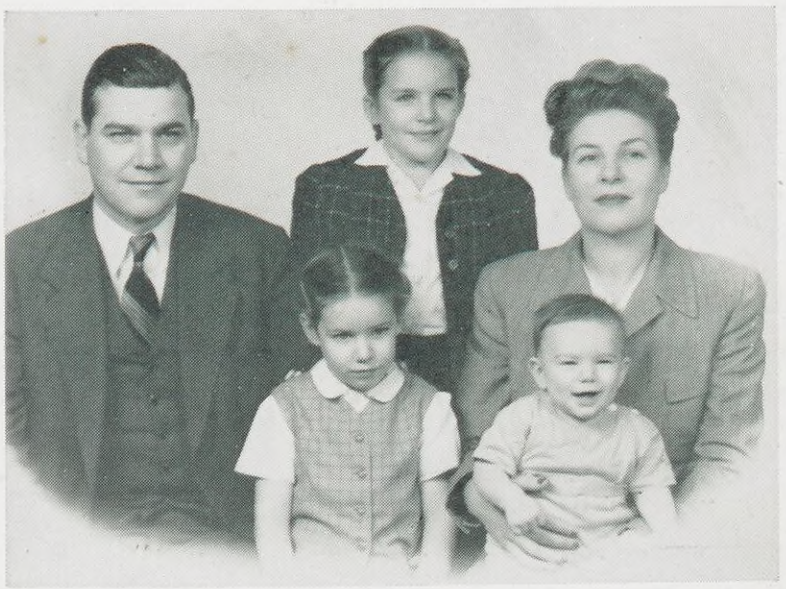
SHELL NEWS

SEPTEMBER 1959

PRESSURE COOKER CLEANER

Searching the files in the basement of the Shell building in San Francisco for data to be used in the case, are, in foreground, Attorney S. R. Vandivort, left, and Files Supervisor A. O. Bache. Behind them, front to rear: Statistical Analysts C. C. Fisher and C. E. Wilson, and Attorneys C. D. Walz, Jr., and J. O. Tingle.



The family portrait added new faces since 1947, the year the grand jury began hearings in the West Coast Case. Vandivort moved to San Francisco to begin work on the case in June, 1950. Above are Vandivort and his wife, Martha, with their children Mary, then 5, and Tom, then 1, in front, and Julia, then 8. Below, the Vandivorts posed again recently. Now they are — in front, from left to right, Russell, 8, born in San Francisco after the case started; Vandivort; Julia, holding her son Allan; and Mrs. Vandivort. In the rear are Mary, 17; Allan Roundy, Julia's husband; and Tom, 13.

NINE YEARS ON

Ending of the West Coast Case in June was a milestone for S. R. Vandivort as well as Shell

IN June, 1950, a few weeks after the Anti-Trust Division of the U. S. Department of Justice filed a massive suit against Shell and six other oil companies on the West Coast, Attorney S. R. (Bucky) Vandivort left New York for San Francisco to help contest the suit. With him were his wife and three children.

When a consent decree ended the case for Shell nine years later in June, 1959, Vandivort had four children and one grandson.

"When my youngest son Russell was born in 1950 people kidded me that he would have time to grow up, go through law school and join me in preparing the case before it ever reached trial," Vandivort recalled recently. "And if we had finished getting ready for trial, they might have been right. The case was still in its infancy when it was settled."

The West Coast anti-trust suit was one of the biggest ever filed. In time, trial preparations took nine years. In money, one oil company counsel estimated the total cost at $25 million. In words and figures submitted as evidence, the totals were astronomical.

A Federal grand jury began looking into the possibilities of a suit in 1947. The civil action was filed May 12, 1950, against Shell, Texaco, Richfield Oil Corporation, Standard Oil of California, General Petroleum Corporation, Tidewater Oil Company, Union Oil Company of California and the Conservation Committee of California Oil Producers.

The suit covered virtually every activity of the oil industry on the West Coast for 14 years, from 1936 to 1950.

In brief, the charges were that the oil industry restricted crude oil production to stabilize prices; used control of pipe lines and crude purchase contracts to force independents to restrict their production; and used service stations to limit retail competition.

The suit covered the companies' activities only in California, Washington, Oregon, Arizona and Nevada. At that

THE CASE

SHELL NEWS

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

Employee Communications Department
New York, N. Y.

contents

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ABOUT THE COVER

Wearing a football helmet and an air mask, Pilot Plant Operator C. R. Pease of Shell Development Company's Emeryville Research Center emerges from an autoclave or "pressure cooker" he has just cleaned. The giant pressure cooker, used to "mix" batches of experimental chemicals, is lined with glass which must be cleaned and polished at regular intervals. Although the autoclave is decontaminated before Pease enters it, he wears the helmet and air mask as safety precautions. To learn more about Emeryville's Experimental Plants Department, turn to page 18.

Discussing a statistical aspect of the case: (standing left to right) Tingle, Vandivort, Walz and Wilson; (seated) Fisher and Stenographer Wilma W. Jones. The West Coast suit was one of the biggest ever filed in the U. S.

NINE YEARS ON THE CASE continued

Millions of pages of files were reviewed

time, this area formed a self-contained unit because very little crude oil or products were shipped in or out of this five-state area. (Since then, pipe lines and tanker shipments have changed the situation.)

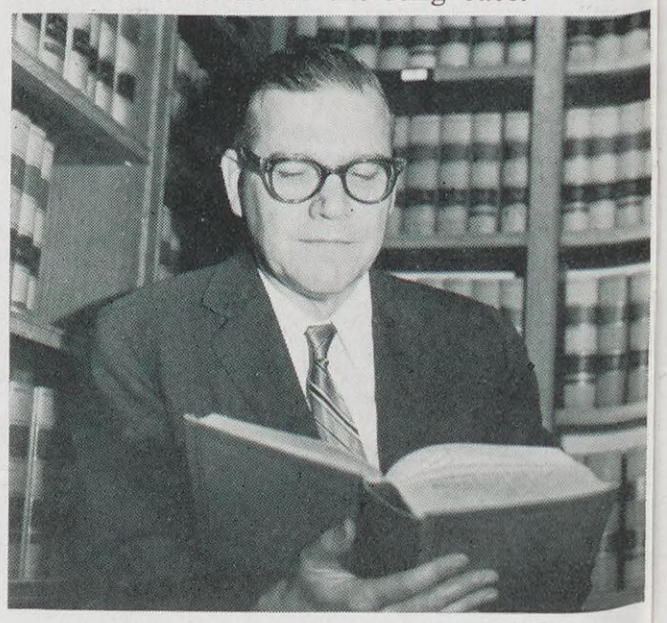
Government attorneys hoped to get a ruling that could be applied nation-wide, Vandivort said, by tackling the relatively small West Coast operations as a "pattern" case.

It wasn't until after the suit was filed and the work really began, he said, that the government attorneys realized just how complex the case would be.

"They reminded me of the man who tried to lift a barrel of apples and found out he couldn't get his arms around it," Vandivort said.

Vandivort was an ideal man to help show that the Anti-Trust Division's

Legal research, being done here by Vandivort, contributed to the favorable outcome of the long case.



suit was unwarranted. A graduate of the University of Missouri Law School, he had been a country lawyer in Cape Girardeau, Missouri, and later an Assistant U. S. Attorney in St. Louis before he joined Shell in 1947. Perhaps equally important were his temperament, sense of humor, patience, and his ability to work with people as the case became more complex and frustrating.

When he and his family came to San Francisco, it was "a two to four-year assignment," he said — though legend has it that he came for two weeks and stayed nine years. He leased a home in nearby Burlingame and set up an office on the second floor of the Shell Building in a former library office. As information on the case mounted, the office soon resembled a good-sized library again.

Looking around at the banks of packed files, stacks of charts and rows of books, Vandivort recalled that "sometimes it appeared that there would be no settlement, and we would be going on and on for years and years."

"We knew that after the years of getting ready for a trial, the trial itself might take years," he said. "Then after a trial would come appeals—if the trial resulted in a decision adverse to Shell."

To fight the suit, Shell set up two "defense headquarters." One was in Los Angeles, the other in San Francisco. The Los Angeles office worked on problems concerning production and transportation. Attorney B. G. Warren of the Pacific Coast Exploration and Production Area directed the work from 1950 through 1953; F. H. Warner succeeded him through 1958, and A. T. Newcomb took over until the suit ended.

Working at various times with Vandivort in San Francisco on marketing and manufacturing aspects were A. J. Fabris, Manager, Legal Department, San Francisco, and Attorneys T. E. Wilson (now in New York), P. R. Teetor (now in Tulsa), C. D. Walz, Jr., and J. O. Tingle; and Statistical Analysts C. E. Wilson, C. C. Fisher and C. L. Smith (now retired).

The government planned to build its case on information from the oil companies, and to get the information it sent out "interrogatories" — long, detailed questionnaires—about every phase of the business. (After several years, their complexities became a source of frustration which occasionally could only be relieved by humor. For example, two staff members once gave Vandivort a large envelope marked "Interrogatory No. 143." When he opened it, he saw column after column of Chinese characters.

Shell received 237 interrogatories. Answering them took seven years' work by teams of accountants and attorneys interviewing employees and going through thousands of files.

Some of the work in Los Angeles

In Los Angeles, Attorney B. G. Warren of the Legal Department of the Pacific Coast E&P Area, who worked on production and transportation aspects of the case from 1950 through 1953, looks over one of many files.

Referring to the consent decree that ended the case are left to right, Walz, Vandivort and Tingle. The consent decree as printed is 31 pages long.

Packing for the return trip to New York by automobile—nine years after arriving in San Francisco—are Vandivort, daughter Mary, son Russell, and wife.

meant going back to files as far back as 1926, Warren said. But files could not answer the technical engineering and geological questions, so Warren and Warner "had to 'pick the brains' of people in various departments."

Some departments set up teams of experts to confer with attorneys. Others loaned technical experts for months or years at a time. Engineer F. E. Davie, who retired last year, worked more than a year on questions involving crude purchases and exchanges. Engineers W. L. Hobro, J. L. Arthur, R. L. Jewett and James Bowen worked with F. H. Warner on evidence to show that conservation was an engineering, not an economic concept. Chief Dispatcher D. J. Cameron of Transportation and Supplies gathered pipe line data. Supervisor E. P. Hudson and the late Ralph Beller, an Accountant, compiled statistical information.

"We reviewed literally millions of pages in Company files and we ran into many problems," Warren said. "Some stemmed from the fact that records were not kept as carefully 20 years ago as they are today. Many arrangements were made by telephone and the only correspondence about them was a note confirming a call without any details. Then there was the factor of the frailty of human memory. People just can't remember everything that happened 15 to 20 years ago."

As the years rolled by and the evidence mounted, working on the case became progressively more discouraging to government attorneys, Vandivort said, because the practices against which the charges were directed became outdated, and because "as they came to know the industry, they began to see the very real competition that exists."

Attorneys involved in the case agree that the turning point came when Vandivort convinced the court that the government lawyers were preparing a case based on compilations which were inaccurate, inadmissable and "statistical nonsense."

Early in the case Vandivort noted that Department of Justice attorneys planned to try to use replies from each company as evidence against the other companies. Shell's answers always contained explanatory notes and statements to show how its accounting and other business methods differed from other companies'. Government attorneys apparently did not realize that this mass of compilations would, in effect, be as useless as comparing apples with artichokes.

Vandivort drew a series of bar graphs comparing the compilations to show visually that the data were meaningless. When Federal District Court Judge J. M. Carter agreed, the Department of Justice's case suffered a blow from which it never recovered.

In October, 1958, the court ruled that the oil companies were not conspiring to hitch crude oil production to prices, and held that service stations would not be divorced from the oil companies. Those rulings left the government with virtually no case, and the consent decree followed for Shell and five of the companies eight months later. (Texaco did not join in the decree and still is involved in litigation.)

"To me, the best thing about the case was the decree," Vandivort said. "It's only 31 pages long, and the actual decree takes up only 22 pages. People act surprised when they see it, and say, 'You mean this is all that came out of all that work?' But I think it represents a real victory for us, because the case could have resulted in changing the entire structure of the oil industry."

W. F. Kenney, Shell Vice President and General Counsel, said the decree "does not in any manner concede the charges made, nor will it require any significant changes in Shell's method of doing business." He added: "Shell heartily endorses the principles of the anti-trust laws and firmly believes that American business has benefited from their enforcement. However, had the Anti-Trust Division developed a fuller and more realistic understanding of oil industry problems 10 years ago, we feel this suit would never have been filed" ●

news and views

NEW SAFETY RECORD

Employees of the Norco Refinery have set a new safety record among Shell Oil Company refineries.

The number of accident-free man-hours at Norco reached 3,973,369 on July 30, surpassing the previous Shell record of 3,973,204 man-hours set by the Wilmington-Dominguez Refinery during 1953-54.

Norco's safety record began 583 days before July 30—on Christmas Day, 1957. Had one accident not occurred on the day before Christmas, 1957, Norco would now have exceeded the U. S. Refinery safety record—7,506,711 man-hours without a lost-time accident.

In recognition of Norco's record, M. P. L. Love, Vice President Manufacturing, presented employees with a new Shell safety award in the form of a pennant to be flown under the U. S. flag on the Refinery flagpole. The pennant bears the words "Safest Refinery Award" and a Shell pecten.

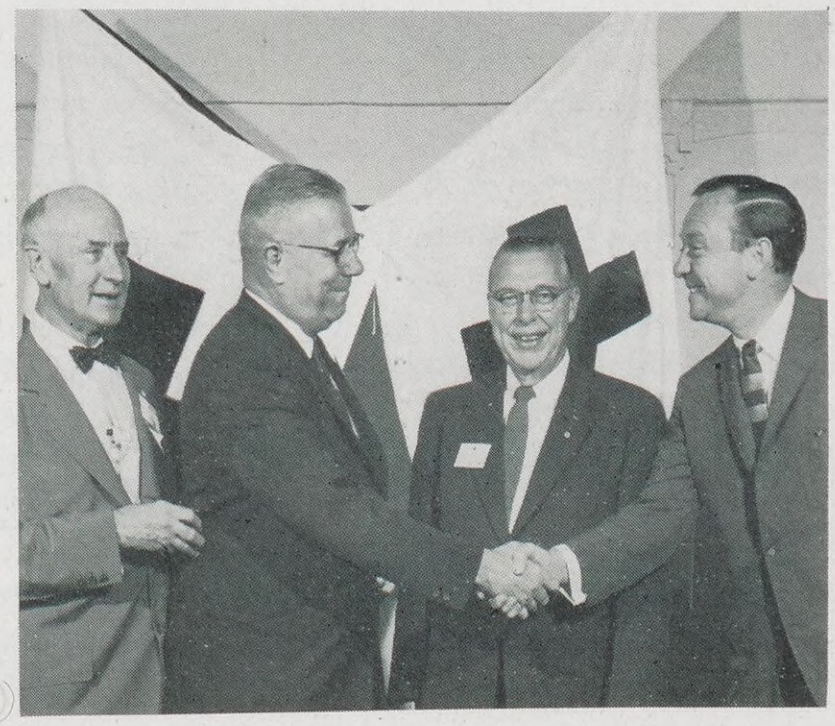
Presentation of the award was made August 29, on Norco Achievement Day, at an Open House for employees and their families.

"Wouldn't you like to rest after that exhausting battle?"

RED CROSS APPOINTMENT

L. A. Lohman, former Administrative Superintendent of the Wood River Refinery, who retired August 1, 1959, has been appointed National Vice Chairman in Illinois for the American Red Cross national fund-raising compaign for 1960.

As a National Vice Chairman, Lohman heads the Red Cross campaign in Illinois. In the picture at right, taken at a Red Cross meeting in Atlantic City, N. J., when his appointment was announced, Lohman (second from left), is pictured with (from left) E. Roland Harriman, Red Cross National Chairman; Theodore Houser, National Fund Chairman for the 1960 drive; and John Daly, radio-tv newscaster and a Red Cross Fund National Vice Chairman.



The OIL INDUSTRY and SHELL in 1959

Domestic demand for oil is up, following U. S. industrial recovery, but oil product prices continue depressed

DURING the first half of 1959, the oil business, along with the United States economy in general, showed marked improvement. Tempering the good news, however, is the fact that prices of oil products continued to be depressed.

As of July 1, the average price of gasoline, our major product, was still more than a cent and a quarter a gallon less than its high point in 1957. Meantime, the costs of doing business —materials, wages and services—have increased. Consequently, while both the industry and Shell regained much of the ground lost last year, profits were still below their levels of two years ago.

Total domestic demand for oil during the first half of the year was about six per cent above the same period last year. This was the highest level of demand in history. It reflected the recovery and expansion of U. S. industrial output—for U. S. industry is fueled and moved largely by oil products.

Shell Oil Company's consolidated net income for the first half was $69.2 million, or $2.28 a share, an increase of 28 per cent as compared with the $53.9 million * for the same period in 1958. It was, however, 11 per cent below the net income for the first half of 1957.

Shell had an 11-per-cent increase in crude oil production over the first half of 1958 resulting from increased allowables in Texas and new production in Louisiana and the Four Corners Area. In refined products sales, Shell had an increase of five per cent in volume, with the gains principally in motor and aviation gasoline and home heating oils.

However, Shell's revenues — and those of the industry generally—still showed the effect of depressed product prices for motor gasoline and residuals. These lower prices were the result of severe competition intensified by oversupply and excess refining capacity throughout the industry. These factors, linked with rising costs,

TOTAL DOMESTIC DEMAND
ALL OIL PRODUCTS

	1958	Estimated For 1959	
			ESTIMATED CHANGE
	GASOLINE 3,885,000 Barrels Per Day In All Cases	GASOLINE 4,038,000 Barrels Per Day In All Cases	+3.9%
	INTERMEDIATES 2,098,000	INTERMEDIATES 2,193,000	+4.5%
	RESIDUALS 1,455,000	RESIDUALS 1,571,000	+8.0%
	OTHER 1,627,000	OTHER 1,716,000	+5.5%
TOT.	9,065,000	9,518,000	+5.0%

Demand for oil products was up about six per cent in the first half of 1959 and the year's increase is estimated at five per cent.

** This figure has been restated from that reported a year ago in order to reflect the change in amortization and depreciation practice adopted December 31, 1958.*

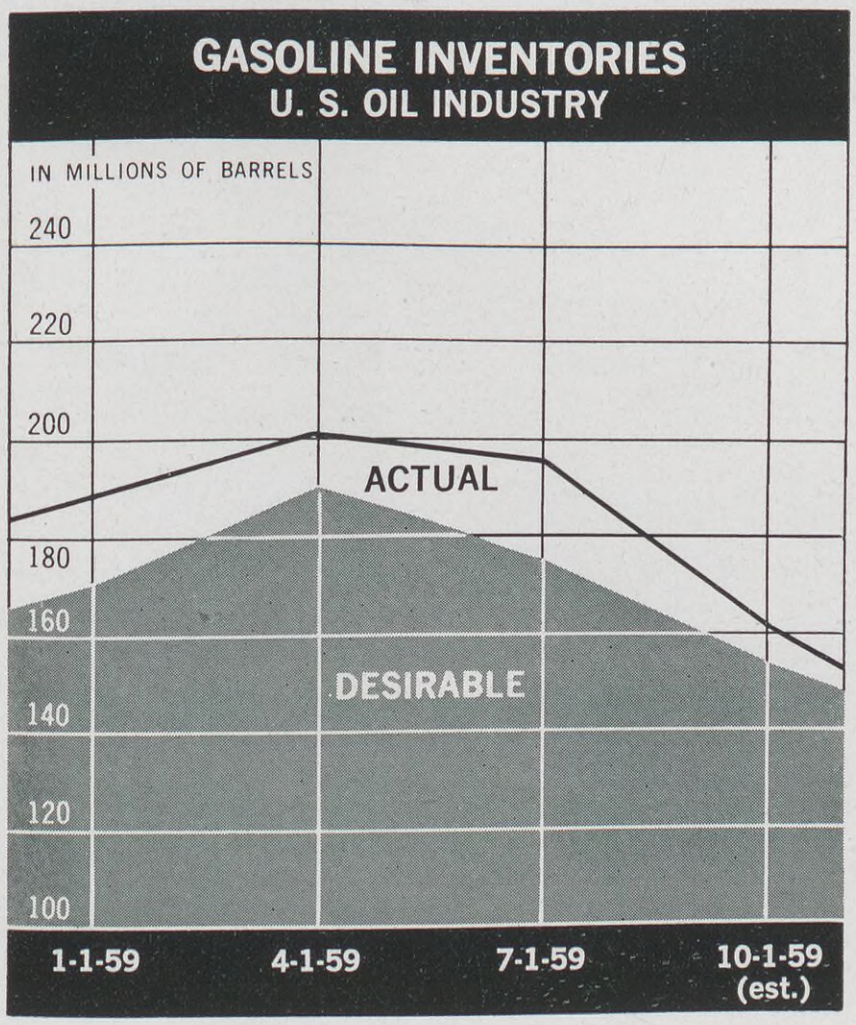
were the main reason why rate of earnings in the first half of 1959 failed to reach the level attained before the 1958 recession.

A high level of crude production, plus excess refining capacity, led to manufacture of more products by the industry than consumer demand warranted. Last year, a severe drop in consumer demand resulted in oversupply of products; in the first half of this year, demand recovered but there was a surge in refining greater than demand. Refineries are always under pressure to use their capacity to the fullest extent possible, because of their high fixed costs. Today, the industry's refinery runs of crude oil are averaging only about 85 per cent of operating capacity; this may lead some companies to manufacture a greater volume of products than is immediately required. However, Shell's gasoline inventories were in good balance with demand as the second half of the year started.

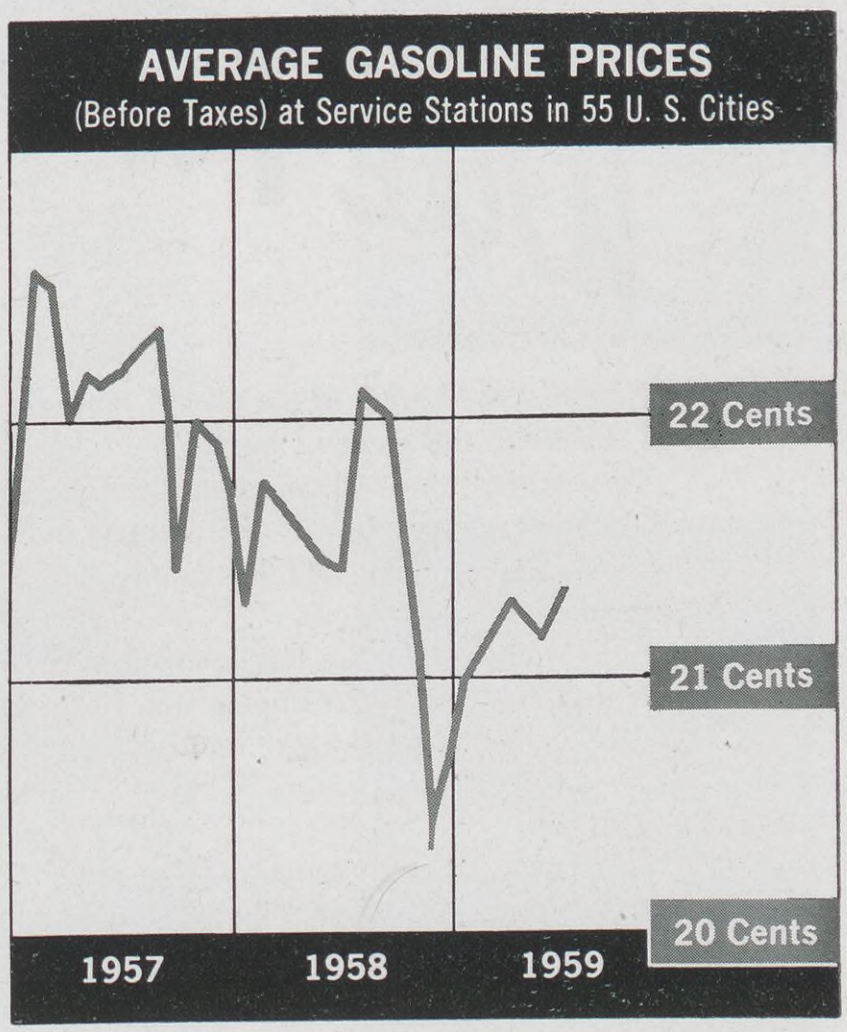
Government forecasts for crude production by the industry during the second half of 1959 indicate there will be a gain of only about five per cent over the second half of 1958, compared with the 11-per-cent increase in this year's first half. Also, oversupply of products is likely to decline if use of excess capacity falls. Last year, gasoline stocks declined only 11 million barrels in the third quarter of the year; this year, higher demand and restrictions on imports, among other factors, indicate the decline in gasoline inventories may be as much as 35 million barrels.

Toward the end of 1958, average gasoline prices* dropped to 20.36 cents from a high of 22.66 cents in 1957. As of July 1 this year, average gasoline prices had risen to 21.32 cents —but were still 1.34 cents below the 1957 high. However, if excess supply drops, gasoline prices for the year 1959 may compare favorably with the average for 1958. Fuel oil prices are expected to be lower in the second half than in the first half.

The oil industry outlook for 1959 as a whole is this: Consumer demand for oil products will show a gain of about five per cent over 1958. Profits should be better than 1958, but they will probably fall short of 1957. Therefore, the industry's rate of profits this year is not likely to reach the level that should be realized to compensate for the large investments made in plants and facilities during the last two years ●



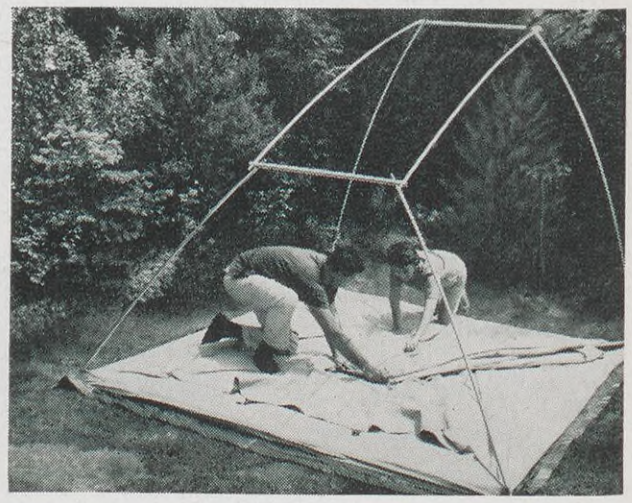
Increasing inventories of all major products resulted in a supply excess. This and severe competition tightened prices.



Average prices of regular gasoline throughout the industry fell to a low of 20.36 cents (before taxes) in 1958 and as of July 1 this year had risen to only 21.32 cents.

** Housebrand gasoline before taxes at service stations in 55 U. S. cities.*

Outside their Valley Stream, N. Y., home, the Power family line up their camping equipment before loading it into their station wagon. Once at the camp site, Rita helps Hal unfold a tent, which can be erected in five minutes.



This is mother's vacation too, so luncheon sandwiches before break-

Have Tent— Will Travel

"IT is not the beauty of the place I remember best, but the peace of mind, the peace of heart."

These words were written about the Grand Canyon. But Harold (Hal) Power, Supervisor of photography in the Head Office Public Relations Department, and his family believe they can apply to most camping sites.

Every summer for the last few years, the Powers have loaded their station wagon with camping gear to spend their vacation seeking enjoyment and relaxation close to nature. The camping sites they picked have all been within a radius of 350 miles of New York City.

Power's equipment, including tents, sleeping bags, cooking utensils and fishing gear, which he has accumulated over the years, is worth about $500. But he says camping can be just as enjoyable with less equipment. Also, such equipment can be rented in many places at reasonable rates.

The trip illustrated on these pages, which covered 2,700 miles and lasted three weeks, cost about $300, including $100 for gasoline and oil.

Power took all of the pictures, except those including himself. They show his wife, Rita, and their children—Jeffrey, 12; Allyn, eight; and Elise, six.

The Power camping facilities include two tents and a kitchen "flap" (right foreground), for protection from rain and sun.

Allyn helps with the dishes. To make things easier, Rita prepares fast, which leaves her free from cooking chores until dinnertime.

By a lonely lake in the Adirondack Mountains, Allyn sits still while Rita combs her hair.

There are no kitchen ranges to turn on in the woods, so Jeffrey helps with the woodcutting.

Nothing works up an appetite like fresh air. What is better than dinner from an open fire?

Chores are only a minor part, the rest is pure enjoyment

To the Powers—as to the more than 25 million Americans who annually pitch tents at thousands of camp sites throughout the country—the accent is on relaxation.

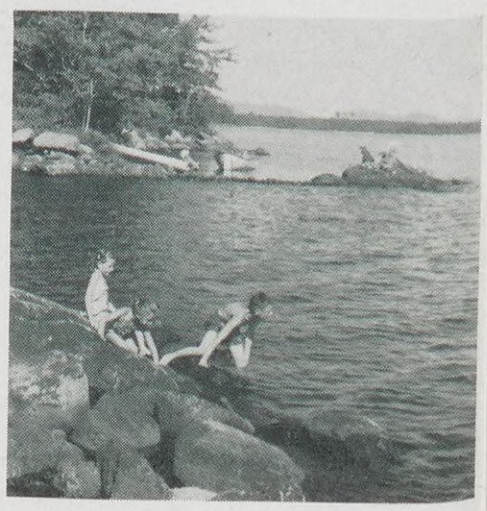
Although there are chores at camp that don't exist at home, they take only a small part of the day. The rest of their time is spent sightseeing, playing, reading or just plain loafing.

During their vacation trip (see map below), the Powers stopped at seven camp sites: Sacandaga Lake, Watkins Glen, Alexandria Bay and Plattsburg, all in New York State; Presqu'ile Park in Ontario; and Crawford Notch and Franconia Notch in New Hampshire.

Rita and the children edge along a limestone chasm at Watkins Glen. They pick their camp sites for just such attractions.

CAMPING TRIP ROUTE

In the serene White Mountains, Rita finds plenty of time to catch up with some reading, but she often glances up . . .



. . . to watch the children who cavort in the nearby water.

The falls at Niagara form a curtain of mist around the Powers in their rented slickers as they stand silhouetted in awe of its might.

A totem pole at Franconia Notch, N. H., fascinates the children.

who

Exciting scenes that were only pictures in a book come alive to the Power children. They can explore a granite ledge or find out what makes frogs jump. With luck, they can find an ancient covered bridge in New Hampshire, and even a shady brook.

HIT-and- M

This Mississippi well was recently completed as another successful oil producer in the Little Creek Field, which was discovered by Shell in January, 1958.

The solid black spots in the map at right show Mississippi fields in which Shell has an interest. Shell has no wells in the Tinsley and La Grange Fields shown in outline.

Production Foreman D. L. LaBeth checks a meter on one of a battery of heater-treaters in the Little Creek Field. The treaters separate oil, gas and water coming from wells and are part of Shell's automatic custody transfer system, which measures and records oil transferred directly from wells to purchasers.

Oil is hard to find in the Magnolia State, but perseverance has paid off for Shell and others

MISS in MISSISSIPPI

MISSISSIPPI marks the 20th anniversary this month of its first successful oil well. But oilmen have been working there for almost 40 years, grappling with complicated geological problems in their search for oil.

Perseverance has paid off, however. Mississippi now ranks ninth among oil-producing states. Since the first oil started flowing there 20 years ago, about 500 million barrels of oil have been produced in the State. This production, and the exploration and development that made it possible, have had a tremendous impact on Mississippi's economic development.

To date, the oil industry has invested more than $1.5 billion in Mississippi. The industry now employs more than 12,000 people in the State and has an annual payroll that exceeds $50 million. Taxes paid by the petroleum industry and by its customers for oil products provide the State with more than one-third of its total tax revenue.

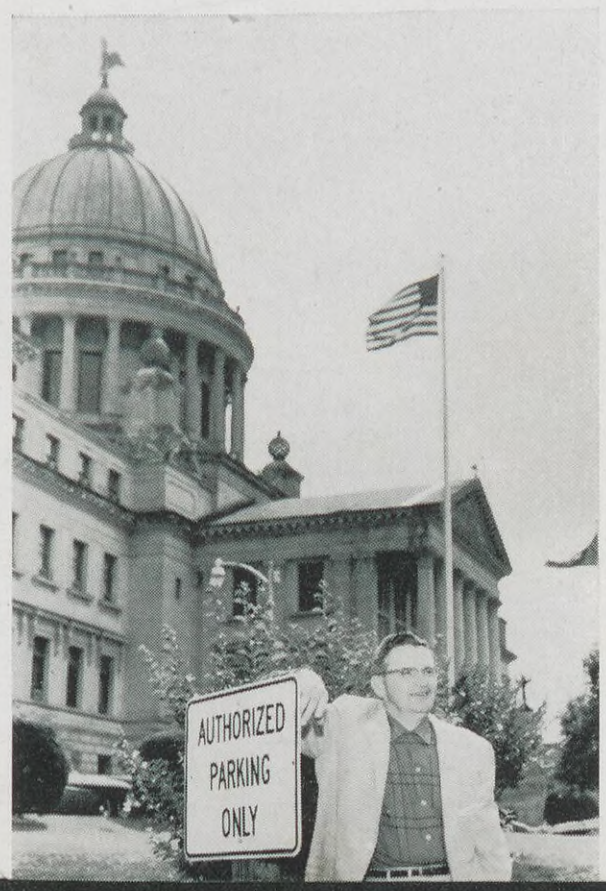
Progress in exploration has been quite slow and costly in Mississippi, partly because of the geologic history of the State. For example, whereas typical reservoir rock elsewhere was laid down under marine conditions and is therefore rather widespread and uniform in character, some of the principal reservoir sands in Mississippi apparently were deposited by meandering rivers whose courses are impossible to determine in advance of drilling. As a result, oilmen have found only one producing well for every 17.3 wildcats drilled in the State, while the national average is one in nine. At the same time, drilling costs are high because the average well is 7,500 feet deep, compared to a national average depth of 4,100 feet. Most Mississippi wells cost about $100,000; the national average is about $50,000.

Shell was among the early oil explorers in Mississippi. In 1922, the Company (then Roxana Petroleum Company) sent a two-man crew to map the surface geology of central Mississippi. Their findings led to drilling of the first Shell well in the State in 1926. It was, as so many Mississippi wells have been, a dry hole.

The first production of any kind in Mississippi was found in 1926 with discovery of the Amory Gas Field by Amory Petroleum Company. However, only three successful wells were drilled in the field and they were abandoned in 1937. Discovery of a second gas field in 1929 boosted interest again, but Mississippi's geology continued to hide its oil from Shell and other operators.

In 1937, Shell decided to keep abreast of exploration activities in the State on a continuing basis by assigning R. E. Stevens as a permanent exploration scout there. He is still with Shell in Mississippi, now as Division Scout.

The first Mississippi oil was discovered in September, 1939, at the Tinsley Field, by the Union Producing Company. Tinsley not only was the first oil field, but has remained



Division Scout R. E. Stevens poses in front of Mississippi's State capitol after checking drilling records kept in the offices of the State's Oil and Gas Board. Stevens has worked in Mississippi 22 years—longer than any other Shell employee.

Big break comes at Little Creek

the State's largest, with a total production so far of more than 145,000,000 barrels of oil.

The Tinsley discovery brought oil hunters to Mississippi in droves. Shell stepped up its activities and started acquiring leases on surface structures previously mapped. But the big search during the next few years failed to find significant oil deposits.

The hit-and-miss nature of Mississippi's oil-bearing sands has caused Shell and other operators many disappointments. For example, in 1942 Shell supported the drilling of a well by an independent wildcatter. It was a dry hole and the Company allowed its interest in the leases to lapse. Four years later, however, a wildcat just 2,500 feet from the Shell-backed dry hole brought in the La Grange Field, which has since produced almost 30,000,000 barrels of oil.

Even though success had been elusive, Shell opened exploration and land offices in Jackson, the State capital, in 1943. Soon after, a program of seismic exploration and leasing was started.

Toward the end of World War II, several major fields were brought in, but Shell did not share in their discovery. However, the Company continued its exploration and leasing activities.

In 1950, Shell received the first returns on its large investment in Mississippi—28 years after the Company first started exploration work in the State. A successful well was drilled in the Yellow Creek Field in a joint venture with Gulf Oil Corporation. This was followed in 1953 by the discovery of the Aberdeen Gas Field by Shell and an independent operator.

For the next four years, Shell concentrated its main exploration efforts in the Salt Basin in the central part of the State where extensive work was done by our own and contract seismic and gravity crews. Shell had mineral interest in the discovery well of the Sweetwater Field, drilled in 1954 in this part of Mississippi. However, after two years development work Sweetwater appeared to be an uneconomic one-well field and the discovery was plugged and abandoned in 1956. The following year, Shell drilled a well one mile west of the discovery well and struck oil—the Company's first full-interest well in the State. Shell now operates four wells in the field. Later in 1957, Shell participated in the discovery of the Diamond Field, where the Company now operates 10 wells.

Shell's big break in Mississippi came in January, 1958, with the discovery of Little Creek Field, which grew rapidly into one of the State's major fields. By the end of 1958, Shell had 23 full-interest wells at Little Creek and part interest in eight others; also, the Company's total production in Mississippi had jumped from 1,000 to 7,200 barrels per day.

A second gas field was also discovered by Shell in 1958—Siloam Field, located 13 miles south of Aberdeen Field. The discovery well, which has an open flow potential of 6,400,000 cubic feet of gas daily, has been shut in awaiting the construction of gas lines. The field is expected eventually to double Shell's present gas production in Mississippi.

This year, Shell added another oil well to its discovery list, in what is called the Morton Field, and the Company expects to drill two development wells there before the end of the year. Another major development this year was completion of Shell's gas plant in Mississippi. Located in the Little Creek Field, the plant will process 5,000,000 cubic feet of natural gas daily, recovering 15,000 gallons of natural gasoline and propane.

During the last year, Shell has had three seismic crews and from four to nine drilling rigs working in Mississippi. As of August 1, 1959, the Company had 49 full-interest and 35 part-interest oil wells in Mississippi, plus one full-interest and two part-interest gas wells. Shell is now the State's third largest oil producer with a current total production of about 11,000 barrels daily. The Company's gas production amounts to about

During construction of Shell's recently-completed gas plant in the Little Creek Field, Repairman L. R. Schalesi, left, and Engineer

7,000,000 cubic feet daily.

The number of Shell exploration and production employees working in Mississippi has grown from one in 1937 to more than 100 in 1959. The Jackson office is now composed of the Jackson Exploration, Land and Production Division of the New Orleans Exploration and Production Area, covering all of Mississippi and Alabama, southern Arkansas and northern Louisiana, as well as several states along the Atlantic Coast where the oil industry is relatively inactive.

The success of Shell and other companies in recent years has encouraged the oil industry in Mississippi. This year, the major companies plan to spend more than $70 million in exploration and development work. Independent operators are expected to add a substantial amount to this figure.

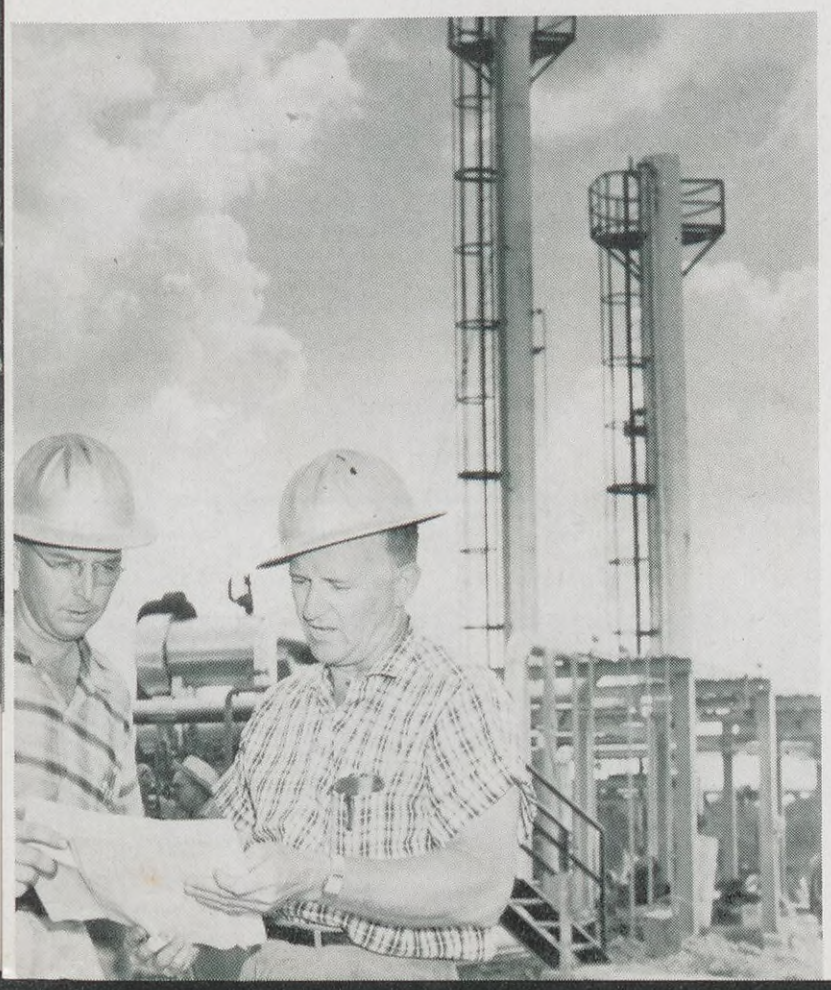
Although the future looks bright, oilmen still expect difficult times ahead with the Magnolia State's complicated geology. But if more oil is there, they are determined to find it ●

Seismic equipment is mounted on tractors in Mississippi to facilitate travel through densely-wooded areas. Above, members of Shell's Seismic Party No. 31 ride aboard a tractor to a new shot point. They are, left to right, E. K. Crow, D. L. Biles and H. E. Brumfield (all contract "jug-hustlers"), Shell Party Chief E. P. Cooper (in checked shirt), contract recording foreman C. E. Knippers and Shell Seismologist J. C. McClimans.

Seismograph record made in southwest Mississippi is checked by Seismic Operator M. G. Laird, left, and Party Chief E. P. Cooper, both of Shell's Party No. 31.

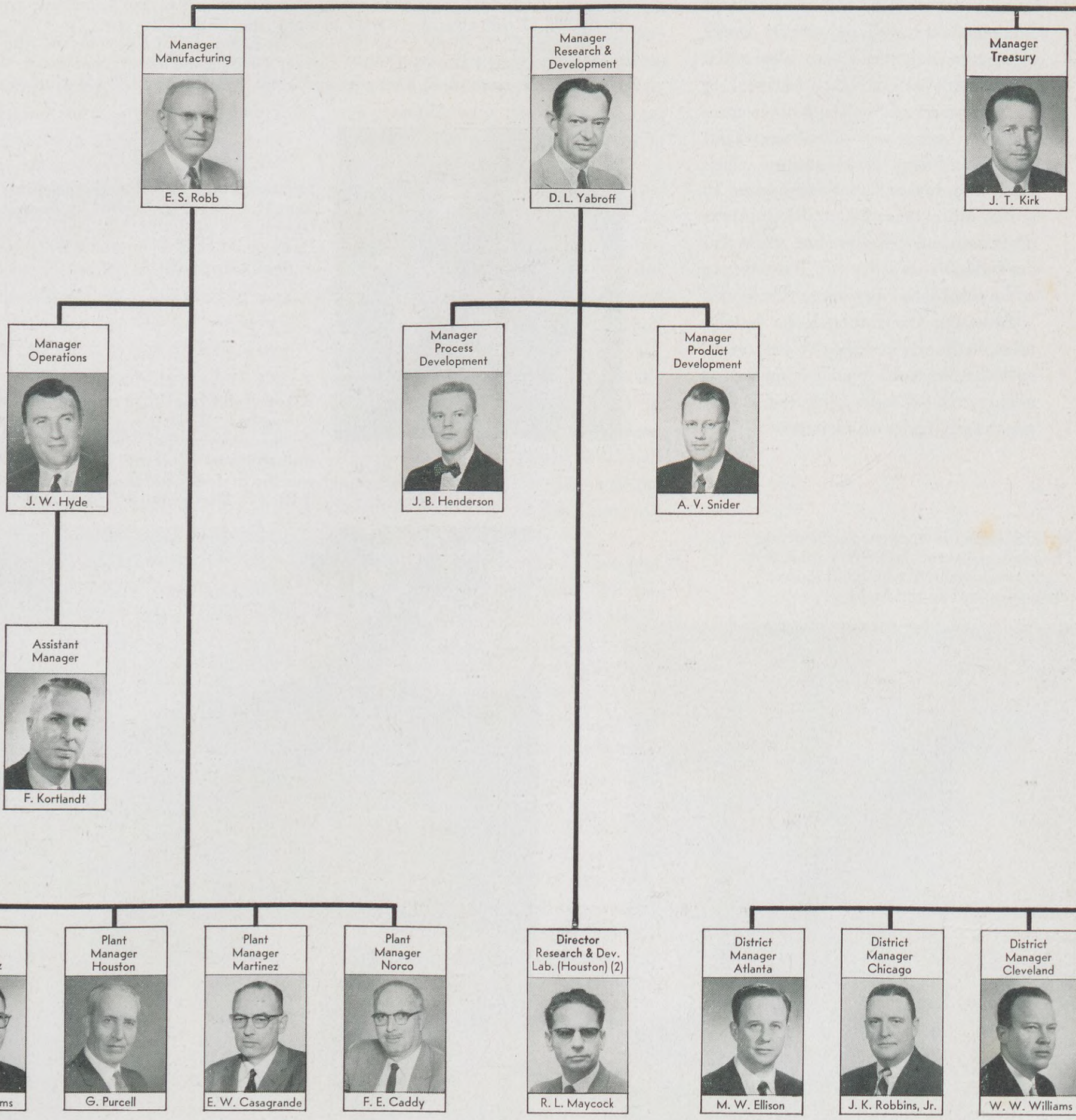
After checking the pumping unit, Lease Operator L. W. Parker (below) leaves the discovery well of Morton Field, brought in by Shell this year. This wildcat was the first successful oil well drilled in Mississippi's Scott County.

W. V. Alleman look over specifications. The plant processes 5,000,000 cubic feet of gas produced daily by Shell and other operators in the Field.



Shell Chemical Corporation

September—1959



Shell Chemical Corporation
Industrial Chemicals Division
Organization

General Manager

A. W. Fleer

Manager Marketing

K. R. Fitzsimmons

(1) EXERCISES FUNCTIONAL GUIDANCE OVER ACTIVITIES AT UNION TECHNICAL SERVICE LABORATORY.

(2) SINCE THIS ORGANIZATIONAL UNIT IS AN INTEGRAL PART OF THE PLANT, IT IS SUBJECT TO LOCAL ADMINISTRATIVE CONTROL, RULES AND AGREEMENTS.

Sales Manager

W. Q. Mooney

Manager Market Analysis

K. V. Erdman

Manager Sales Development (1)

W. A. McCormick

District Manager Detroit

W. R. Moore

District Manager Houston

E. R. Scogin

District Manager Los Angeles

R. W. Campbell

District Manager Newark

J. F. Kroeger

District Manager New York

W. E. Keegan

District Manager San Francisco

B. B. Stranz

UNION TECHNICAL SERVICE LABORATORY

INDUSTRIAL CHEMICALS DIVISION

PROVING GROUND FOR IDEAS

The Experimental Plants Department at Emeryville helps decide whether a new idea is practical

IDEAS from research laboratories are often like those from any other source—they have to be proved before they are useful.

Scores of ideas for new processes are worked out every year in laboratories at Shell Development Company's Emeryville Research Center. But only a few can be expected to be developed commercially — after they are proved by pilot plant work.

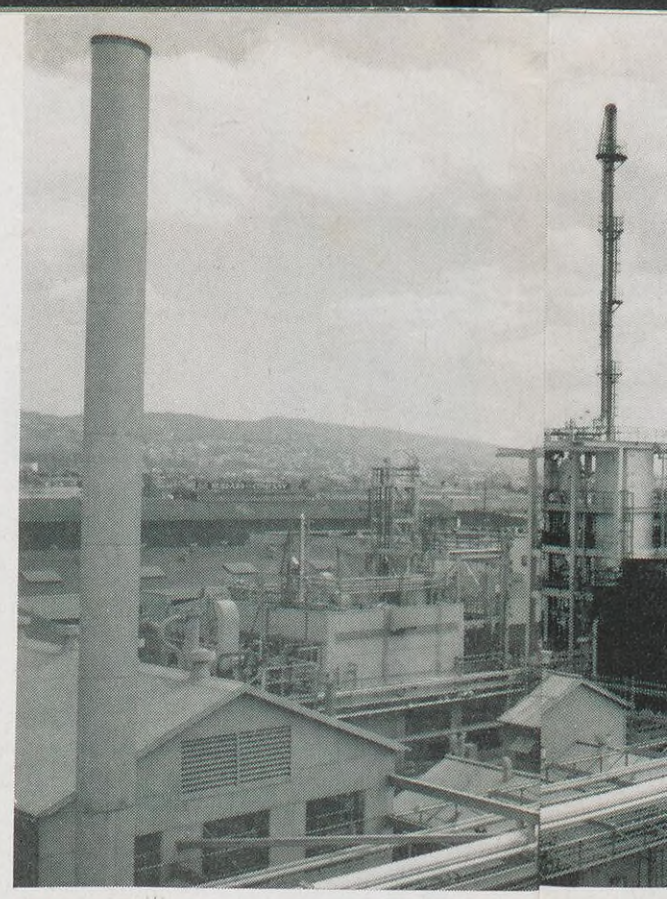
At Emeryville, the Experimental Plants Department, is, in effect, a process proving grounds. It is a link between laboratory and plant production—a vital link, because it is often impossible to know whether a laboratory process will work at all in a full-size plant.

"It's the difference between baking one cake and 1,000 cakes," said R. M. Cole, Head of the Department. "A recipe may be good for one cake, but multiplying all the ingredients by 1,000 doesn't mean you have the perfect batter for a cake 1,000 times as large."

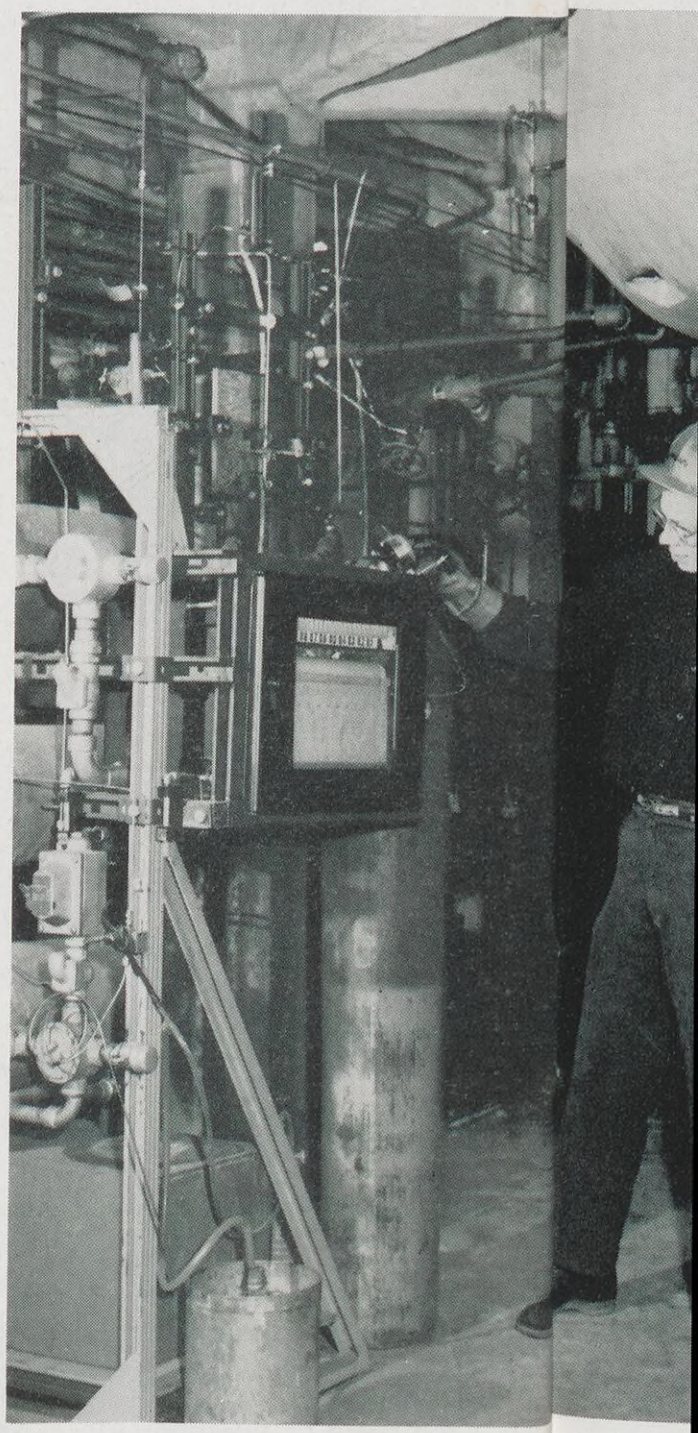
Some ideas from Emeryville laboratories work even better than expected when they are adapted for larger scale production. Some don't work at all, for one reason or another that can't be foreseen in the laboratory. Others are tested, revised, tested again, and eventually become the basis for manufacturing an entirely new product.

The Experimental Plants Department has four groups—working separately or in various combinations together — to test each new process idea. The pilot plant group studies the vital steps of a process in small-scale equipment. The chemical products group makes small quantities of new products, to get more testing data and to supply other Emeryville departments with product samples for their own uses. The manufacturing group performs a similar function, only on a larger scale; for example, this group often provides Shell Chemical Corporation with customer samples, or even enough product to fill demand until a full-scale plant can be built. Working closely with all three is the department's engineering group.

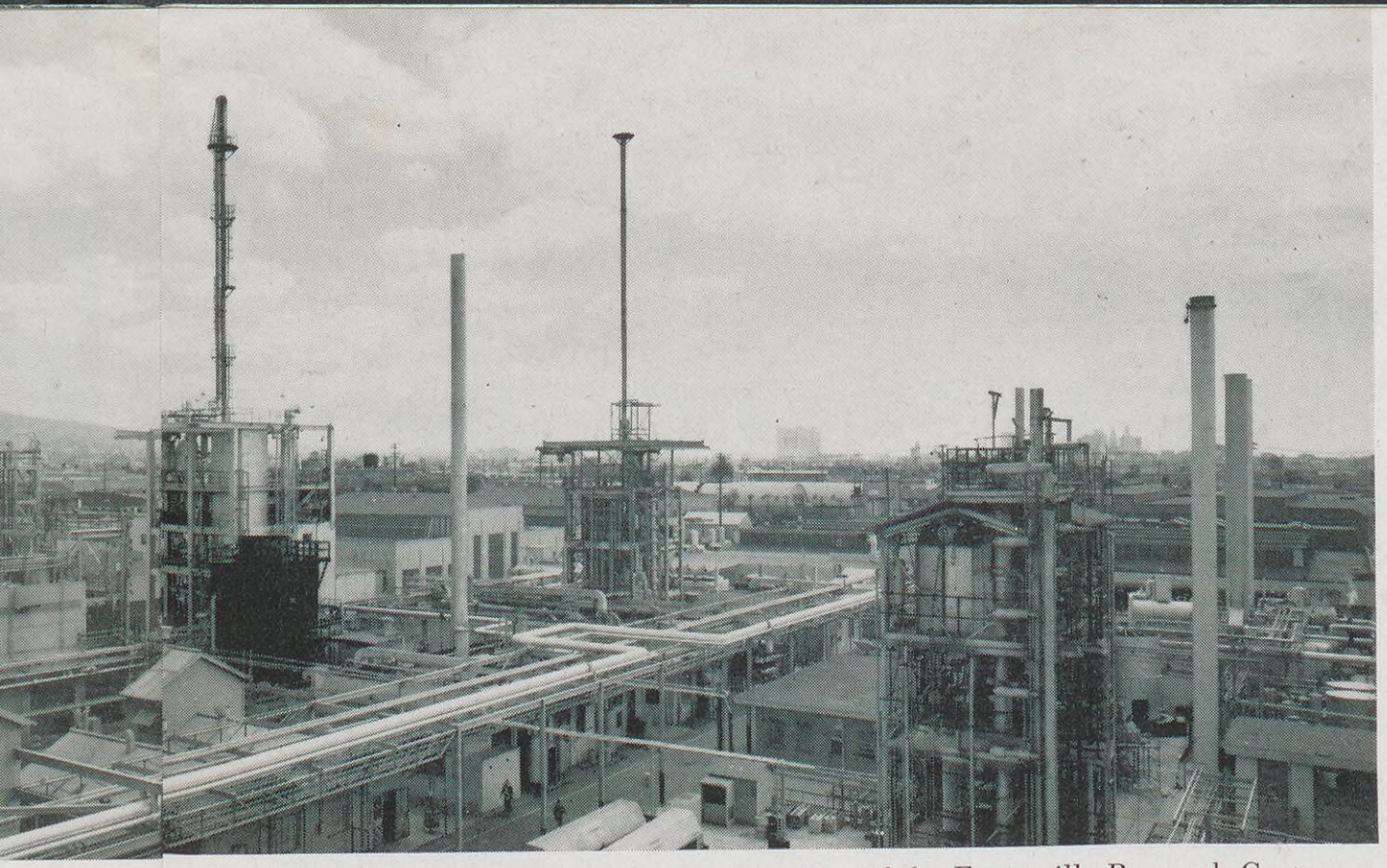
"There's lots of flexibility in the type of work performed by each group because there has to be," said G. J.



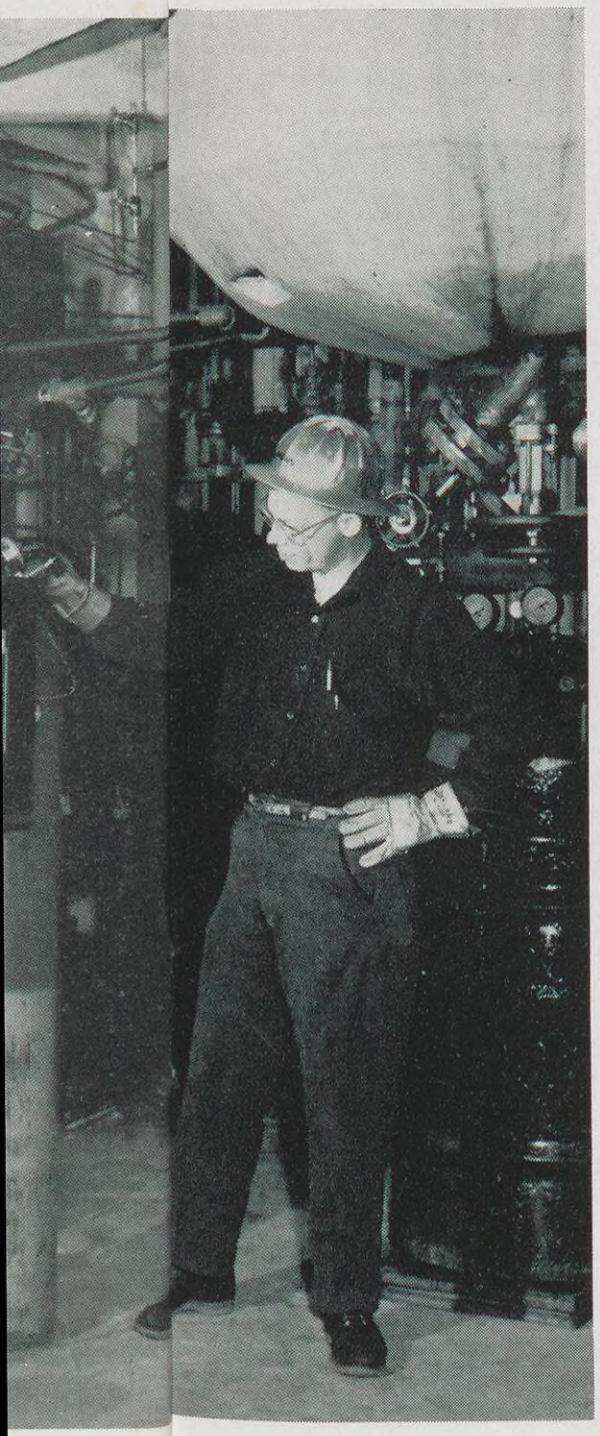
The pilot plants area of the Experi mental P The pilot plants offer small-scale equipmer



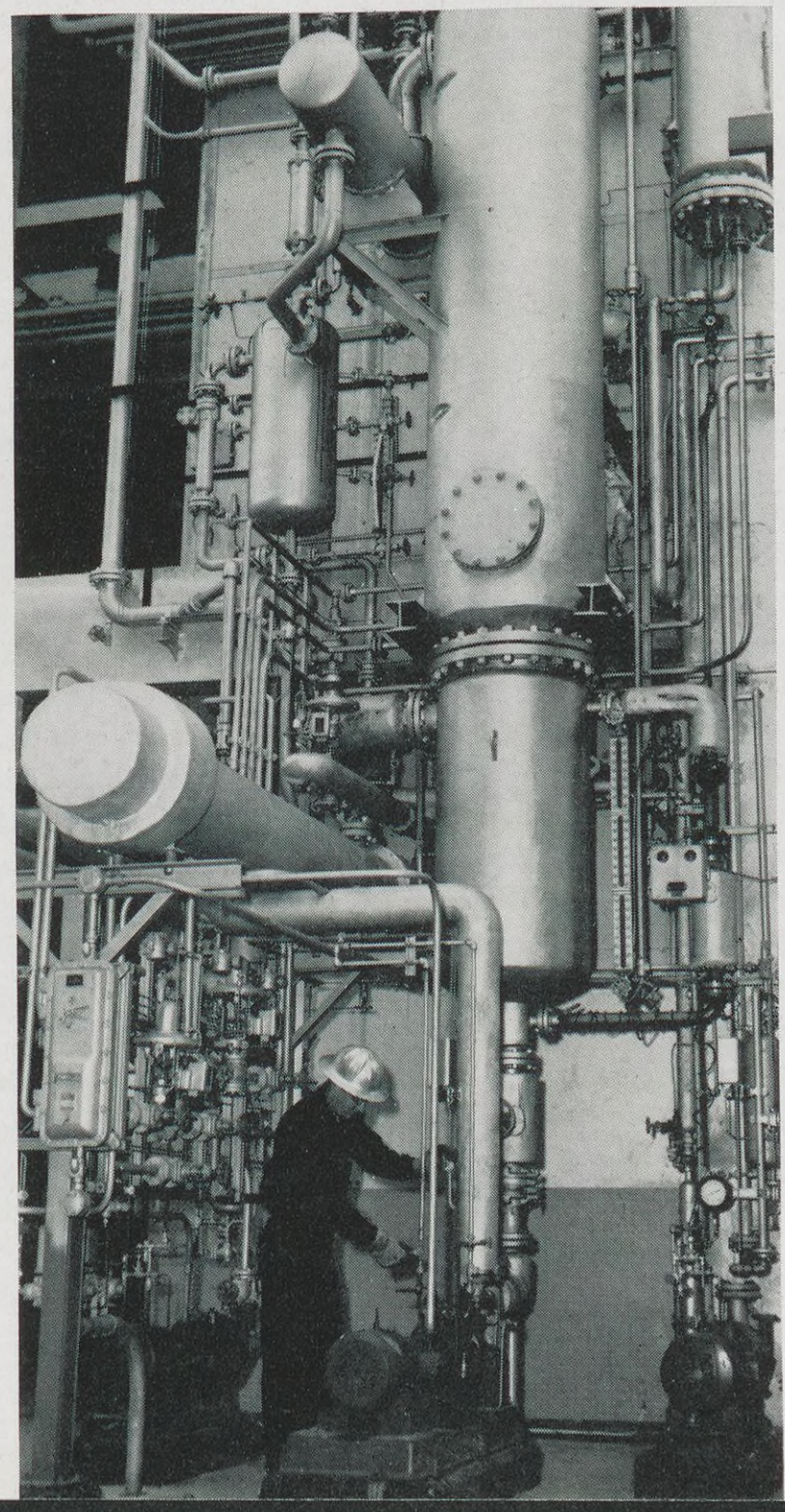
The bottom of the autoclave (the top of which is shown on the front cover) is in this picture's top right corner. Pilot Plant Operator E. Lundin adjusts flow of nitrogen used to clean instruments.



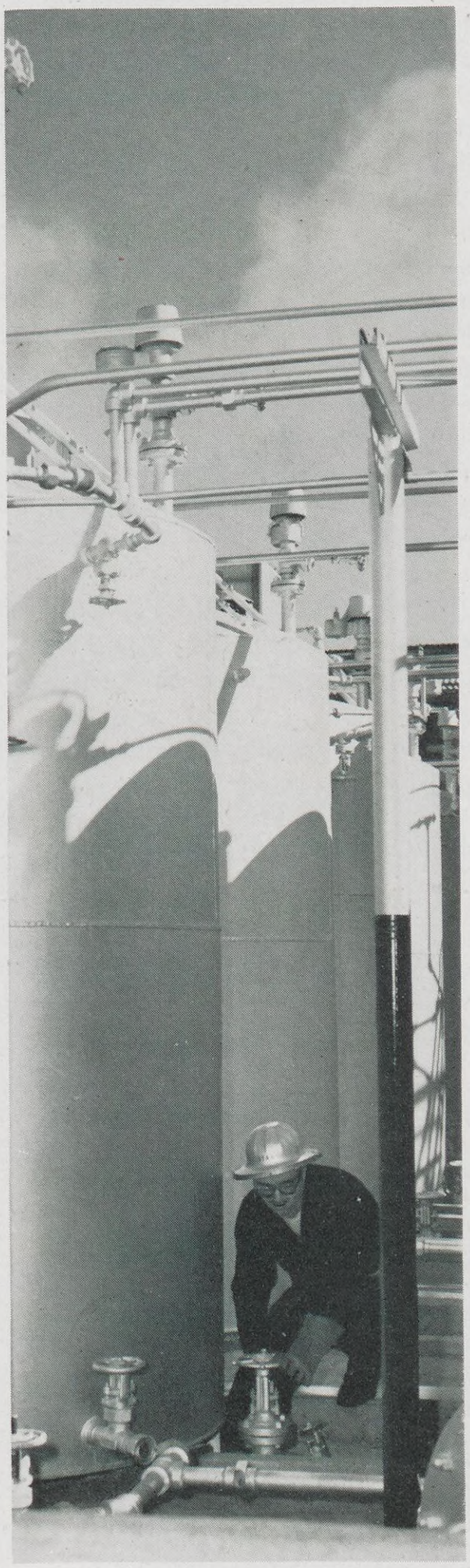
f the Experi mental Plants Department takes up a large section of the Emeryville Research Center. small-scale equipment for study of vital process steps. They help prove laboratory ideas.



Starting the reflux pump on a stainless steel vacuum distillation column is Pilot Plant Operator A. E. Wilson. The column, one of the largest ever designed for research purposes, is used in product development.



Opening a drain valve on a 1,500 gallon storage tank is Pilot Plant Operator S. A. Griffin. The tank is part of Emeryville Research Center's miniature tank farm.



Pilot plant tests are painstaking

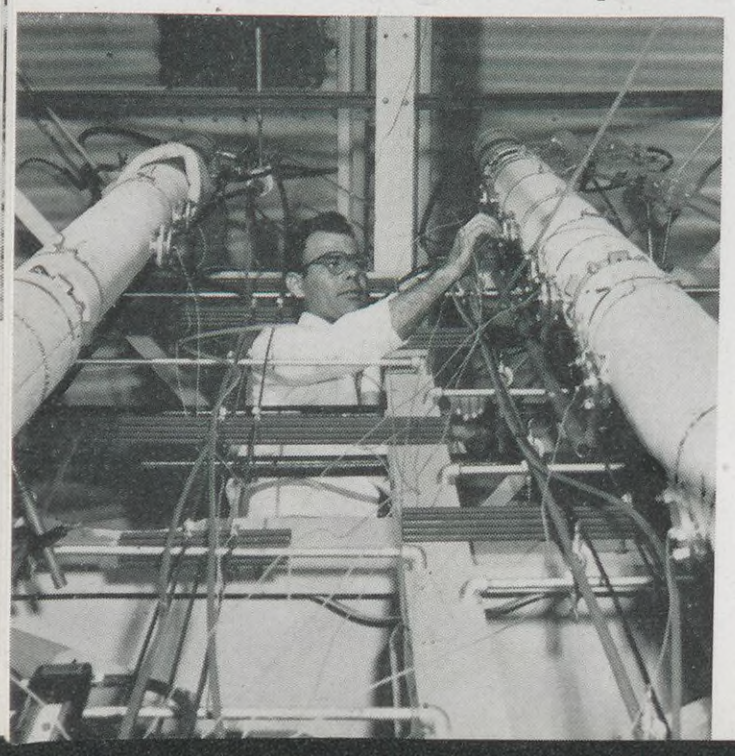
Carlson, Supervisor of the small-scale manufacturing group. "You can't confine research to compartments on organization charts. It might seem that every new process would follow the same pattern from laboratory through pilot plant to us and on to commercial production, but it never happens like that. Sometimes we go back to the laboratory, sometimes we might skip a phase or have to go through it several times. Every problem is different."

One step, however, that is never skipped is the safety committee. Every new process from a laboratory must be approved by the safety committee before the Experimental Plants Department can start its work.

"The committee members are from outside our department, so they won't have any personal interests," Carlson said. "Actually, I think the real benefit from the committee is that the man in charge of a project must put plans and findings in writing, so he really has to think about all aspects of the project. That way he sees things he might not have before."

Normally the pilot plant group, under Supervisor H. A. Cheney, is the first to start testing a new process.

Distillation columns made of glass, two stories high, are prepared by Senior Laboratory Assistant D. A. Plaskett for a product experiment.



A pilot plant is not a miniature version of a commercial plant. Sometimes only one phase of a process may be under study, producing only a fraction of what a full-scale plant would make. The object is information, under conditions that can be changed quickly and easily for process engineers to use in plant design studies.

Occasionally a process that worked well in a laboratory may not work at all in the pilot plant. Any number of reasons can cause a failure. One, for example, is the appearance of minute amounts of impurities that may kill the catalyst or spoil the product.

Such impurities may have been undetectable in the laboratory. But in the pilot plant stage the impurities can become obvious and require a change in the process.

Often the solution may come from the engineering group, which works closely with Emeryville's process and mechanical engineers in designing or rearranging the process equipment.

Equally important are the instrument "eyes" that tell exactly what is happening inside reaction vessels, Supervisor E. M. Myers indicated. The engineering group works with Emeryville's Instrumentation Department in designing new instruments to measure new processes. Usually, standard components are used in different arrangements—some so different that they can be patented. Like the objects in two paintings, the components may be the same, but it's the way they are arranged that may make the difference.

The end result of the Department's work—in common with all Emeryville efforts—is information. Process information developed by the Department plays a major role in the decision of Shell Oil or Shell Chemical on whether to go into commercial production with a new process.

Keen competition requires constant attention to the cost of all aspects of manufacturing. One function of the department is to keep a sharp eye on all manufacturing costs.

"If we develop a unique product that is better than anything in the market, cost may be of less importance," Cole said. "But unique products are few and far between. We have to try for a product that does a better job at the same or less cost than competing ones, or a product that opens up a new field of uses."

The operating companies get more than one set of figures, however. The primary cost estimates are based on the "reasonable line" between extreme purity and extremely expensive equipment costs. (For example, recycling part of the product stream may produce very high purity, but recycling equipment is expensive. A balance must be set between purity and costs.) The operating companies also get figures above and below the "reasonable line," because changes in the market or in raw materials can make today's expensive process tomorrow's money-maker.

The price of the raw material might fall low enough to make a process practical or the market price of a product may go up enough to do the same thing. In either case, the operating companies must have the figures on both sides of the scale to know when those points are reached.

One set of figures the Department can't pin down is how long it will take to move a process from test tube to plant.

Depending on a variety of factors, from facilities to markets, it might be six months, six years or even longer before Shell can come out with a market-tested product and a commercially practical process ●

J. H.

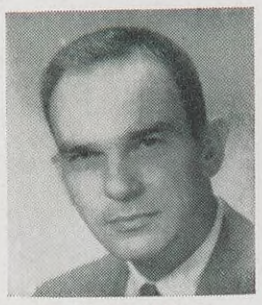
J. A

SHELL PEOPLE in the news

E. J. McLAIN

E. C. ABELL

J. M. ROBERTS



R. K. MacINTYRE

SHELL OIL COMPANY EXPLORATION AND PRODUCTION ORGANIZATION

E. J. McLAIN has been named Assistant to Vice President, New Orleans Area, and will coordinate unitization work and joint operating agreements. Mr. McLain, who holds an LL.B. degree from the University of Denver, joined Shell Oil Company in 1934 as a Land Man in Tulsa. After serving as a District Land Agent in Louisiana and Texas, he became a Land Agent in the New Orleans Area in 1946. He was named Area Land Agent there in 1952 and Land Manager in 1954.

E. C. ABELL has been appointed Land Manager of the New Orleans Area. Mr. Abell, who attended Louisiana State University, joined Shell Oil Company in 1937 at Baton Rouge, La. Later he held assignments in land work also at Shreveport, La.; Houston; and Tallahassee, Fla. In 1948 he became District Land Agent at Baton Rouge in the New Orleans Area and Division Land Manager there in 1952. Two years later he was named Area Land Agent in New Orleans.

J. M. ROBERTS has been named Land Manager of the Houston Area succeeding S. A. Germany who died July 9, 1959. Mr. Roberts, who attended Lamar College in Texas, joined Shell Oil Company at Houston in 1936 as Office Assistant to the Chief Scout. Later he held assignments in land work in the Houston and New Orleans Areas. He was named Division Land Agent of the Houston Division in 1951 and Division Land Manager in 1952. He was appointed Area Land Agent of the Houston Area in 1954 and transferred to the New Orleans Area in a similar position in June, 1959.

SHELL OIL COMPANY MANUFACTURING ORGANIZATION

R. K. MacINTYRE has been named Chief Engineer of the Montreal East Refinery, Shell Oil Company of Canada, Limited, effective October 1, 1959. Mr. MacIntyre, who holds a bachelor's degree in mathematics and mechanical engineering from Ohio State University, joined Shell Oil Company in 1942 as an Engineer-Inspector in the Head Office Manufacturing Organization. He was transferred to the Wood River Refinery in 1944 and became a Master Mechanic there in 1946. Mr. MacIntyre was transferred to the Wilmington Refinery in 1950 as an Assistant Chief Engineer and in 1955 returned to the Wood River Refinery in the same capacity. He was named Assistant Manager, Head Office Manufacturing Engineering Department, in June, 1957.

J. H. TOMFOHRDE

J. A. HATTON

The following personnel changes have been announced at the Anacortes Refinery:

NAME	NEW POSITION	FORMER POSITION
J. H. TOMFOHRDE	Manager, Technological Department	Employment abroad with a Royal Dutch/Shell Group Company
J. A. HATTON	Manager, Zone A	Manager, Technological Department
P. E. MALSON	Manager, Zone B	Manager, Zone A
W. A. MITCHELL	Special Assignment, Emeryville Research Center, Shell Development Company	Manager, Zone B

P. E. MALSON

W. A. MITCHELL


J. T. KIRK

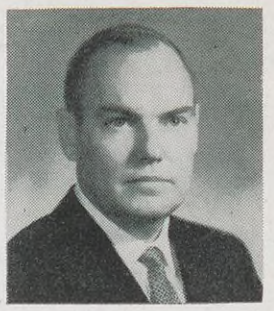

J. B. CORKINS

SHELL CHEMICAL CORPORATION

R. C. McCurdy, President of Shell Chemical Corporation, has announced that certain financial and accounting functions formerly handled by Head Office Treasury Department are being decentralized to the five integrated product divisions.

Head Office Treasury will continue to provide coordination over the divisions and establish basic financial policies. Each division treasury organization will be headed by a Manager Treasury. In this connection, the following staff changes have been announced:

NAME	NEW POSITION	FORMER POSITION
J. T. KIRK	Manager Treasury, Industrial Chemicals Division	Manager, Head Office Treasury Department
J. B. CORKINS	Manager Treasury, Ammonia Division	Treasury Manager, Ammonia Division
R. E. JACKSON	Manager Treasury, Agricultural Chemicals Division	Treasury Manager - Marketing, Agricultural Chemicals Division
F. H. McGREGOR	Special Assignment on staff of Assistant Controller, Head Office Treasury Department	Treasury Manager - Marketing, Industrial Chemicals Division
G. W. LINDSEY	Manager, Purchasing-Stores, Shell Point Plant	Manager, Stores, Shell Point Plant


R. E. JACKSON


F. H. McGREGOR


G. W. LINDSEY


C. H. FAY

SHELL DEVELOPMENT COMPANY

C. H. FAY has been named a Technical Assistant to the President of Shell Development Company, succeeding T. M. Doscher, to handle exploration and production matters. He will begin his assignment during September. Mr. Fay, who holds a Ph.D. degree in physics from Harvard University, joined Shell Oil Company in 1941 as a Research Physicist in the Exploration Department's Geophysical Laboratory at Houston. He was named Senior Geophysicist there in 1945 and Section Leader, Physical Research in the Exploration and Production Technical Services Divisions in 1951. He joined Shell Development Company in 1953 as Manager, Physics Department, at the Exploration and Production Research Division. In mid-1958 he became Manager, Physics and Mechanics Department, Basic Research.


W. V. MEDLIN

W. V. MEDLIN has been named a Technical Assistant to the President of Shell Development Company. Mr. Medlin, who holds a Ph.D. degree in chemistry from the California Institute of Technology, joined Shell Oil Company in 1935 as a Chemist at the Wilmington-Dominguez Refinery. He later held assignments as a Senior Technologist in the San Francisco Office, New York Office, and the Martinez Refinery. He joined Shell Development Company in 1946 as an Engineer at San Francisco and transferred in 1950 to Emeryville Research Center. He was named Supervisor Development, Oil Process Engineering in 1956.


T. M. DOSCHER

T. M. DOSCHER has been appointed to the staff of the Exploitation Department, Production Research at the Exploration and Production Research Division in Houston. He will assume his duties during September. Mr. Doscher, who received a Ph.D. degree in colloid chemistry from the University of Southern California, joined Shell Oil Company in 1951 as a Chemist in the former Exploration and Production Technical Services Divisions at Houston. He joined Shell Development Company in 1953 as a Chemist in the Exploration and Production Research Division, and was named a Senior Chemist the following year. He was appointed Technical Assistant to the President of Shell Development Company in 1958.

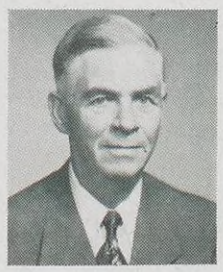
KSON

REGOR

NDSEY

RETIREMENTS

T. B. CALLENDER
Wood River Refinery
Compounding



E. H. CHEESEMAN
Pacific Coast Area
Production

A. W. CHRIST
Shell Pipe Line Corp.
Mid-Continent Division

R. G. CRUM
Midland Area
Gas

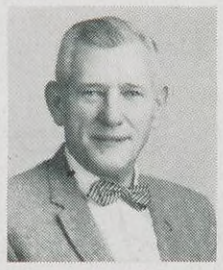
J. D. FLICKINGER
Shell Pipe Line Corp.
Rocky Mountain Division

C. W. HAUSSMAN
Martinez Refinery
Cracking

E. W. JONES
Houston Area
Transp. & Supp.

O. L. KESTERSON
Shell Pipe Line Corp.
Texas-Gulf Division

F. L. KINCHEN
New Orleans Division
Operations

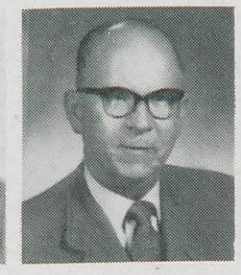


F. LAPINSKI
New York Division
Operations

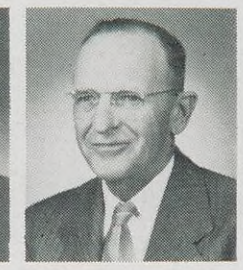
R. F. LEA
Wilmington Refinery
Thermal Cracking

F. F. MIDDLETON
Shell Pipe Line Corp.
Texas-Gulf Division

J. K. MILES
Cleveland Division
Sales



L. G. MONTAGUE
Tulsa Area
Land



G. W. NORRIS
Shell Pipe Line Corp.
Mid-Continent Division

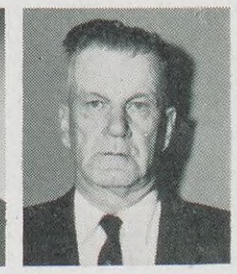
L. A. OSBURN
Wilmington Refinery
Engineering Field

A. L. PORTER
Seattle Division
Operations

F. E. POSEY
Houston Area
Transport

C. W. PULLEN
Wood River Refinery
Engineering Field

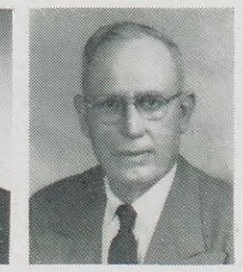
J. M. RIEGER
Houston Area
Transport



W. L. ROBARDS
Shell Pipe Line Corp.
Mid-Continent Division

G. L. ROUGIER
Sewaren Plant
Manufacturing

B. H. RUNFT
Chicago Division
Operations

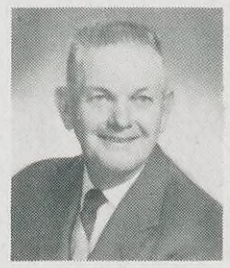


J. J. SANDERS
Shell Pipe Line Corp.
Mid-Continent Division

E. G. SHAKELY
Midland Area
Production

NELL E. SHAW
Midland Area
Land

C. C. SHIRLEY
Denver Area
Production



H. H. SINGLETON
San Francisco Division
Operations

E. F. SMITH
Shell Development Co.
Emeryville

M. T. SMITH
Midland Area
Crude Oil

L. L. SWANSON
Seattle Division
Operations

L. W. TALKINGTON
Wood River Refinery
Engineering Field

W. M. TAYLOR
Baltimore Division
Operations

E. H. UHLEY
Wood River Refinery
Engineering Field

F. H. VASEL
St. Louis Division
Operations

B. D. VISHANOFF
Head Office
Expl. & Prod.

G. A. WATERS
Wood River Refinery
Engineering Field

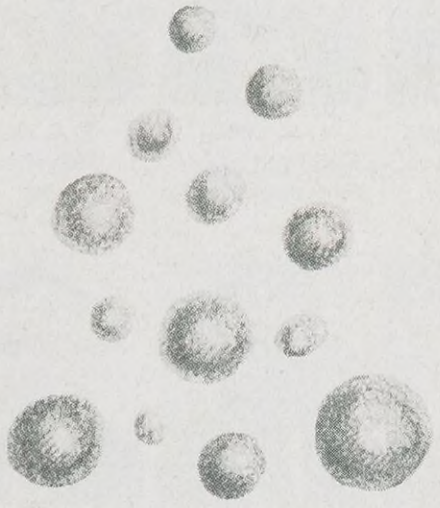
G. WHITESELL
Shell Pipe Line Corp.
Mid-Continent Division

R. W. WILLIAMSON
Pacific Coast Area
Production

W. T. ZUCKVA
Wilmington Refinery
Distilling

Editor's Note: In the August issue of SHELL NEWS, several retirement pictures were incorrectly identified. They are included among the above with correct identifications.

Products separation is discussed at the Indianapolis General Field Office by (left to right) Chief Dispatcher G. D. Harden. pointing to a model of spheroid operation; M. L. Barrett, Jr., Senior Research and Development Engineer; and Engineer W. H. Osborne, holding a pipe line spheroid. On the table is the wooden core of an unsuccessful experimental spheroid.



THE BALL IS ON THE LINE

Rubber spheroids, inserted between different products in Shell Oil Company's North Line, reduce product mixing

Unusual high piping of an auto
Barrett (foreground). Before a

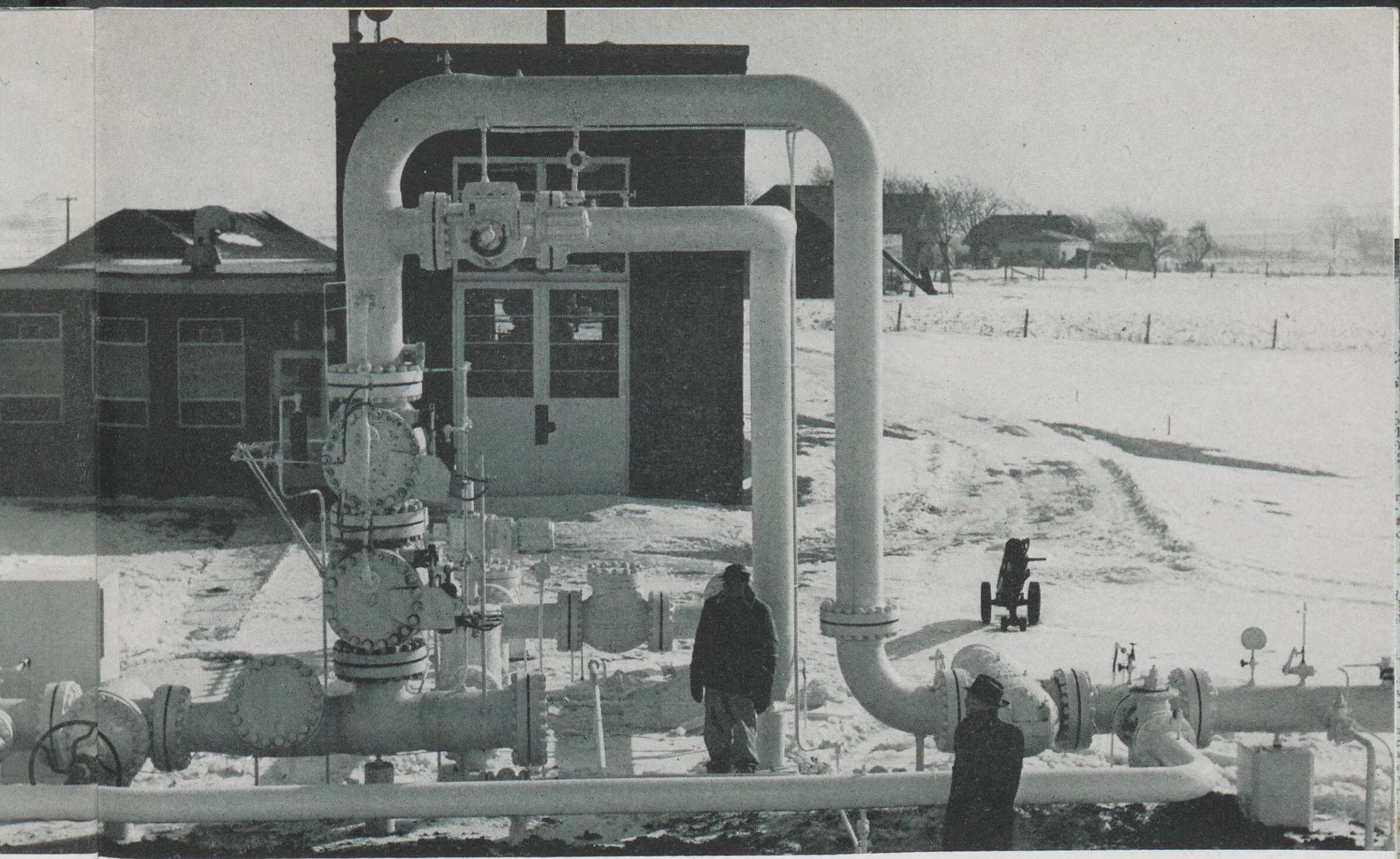
SHELL Oil Company's Pipe Line Department has developed the use of rubber balls to improve its products pipe line operations.

Use of inflated rubber balls is the latest achievement of the Pipe Line Department in solving the old problem of keeping products separated as they flow through a pipe line. Part of the problem remains, but such balls can reduce losses caused by product mixing up to 75 per cent. Besides, pipe line spheroids, as the balls are technically called, have other uses that help improve pipe line operations.

This new development in products pipe line operations is an extension of earlier pioneer work Shell has done in this field. In 1938 Shell built one of the first modern multiple-products lines. Named the East Line, it runs 352 miles from the Wood River Refinery to Lima, Ohio. Shell engineers designed the line so that the products in it would maintain "turbulent flow" and thus tend to keep separate. In "streamline flow," liquid in the center of a line flows faster than liquid near the wall of the pipe, thus tending to mix contiguous products. In turbulent flow, mixing is less because the separate products churn within themselves with no difference in rate of flow between the liquid in the center and that near the wall.

But turbulent flow is not the complete answer for it cannot eliminate commingling of products. In a 250-mile run, about 1,000 barrels of commingled products result from mixing of two adjacent products if there is no other method of separation besides turbulent flow. To reduce losses from commingling of products, pipe lines are usually loaded with similar products adjoining. When two adjacent products mix, they retain their basic characteristics although their grade is altered—which means a cut in their value. For example, when premium gasoline mixes with regular, the mixture is a downgraded premium. Such downgraded premium is mixed with large volumes of regular gasoline and consequently has the lower value of the regular gasoline.

The second major step in reducing commingling was the introduction of "dumbbells," an adaptation of the scrapers, called "go-devils," put through pipe lines to keep their inside surfaces clean. A dumbbell is a metal bar with several rubber discs at each



igh piping of an automatic spheroid bypass at the Bradley Station on the North Line is inspected by Maintenance Foreman W. Mellenberger and reground). Before a spheroid reaches the pumps, it is automatically shunted through the bypass and relaunched on the other side of the pumps.

end; the discs are slightly larger than the diameter of the pipe in which they are used. Dumbbells, still used on some of Shell's product lines, not only help clean lines but also effect a degree of separation of products. With such devices, commingling of two products is reduced to about 700 barrels during a run of 250 miles.

In their search for an even better separator and cleaner, Pipe Line Department engineers looked for a device that could be 1) inserted in product streams more easily and more accurately than dumbbells; 2) cheaper to use; and 3) passed around a pumping station automatically.

Shell engineers visualized the possibility of using a spherical-shaped object passing through the pipe line in tight contact with the pipe wall and started to develop a spheroid of an elastic material. The problem was discussed with the F. H. Maloney Company, a Houston manufacturing firm, which began working on the project with Shell in 1954. Experiments were made with many different compounds before selection of natural rubber, Neoprene and Hycar as the materials. Devices made with these compounds proved they could be varied to withstand contact with petroleum products and temperatures ranging from 40 degrees below zero Fahrenheit to 250 degrees above without becoming brittle or soft.

Spheroids are made in two operations. First the halves are molded separately under very high pressure at 300 degrees. After curing for several hours, the halves are vulcanized together. The balls are made in various pipe line sizes, from three to 36 inches in diameter, and are inflated to one per cent larger than the internal diameter of the pipe in which they are used by filling with water and anti-freeze. Air or gas is never employed for filling, for the size of the spheroid would be aflected by varying line pressures.

When the first elastic spheroids became available, the Pipe Line Department tested them on its North Line, which runs 250 miles from Wood River Refinery to East Chicago, Ill. After these tests proved successful, Shell began modification of the North Line to make the best use of the spheroids. This involved installing equipment to 1) launch the spheroids and; 2) allow them to pass automati-

Automatic spheriod launchers and bypasses improve products pipe line efficiency

cally around pumping stations at Barnett, Dewitt and Bradley, all in Illinois.

Products moving out of the Wood River Refinery travel about one mile along the line before they reach the point where the spheroids are launched. At that point, commingling of two adjoining products has already taken place to the extent of about 120 barrels. When the separation area between two products reaches the launching site, spheroids are automatically injected into the line. Up to 10 balls can be launched automatically at intervals of less than 15 seconds, although normally only five are employed for satisfactory separation. Each is inserted into progressively purer liquid and the last one into completely unmixed product. The fact that up to 10 spheroids can be injected into the line relatively easily marks another major advantage over the dumbbells—only two of which can be launched in a short time.

Experiments have shown that using five spheroids properly can reduce the amount of intermingling on the 250-mile North Line run to as little as 250 barrels, compared with 1,000 barrels commingled using turbulent flow alone and 700 with dumbbells.

Other major advantages of spheroids in products pipe lines are these:

1. At a pumping station, spheroids go through automatically, in contrast to dumbbells which have to be taken out of the line manually before reaching the pumps and then replaced on the other side. Spheroids are automatically shunted off the main stream, sent around the pump through a bypass system, and then relaunched automatically in the same relative position in the stream as before.

2. Spheroids can be run some 800 to 1,000 miles compared to 60-70 miles for dumbbells. The rubber balls go through a line with a combined rolling and sliding movement so that wear on their walls, about 2¼ inches thick, is generally evenly distributed. When the balls are worn down slightly, they can be inflated between trips to bring them up to size.

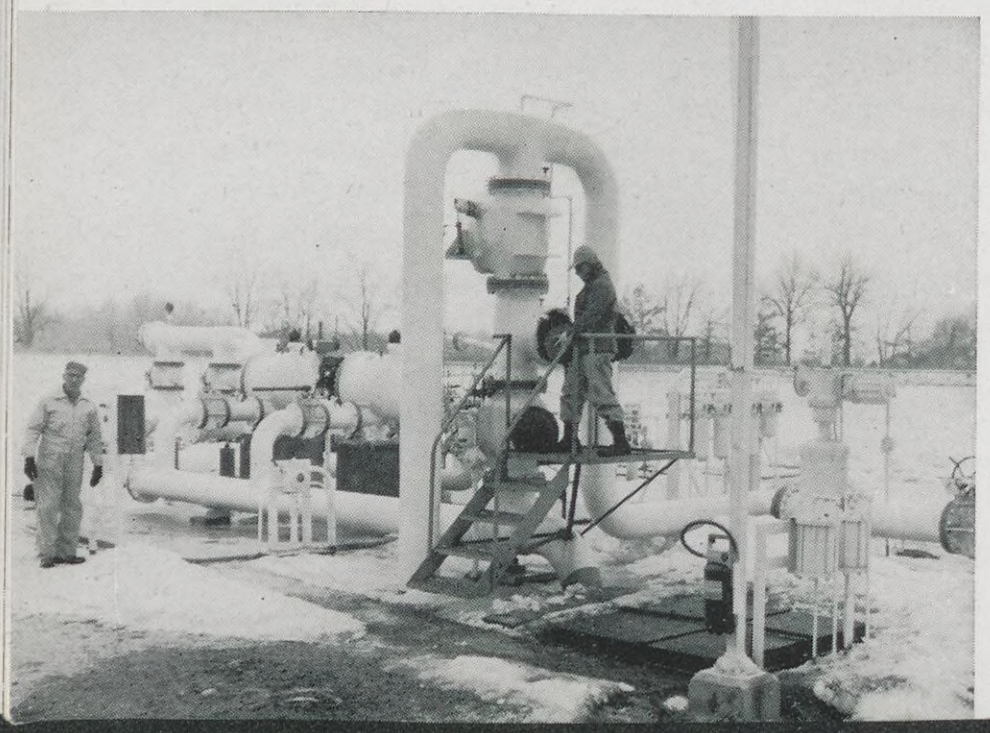
Conversion of the North Line to spheroid operations was completed early this year. It is the only one that has been entirely converted to this technique. However, the balls are used also on other Shell-operated product lines where no pumping stations have to be passed, and in a variety of operations including proving the accuracy of meters, cleaning lines and evacuating liquids from lines.

While Shell is the only company using spheroids as fully as on the North Line, other companies have started experimenting with them for product separation, hydrostatic testing, line evacuation and cleaning.

The Pipe Line Department is continuing tests to increase the number of operations that can be accomplished by spheroids. One possible use would be for them to act as locating devices showing exactly where products are in a line. This could make it possible to perform additional and more accurate automatic operations than at present, such as sending part of one product shipment into one tank and the rest into another.

While Shell continues tests with spheroids, experience with them so far indicates that their first full year of operations on the North Line—in combination with the installation of remote station control—will bring substantial savings ●

Loading a spheroid into the line for tests at the Vicksburg (Mich.) Pumping Station on the Wolverine Line is Operator F. V. Miller. Operator R. T. Borcher watches.



Using a stopwatch, Engineer G. F. Axmann studies the behavior of a tiny rubber spheroid in a model pipe line to determine how full-size spheroids will operate on Shell's North Line.

OPERATIC TRAVELERS

A Shell wife and a Shell daughter-in-law are winning fame as opera singers, but it's taking a lot of hard work and traveling.

Jean Preston, below, who lives in Salt Lake City with her husband, D. H. Preston, a Geologist with the Pacific Coast E&P Area, and their two sons, has traveled to San Francisco and Denver to further her career.

She went to the San Francisco Opera's final auditions after winning the regional contest. While there she appeared as soloist with the San Francisco Symphony conducted by Kurt Adler. She also went to Denver to compete in the Metropolitan Opera auditions after winning that regional audition, but laryngitis forced her to withdraw.

Patricia Heuermann, above, with her year-old daughter, Lana, has traveled 50,000 miles in the last four years to take voice lessons. She is the daughter-in-law of E. H. Heuermann, Manager of the Atlanta District of Shell Chemical's Agricultural Chemicals Division. Every six weeks she spends several days in New York studying.

She has appeared as a dramatic soprano with several symphony orchestras and in several operas.

SHELL Coast to Coast

HIS HOBBY: YOUTH

Described as "the man who personifies how McCamey (Tex.) feels about its youth," Mechanical Foreman E. D. Kinney of Shell Pipe Line Corporation, has received the George B. McCamey award for community service. At left, Kinney, a director of the McCamey Youth Center and a former Scout advisor, is awarded a plaque by School Superintendent H. L. Wheat at a Chamber of Commerce banquet.

SATELLITE SNAPSHOT

Although Physicist Ken Thomson of the Houston E&P Area is as down-to-earth as the next man, his photography is usually up in the air. Thomson's hobby is photographing celestial phenomona. He has photographed Sputniks I, II and III and the Atlas-Score satellite, the trail of which is shown in the picture above which he took before dawn one morning against a background of stars.

TEN GRAND PRIZE

Mrs. R. J. Mellies named a little switch on a Hoover Vacuum Cleaner and won a grand prize of $10,000. Below, she shows the check to her husband, a Technologist at the Wood River Refinery, and

their t
Paul,
money
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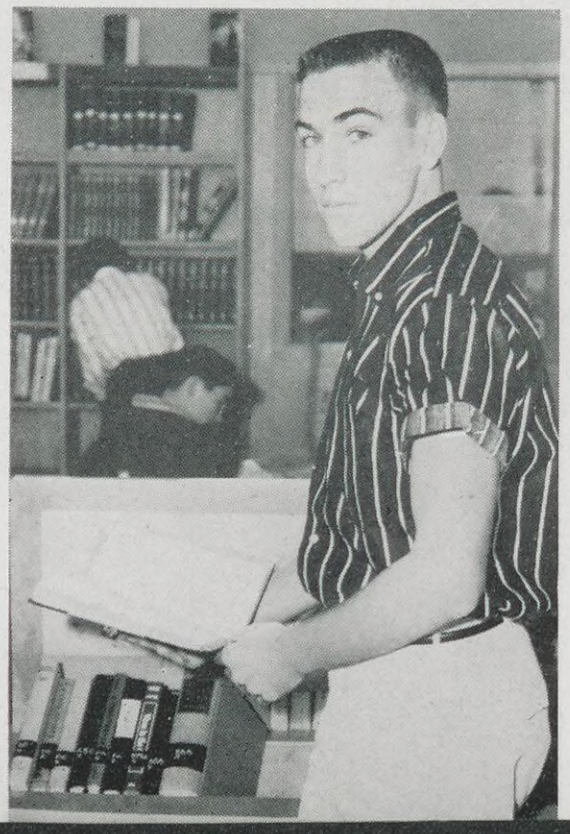
to buy

BUSY VACATION

Clifford Faith, 17, son of M. S. Faith, Shell Point Chemical Plant, attended the National Student Councils' Conference in Philadelphia in June as representative of all California high schools. In July, he went to Malibu, British Columbia, as representative of his high school at a conference sponsored by the National Christian Youth Organization.



WATER SCOOTER

Laboratory Photographer A. E. Locke of the Houston Refinery likes to fish in very shallow water. So he built himself a water scooter that can navigate in two inches of water with its motor up and 10 inches with it down. The 11-foot scooter is made of plywood treated with fiberglass. It is ridden standing up and steered with body movements. The scooter can reach a speed of 25 miles an hour.

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Boston
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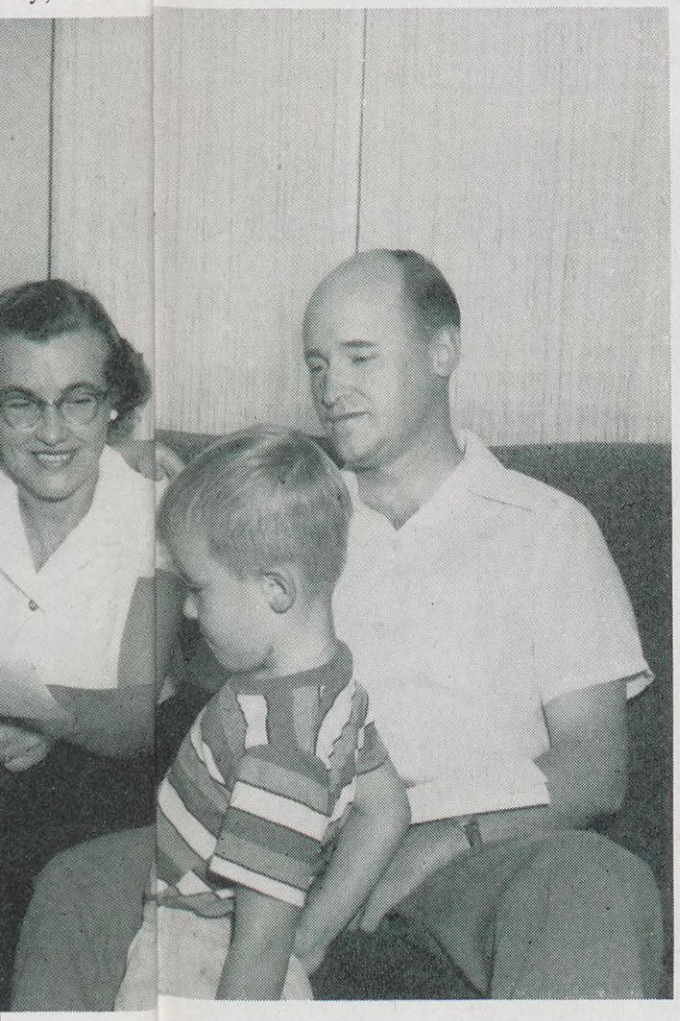
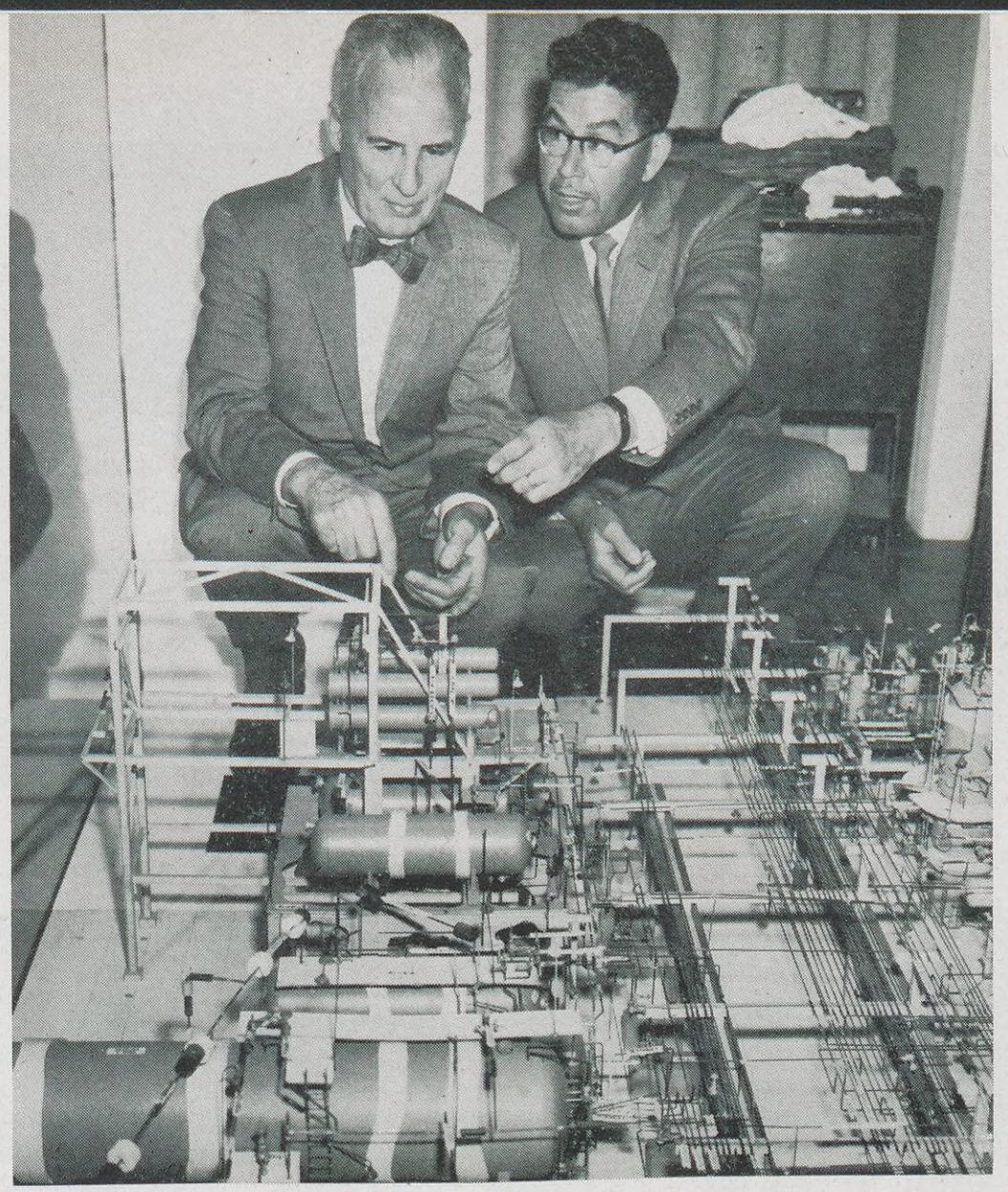
their two children, Jane, 11, and Paul, five, in their home. The money will be used for the children's college education . . . and to buy a new vacuum cleaner!





MODEL REFINERY

A scale model of the Anacortes Refinery's alkylation unit is explained by Refinery Manager R. C. Barton, right, to John L. King of the University of Washington's Board of Regents. The model was donated by Shell to the University's Chemistry and Chemical Engineering Departments.

fish in
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scooter
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n hour.

MUSIC APPRECIATION

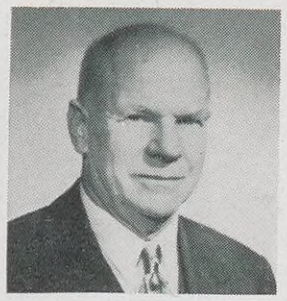
Arthur Fiedler, left, conductor of the Boston Symphony (Boston Pops) Orchestra, presents a certificate to District Sales Supervisor W. T. Critchley of the Boston Marketing Division in appreciation of the sponsorship by the Shell Companies Foundation of the first of a series of the orchestra's Esplanade Concerts for children. The Foundation was cited for helping preserve one of "Boston's chief cultural assets." The concerts were July 1 and 8 and Aug. 12.

YOUNG INVENTOR

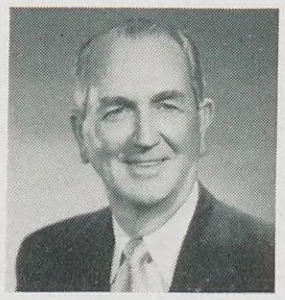
Pat Flanagan, 14, son of Scout G. C. Flanagan of Shell Development's Houston E&P Research Division, has won top prizes in two science fairs for his portable missile detector — which is being considered for production by an electronics company. Below, he holds the Houston Engineers' Council Award. Part of his missile detector is behind him.

Service BIRTHDAYS

Forty Years



I. W. ALMOND
Martinez Refinery
Engineering Field



R. B. CULLEY
Pacific Coast Area
Production

Thirty-Five Years

H. M. BARNES
Shell Pipe Line Corp.
Mid-Continent Division

L. C. BECK
Pacific Coast Area
Production

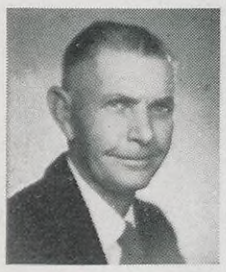
P. J. BES
Pipe Line Department
Ventura, Calif.

R. CASEY
Denver Area
Gas

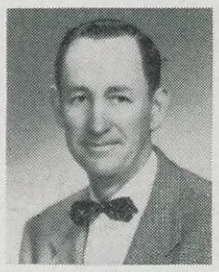
C. C. CROSBY
Shell Chemical Corp.
Ammonia Division

R. O. ERICKSON
Minneapolis Division
Sales

G. B. FRANKEN
Los Angeles Division
Treasury



G. H. LEE
Denver Area
Production



J. E. LEEVERS
Shell Chemical Corp.
Dominguez Plant

W. K. LUCK
Wilmington Refinery
Alkylation

W. E. McANANY
Wood River Refinery
Thermal Cracking

J. A. McQUADE
Pacific Coast Area
Production

J. E. SEAMON
New Orleans Area
Production

G. L. SIRARD
Sacramento Division
Sales

R. J. SUTTON
Pacific Coast Area
Gas

A. G. UZZELL
Wood River Refinery
Research Laboratory

E. T. WILSON
Los Angeles Division
Treasury

P. H. WRIGHT
Pacific Coast Area
Production

Thirty Years

C. J. ABADIE
Norco Refinery
Distilling

A. J. ALBERS
Wood River Refinery
Distilling

L. L. ALTHAUS
Portland Division
Operations

R. G. BOARDMAN
Los Angeles Division
Sales

A. J. BRAUD
Norco Refinery
Dispatching

R. D. BURLESON
Head Office
Marketing

W. A. BURNETT
Baltimore Division
Operations

A. G. CABRAL
Martinez Refinery
Engineering Field

J. CALAFATO
Wilmington Refinery
Treasury

E. W. CARLSON
Portland Division
Treasury

L. M. COLLARD
Cleveland Division
Marketing Service

W. H. CRADDOCK
Shell Pipe Line Corp.
West Texas Division

P. M. CRENSHAW
Shell Pipe Line Corp.
Rocky Mountain Division

C. E. CROCKER
Shell Pipe Line Corp.
Mid-Continent Division

C. H. CUNNINGHAM
Midland Area
Gas

ROSEMARY A. DALTON
St. Louis Division
Treasury

R. O. DAWSON
Sacramento Division
Operations

L. L. DONALDSON
Shell Chemical Corp.
Shell Point Plant

M. S. DUNHAM
Cleveland Division
Operations

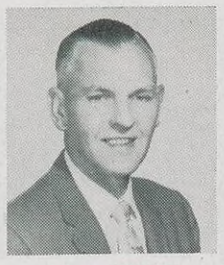
K. F. EHLENFELDT
New York Division
Sales

W. A. EQUITZ
Pipe Line Department
Long Beach, Calif.

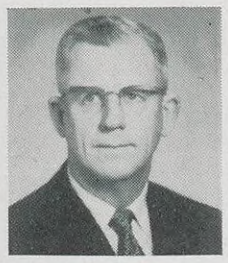
W. D. EVANS
St. Louis Division
Sales

Thirty Years continued

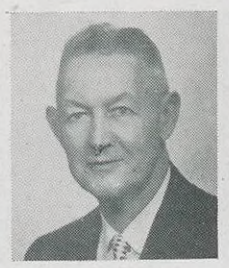
L. FARNER, JR.
Head Office
Financial



I. S. FLEGEL
Seattle Division
Sales



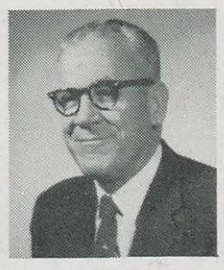
O. E. FRITCHMAN
Sacramento Division
Operations



M. T. GISLER
Indianapolis Division
Sales

A. W. HABBE
Wood River Refinery
Aromatics

FRANCES S. HALL
Wood River Refinery
Treasury



D. HARRISON
Houston Refinery
Engineering Field

C. E. HAWTHORNE
Wood River Refinery
Engineering Field

FRANKEN
les Division
easury

R. D. HENNELLY
Houston Area
Treasury

J. O. HIZA
Albany Division
Operations

J. B. JACKSON
Indianapolis Division
Sales

O. H. JELF
Denver Area
Production

E. E. KETCHERSID
Pacific Coast Area
Treasury

J. N. KOLB
Minneapolis Division
Sales

A. LAMBORN
Shell Chemical Corp.
Shell Point Plant

P. LEARDINI
Martinez Refinery
Compounding

M. H. LEE
New York Division
Operations

UZZELL
iver Refinery
n Laboratory

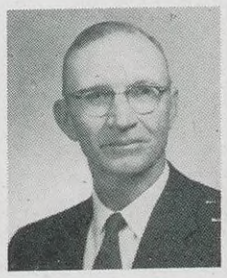
EVELYN E. LINDQUIST
Seattle Division
Marketing Service

M. J. LOMP
Baltimore Division
Sales

S. F. LUPO
Martinez Refinery
Engineering Field

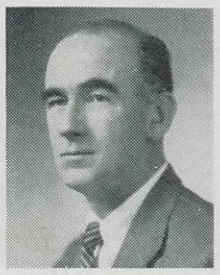
R. M. LYTLE
Shell Pipe Line Corp.
Mid-Continent Division

D. C. MARSCHNER
Head Office
Marketing



J. D. McCLINTON
Shell Pipe Line Corp.
Mid-Continent Division

W. J. McDONOUGH
Boston Division
Sales



J. P. McKEON
Manager
Prov. Fund & Pens. Trust

F. E. MILLER
Cleveland Division
Operations

BOARDMAN
eles Division
Sales

R. D. MILLER
Houston Refinery
Aromatics

M. M. MILLWARD
Sacramento Division
Sales

F. X. MOORE
St. Louis Division
Operations

J. T. MORGAN
Shell Development Co.
Houston

P. F. MULLANE
New York Division
Sales

K. W. OSTERHAGEN
St. Louis Division
Treasury

W. R. PARKER
Boston Division
Operations

E. J. PAULL
Sacramento Division
Sales

C. J. PYATT
Denver Area
Production

CRENSHAW
e Line Corp.
ntain Division

R. S. RENO
Wilmington Refinery
Engineering Field

J. A. RICE, JR.
Chicago Division
Marketing Service

E. E. ROBERTS
Midland Area
Gas

W. J. ST. AMANT
Norco Refinery
Engineering Field

H. F. SCHMID
Boston Division
Treasury

C. SCOTT
Indianapolis Division
Operations

H. A. SHANKS
Head Office
Purchasing-Stores

E. D. SHARP
Wilmington Refinery
Engineering Field

ARMINTA I. SHUPPERT
Indianapolis Division
Treasury

D. EVANS
uis Division
Sales

F. H. SIPE
Indianapolis Division
Sales

G. R. SIZEMORE
Denver Area
Production

W. J. SNOW
Houston Refinery
Engineering Field

L. STANDLEY
St. Louis Division
Operations

G. H. STOUT
Baltimore Division
Operations

R. S. SWAN
Portland Division
Operations

A. C. TAYLOR
Wood River Refinery
Aromatics

J. L. THOMPSON
Houston Refinery
Distilling

F. A. VAN MELLE
Shell Development Co.
Houston

Thirty Years continued

C. T. WAIT
Portland Division
Operations

A. J. WELLS
Indianapolis Division
Operations

C. A. WENTZ
Wood River Refinery
Engineering Field

E. T. WEST
Cleveland Division
Operations

R. V. WILKINSON
Portland Division
Treasury

G. P. WILLIAMS
Norco Refinery
Purchasing-Stores

K. E. WILT
Martinez Refinery
Engineering Field

H. F. WINHAM
New Orleans Area
Transport & Materials

Twenty-Five Years

A. M. ADAIR
New Orleans Area
Production

Z. E. BAYLIS
Pipe Line Department
Dennison, Ill.

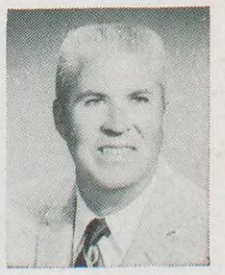
J. B. BENNETTI
Shell Chemical Corp.
Shell Point Plant

R. M. BOATRIGHT
Shell Pipe Line Corp.
West Texas Division

W. L. BOTKIN
Denver Area
Treasury

W. F. BRITTAIN
Baltimore Division
Operations

R. R. BROWN
New Orleans Area
Production



J. O. BUCKLAND
Pacific Coast Area
Gas

C. D. BUCKNER
Albany Division
Operations

S. N. CROWLEY
Denver Area
Production

F. W. DEAN
Pacific Coast Area
Exploration

W. H. DIETZ
Shell Chemical Corp.
Ammonia Division

H. T. DULS
Pipe Line Department
Springfield, Ohio

N. K. GROVER
Shell Chemical Corp.
Torrance Plant

A. HARTLEY
Wood River Refinery
Engineering Field

F. B. HILMER
Shell Development Co.
Emeryville

T. B. HOBBS
Houston Refinery
Engineering Field

T. W. HOLLIS
Midland Area
Production

R. M. HUNLEY
New Orleans Area
Exploration

H. W. JOHNS
Martinez Refinery
Engineering Field

CLARA M. JONES
Shell Chemical Corp.
Head Office

D. M. KELLY
Pacific Coast Area
Production

R. W. MAUTZ
St. Louis Division
Treasury

J. F. McKONE
Los Angeles Division
Sales

E. McMILLS
New Orleans Area
Production

H. W. MEGAW
Head Office
Gen. Exec. Office

W. P. MILLER
St. Louis Division
Treasury

O. L. NUERNBERGER
Denver Area
Production

O. W. PALMER
Head Office
Marketing

J. W. PITTMAN
New Orleans Area
Transport & Materials

S. G. RINGER
Sewaren Plant
Compound

F. L. SETTLES
Shell Chemical Corp.
Shell Point Plant

H. J. SHELLEY
Shell Chemical Corp.
Martinez Plant

A. SILVA
Pipe Line Department
Byron, Calif.

S. L. SMITH
Pipe Line Department
Greensboro, N. C.

W. E. SMITH
New Orleans Area
Pers. & Ind. Rel.

W. N. SMITHSON, JR.
Baltimore Division
Operations

A. SPENCE, JR.
Wood River Refinery
Engineering Field

W. A. STOKESBARY
Pacific Coast Area
Exploration

S. W. WHITE
Portland Division
Sales

B. L. WILLBANKS
Houston Area
Production

W. J. WIMMER
Chicago Division
Treasury

C. I. WRIGHT
Shell Chemical Corp.
Dominguez Plant

D. L. YABROFF
Shell Chemical Corp.
Head Office

WINHAM
leans Area
& Materials

BUCKLAND
Coast Area
Gas

. HOBBS
on Refinery
ering Field

. MEGAW
d Office
xec. Office

. SMITH
e Department
boro, N. C.

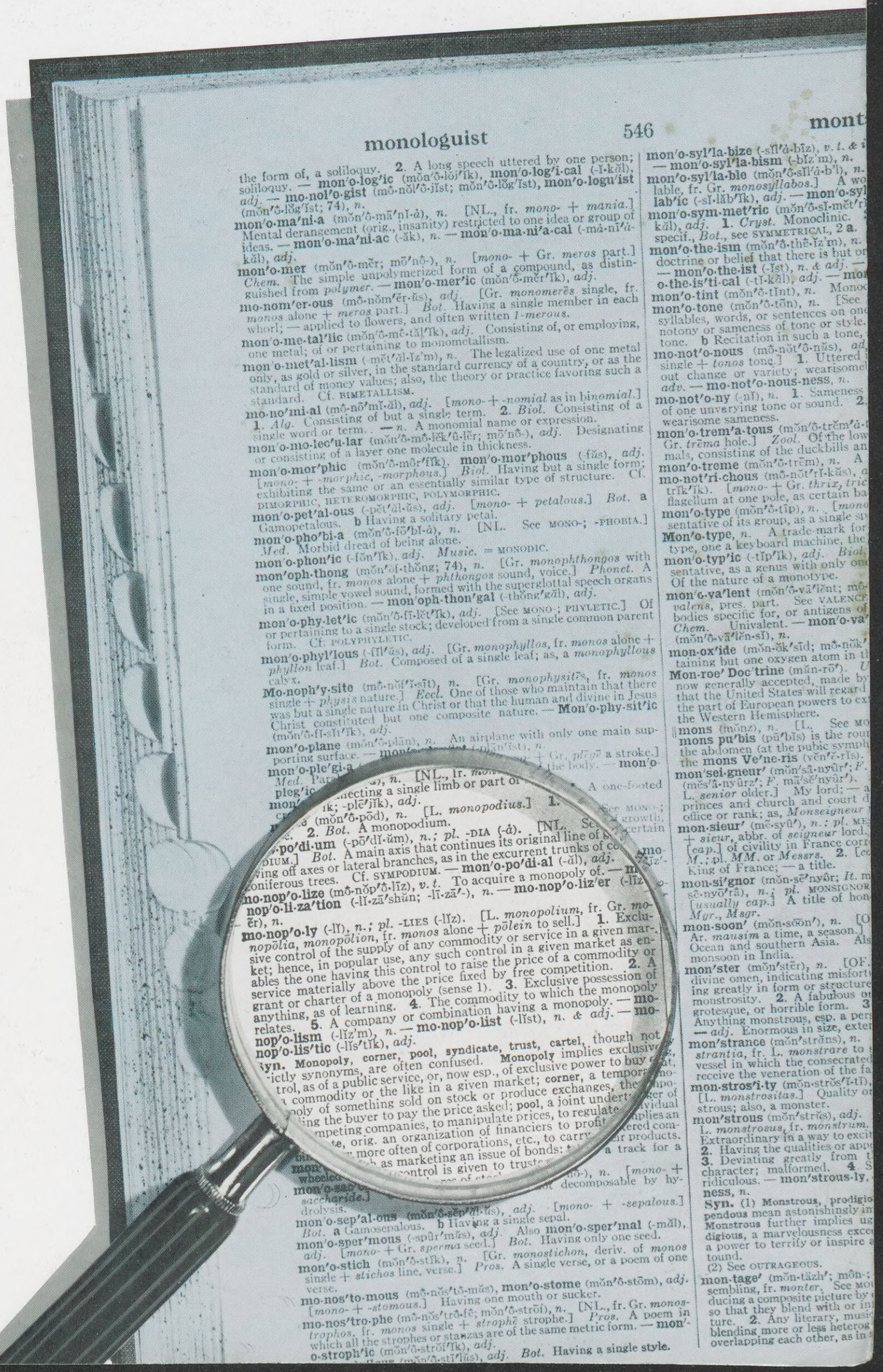
YABROFF
emical Corp.
d Office

YOU'RE RIGHT, Mr. WEBSTER

matters of fact

Some people still use the word "monopoly" to describe the larger oil companies. We see that you, Mr. Webster, condone no such loose talk! And the facts in our industry prove you're right.

The largest oil producer in 1958 had only 5.2 per cent of total United States crude oil production; the largest refiner had only 9.8 per cent of refinery intake; and the largest marketer had only 12 per cent of refined products sales. Indeed, 42,000 large and small companies are vigorously competing in the U. S. oil business.



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NEW YORK 20, N. Y.
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10231 Eddystone Dr.
Houston 24, Texas

SPL

LANDMARKS OF PROGRESS

Indianapolis General Field Office

Shell Oil Company Pipe Line Department

The General Field Office of Shell Oil Company's Pipe Line Department at Indianapolis (photo above map) is the nerve center for the daily flow of 307,000 barrels of 47 products through a 1,600-mile web of products pipe lines serving midwestern and eastern markets.

The Office was opened in 1957 to centralize operation of widely-scattered lines east of the Rocky Mountains. From its dispatching room (photo below map), operators control the direction and flow of products through the Shell-operated North, East and Wolverine Lines and a portion of the Inland System. Moving tapes, flashing colored lights and teletype messages report location, quantity and type of products in the lines and operations of pumping stations.

The Indianapolis Office is also responsible for movement of Shell products to nine Company-owned terminals on the Plantation Pipe Line, and from one pumping station on the Sewaren-Linden (N. J.) Line. It also directs operation of Shell's Massachusetts Line.

Assigned to the Office are 100 men and women who work in Engineering, Dispatching, Operating, Right-of-way, Purchasing-Stores, Treasury and P&IR Departments. Another 479 employees work at 28 terminals and 32 pumping stations along the lines.