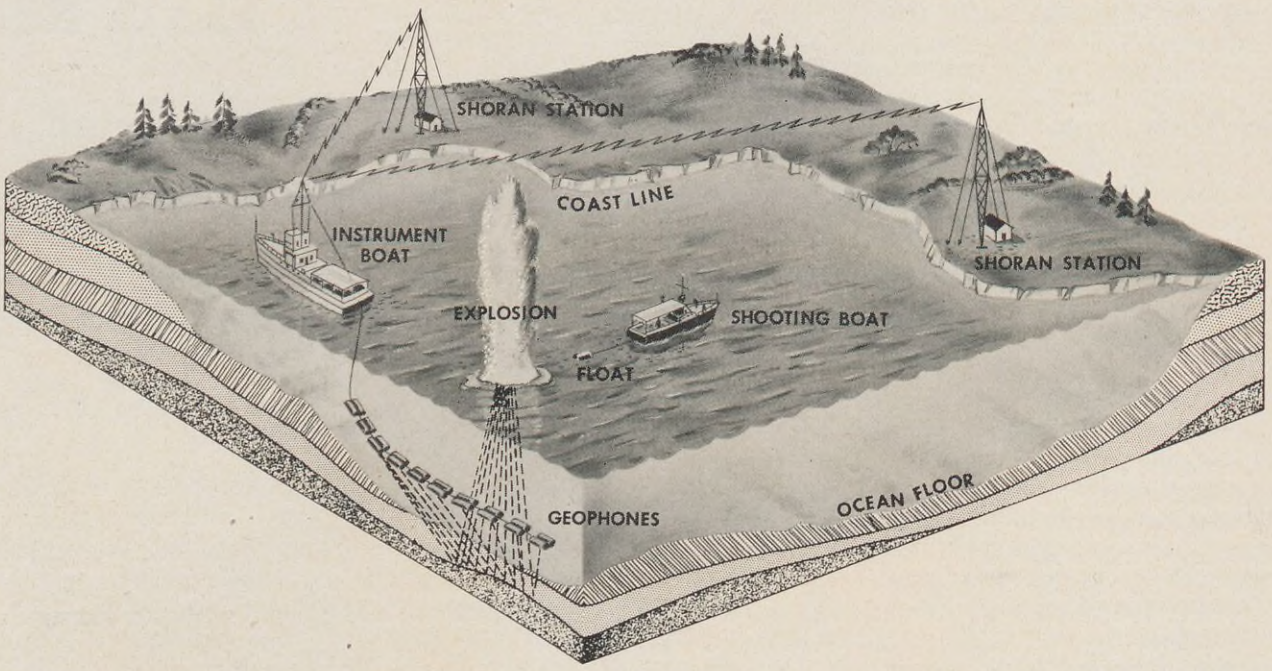
CONSTRUCTION AT HOUSTON

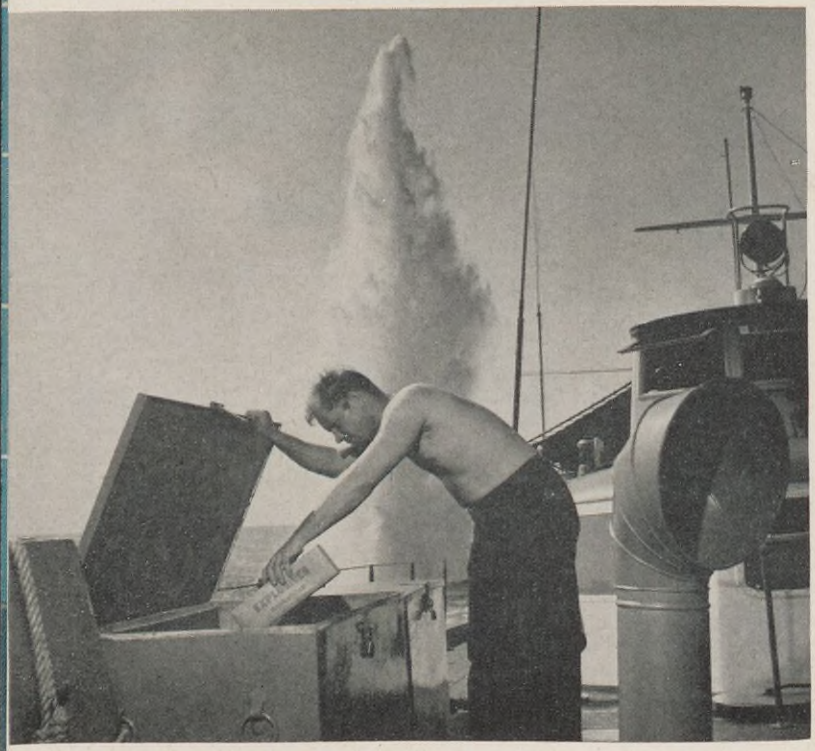
In the foreground of this month's cover picture, J. R. Greisser (left), Project Engineer for the sulfur plant and G. P. Forbes, Superintendent of Construction, watch the construction of concrete supports for a pipeway that will connect new sulfur and EPON* plants with existing facilities at Shell Chemical Corporation's Houston Plant.

This construction is part of an expansion program to make additional chemicals available for civilian and defense use. For additional details see For Better Living, a story which begins on page 20.

* Registered Trademark, U. S. Patent Office.

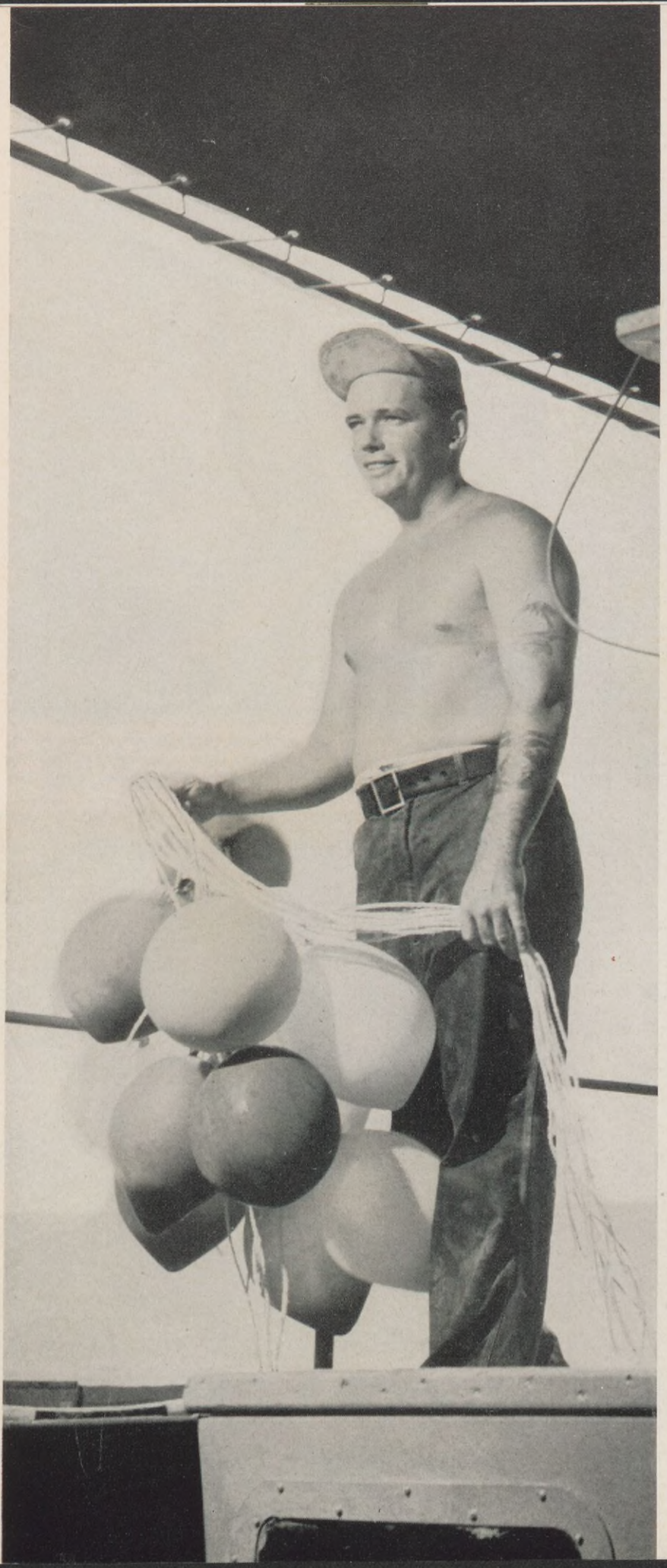


2. The diagram above shows how the instrument boat cross-checks its position with two shore-based Shoran stations—a spotting technique called triangulation. Upon establishing a shot point, the instrument boat moves forward about 1,200 feet and stops to allow its trailing cable and geophones to sink to the bottom. The shooting boat is then directed to drop the charge at the prescribed shot point about mid-way over the cable and, when all is ready, it is signalled to set off the explosion. The effects of the explosion are recorded in the instrument boat.



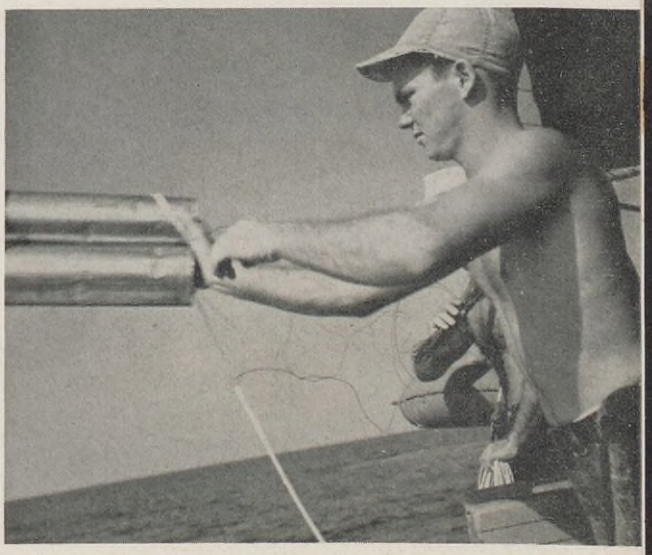
3. While a preliminary test shot is fired for a recording check on the instrument boat, an assistant shooter on the shooting boat removes explosives from a locker in preparation for additional shots.

4. One man, left above, puts a detonator on one of two cannisters of the explosive charge. The second man holds a long wire leading to the charge so it will not tangle. The third holds a float that keeps the firing connection dry.



5. A brightly colored balloon is attached to each 33-pound charge to prevent the charge from submerging more than four feet under the water's surface. About 150 of the balloons, left, are used in each day's shooting.

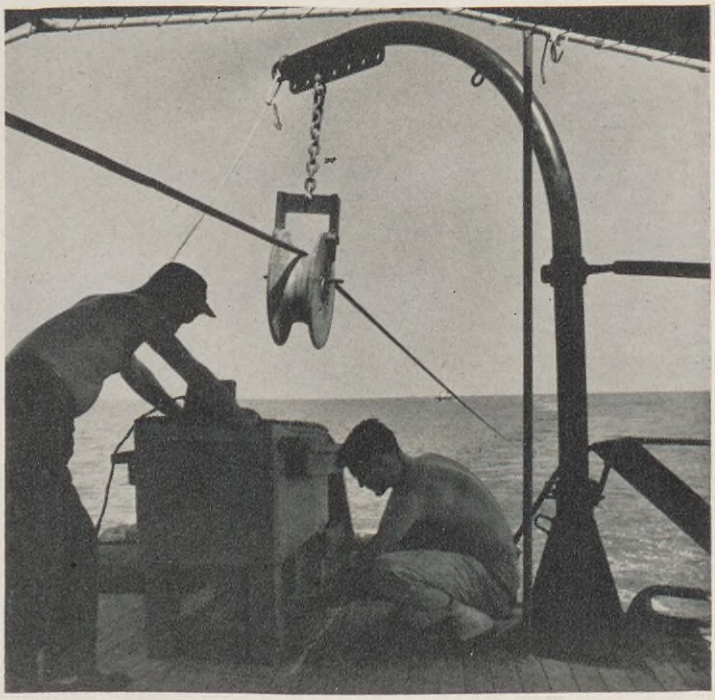
6. As the instrument boat moves into position, above, the charge is ready on the shooting boat. When in position, the instrument boat stops to allow geophones to sink to the bottom.



7. Charge and float go overboard on receipt of a signal from the instrument boat. The charge will be set off at a point about midway along the length of the recording cable.

8. Again on signal, the charge is fired, below, and a geyser of water soars a hundred feet in the air. The balloon from which the charge was suspended has also served as a safety device to mark the exact spot where the explosion would occur. The float holding the firing connection is then pulled in.

9. Two operators of the recording instruments on the instrument boat, above, examine the long strip of film on which the shock waves reflected from the strata beneath the Gulf is recorded. It is similar to land-based seismic film.



10. When the day's shooting is over, the cable trailing from the instrument boat is reeled back onto a drum and the geophones are taken off to be stored on deck. Together, the cable and ten geophones weigh two tons.

11. As each geophone returns to the instrument boat, above, the cable reel is stopped and the geophone is detached. The instrument is carried forward and lashed down for the night.

12. Food on the seismic boats is calculated to satisfy hearty appetites. This night it is steak and all the trimmings. In the morning Party 88 will resume its criss-cross route over the Gulf waters—to find oil!

Shell People In The

D. H. Lewis

D. H. LEWIS has been appointed a Vice President of Shell Pipe Line Corporation. Mr. Lewis, who did graduate work at the University of Besancon in France after receiving a B.S. Degree in mechanical engineering from Tri-State College, in Indiana, pioneered in the use of centrifugal pumps and electric power on oil pipe lines prior to joining Shell Pipe Line in 1927. In the next decade, he held important administrative operating positions, particularly as Division Superintendent in East Texas and Area Superintendent in West Texas. He became Chief Engineer for the Corporation in 1939 and was made a Director in 1942.

In the course of his Shell career, Mr. Lewis has directed the construction of such major projects as the East Texas Gathering System, the Ozark Pipe Line System, the Bayou Pipe Line System and the new Rancho Pipe Line System.

C. C. COMBS, Assistant Treasurer and Assistant Controller of Shell Oil Company, has been appointed Controller of Shell Oil Company of Canada, Limited, while **J. A. ROSS**, Controller of the Canadian Company, will be attached to the Financial Department of Shell Oil Company to work on special senior assignments. This exchange enables both organizations to utilize fully the wide experience gained by two senior Treasury employees.

Mr. Combs, who began his Shell career in 1923 as a service station attendant in California, has since served in Treasury assignments at various Marketing, Refinery and Production locations. He has recently completed a special assignment for the Shell Companies in several South American countries.

Mr. Ross was employed by Shell Oil of Canada in 1945, after six years work as a Chartered Accountant in the public accounting field and several years in government and other business activities. He has been Controller of that company for the last six years. Mr. Ross will remain in Toronto to assist Mr. Combs until approximately July 1, 1952.

J. D. DAVIS has been appointed Manager of the new Catalytic Cracking Department of Shell Oil Company's Norco Refinery. A graduate of the California Institute of Technology where he received his B.S. Degree in mechanical engineering, Mr. Davis joined the Engineering Department of the Martinez Refinery in 1934 as a laborer—after several temporary summer jobs in the Los Angeles

C. C. Combs

J. A. Ross

J. D. Davis

H. S. Hicks

D. L. Cleveland

News

Office. He served at Martinez and in the San Francisco Office in various technological positions prior to being appointed a Senior Technologist at Martinez in 1944. Named Manager of the Martinez Cracking Department in 1945, Mr. Davis later managed the Refinery's Distilling and Gauging Departments before becoming Manager of the Catalytic Cracking Department of the Wilmington Refinery in 1949.

H. S. HICKS has succeeded J. D. Davis as Manager of the Catalytic Cracking Department of the Wilmington Refinery. Mr. Hicks received B.S. and M.S. Degrees in electrical engineering at the University of California before joining Shell as a laborer at the Martinez Refinery in 1934. After service in engineering positions at both the Martinez and Wilmington Refineries, he became Senior Engineer at Wilmington in 1946. Mr. Hicks was appointed Manager of the Effluent Control and Utilities Department there in 1949 and served in this capacity until his latest assignment.

D. L. CLEVELAND has replaced H. S. Hicks as Manager of the Effluent Control and Utilities Department at the Wilmington Refinery. Holder of a B.S. Degree in chemical engineering from the California Institute of Technology, Mr. Cleveland began his Shell career in 1934 as a Junior Chemist in the Control Laboratory at the Martinez Refinery. He held various technical assignments at Martinez, Wilmington and Coalinga in the years that followed prior to becoming Technologist at the Wilmington Refinery in 1942. In 1949, Mr. Cleveland was appointed Assistant Manager of the Department he now heads.

Changes In Shell Oil Company's Transportation And Supplies Organization

RECENT personnel and operational developments in Transportation and Supplies have led to the following organization changes:

Effective July 1 in the New York Head Office, R. N. Duncan has been appointed Manager of Transportation and Supplies, succeeding M. E. Grant who is leaving the Company to become Executive Vice President of Plantation Pipe Line Company. M. H. W. Dent will replace Mr. Duncan as Manager of the Supplies Department and C. M. D. Peters will take over Mr. Dent's former position as an Assistant Manager of the Supplies Department.

Along with these changes, the Head Office Transportation and Terminal Analysis section will assume the status of a department and will be known as the Transportation and Supplies Economics Department. E. O. King has been named as Manager.

To provide Shell with more complete transportation and supplies representation on the Pacific Coast, Supplies Manager L. J. Clisham has transferred his office from San Francisco to Los Angeles. E. A. Romer has been appointed Assistant Supplies Manager in the San Francisco Office to work with Mr. Clisham in coordinating Shell's West Coast transportation and supplies activities.

R. N. Duncan

M. H. W. Dent

E. O. King

C. M. D. Peters

L. J. Clisham

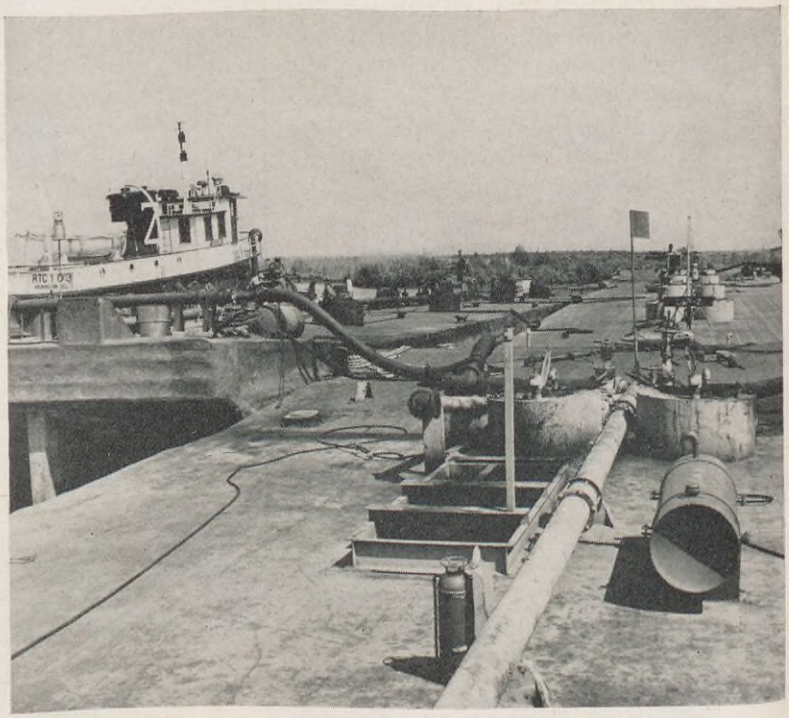
E. A. Romer

crude oil

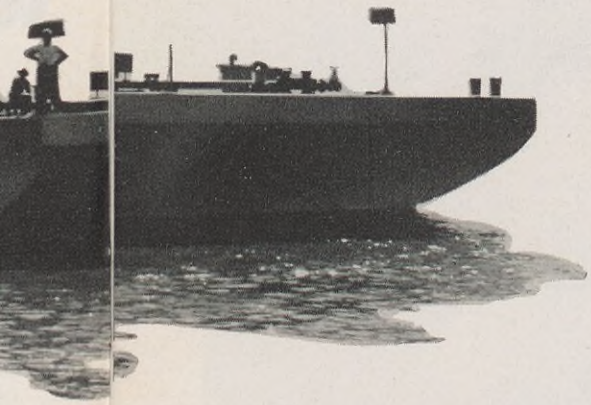
'round the bend

Towboats and Barges Ply a Colorful Mississippi River Steamboat Route to Supply the Norco Refinery With Crude Oil From Southern Louisiana Fields

1. The crude oil begins its 160-mile trip to the Norco Refinery at a well-head in the Weeks Island Field. First leg of the route is from the well into a central storage tank, where the oil remains until loaded into barges.



2. When this towboat and three barges loaded with crude leave the Weeks Island storage terminal for Norco, they will take a route through the Intracoastal Waterway to the Harvey Locks near New Orleans, then up the Mississippi 30 miles to the refinery. The trip, amount and type of crude, have been scheduled weeks ahead.



CRUDE oil barging is as old as the Oil Industry. Ever since 1859, when the first American oil wells were drilled along Oil Creek, a small tributary of the Allegheny River in Pennsylvania, oil has flowed on the waters of the nation—first in flatboats laden with wooden barrels, later in metal tanks mounted on the flatboats, and today in modern steel barges especially designed for the job.

Nor is crude the only oil on the waters. Once it is barged to refineries, and petroleum products are manufactured, other barges pick up a good portion of the products and—in long strings shepherded by towboats—deliver those products throughout the more than 27,000 miles of inland waterways in the United States.

Perhaps nowhere in the nation, however, is barging more a part of the Oil Industry scene than it is in southern Louisiana where many navigable rivers, bayous, canals, bays and harbors make water-borne traffic an economic convenience—and quite often a practical necessity. The bayous and canals intersecting the marshy lowlands of the Louisiana coast are aptly suited to the use of towboats and barges for transporting crude oil from the many oil fields there. The Intracoastal Waterway serves as a central artery, connecting smaller tributaries with the Mississippi River, a great water life-line leading to the north.

It is only natural, then, that Shell's Norco Refinery on the Mississippi—and almost in the center of southern Louisiana's network of waterways—receives about 85 per cent of its crude oil intake by barge. In fact the discovery of important new crude oil reserves in Louisiana, many of them accessible to barges, was a contributing factor in a recent decision to boost the refinery's capacity from 50,000 to 75,000 barrels a day.

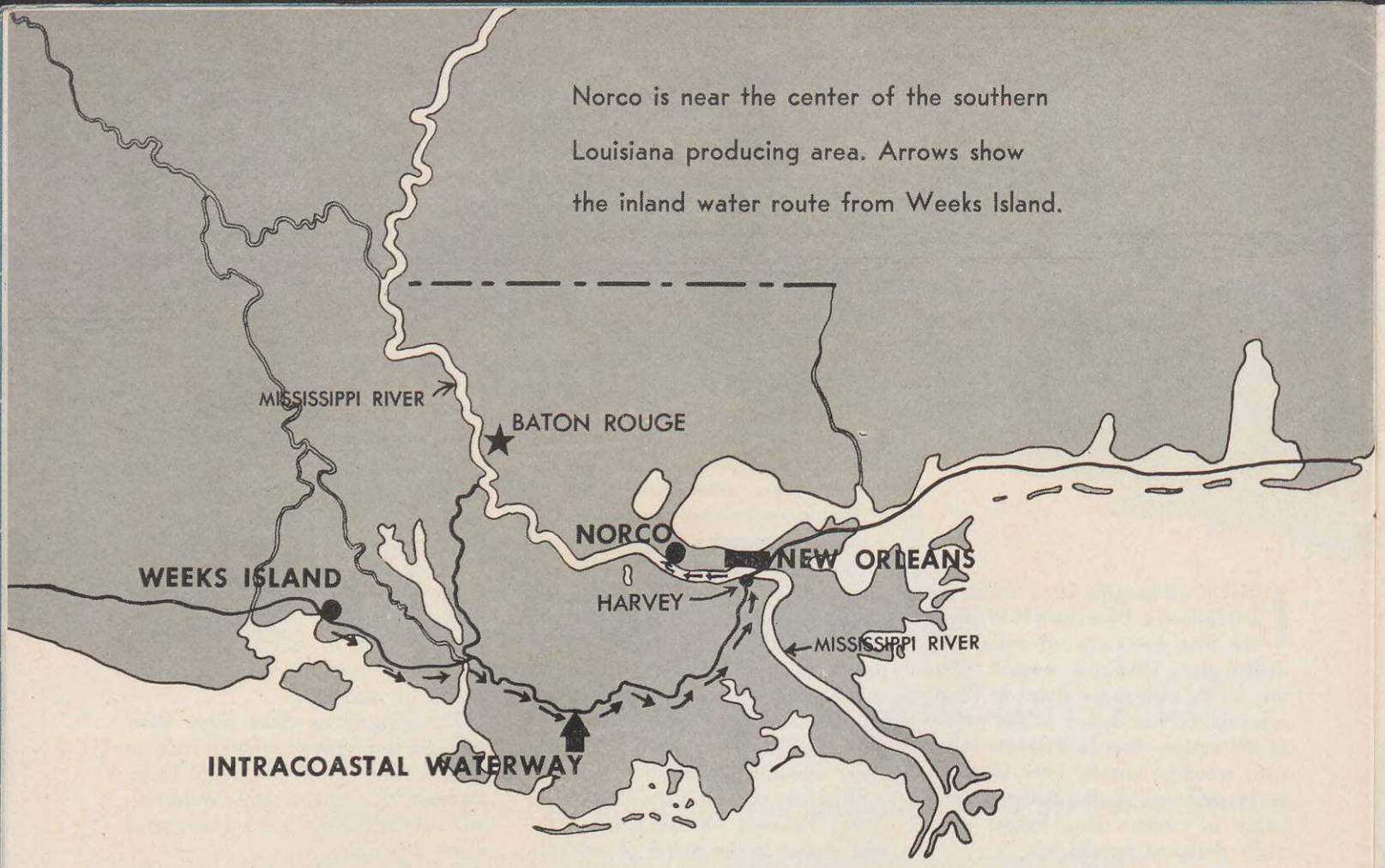
Though much of the route from any of several oil fields may be a twisting and turning one through a bewildering maze of waterways, a towboat and its barges make the last leg of the trip to Norco either up or down the Mississippi. As they round the bend of the river from either direction, they are sighted by a Shell employee at the refinery's unloading dock and a chain of events is set in motion which in reality doesn't end until the refined products are in the hands of consumers.

The pictures on these pages show just what happens when crude is barged from the Weeks Island Field, through the Intracoastal Waterway and up the Mississippi, a distance of about 160 miles.

3. When the tow is sighted two miles down the river, Dockman R. J. Guidry notifies the refinery's Dispatching Department, reading off information from the monthly schedule.

4. The Dispatching Department immediately readies a tank to receive the crude. Here Gauger A. F. Chaisson opens a valve connecting the tank with a pipe line from the unloading dock on the river.

5. With their decks almost awash, the loaded barges approach the dock. Each barge is safely secured at the dock before unloading begins.



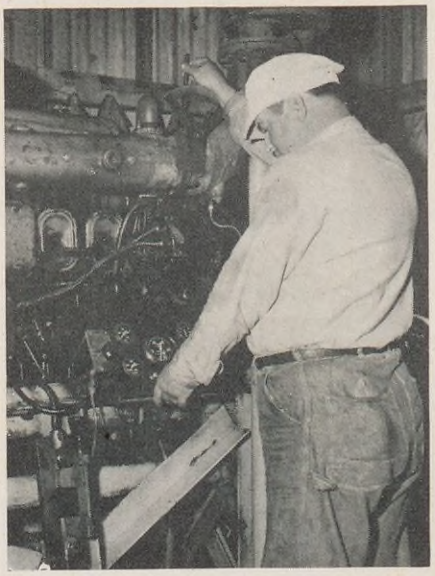
Norco is near the center of the southern Louisiana producing area. Arrows show the inland water route from Weeks Island.

6. Each compartment of each barge is gauged by Guidry with a metal measuring tape and the figure is marked on the hatch with chalk.

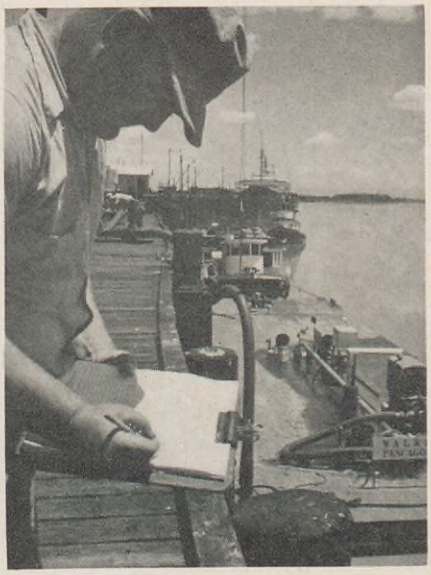
7. Using a "thief"—a sampling device—Dock Helper Stanley Adams takes a quart of crude from each compartment for laboratory testing.

8. Guidry and Dock Helper H. J. Waguespack await a signal to lower an 8-inch hose to a barge outlet. A steam winch does the work.

9. After the hose is coupled to the barge outlet, Guidry then opens a valve to a pump on the dock that provides the needed suction.



10. Then, by pushing a starter button on a diesel engine, Guidry begins the pumping at a rate of up to 3,000 barrels every hour.



11. Pumping underway, the dockman fills out a barge unloading report, noting soundings of each compartment and samples taken.

12. Meanwhile the samples of crude, already at the control laboratory, are being tested for gravity and for bottom sediment and water. Here Tester F. E. Dufresne pours a sample into a glass graduate for a gravity check.

13. With the barges unloaded and now riding high in the water, the towboat takes them in hand again and heads back to Weeks Island for another cargo. The round trip: five days.

OFFSHORE WELLS IN WEST TEXAS!

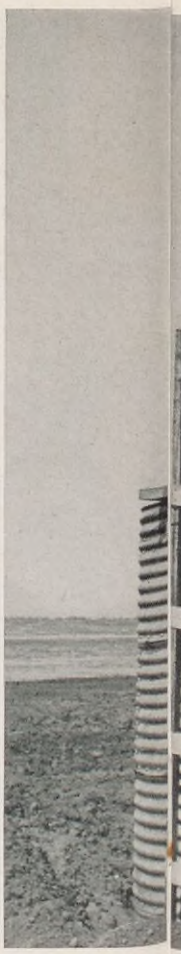
Shell will soon be using boats to service its producing wells in one of the most arid regi

WEST TEXAS' ingenuity in solving its water needs is changing some of Shell's best producing wells into offshore installations!

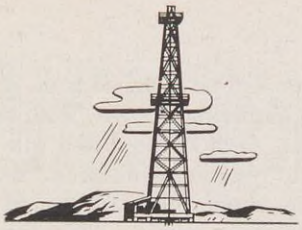
In the next few years, large portions of the Company's Sterling Lease in Scurry County will be inundated by a vast new lake that will spread across parts of two counties and range to a depth of 50 feet. The man-made lake will be stocked with game fish, surrounded at least in part by a public park, and, ultimately, invaded by hordes of youngsters. More reservoir than resort, it will supply badly-needed fresh water to the nearby cities of Odessa, Big Spring and Snyder.

Anyone driving the 600 miles from Ft. Worth to El Paso can see the tremendous importance of the new reservoir. Vegetation becomes increasingly sparse and dry until at last only small mesquite trees and grayish-brown grass survive in the arid climate. So little rain has fallen in this area in the last few years that dust storms have become increasingly frequent and many streams have disappeared.

When the towns in the region were small, shallow wells into the underlying water sands satisfied their water requirements. But populations zoomed upward with the discovery of the Permian Basin Oil fields, and the shallow sands were soon being depleted faster than they were replenished by rainfall. With their underground supply failing, the Texans turned to a surface source, the Colorado River. This



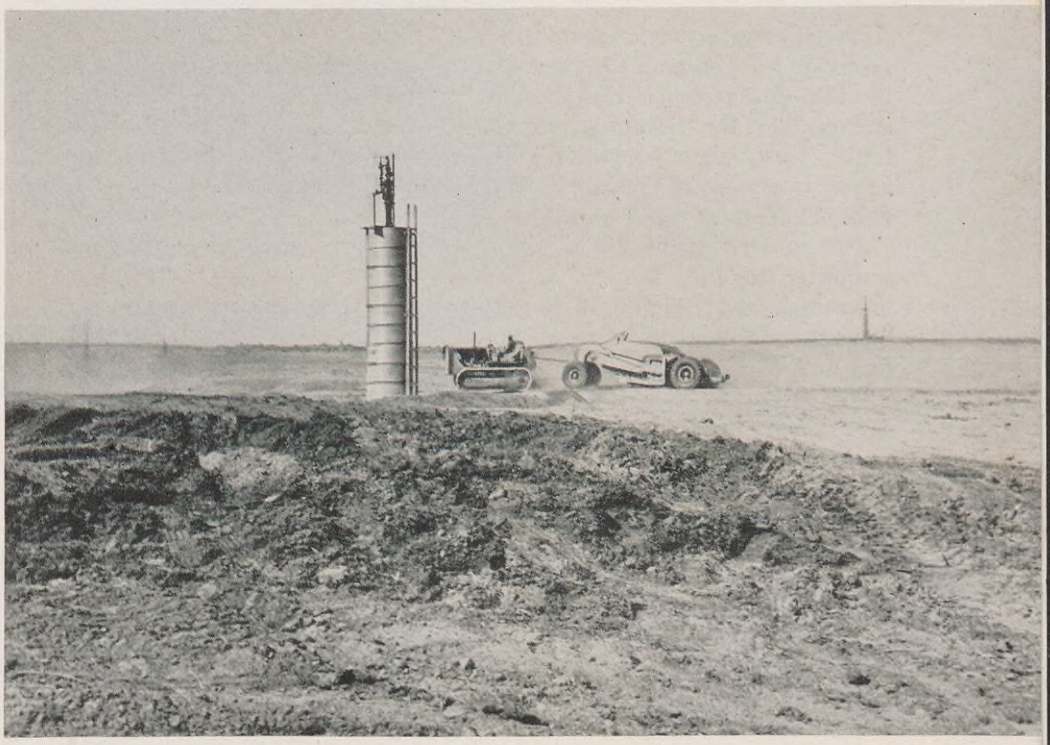
Each of Shell's Sterling Lease well heads is being raised in two stages to a new height of 45 feet. In the first stage, 23-foot sections of various diameter pipe, like the casing pictured at left, above, are attached to the top of the well. A 5-foot metal conduit similar to the one shown at right, above, is then slipped into place as protection for the pipe and to provide working space around the pipe.



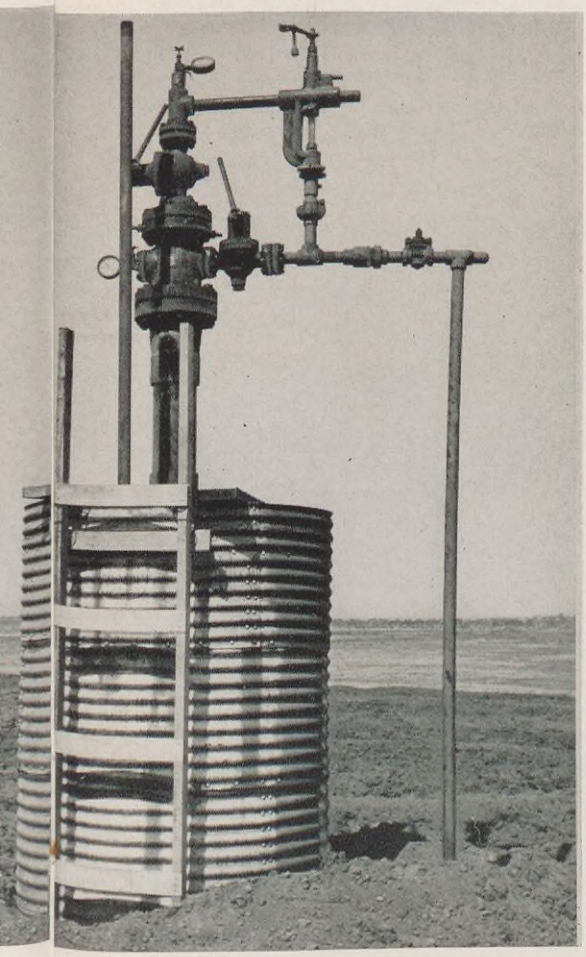
rid **regions in the United States**

wasn't as helpful as it might seem because the Colorado, a mighty river for much of its course, is often just a trickle in this section of the country. Sometimes it can't even be recognized as a river unless there is a flood, and unfortunately, its floods usually dissipate long before their water riches can be captured by nearby cities.

Last year, however, the State of Texas moved into the picture by providing for the formation of the Colorado River Municipal Water District.



More than 34,000 cubic yards of dirt will be needed to build each supporting dirt mound to its eventual 45 foot height. Cone-shaped, the typical well mound will have a diameter of 80 feet at the top slanting down to a diameter of 310 feet at the bottom.



A supporting dirt mound is then constructed around and out from the conduit. In the next stage, the well-head will be raised 22 ft. more.

It is just a dry lake bed now, but this vast expanse will eventually store 66 billion gallons of badly needed water for three West Texas cities. Boats will then be used to service the oil producing "islands" scattered throughout the newly created reservoir.

Authority was given to create a new reservoir by damming the river and, in addition, diverting a small tributary stream into the resulting reservoir basin. The goal: a 66 billion gallon reservoir capable of yielding 33 to 37 million gallons of water a day.

The massive earthen dam will be completed this July. Two and one-half miles long and 105 feet high at its highest, it will require more than four million cubic yards of wetted and rolled earth. Another 150 thousand cubic yards of rock and gravel will go to blanket its lake side to guard against erosion.

Actually, the reservoir is dry as of now and, barring unusually heavy rains in the area or upstream, its 12½ square miles of basin floor will probably not be completely covered for from two to three years. The cities which in the meantime will draw water from wells specially drilled by the District, will not depend on the reservoir entirely until 1961.

Shell expects to have all its drilling on the Sterling lease completed before the basin is completely filled, but completed wells will be producing for some time after the reservoir goes into operation. To keep them in service, well heads will be raised 45 feet above the basin floor, placing them above the eventual water level and thus providing the switchers with room to work. The raised well head equipment will be supported in the reservoir by massive dirt mounds.

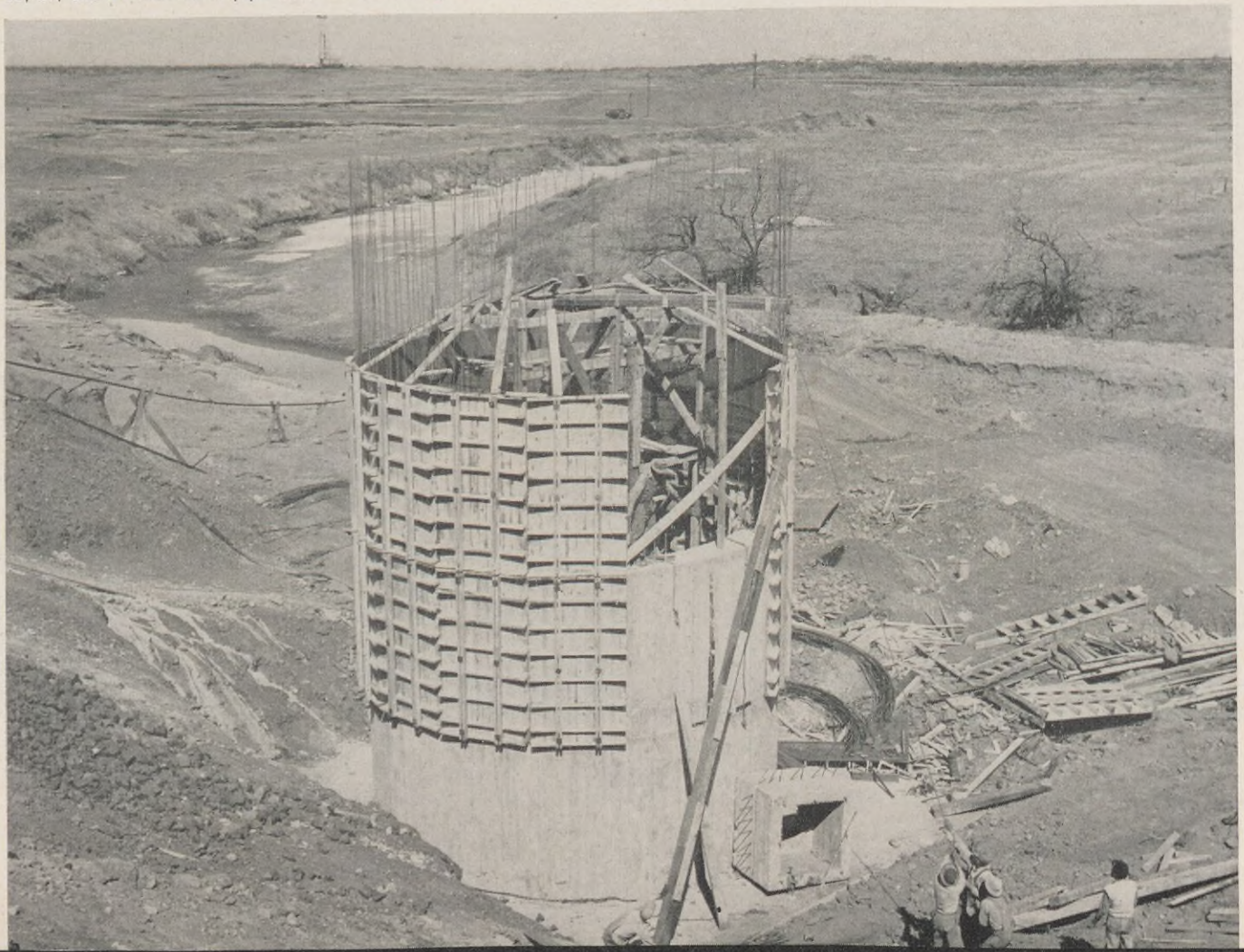
In the interests of safety and economy, the well heads will be raised to their new heights in two stages. In the first stage, they will be raised 23 feet and the supporting mounds then built up to this level. The remaining 22 feet will be added after this first phase has been completed for all wells. Production will be shut in during the raising operation by "killing" each well with an oil-and-mud emulsion.

As soon as the well head equipment is firmly connected at its new height, a flow line will be attached from it to the field gathering system. With this connection, each elevated well will be ready to renew production, even though its supporting dirt mound is still under construction.

The Colorado River Municipal Water District, which will furnish the mounds, will also provide a means of access to Shell wells on the lease. Initially, this access will take the form of an inclined approach runway, which will be built right up to the well head equipment at the top of the mound. When the reservoir is filled, of course, necessary servicing will have to be done by boat.

Landowners of the lakeside property, contemplating a boom for the new resort area, are now advertising "Shore Acres." This may be a bit premature. But Scurry County's oil and water reservoir combination is a good example of how everyone can benefit from cooperation between civic groups and private industry.

The Colorado River Municipal Water District is building the pumping station below at the edge of the reservoir near the Sterling Lease. New 33, 27, and 21 inch water pipe lines are also being built to transport reservoir water to the dependent cities of Odessa, Big Spring and Snyder.



Walter K. Luck's water on the elbow trick has no medical meaning. It's fun when he produces this illusion.

Luck, The Mystic

WALTER K. LUCK is a disciple of the world's great magicians—Houdini, Blackstone, Thurston—and a professional "sleight of hand" artist in his own right. At Shell's Wilmington Refinery, Walter's fellow-workers call him "Luck the Mystic." Origin of the label stems back to Luck's vaudeville days when he trouped one night stands on the Orpheum's Pacific Coast Circuits as a young man in his middle-teens. It has also been his feature billing during the past 26 years that Luck has worked for Shell and entertained church, business and civic groups in his spare time.

A child's Mysto Magic Set, given Walter one Christmas by a relative, was his first magician's bag of tricks. By the time he bought a bigger, $15 set, he was behind the footlights originating tricks of his own.

Originals such as the "funnel trick" which Luck uses to pump water out of an assistant's elbow, are well-kept secrets. Another invention to make a bowl of water vanish from under a cloth, he copyrighted as early as 1920. Copyrighted in 1938, an original magic rifle shoots bullets through the body of an assistant to land bulls-eyes in a glass target. When you ask Luck how he does such things, his stock answer is, "They're something that comes to magicians and nobody else."

Illusions Need Showmanship

There are 1002 such tricks that make the Mystic's collection a valuable investment. But his trunkful of Chinese folding fans, antique boxes, and Hindu sticks would be only collectors' curiosities if they weren't properties of a showman who "strings" them together with the raw material of magic—sleight of hand skill and the gift of gab.

But no magician is successful all the time. Walter tells about a stunt which backfired during a performance in Twin Falls, Idaho.

He borrowed an expensive diamond ring from a woman in the audience and made quite a show of smashing it to bits. He then poured broken pieces into a chafing dish and his assistant lit a fire in it. Walter clamped a top on the dish and waved his magic wand. When the lid was removed a white dove flew out, a "diamond" ring tied around its neck with bright red ribbon. Walter passed the ring to the theater patron.

The woman looked at the ring, looked at Walter, and screamed, "You crook, this is a fake."

Walter quieted the irate woman and when the two met backstage later, he learned he had smashed the woman's ring by mistake and unintentionally given her one of his fake substitutes. The damaged ring was not found until stagehands tore up floorboards of the stage. The diamond itself was intact but the ring setting was ruined. The cost of a new setting came out of Walter's pocket!

Walter's routine lasts about an hour. It ordinarily includes one of Houdini's escape stunts. Multiplying billiard balls out of his or an assistant's nose, ears and mouth is another illusion Luck's audiences regularly enjoy. Alexander—the original "Mystic"—taught him to do that one.

Walter's wife and son, James, are enthusiastic supporters of his hobby, joining with him to perpetuate the secrets and zeal of men who'd rather make magic than eat.

A deft hand, beguiling patter and numerous props make a good show.

The eighth in a new series of organization charts

Shell Oil Company

June—1952

EXPLORATION AND PRODUCTION TECHNICAL DIVISION ORGANIZATION CHART

Exploration Assistant

F. Goldstone

Manager Research

N. D. Smith, Jr.

Senior Chemist

H. C. H. Darley

Senior Physicist

C. H. Fay

Senior Physicist

A. J. Hermont

Senior Physicist

S. Kaufman

Senior Geologist

R. J. LeBlanc

Senior Chemist

J. S. Levine

Senior Chemist

D. R. Lewis

Senior Chemist

C. S. Matthews

Senior Engineer

H. E. McKinney

Senior Physicist

E. Merten

Senior Geologist

G. T. Philippi

Senior Physicist

G. W. Postma

Senior Chemist

W. R. Purcell

Senior Chemist

J. Rae, Jr.

Senior Physicist

H. Rainbow

Senior Chemist

J. G. Roof

Senior Geologist

R. A. Rowland

Senior Chemist

C. C. Templeton

Senior Physicist

F. A. Van Melle

Senior Chemist

H. Van Olphen

Shell Chemical Purchases I

SHELL Chemical Corporation has purchased the stock of Julius Hyman & Company, manufacturer of the insecticides, aldrin and dieldrin, which Shell has been marketing since first commercial production. Office and manufacturing facilities are located on the outskirts of Denver, Colorado, within the area of the Rocky Mountains Arsenal. Shell has purchased the Hyman Company to assure the continued production of the two insecticides and to strengthen its position in the agricultural field.

The following Shell Chemical personnel have been assigned to augment the Hyman operating staff at the Denver plant.

J. G. BEJARANO

Name	Position at Denver	Former Position
J. G. Bejarano	Plant Manager	Plant Manager—Dominguez
M. R. Sprinkle	Plant Superintendent	Asst. Mgr. Agricultural Products—Head Office
E. M. Lando	Chief Chemist	Chief Chemist—Torrance
C. C. McKenna	Chief Technologist	Chief Technologist—Martinez
D. Norton	Treasury Manager	Treasury Manager—Dominguez
W. H. Paulman	Assistant Chief Engineer	Senior Engineer—Martinez
V. C. Harrison	Mgr., Personnel & Industrial Relations	Asst. Mgr., Personnel & Industrial Relations—Martinez Refinery, Shell Oil Company

Other Shell Chemical Changes

Shell Chemical interplant transfers necessitated by the above will be:

Name	New Position	Former Position
G. Purcell	Plant Manager—Dominguez	Plant Superintendent—Houston
R. L. Kittle	Plant Superintendent—Houston	Asst. Plant Superintendent—Dominguez
G. A. White	Asst. Plant Supt.—Dominguez	Department Manager—Martinez
K. B. Field	Treasury Manager—Dominguez	Chief Accountant—San Francisco, Shell Oil Company Marketing Division
L. R. Donkle	Chief Chemist—Torrance	Senior Chemist—Torrance

M. R. SPRINKLE

E. M. LANDO

C. C. McKENNA

D. NORTON

W. H. PAULMAN

V. C. HARRISON

s Insecticide Company

G. PURCELL

R. L. KITTLE

G. A. WHITE

K. B. FIELD

To increase its effectiveness, Shell Chemical's Head Office Engineering Department has been reorganized into a construction section and a development section, with the following personnel moves:

G. P. Forbes, now Construction Superintendent at Houston will assume the duties of Section Head—Construction in Head Office. H. Q. Duguid, now Plant Superintendent at Torrance, will become Section Head—Engineering Development in Head Office. W. G. Reynard, Shell Chemical representative at Sewaren will take over the duties of Plant Superintendent at Torrance, and R. M. Oakes, Senior Engineer, Head Office will replace Mr. Forbes as Construction Superintendent, Houston.

In order to maintain proper coordination between Shell Chemical Corporation and Shell Oil Company of Canada in the handling of chemical matters, O. A. Colten, Assistant Manager of the Economic Research Department in Head Office has been appointed Assistant to Shell Chemical's General Manager — Manufacturing. Mr. Colten will be responsible for liaison on all mutual manufacturing and development problems.

The increasing importance of advertising and sales promotion functions in Shell Chemical marketing has lead to the establishment of a Head Office Advertising Department. M. H. Keel has been appointed Manager of this newly created Department which will be responsible for the preparation and production of advertising and sales promotion material.

L. R. DONKLE

G. P. FORBES

M. H. KEEL

O. A. COLTEN

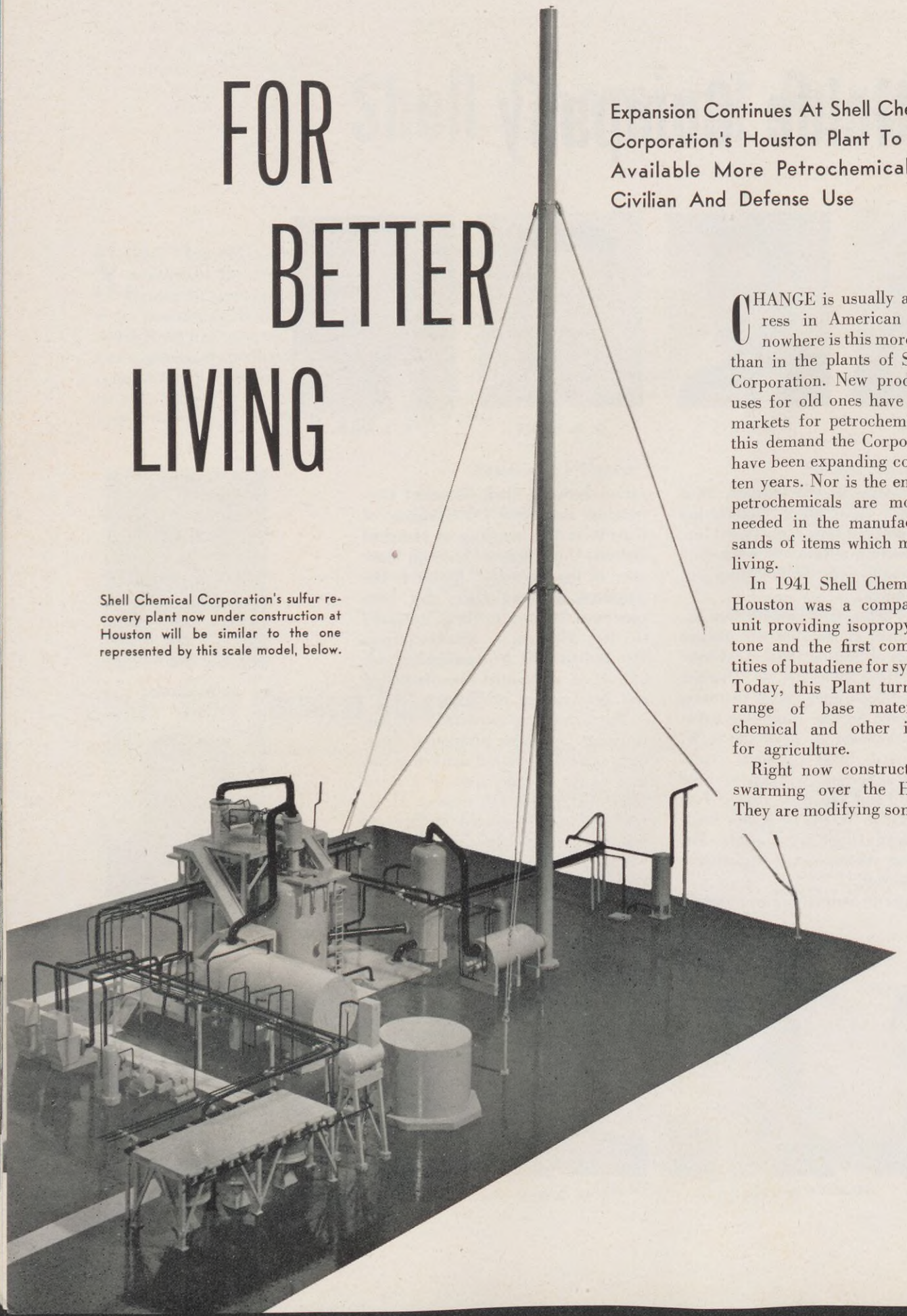
R. M. OAKES

W. G. REYNARD

H. Q. DUGUID

FOR BETTER LIVING

Expansion Continues At Shell Chemical Corporation's Houston Plant To Make Available More Petrochemicals For Civilian And Defense Use



Shell Chemical Corporation's sulfur recovery plant now under construction at Houston will be similar to the one represented by this scale model, below.

CHANGE is usually a sign of progress in American industry—and nowhere is this more evident today than in the plants of Shell Chemical Corporation. New products and new uses for old ones have built up large markets for petrochemicals. To meet this demand the Corporation's plants have been expanding continuously for ten years. Nor is the end in sight, for petrochemicals are more and more needed in the manufacture of thousands of items which make for better living.

In 1941 Shell Chemical's Plant at Houston was a comparatively small unit providing isopropyl alcohol, acetone and the first commercial quantities of butadiene for synthetic rubber. Today, this Plant turns out a wide range of base materials for the chemical and other industries and for agriculture.

Right now construction crews are swarming over the Houston Plant. They are modifying some units so that

Ethyl chloride, the antiknock fluid for automotive and aviation fuels, is shipped from Shell Chemical Corporation's Houston Plant in pressure tank cars such as the ones shown above.

increased "know-how" may be used to advantage. They are constructing others to manufacture base materials for use by several national defense industries.

Sulfur Production

Sulfuric acid, sometimes called the king of chemicals, is used in many manufacturing processes, including those in national defense industries such as ammunition, steel, oil and chemicals. The acid is made from raw sulfur, which is mined in the U. S. in almost pure form. There are other sources from which raw sulfur can be derived, one being hydrogen sulfide gas available to Shell as a by-product of petroleum refining. With the U. S. yearly demand exceeding the supply by 500,000 tons, additional quantities of raw sulfur are urgently needed.

To help meet this need, a sulfur recovery plant, producing about 13,000 tons a year from hydrogen sulfide gas, is scheduled for completion this summer at the Houston Plant. The gas will be converted to raw sulfur in a melted state and accumulated in a concrete-lined pit. The melt will be shipped in tank cars to another company where it will be converted into sulfuric acid.

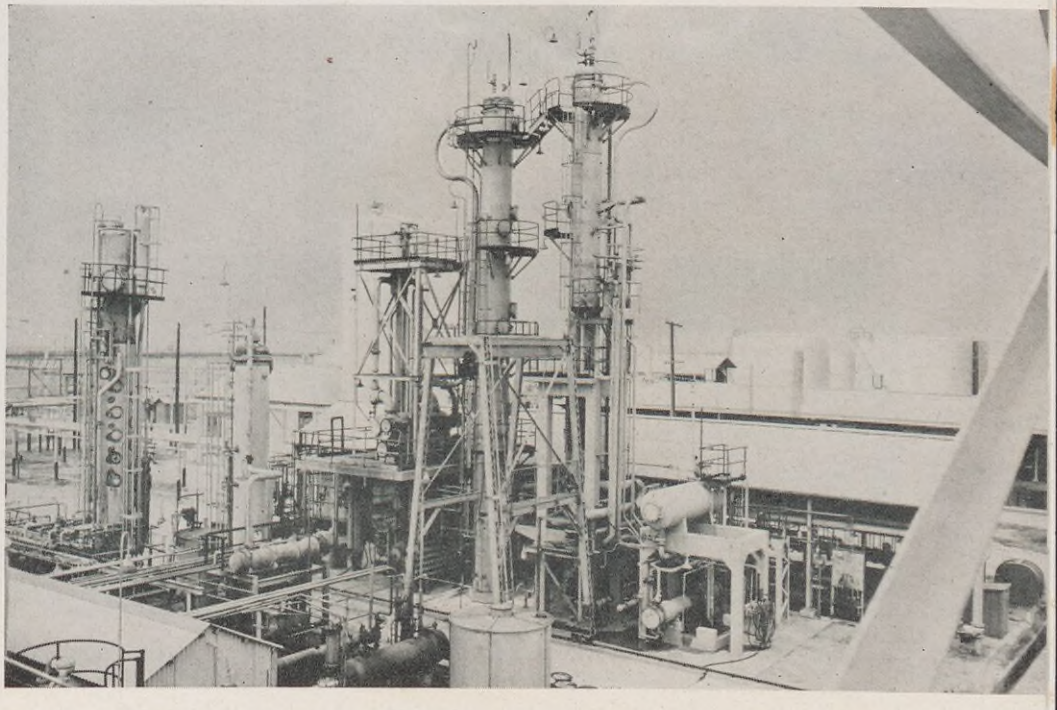
Need for Solvents

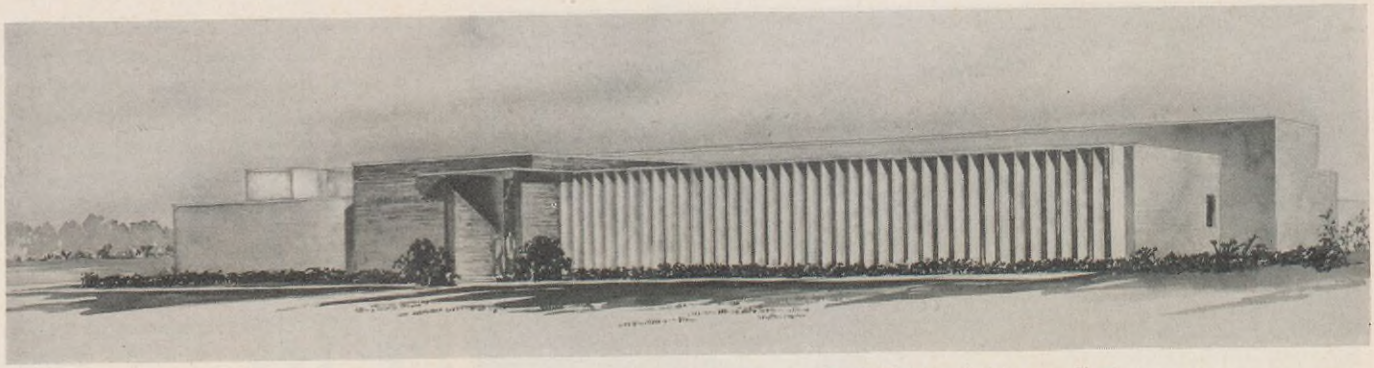
Shell Chemical Corporation is a large producer of solvents used in the manufacture of many new products. To meet the increasing demand for solvents, additions are being made to the secondary butyl alcohol-methyl ethyl ketone plant. They are expected to be completed by the end of 1952.

Secondary butyl alcohol, from which methyl ethyl ketone is derived, is a solvent with a variety of uses in such products as lacquers, thinners, shellac, perfumes, dyestuffs, cleaners and paint removers. A portion of the sulfuric acid produced from the raw sulfur recovered by Shell Chemical will be used in the manufacture of secondary butyl alcohol. By dehydrogenation of the alcohol, methyl ethyl ketone is produced. This is a fast-evaporating solvent for nitrocellulose and vinyl types of protective coating, and for molded plastics. It is also used in metal cleaning, lubricating oil dewaxing and artificial leather.

Sulfuric acid from raw sulfur made in Shell's recovery unit will be available for the manufacture of isopropyl alcohol. This chemical is needed for the production of acetone, a solvent

Present epichlorohydrin facilities, below, are being expanded to increase production of feed stock for the manufacture of EPON resins.





An artist's concept of the proposed Research Laboratory at Shell Chemical's Houston Plant, which will conduct investigations in association with the plant's manufacturing operations.

having numerous applications in the making of rayon, explosives, tear gas, plastics, perfumes, safety glass and many other products. Isopropyl alcohol is a solvent for lacquers and thinners and is familiar to the drugstore shelf as rubbing alcohol.

EPON Resin Manufacture

EPON resin, the new synthetic manufactured and marketed by Shell Chemical Corporation, has been so successful that present facilities for its manufacture cannot meet the demand. It has had widespread usage in industrial finishes and varnishes because of its outstanding adhesion, flexibility and resistance to chemical action. In defense production its use for drum linings, machine tool finishes and plastics applications has steadily increased since it was first produced at Houston in 1950.

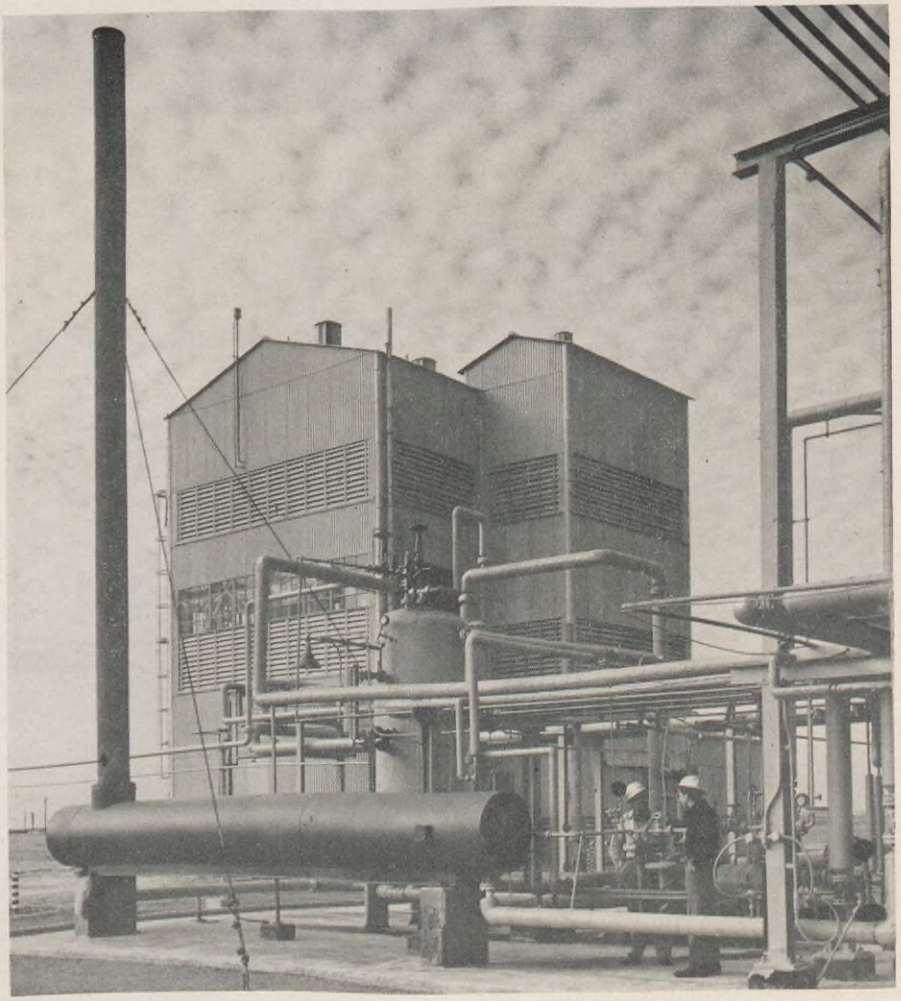
The output of EPON will be increased by the addition of a new plant. To supply the feed stocks for this plant, a new bisphenol unit will be built and present facilities for making epichlorohydrin expanded.

Along with these changes in production facilities, additions are now being made to the warehouse and shops.

Research Laboratory

The development and manufacture of chemicals and chemical products have grown so rapidly and demand for new products continues so great that present facilities for research at Shell Chemical's Houston Plant are no longer adequate. Consequently, construction of a Research Laboratory has been authorized and the project is expected to be ready by the end of this year.

The improvement of plant processes and products as well as the utilization of by-products will continue as the major areas for investigation in the new laboratory. As in the past, the research staff will work closely with Shell Development Company in the over-all chemical development program.



A new EPON plant at Houston similar to the one above, which began operation in 1950, will be built so that production can meet the steadily increasing demand for this synthetic resin.

They Have Retired

E. A. BACON
Tulsa Area
Crude Oil

G. M. COLE
Houston Refinery
Engineering

S. L. COOK
Chicago Division
Operations

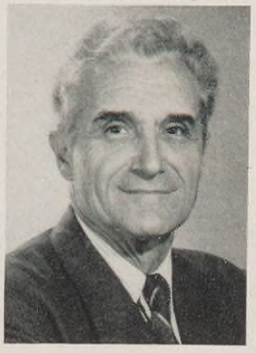
C. V. CURTIS
Pacific Coast Area
Production

P. J. DEMUNCH
Tulsa Area
Production

G. A. DOUGHERTY
Tulsa Area
Production

E. P. FRANKE
Wood River Refinery
Engineering

R. T. GOODWIN
Head Office
Special Products



C. O. GRIFFIN
Wilmington Refinery
Engineering

J. L. HAYWARD
Houston Refinery
Engineering

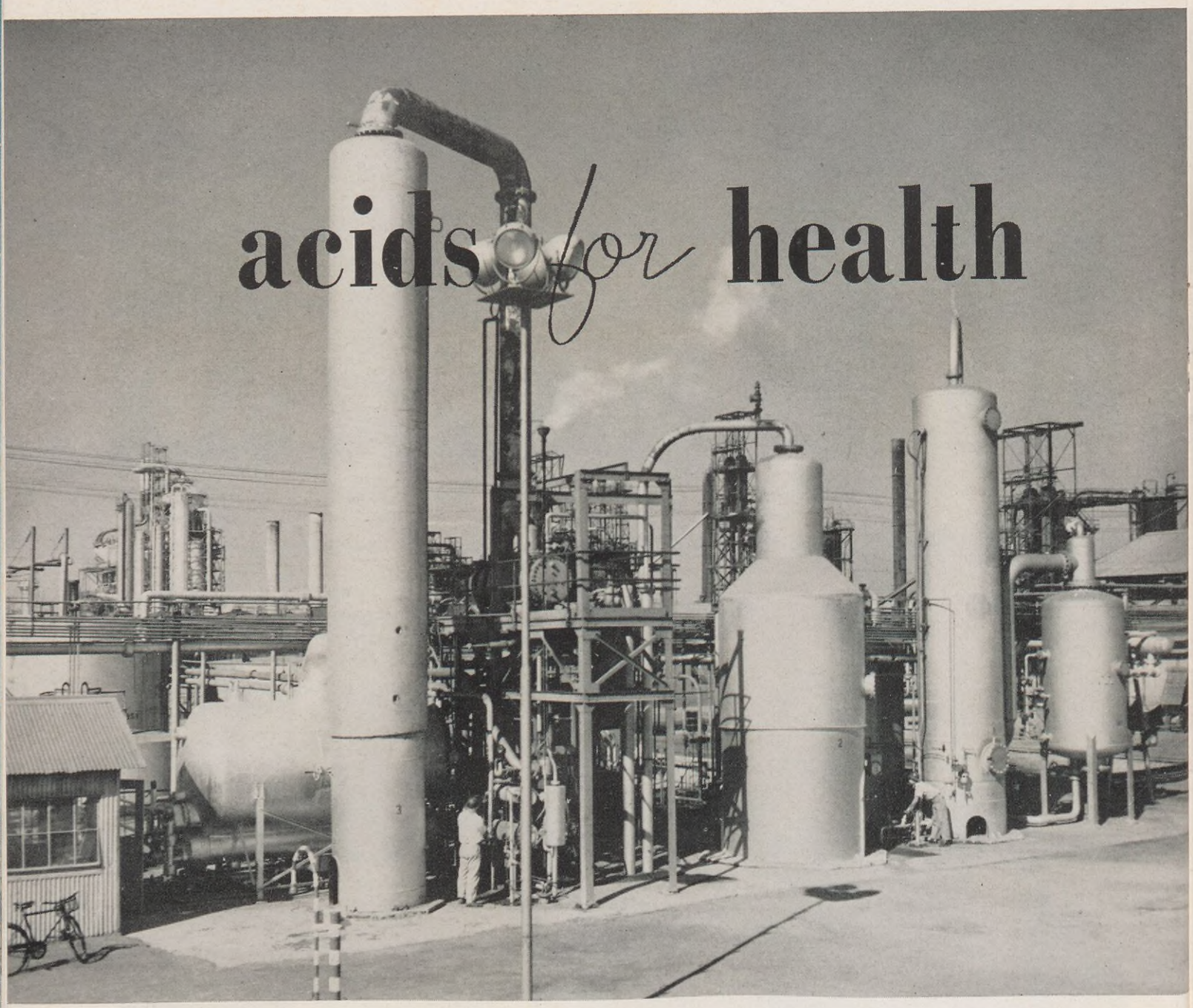
J. E. McCARTNEY
Pacific Coast Area
Production

A. H. ROBERTSON
Wilmington Refinery
Engineering

N. H. SPICER
Pacific Coast Area
Production

A. J. WAGUESPACK
Norco Refinery
Cracking

A. C. WAMPLER
Wilmington Refinery
Dispatching



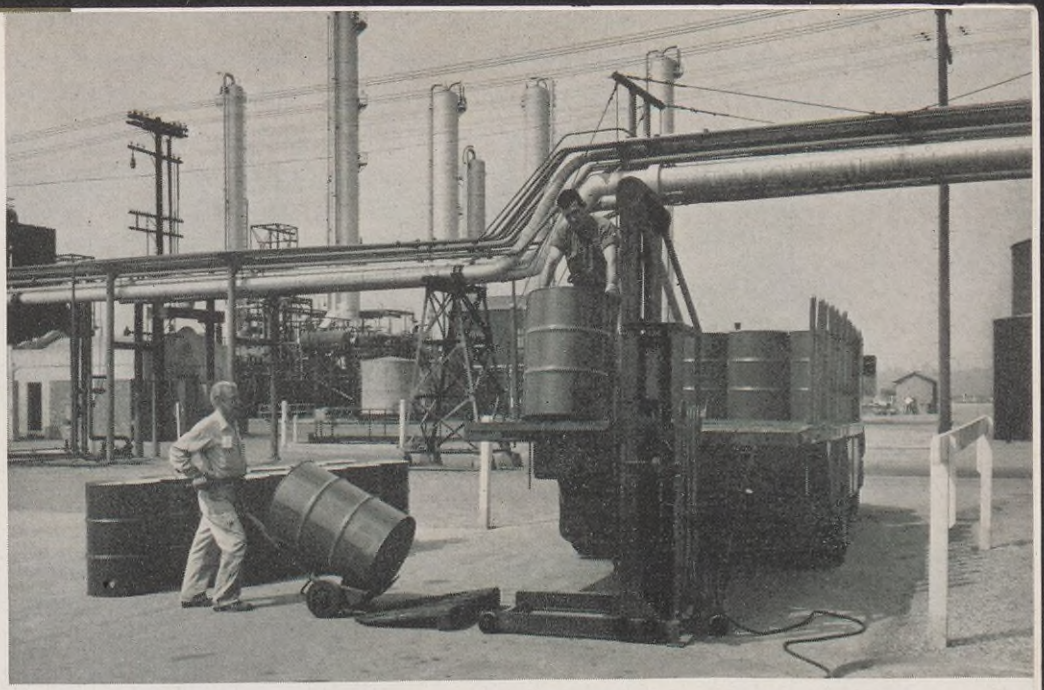
acids for health

Petroleum-derived cresylic acids are contributing to the country's health and welfare

YOU don't want to drink them to prove the point, of course, but certain petroleum acids nowadays rate right up there with cod-liver oil as a source of vitamins. Their health-yielding possibilities were dramatized by a rare coincidence.

Along about 1937, several biochemists were busy studying the chemical structure of Vitamin E. Among the "building blocks" which went to make the Vitamin E molecule one major block was identified as either of two complex compounds called 2,3,5 trimethylphenol and 2,3,5,6, tetramethylphenol. At the same time, research workers of Shell Development Company isolated the same two compounds from cresylic acids which, although not present in crude oil, are formed in small amounts during cracking operations in refineries. The Shell researchers pointed out this coincidence to the biochemists, who lost no time in taking the next logical step; they put together 2,3,5 trimethylphenol supplied by Shell, and another chemical

< The Wilmington acid oil plant, left foreground, processes crude cresylic acids from Martinez and Wilmington Refinery cracked distillates.



"building block" known as phytol, and came up with Vitamin E. Shell has since been supplying Vitamin manufacturers with 2,3,5 trimethylphenol from the Wilmington Refinery, which has been equipped to manufacture it.

The compound 2,3,5 trimethylphenol is only one of the numerous family of cresylic acids, also known as alkyl phenols, produced from petroleum. So far, Shell researchers have isolated some twenty different members of this acids family, including one that is a chemical stepping stone to Vitamin B_2, or riboflavin, as the chemist calls it.

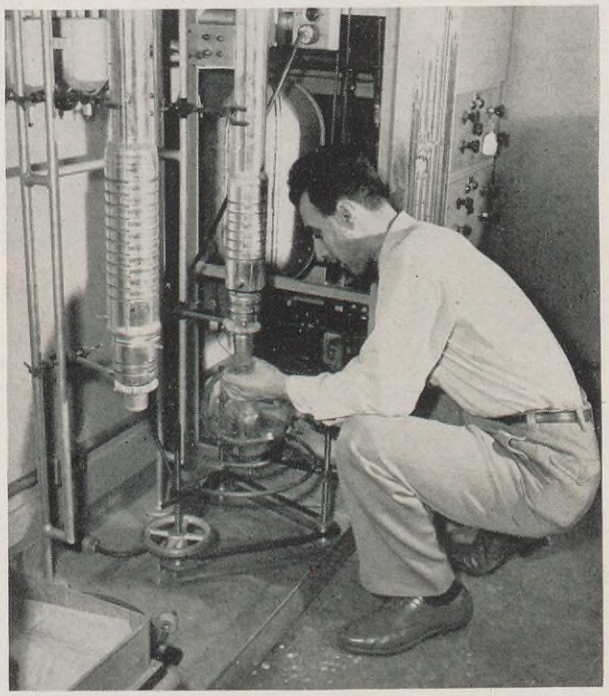
Cresylic acids are chemical compounds closely related to the familiar carbolic acid in both properties and make-up. Like carbolic acid, they are valuable as disinfectants; their germ-killing ability runs as high as thirty times that of carbolic acid. For this reason they are popular as sheep and cattle dips and as household and general purpose disinfectants.

Other Uses for Cresylic Acids

Large amounts of cresylic acids nowadays are sold for use in manufacture of the water-resistant adhesives widely used by plywood plants. The acids are also frequently used as wood preservatives; railroad ties, pilings and fence posts are among the items which have their useful life extended by impregnation with cresylic acids. In addition, the acids find use as metal cleaners because of their excellent solvent power for resins and gums, and are used in the manufacture of synthetic resins.

But the biggest customer for Shell cresylic acids today is the mining industry, which uses them in converting low-grade copper ores into high-value concentrates. The acids are also used in the recovery of zinc and lead ores.

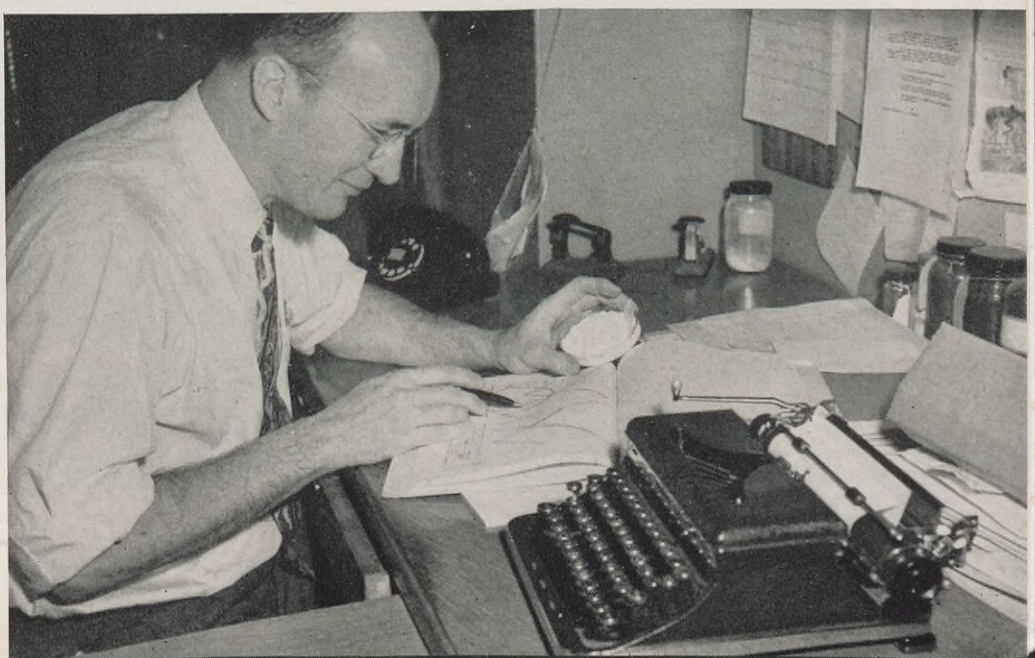
Thirty years ago cresylic acids were such a drug on the market that coal tar easily provided the limited supply needed at the time. Today, the Oil Industry is called on to supply them in vastly greater quantities for an ever-lengthening list of uses.



Above: Raymond Lea, left, and Don Bates load drums of cresylic acids at the Wilmington acid oil plant for delivery to local marketing outlets.

Chemist Aldo DeBenedictis places a sample of cresylic acids under a laboratory distillation column at the Shell Development Laboratories at Emeryville, California.

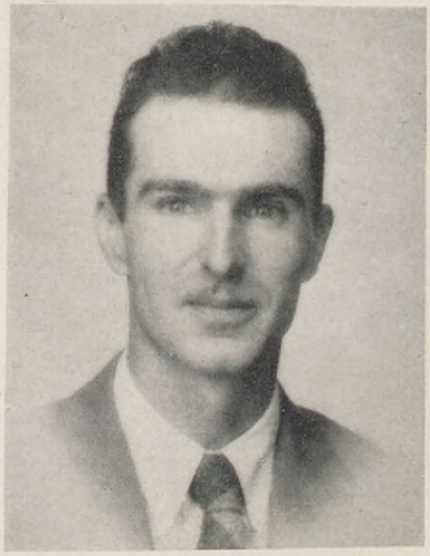
Another Emeryville chemist, D. B. Luten, is shown below examining a sample of pure 2,3,5 trimethylphenol, which is a cresylic acid used in vitamin manufacture.



coast to coast

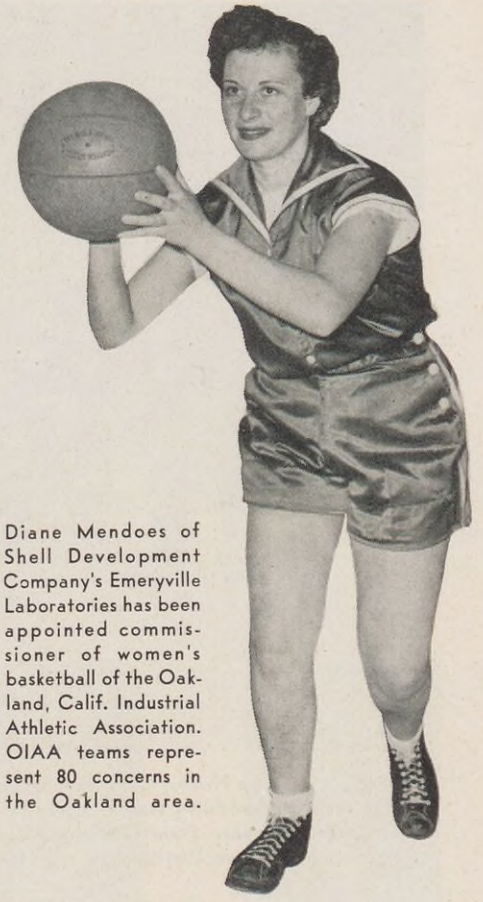
The Shell Chemical employees pictured at left are serving as officers of the Shell Point (California) Credit Union. They are, left to right: A. "Gus" Borba, vice president; H. W. Harwell, publicity director; George Ridley, recently elected president; C. M. Cameron, out-going president; June Calloway, secretary and M. L. Dry, who serves as treasurer.

St. Louis Division personnel were joined, below, by representatives of the New York Head Office Marketing organization at the Division's Annual Review, held at the Sheraton Hotel in St. Louis on March 20 and 21.

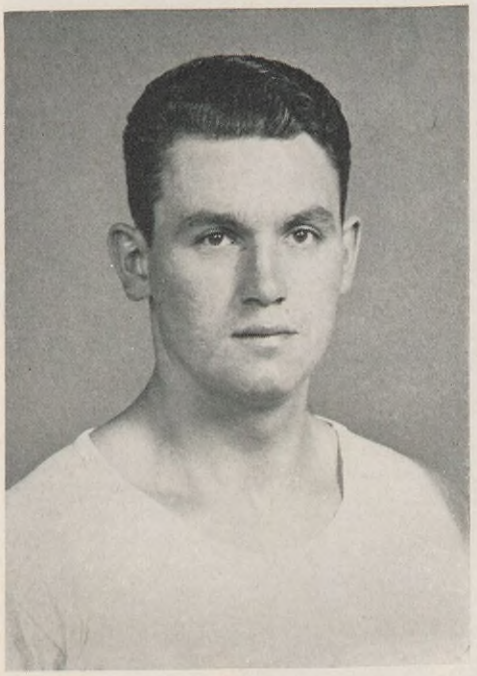


Charles Schley of the New York Marketing Division's Marketing Service Department is serving as the chairman of the 1952 Red Cross Fund Drive for Levittown, Long Island.

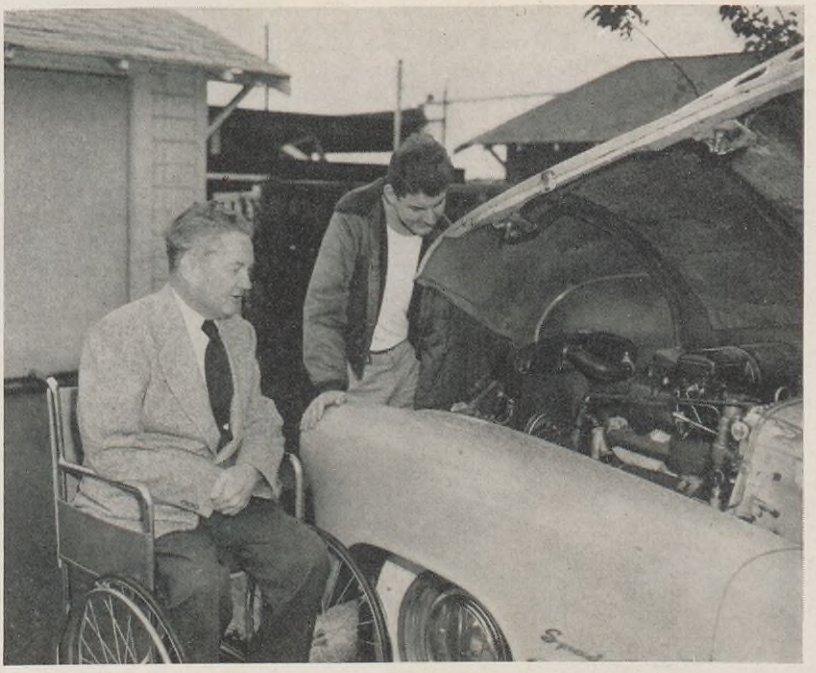
Officers and directors of the Service Club at the Wood River Refinery are pictured above. In the first row, from left: V. W. LaMarsh, president; R. L. Turner, vice president; C. Ailsworth, secretary; and C. E. Reichert, treasurer. In the back row: directors R. R. Hoover, J. L. Roller, J. R. D. Creekmore and S. B. Kennedy who retires from the board this year.



Diane Mendoes of Shell Development Company's Emeryville Laboratories has been appointed commissioner of women's basketball of the Oakland, Calif. Industrial Athletic Association. OIAA teams represent 80 concerns in the Oakland area.



In the National Amateur Handball Championships held recently in Detroit, J. P. Ingrassia of the Head Office Traffic Department and his partner extended the eventual champions in three tight games before losing.



Shell pensioner Chester Ashley and his son Allen have whipped the problem of "getting around" which has plagued them both since their polio attacks of seven years ago. Chet invented a power steering booster which enables Al to manipulate the family car with about one-fourth the effort required by conventional driving systems. Here father and son check the engine before taking a spin.

Shell's Calgary Area Hockey Club recently took top honors in the Calgary Oil Hockey League for the second consecutive season. Shown in the picture above, from left to right, are team members Larry Cooper, Frank Clifton, Alf Jones, Jim Dobbin, Al Denis, George Smith, Ralph Jackson (coach), Tom Whittingham, Al Hinks, Verne Brewer and Ernie Stilling (manager).

Ed Terry, below left, won the "Calf Award" sponsored by Shell Chemical Corporation at the recent Grand National Junior Livestock Show in San Francisco. K. W. Dedrick of the Western Division makes the presentation.

This Shell Development basketball team won the championship of the Oakland Industrial League. In front, left to right: George Sayous, Les Coykendall, George Antone, Richard Murray; standing: George Payne, Don Berry, Dale Webster and John Oshida.

All phases of Detroit Marketing Division operations were discussed in the annual review meeting held in March at the Sheraton-Cadillac Hotel in Detroit. Shown above are some of the Head Office and Division personnel who attended the meeting.

Service Birthdays

Thirty-Five Years

A. G. BOUTON
San Francisco Office
Treasury

A. P. FREY
Tulsa Area
Production

Thirty Years

C. W. ASHMAN
San Francisco Division
Sales

W. A. CARPENTER
Houston Refinery
Distilling

W. H. CLAUSEN
Pacific Coast Area
Production

G. E. McCRACKEN
Wood River Refinery
Distilling

L. E. PLATT
Portland Division
Operations

EMILE REILLAC
San Francisco Office
Treasury

G. C. ROCKAFIELD
Wilmington Refinery
Treasury

P. E. SCHUTZ
San Francisco Division
Operations

A. J. SHELL
Wilmington Refinery
Engineering

W. C. THOMPSON
Pacific Coast Area
Production

F. F. WALMSLEY
San Francisco Office
Marketing

Twenty-Five Years

C. R. ALDERMAN
Head Office
Manufacturing

L. L. BAKER
Tulsa Area
Production

M. H. BARTOLOMEI
Martinez Refinery
Compounding

W. L. BLAKE
Wilmington Refinery
Effluent Control and Util.

C. A. BLOCH
Martinez Refinery
Dispatching

W. E. W. BOYD
Wilmington Refinery
Engineering

R. M. BROUGHER
E. & P. Technical Division
Research

C. I. BURGESON
Seattle Division
Operations

D. W. CRAVENS
Wood River Refinery
Cracking

R. H. DELANO
Wilmington Refinery
Thermal Cracking

E. L. DIMMICK
Pacific Coast Area
Production

J. C. EMLEN
Portland Division
Sales

HENRY HASSELL
Pacific Coast Area
Purchasing-Stores

J. K. HENSLEY
New Orleans Area
Production

H. O. HOLMES
Indianapolis Division
Operations

C. J. HUGGETT
Wilmington Refinery
Thermal Cracking

S. A. JOHNSON
Portland Division
Treasury

E. E. KETHA
Seattle Division
Operations

E. A. LEY
Pacific Coast Area
Purchasing-Stores

R. U. LUGIBIHL
Cleveland Division
Operations

C. H. McCALLEY
Wood River Refinery
Dispatching

R. D. MOTHERAL
Martinez Refinery
Engineering

C. A. NORMANDY
Pacific Coast Area
Production

E. R. PURSE
Chicago Division
Operations

GEORGE QUALTERS
Wilmington Refinery
Dispatching

J. R. ROBINSON
Products Pipe Line
Zionsville, Ind.

W. S. SHAW
Wilmington Refinery
Catalytic Cracking

O. E. SIEBENMANN
Chicago Division
Sales

I. I. STOCKTON
Pacific Coast Area
Production

H. H. TREDE
Pacific Coast Area
Production

R. C. VANBIBER
Tulsa Area
Production

J. K. WELLS
New York Division
Sales

C. H. WINGATE
Houston Area
Production

D. D. WINTERS
Wilmington Refinery
Alkylation

SHELL OIL COMPANY

Head Office

20 Years

R. M. Cherryholmes ..... Marketing
S. A. Nesbitt ..... Marketing
Ida M. Smith ..... Treasury

15 Years

B. W. Dunbar ..... Manufacturing
T. H. Dwyer ..... Exploration & Production
G. F. Freeman ..... Transportation & Supplies
E. O. King ..... Transportation & Supplies
W. S. Myers ..... Manufacturing
R. K. Schulze ..... Transportation & Supplies
C. M. Wright ..... Legal
J. J. Zamenick ..... Treasury

10 Years

R. T. Smith, Jr. ..... Manufacturing

San Francisco Office

20 Years

Doris L. Boldt ..... Marketing

15 Years

N. Templeton ..... Legal
F. R. Watson ..... Manufacturing

Exploration and Production

TECHNICAL DIVISION (HOUSTON)

15 Years

E. H. Timmerman ..... Technical Services

10 Years

F. V. Robinson, Jr. ..... Research

CALGARY AREA

15 Years

J. S. Blaine ..... Purchasing-Stores

10 Years

J. A. McCaw ..... Purchasing-Stores

HOUSTON AREA

20 Years

G. E. Burpee ..... Production

15 Years

R. C. Hilton ..... Exploration
A. K. Korn ..... Production

10 Years

H. E. Keith ..... Production
E. L. Marquart ..... Legal

MIDLAND AREA

20 Years

Estella L. Brown ..... Treasury

15 Years

R. S. Cryer ..... Production
T. Williamson ..... Gas

10 Years

R. E. Duncan ..... Production

NEW ORLEANS AREA

20 Years

R. L. Davis ..... Gas
W. H. Miller ..... Production

15 Years

L. J. Blakewood ..... Exploration
E. H. Leemann ..... Production

10 Years

V. L. Pellerin ..... Production
J. W. Trahan ..... Production

PACIFIC COAST AREA

20 Years

H. J. Beatty ..... Production
J. Dale ..... Production
E. W. Davis ..... Production
H. H. Howard ..... Production
L. S. Stevenson ..... Production

15 Years

D. W. Enterline ..... Production
E. E. Martin ..... Production
A. S. Moignard ..... Production
W. Neilson, Jr. ..... Production
J. P. Ruby ..... Personnel & Ind. Relations
G. H. Sturgeon ..... Exploration

10 Years

J. E. Ahlstrom ..... Production
R. E. Boyer ..... Production
W. L. Coats ..... Production
E. M. Curry ..... Exploration
J. D. Howard ..... Production
S. A. Kelley ..... Production
J. J. Roll ..... Production
R. R. Werts ..... Production
R. J. Woodward ..... Production

TULSA AREA

20 Years

W. C. Howard ..... Production

15 Years

J. D. Goodrich ..... Production
J. L. Lindner ..... Exploration
F. H. Rathjen ..... Gas
R. N. Thompson ..... Production

10 Years

E. W. Ross ..... Personnel & Ind. Relations
H. H. Schierloh ..... Exploration
A. M. Walker ..... Treasury

Manufacturing

HOUSTON REFINERY

20 Years

R. H. Hutchings ..... Distilling
I. G. Loomis ..... Engineering
J. H. Wheat ..... Gas

15 Years

C. Agnew ..... Engineering
Elizabeth C. Hechler ..... Fire & Safety
L. Mikle ..... Control Laboratory
C. Newton ..... Engineering
S. L. Orr ..... Catalytic Cracking
G. Robinson ..... Engineering
C. G. Scott ..... Gas
S. L. Stewart ..... Engineering

10 Years

R. R. Crawford ..... Engineering
L. C. Dickey ..... Engineering
J. B. Dunham ..... Stores
M. D. Jergins ..... Lubricating Oils
R. W. B. Johnston ..... Research
N. P. Lane ..... Control Laboratory
A. Mason ..... Catalytic Cracking
H. J. McShane ..... Engineering
L. R. Myers ..... Engineering
L. W. Parrish ..... Engineering
J. M. Perry ..... Gas
M. W. Roberson ..... Catalytic Cracking
P. R. Schaff ..... Treasury
L. I. Valenta ..... Engineering

MARTINEZ REFINERY

15 Years

R. F. Evenson ..... Cracking
C. H. Wiget ..... Research Laboratory

10 Years

J. J. Irwin ..... Cracking
W. H. Jackson ..... Compounding
R. C. Osborn ..... Dispatching
C. J. Struby ..... Research Laboratory
A. Tackett ..... Cracking
C. D. Warren ..... Lubricating Oils

NORCO REFINERY

20 Years

C. C. Guillot ..... Cracking
G. L. Labbe ..... Gas

15 Years

W. A. Erickson ..... Engineering

10 Years

R. H. Bartholomew ..... Technological
C. J. Brignac ..... Engineering
E. L. Holmes ..... Engineering

WILMINGTON REFINERY

15 Years

E. C. Chaffin ..... Dispatching
V. F. Lahr ..... Laboratory
A. M. Mahoney ..... Distilling

10 Years

C. M. Anderson ..... Engineering
T. S. Cate ..... Engineering
H. F. Davis ..... Engineering
W. D. Horton ..... Engineering
R. M. King ..... Engineering
M. T. Lee ..... Marine Loading
R. McLean ..... Effluent Control & Utilities
J. H. Muensterman ..... Engineering
W. W. Taylor ..... Engineering
V. A. Vezina ..... Engineering
L. G. Woodle ..... Distilling

WOOD RIVER REFINERY

20 Years

H. E. Best ..... Compounding
J. N. Conroy ..... Engineering

15 Years

D. L. Berry ..... Research Laboratory
A. J. Collins ..... Engineering
L. J. Jackson ..... Engineering
C. W. Meyer ..... Engineering
G. A. Seigelman ..... Alkylation
W. W. Summers ..... Engineering
H. E. Theuer ..... Engineering
R. A. Wehmeyer ..... Research Laboratory

10 Years

J. H. Ashcraft, Jr. ..... Cracking
T. G. Bailey ..... Engineering
L. V. Botkin ..... Engineering
A. E. Broadway ..... Engineering
L. A. Brooks ..... Engineering
E. L. Burmester ..... Engineering
A. C. Cunningham ..... Engineering
K. R. Dalton ..... Engineering
L. E. Fishback ..... Engineering
L. F. Fritsche ..... Dispatching
L. Giacomelli ..... Engineering
C. H. Groeteka ..... Engineering
R. E. Hall ..... Dispatching
E. A. Hanudel ..... Technological
A. L. Hook ..... Compounding
G. L. Hayes ..... Research Laboratory
S. W. Kennedy ..... Engineering
M. E. Kimble ..... Control Laboratory
L. R. King ..... Treating
T. E. Land ..... Research Laboratory
T. J. Leatherby ..... Compounding
W. L. Little ..... Engineering
D. Maddalon ..... Engineering
E. L. Milford ..... Engineering
S. W. Montgomery ..... Engineering
R. W. Niemann ..... Engineering
E. L. Perkins ..... Cracking
V. F. Plager ..... Engineering
W. C. Roberts ..... Technological
K. E. Rohr ..... Technological

* On Military Leave

H. V. Smith ..... Engineering
F. Valenta ..... Engineering
D. Van Bebber ..... Dispatching
W. E. Wasson ..... Control Laboratory
V. G. Wiss ..... Engineering

Marketing

MARKETING DIVISIONS

20 Years

T. J. McCormick ..... Albany, Operations
G. R. Sawin, Jr. ..... Albany, Sales
W. J. Harrell ..... Atlanta, Sales
Loretta Jervey ..... Atlanta, Sales
H. D. MacRitchie ..... Boston, Operations
A. E. Thompson ..... Boston, Marketing Service
G. P. Taylor ..... Chicago, Operations
G. E. Gast ..... Cleveland, Operations
W. A. Mackin ..... Cleveland, Operations
N. A. Wyckhouse ..... Los Angeles, Treasury
D. E. Hilkerbaumer ..... Sacramento, Treasury
J. M. Fogarty ..... San Francisco, Sales
L. C. Holland ..... San Francisco, Sales
M. G. Schlote ..... San Francisco, Operations

15 Years

D. B. Kessell ..... Albany, Sales
*K. V. Sutter ..... Albany, Sales
D. B. White ..... Albany, Operations
S. A. Gervin, Jr. ..... Atlanta, Sales
H. H. Gardner ..... Boston, Operations
L. F. LaMarche ..... Boston, Operations
W. M. Newcombe ..... Boston, Operations
G. E. Ninde ..... Boston, Treasury
W. R. Stelk ..... Chicago, Sales
C. E. Cooley ..... Cleveland, Operations
R. C. Reichle ..... Cleveland, Marketing Service
H. G. Wheeler ..... Los Angeles, Operations
V. C. Elmquist ..... Minneapolis, Sales
E. I. Jensen ..... New York, Sales
Aileen N. Hampton ..... Sacramento, Treasury
S. H. Sides, Jr. ..... St. Louis, Sales
E. A. Davis ..... Seattle, Operations
W. L. Meston ..... Seattle, Operations
J. H. Perry ..... Seattle, Sales

10 Years

E. Lewis ..... Atlanta, Operations
V. B. Morris ..... Atlanta, Treasury
C. J. O'Hagan ..... Atlanta, Operations
Phyllis E. Marshall ..... Baltimore, Treasury
R. Whalley ..... Boston, Operations
Grace S. Johnston ..... Detroit, Mktg. Service
L. Hagan ..... Indianapolis, Operations
G. W. Tate ..... Los Angeles, Operations
K. F. Burton ..... Minneapolis, Operations
R. A. Gimbel ..... San Francisco, Operations

SEWAREN PLANT

15 Years

B. J. Concannon ..... Terminal
A. P. Moretti ..... Compounding
J. Terefenko ..... Compounding
M. Toth ..... Compounding

Products Pipe Line

15 Years

R. K. Schulze ..... New York, N. Y.

10 Years

L. W. Brack ..... Chattanooga, Tenn.
G. L. Chapman ..... East Chicago, Ind.
J. M. Greer ..... Spartanburg, S. C.

SHELL CHEMICAL CORPORATION

20 Years

C. P. Boutte ..... Houston

15 Years

R. M. Oaks ..... Head Office
P. H. Leyhe ..... Houston
J. H. Long ..... Houston
H. J. Backstrom ..... Shell Point

10 Years

V. E. Kane ..... Dominguez
R. D. Mays ..... Dominguez
G. F. Saunderson ..... Dominguez
J. E. Carey ..... Head Office
C. V. Wittenwyler ..... Head Office
W. H. Berkley ..... Houston
G. R. Chamberlain ..... Houston
M. G. Henshaw ..... Houston
W. L. Russell ..... Houston

SHELL DEVELOPMENT COMPANY

20 Years

P. H. Letsch ..... Petroleum Refining
F. F. Rust ..... Reaction Kinetics

15 Years

A. De Benedictis ..... Organic Synthesis
H. T. Gillis ..... Experimental Plants
Z. V. Jasaitis ..... Petroleum Refining
J. W. Pegg ..... Vice President
G. J. Pierotti ..... Physical Chemistry
J. W. Prud'homme ..... Mech. & Elec. Engr.
C. L. Raymond ..... Process Engineering
W. E. Ross ..... Process Development
T. T. Waterman ..... Fuels & Lubricants Engr.

10 Years

E. R. Bell ..... Reaction Kinetics
R. W. Dorn ..... Process Development
D. C. Lehwalder ..... Physical Chemistry
J. H. Raley ..... Reaction Kinetics
G. R. Sayous ..... Instrumentation
R. D. Sullivan ..... Organic & Applications

SHELL PIPE LINE CORPORATION

20 Years

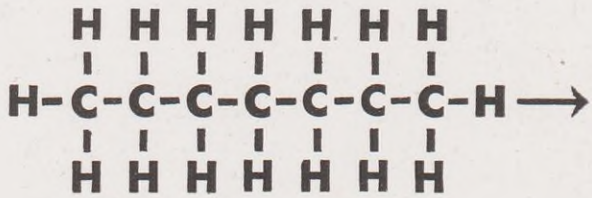
C. E. Dolhonde ..... Texas-Gulf Area
R. H. Gibson ..... Texas-Gulf Area

15 Years

O. H. Cage ..... West Texas Area
F. E. Flood ..... Mid-Continent Area
W. T. Porter ..... West Texas Area

10 Years

L. P. Blackburn ..... West Texas Area
D. B. Boyd ..... Mid-Continent Area
D. O. Griffith ..... Texas-Gulf Area
J. P. Holt ..... Mid-Continent Area
D. E. Johnson ..... West Texas Area
L. F. Miller ..... Mid-Continent Area
W. S. Sanders ..... West Texas Area
J. M. Smith ..... West Texas Area
R. A. Whipkey ..... Mid-Continent Area
W. H. Wyatt ..... Mid-Continent Area



symbols of research

Achievements begin as ideas. Because ideas are the life of progress, Shell maintains research and development laboratories, staffed by skilled scientists and assistants who tackle the job of developing new ideas and of making old ones work better. Shell's coordinated research program has led to better fuels, lubricants, and chemicals and to many new products that mean progress for America. Through research every ounce of our raw material is made more useful, in more ways.

But Research is just one group working at the over-all job Shell does in finding oil, making products and moving them to the public. Doing the full job requires the coordinated efforts of Exploration and Production, Manufacturing, Transportation and Supplies, Marketing, Research and all our other groups. You are one of more than 30,000 Shell men and women doing 1860 different kinds of work to keep the full job going—and growing. Each Shell group—large and small—is essential in keeping a well balanced flow of oil and products from well to consumer.

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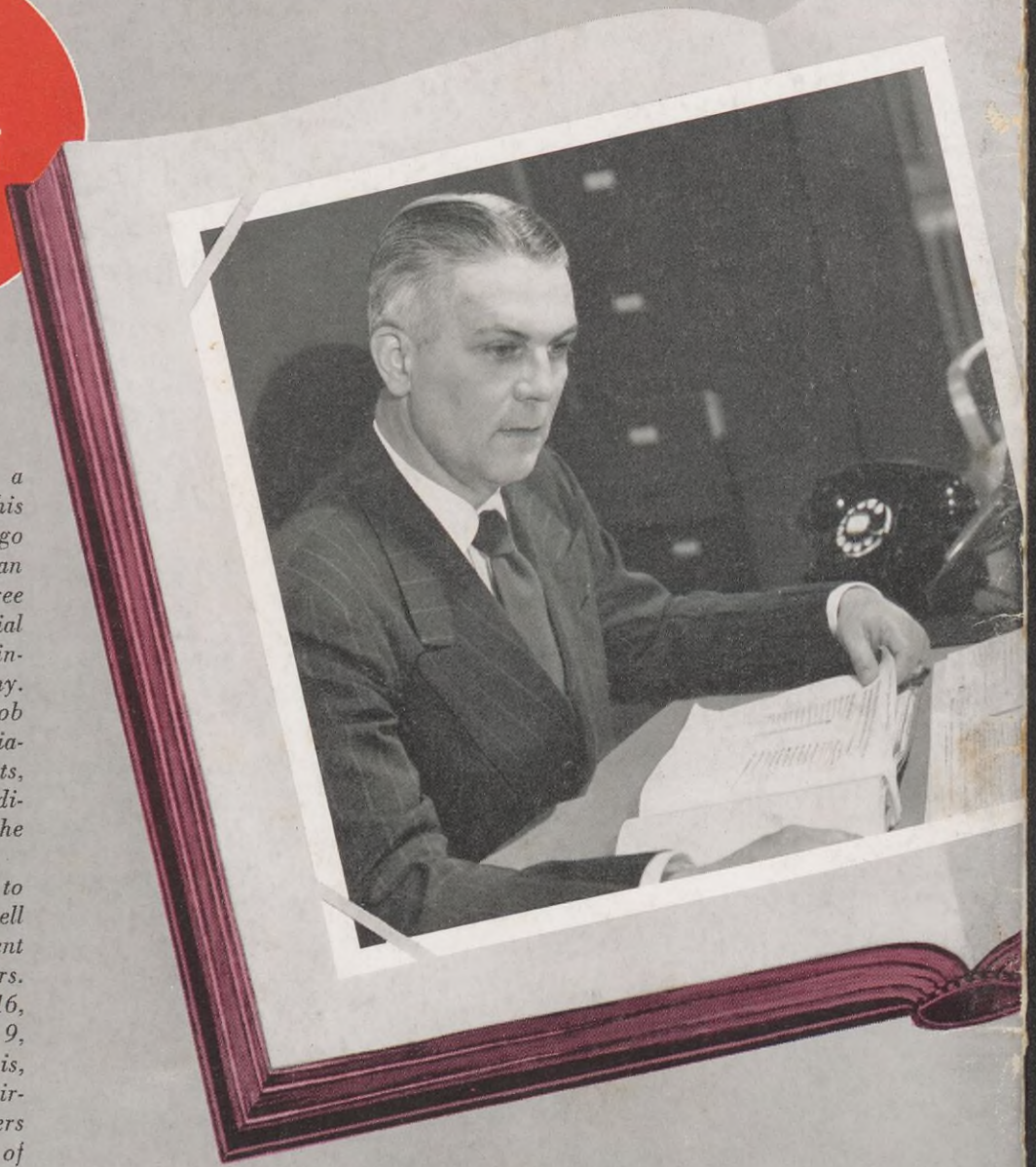
FAMILY PORTRAIT



THERE'S an old saying that a man's reputation is as good as his credit. Arnold Uelk of the Chicago Marketing Division and the more than 100 other Shell Credit Men will agree that promptness in meeting a financial obligation is one way to judge the integrity of an individual or company. They should know, for it is their job to investigate and determine the reliability of Shell's prospective accounts, to grant credit under proper conditions, and to be responsible for the collection of these accounts.

"Chick" Uelk, as he is known to fellow-employees, has been with Shell for more than 18 years. In his present position since 1947, he lives with Mrs. Uelk and five children — Joseph 16, Joanne, 15, Bernard, 12, Mary Jo, 9, and Thomas, 7, in Rosemoor, Illinois, a suburb of Chicago. He is Vice Chairman of the Motor Freight Carriers Group in the Chicago Association of Credit Men. Baseball, swimming and gardening are his hobbies.

CREDIT MAN (Marketing) ● **ARNOLD J. UELK**