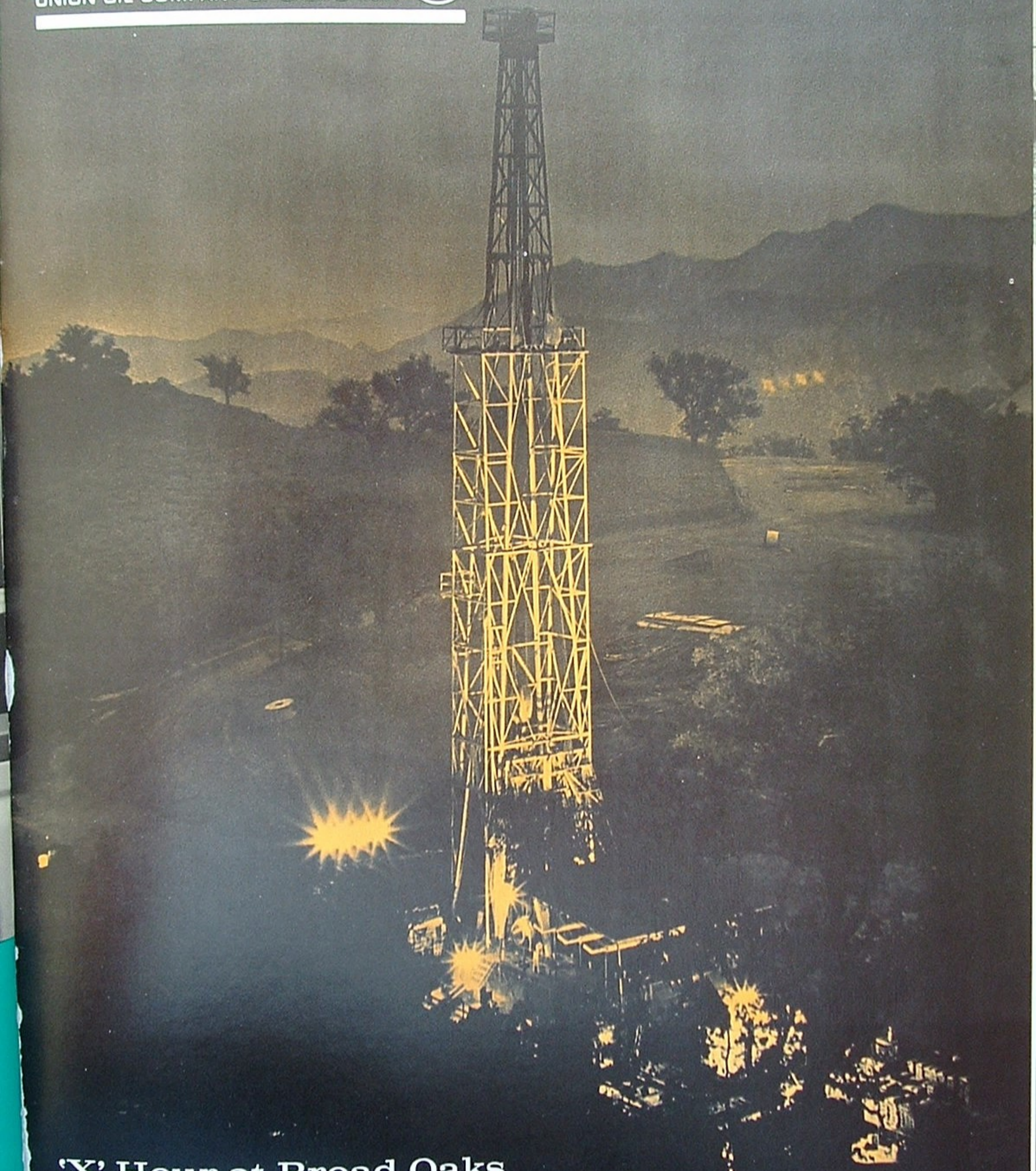


SEVENTY SIX
UNION OIL COMPANY OF CALIFORNIA



JUNE 1964



'X' Hour at Broad Oaks


Moonie Field producing

UNTIL MAY OF THIS YEAR, every drop of oil used in Australia was imported. Now a small part of this \$250 million a year drain on Australia's foreign exchange is being relieved. Early in May, oil from the Union-developed Moonie Field began flowing into the economy.

It all began at Moonie in December of 1961 when Union and its partners, Kern County Land Co. and Australian Oil & Gas, made the nation's first commercial oil strike. The event was regarded as so significant that when Queen Elizabeth visited there last year she stopped by to pay tribute.

At the Moonie Field itself, there are 15 completed wells on a productive area about four miles long and one mile wide. Elsewhere in the 35-million acre concession, two Union rigs continue the search for oil.

The discovery at Moonie was followed by construction of a 190-mile long, 10-inch pipeline to Lytton, near Brisbane. Once completed, it took eight weeks and 300,000 barrels of oil to fill the line and storage tanks. Once full, however, the flow of oil began. Early in May, Australian refiners began buying the first oil ever produced on the continent down under. For Australians, the fact their nation has oil production, however small, brings dreams of new industrial frontiers to conquer. 78



The first oil strike in Australia, with Union Oil as operator, touched off a frenzy of stock market trading in oil issues. Here a sheep farmer gazes at discovery well.

It took two months to fill the pipeline and tanks with 300,000 barrels of oil. Sales began early in May.





During 1963 visit to Australia, Queen Elizabeth paid tribute to Moonie Field as "a highly important discovery."



Before oil could be marketed, Union and partners built a 10-inch pipeline to Lytton, near Brisbane. Bechtel was builder.

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is a Union Oil Company of California trademark. It also symbolizes the American freedoms won in 1776, which made possible this nation's industrial development and abundance. Our SEVENTY-SIX magazine, published monthly, mirrors industrial freedom through the thoughts, skills, accomplishments and appreciations of Union Oil people. We invite readers to participate with us in an exchange of ideas and information. Address correspondence to The Editor, SEVENTY-SIX, Union Oil Center, L.A. 17, Calif.

OUR COVER—Contributing photographer Richard Tolbert stood on a hillside above the Broad Oaks field until 'X' hour to capture a subtle view of early-morning drilling. The story begins on page 6.

Published by
PUBLIC RELATIONS DEPARTMENT
Earl M. Welty, Director
F. L. Springmann, Assistant Director
Peter Craigmoe, Editor
Thiel D. Collett, Contributing Editor
Lori Arakaki, Production Assistant

Management reports on the outlook for the future in this...

STATE OF THE UNION MESSAGE

LOS ANGELES, CALIFORNIA

WHAT KIND OF a company will Union Oil be in the years ahead? As employees, can we look forward to better jobs? As shareholders, do we see increased earnings in the future? As customers, can we expect the quality of products and service we are accustomed to?

The April 27 shareholders meeting and its complementary annual report reveal some outlines that let you draw your own conclusions. Together they are a report on the "State of the Union," and a glimpse at the future.

If profits are any valid indicator — and they're the best we have — the company is headed in the right direction. Net earnings are rising and appear to be continuing this upward trend. The company earned \$53.9 million in 1963, up \$7.2 million from the year before. Factors contributing to this increase were (1) a seven per cent increase in production of crude oil and natural gas liquids, (2) a ten per cent increase in production of natural gas, (3) the shift to a profitable basis by Union Oil of Canada, an 83

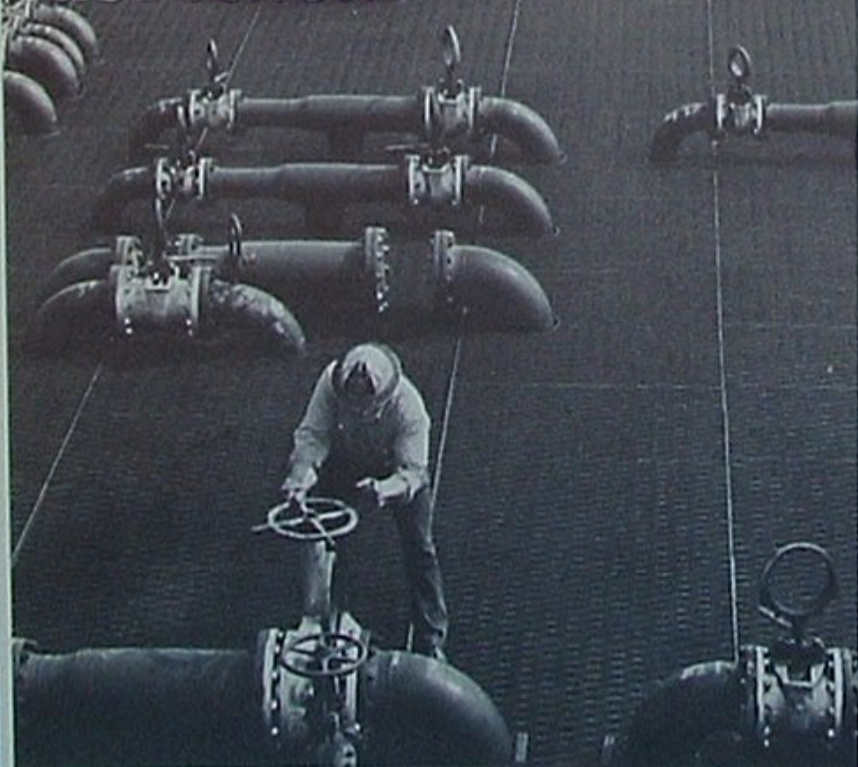
per cent owned subsidiary, (4) improved exploratory successes, (5) reduction in operating expenses, and (6) higher capital gains from sales of assets.

Is this trend continuing? In the first quarter of 1964, the company earned \$1.70 a share, the highest quarter in company history and a healthy 32 per cent over the comparable period for 1963. For a closer look, however, let's investigate the picture in greater detail.

EXPLORATION

Crude oil is the backbone of an integrated oil company. Union's proved reserves have grown substantially in recent years, and the trend is expected to continue. Last year, compared with a small decline nationally, Union's crude oil reserves rose seven per cent. Natural gas reserves also increased by seven per cent, compared with a 1.4 per cent increase nationally.

PRODUCTION



EXPLORATION



On the foreign exploration scene the company is active in Australia and the Philippines, and is planning exploratory activities on the Trucial Coast in the Persian Gulf, offshore Iran and Thailand. In the future, foreign exploration operations will be carried on where geological, economic and political factors are favorable.

"With our demonstrated exploratory ability," President A. C. Rubel told shareholders, "we can substantially improve our reserve position."

THE OUTLOOK: A backlog of excellent prospects.

PRODUCTION

Net production of crude oil and natural gas liquids averaged 115,700 barrels a day in 1963, an increase of seven per cent over the previous year. Increases came mainly from new wells in Louisiana and Canada, and from secondary recovery operations in Texas, New Mexico and California.

Net natural gas production totaled 563 million cubic feet a day last year — an increase of 10 per cent over 1962, and 122 per cent higher than five years ago. In the Pagie Lake gas field of Louisiana, for example, daily production increased from 57 million cubic feet a day early in the year to 121 million cubic feet at year's end.

Recent oil discoveries that are now producing include the Moonie field in Australia, Block 208 field in the Gulf of Mexico, the Las Cienegas field in Los Angeles and the Broad Oaks field near Santa Paula, California. Among other places, this year should see the offshore California Parcel 14 go on production. This is an extension of the Huntington Beach field.

THE OUTLOOK: Growing better every day.

IMPROVING OIL RECOVERY

Methods of producing even more oil than normal from a reservoir — called secondary recovery techniques — are

rapidly being developed and applied. In Union's case, production by such methods increased sharply during 1963 and now amounts to 14 per cent of the company's total net production.

New and improved secondary recovery methods, such as the Project Pusher techniques (SEVENTY-SIX, May, 1964), promise to get this extra oil out of the ground.

"A great deal of our effort and money during the next few years will be directed to this end," Rubel said.

THE OUTLOOK: A big plus for the future.

TRANSPORTATION

The movement of crude oil from field to refinery and the distribution of finished products from refinery to customer is a major task.

"Our most important future development in this field," Executive Vice President Fred Hartley told shareholders, "is the enlarging of two of our supertankers." The carrying capacity of these vessels will be increased from 470,000 to 850,000 barrels. "This," Hartley said, "will substantially reduce the cost of transporting Middle East crude to Union's West Coast refineries."

The cost of transporting California oils to refineries also was reduced through installation of electronic controls at many pumping stations.

THE OUTLOOK: Will favorably affect future earnings.

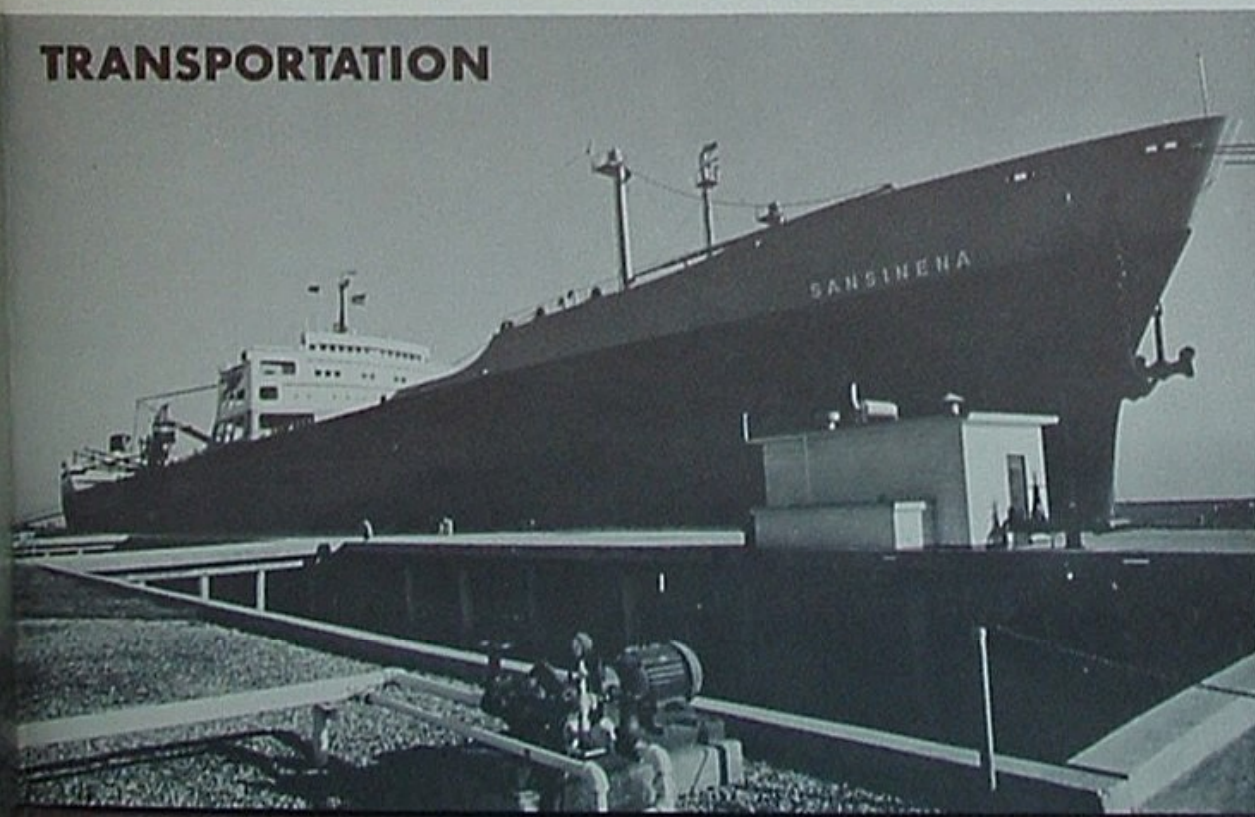
REFINING

Advances in refining technology can bring increased profits. A significant contribution to this technology will take place late this year when a \$22 million Unicracker begins operation at Los Angeles Refinery. It will replace three plants built before World War II and improve yields of high quality products. The Unicracker also will reduce the yield of less desirable fuel oil.

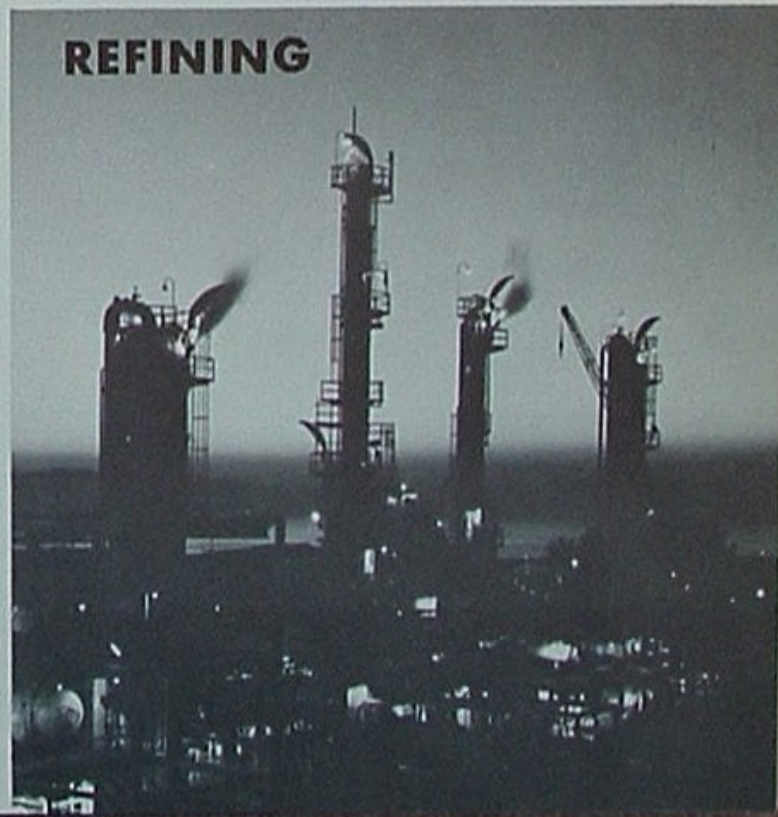
THE OUTLOOK: Benefits to be reflected in 1965 earnings.

continued

TRANSPORTATION



REFINING



STATE OF THE UNION *continued*

MARKETING

Union Oil Company emphasizes sales that return a profit. Each aspect of the sales and distribution effort is evaluated for its profitability.

"Specifically," Hartley said, "this means the company's emphasis is on profitable sales — and not on volume for volume's sake." Last year's marketing was the most successful.

"For example," Hartley said, "gasoline sales in the first quarter of 1964 show a significant increase over the first quarter of 1963."

Even price wars have been taken into consideration. "You will be interested to know," Hartley said, "that we plan our budgets and set our profit goals with retail price wars in mind."

Some of the ways the company aims to further increase the profitability of its sales include: (1) careful screening of new dealer applicants, (2) better training for those selected, (3) improved techniques for selecting service station sites, (4) new station designs, (5) continued advertising, (6) lease and sale of unused portions of garages and such, and (7) increased promotion for sales of tires, batteries and accessories (TBA). One indication that these efforts pay off comes from the sales of TBA items. The first quarter of 1964 saw a 35 per cent increase over the same period last year.

"Profits to the company and its dealers are expected to increase further in 1964 and future years," Hartley said.

THE OUTLOOK: The West is growing, and we're growing with it.

NEW MARKETS

Union Oil has representation in Japan and other parts of the Orient through its association and stock ownership

in Maruzen Oil Co. of Japan, and through its wholly owned subsidiary, Unoco Limited of Hong Kong. Unoco, the company's world-wide marketing subsidiary, continues to expand its sales of crude oil and petroleum products throughout the Far East and many other parts of the world. The company has offices in Singapore, Tokyo and Manila.

"We believe this to be our entree into the expanding economy of the Far East," Rubel said, "an economy that one day will be one of the great marketing areas of the world."

THE OUTLOOK: It's a new frontier.

RESEARCH AND DEVELOPMENT

Research is the company's guarantee that the name Union Oil will represent the *finest* products ten, twenty even fifty years from now. Union's Research Center is expected to make important contributions for the future in improving oil recovery methods, creating more efficient refining techniques, and studying opportunities in petrochemicals.

THE OUTLOOK: Assurance of progress in the future.

SUBSIDIARIES

There are many subsidiaries of Union Oil, and the principal ones have been showing improved earnings. Moreover, they should continue to add to overall profits in the future. Union of Canada, for example, moved from the red to the black in 1963 and should continue to show a profit in the future.

Collier Carbon & Chemical Co. is a wholly owned petrochemical subsidiary that operates seven U. S. plants; it markets throughout the United States, in Canada, Mexico, Japan and Europe. Collier is broadening its scope and working on greater market penetration. Profits increased in 1963 and continued to do so in the first quarter of this year.

THE OUTLOOK: A definite improvement.

MARKETING



RESEARCH



OTHER EARNINGS

Many years ago, Union acquired thousands of acres of California lands for their potential oil and gas reserves. Most of these lands were purchased at a fraction of their present value; recent real estate development has caused much of this land to increase in value. The company has about 50,000 acres of such lands in California. After-tax profits on the sale of such lands and other assets last year were \$3.2 million. In future years, the controlled sale of these lands will continue to yield important earnings.

THE OUTLOOK: *A continuing source of future profits.*

FUTURE ASSETS

In the next few years, the production of petroleum products from oil shale may well come into prominence. Union has large holdings of oil shale in western Colorado, with reserves estimated in the range of three to five billion barrels. Moreover, the company has developed the technology for oil shale retorting.

"There is no doubt that within this decade," Hartley said, "commercial shale oil plants can be built. It is now a question of rating a shale oil plant investment against conventional crude oil exploration and production. Given depletion tax treatment equivalent to crude oil and the assurance of freedom from production controls, shale oil will become a reality."

THE OUTLOOK: *An important hedge for the future.*

ORGANIZATION AND MANAGEMENT

"Certainly one of our most important assets," Rubel told shareholders, "is our organization. It is dedicated, young, hard-hitting and profit oriented." Some of the thinking of this profit-oriented management team was revealed at the shareholder's meeting by Executive Vice President Hartley.

"We are no longer a single business institution," Hartley said. "We are now a complex composed of several enterprises operating separately as either operating divisions or subsidiaries."

He also described Union's management philosophy in which each division or subsidiary is headed by a manager responsible for capital investment, cost, growth and profits.

"The profit contribution and rate of return on each profit center is carefully identified," Hartley said. "Thus the management of each segment of our operation is appraised independently on its performance."

"This type of organization has permitted us to pin-point our strong points and problem areas. Pressure to attain improved performance has resulted in healthy internal competition and an effort to improve operations in every respect."

THE OUTLOOK: *Future emphasis is on profitable operations.*

FUTURE PLANS

"Our plans for the future," Hartley said, "contain detailed steps we intend to take to increase raw material reserves, production and sales. They also contain specific details on ways and means to make additional cost reductions that will contribute significantly to our profits."

Also speaking of the days to come, Rubel said, "I feel justified in predicting that, barring an abrupt decline in the retail market or unforeseen adverse developments, our 1964 earnings should continue to show improvement over 1963."

Evidence of the company's faith in the future was reflected by an announcement that capital expenditures—which have averaged \$100 million for the last five years—will be increased this year to about \$125 million.

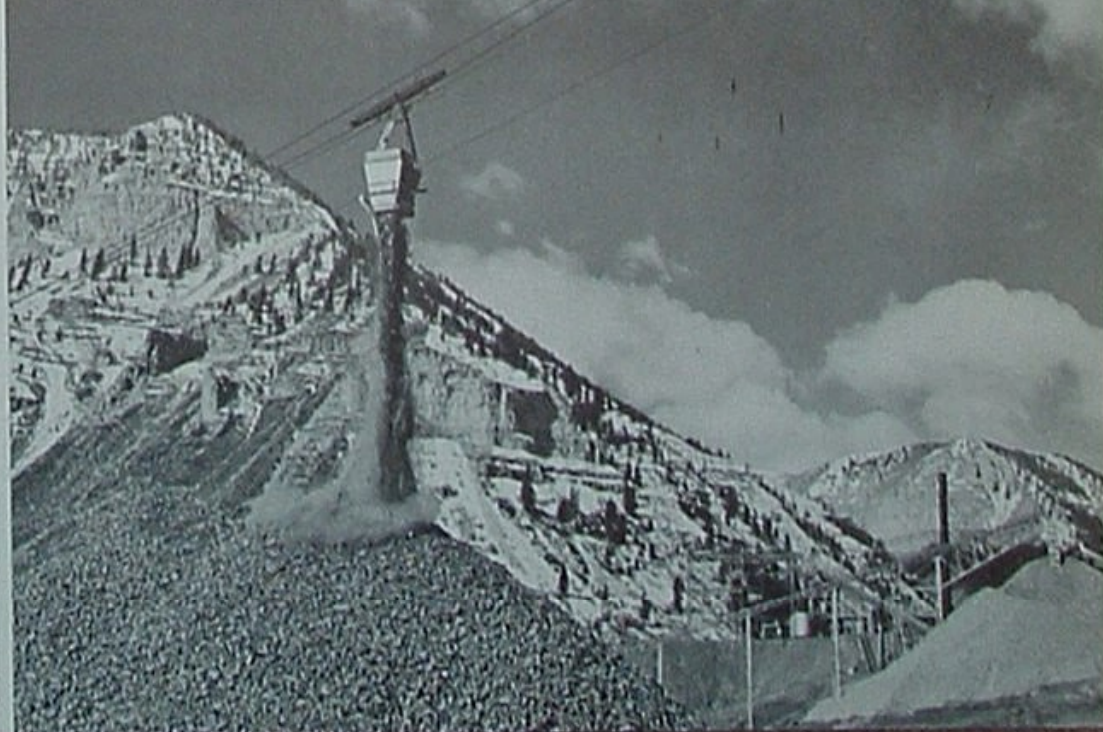
THE OUTLOOK: With reserves increasing faster than production—plus a backlog of exploratory prospects—the outlook appears to be solid. With a better trained sales force oriented toward profitable sales, the future seems even better assured. As shareholders, this forecasts continued prosperity. As employees, it means better job security. And as customers, it means the sign of the 76 will continue to be the place to find the *finest* in products and services.

76

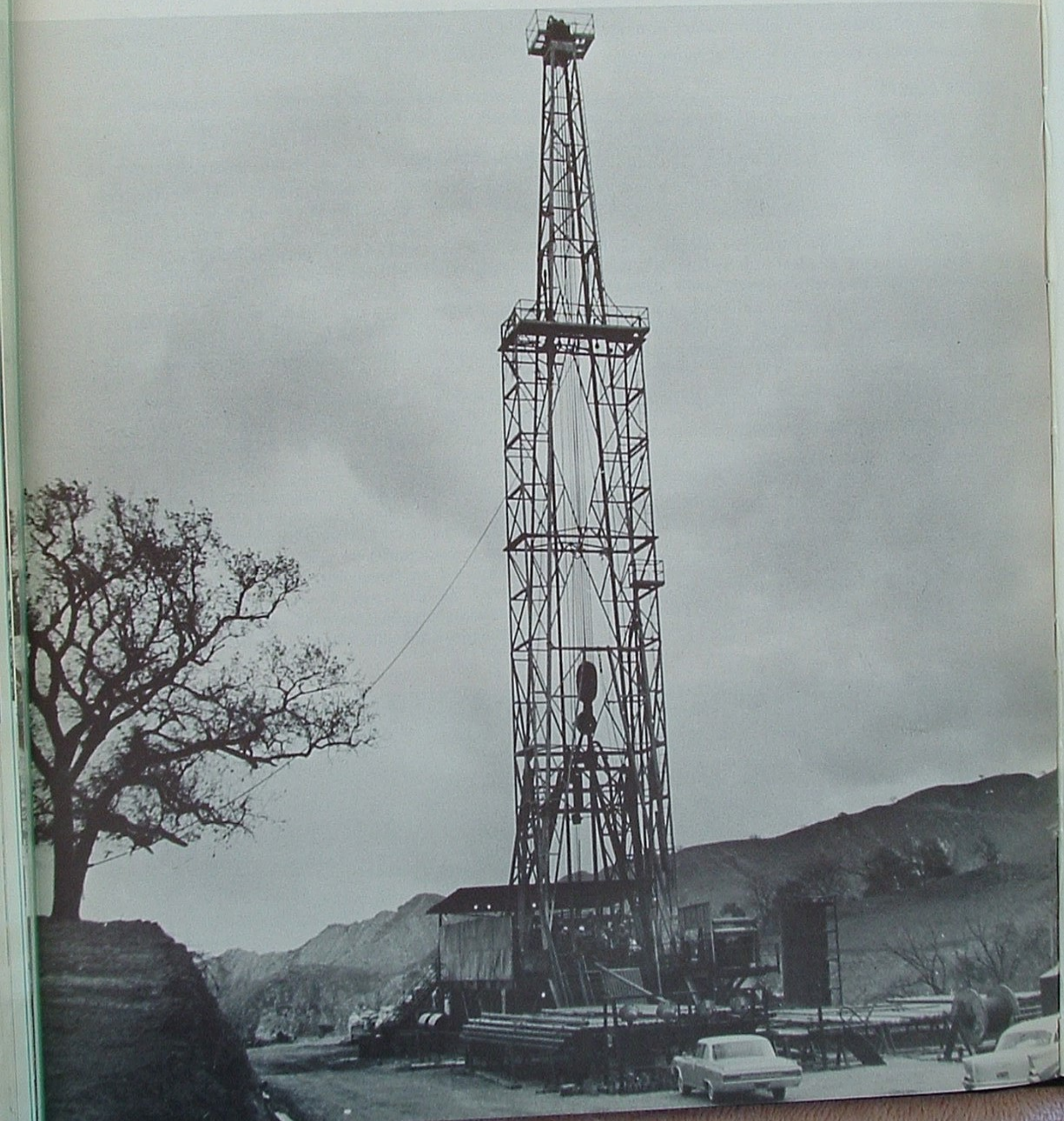
SUBSIDIARIES



OIL SHALE



'X' HOUR AT BROAD C



OAKS 103

*A fortune
is at stake
when drillers
take their first look
at a potential oil well.*

THE TIME OF RECKONING has arrived. It is 9 a.m., March 12, 1964—cloudy—starting to rain. The scene is a rugged one—ravines, winding ridges, steep mountain tops—high up in an isolated portion of the Santa Susana range south-east of Santa Paula. A mantle of oak trees, grass and brush—well stocked with deer and quail—preserves the primitive appearance this area has known for countless centuries. Only a winding mountain road, several oilfield installations, and scattered range cattle testify of man's interest in the domain. Standing in its natural beauty and quietness, you can hardly imagine the stir of Los Angeles traffic only a few miles away.

Driller Jim Sala takes one more look toward his oil rig and its revolving string of drillpipe, then picks up the radio transmitter in the dog house. He identifies himself as "Rig No. 1, Sala, calling KMB877 (Union Oil, Santa Paula)." He asks the party who answers to connect him with the drilling foreman, Art Hawes.

The driller's report in substance is that Rig No. 1 is beginning to make hole a little faster after penetrating extremely "slow going" with a core bit. He wants to know whether to continue coring or to "pull out of the hole" and take a look at the core.

The reply from Hawes is to core not more than 30 minutes longer, then pull out the core barrel. "By the time you're out of the hole, I'll be up at the rig with Greg Wyant and Charley Greer. I'll also call Vern Rutherford, the area geologist, in Bakersfield."

Driller Sala hardly needs to summon his crew. While he is talking short-wave, they sit in the dog house avoiding damp weather. At Hawes' mention of 30 minutes more coring time, they drain their coffee cups and immediately don stained working clothes and hardhats.

By 9:25, the driller and his three roughnecks are ready for action on the drilling floor. The derrickman, fifth man of the crew, is slowly climbing a hundred feet of ladder to his safety belt and narrow walkway high in the mast. Their job for the next 90 minutes is to lift more than a mile of drillpipe out of the hole, disconnect and stack it in 100-foot sections, and disassemble a core barrel and core bit at the extreme bottom of the drilling string.

Rock cores from an exploratory well are drilled with a doughnut-like circular bit, which, as it cuts downward, leaves a central core of rock intact. This rock sample is swallowed whole, as rapidly as it is cut, by a section of pipe called the inside core barrel. When dismantled at the drilling floor, the barrel is made to disgorge its core by the application of hydraulic pressure at the pipe's opposite end.

Today there is a fortune at stake over what comes out of the core barrel. Thirty-two days and nights of drilling have gone into 6330 feet of hole. The budgeted cost to Union Oil, including access roads and water lines, is more than \$200,000. The entire amount could be lost if the well is *dry*.

What big news is contained in this length of core barrel? Is the rock sample sandstone, clay, caprock, granite basement, or one of a thousand other varieties? Is it the porous type that holds liquids in its rock pores, or the impervious type that has rejected liquids and gas for a million years? If it's the porous type, is it wet? If it's wet, does it contain oil or only salt water? If it contains oil, is it permeable—will it readily release the oil? And is there enough oil in the rock to justify the cost of getting it out? All these and a hundred other questions are answered by coring.

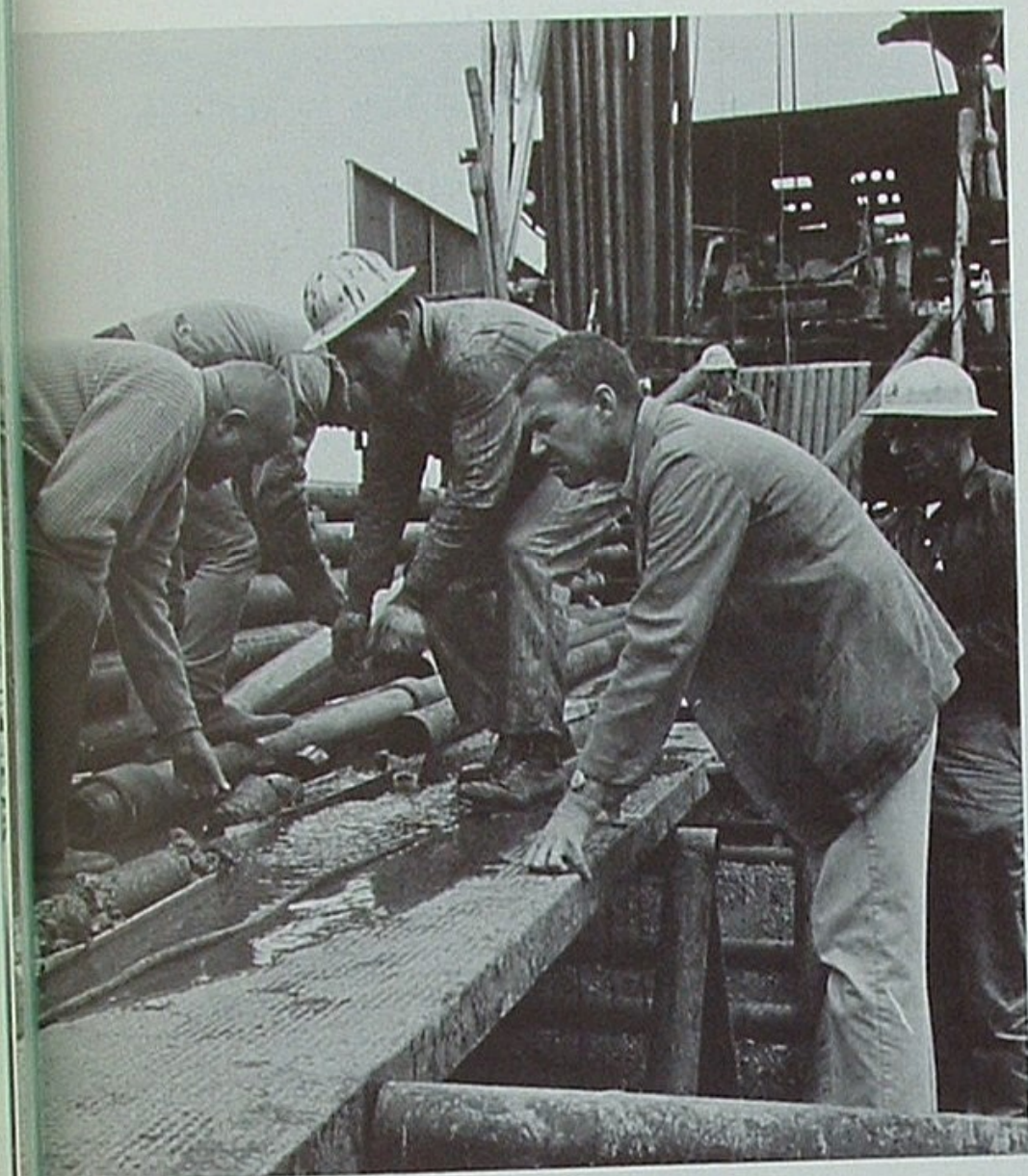
As the drilling crew applies hydraulic pressure to one end of the core barrel, *Pusher* Morton of Clyde Hall Drilling Company, contract drillers, stands watch at the other end. Soon a few inches of core oozes like toothpaste out the open end. As Morton touches it with his fingers, the rock appears loose and crumbly, a hopeful sign. He lifts a freshly broken chunk of the core to his tongue tip, tasting it for salt-water content—then sniffs the sample to detect any hydrocarbon vapors. His reaction reflects no enthusiasm. In fact, as one of the roughnecks approaches with a questioning look, the pusher shakes his head negatively: "This stuff looks pretty gray to me; ought to be brown or black."

Hardly does Morton express his doubt before a sedan pulls off the mountain road and parks at the dog house. Out of it step three Union Oil field men, Drilling Superintendent Greg Wyant, Drilling Foreman Art Hawes, and Drilling Foreman Charles Greer. They head straight for the pipe rack, where Morton has started transferring the pieces of core to metal trays.

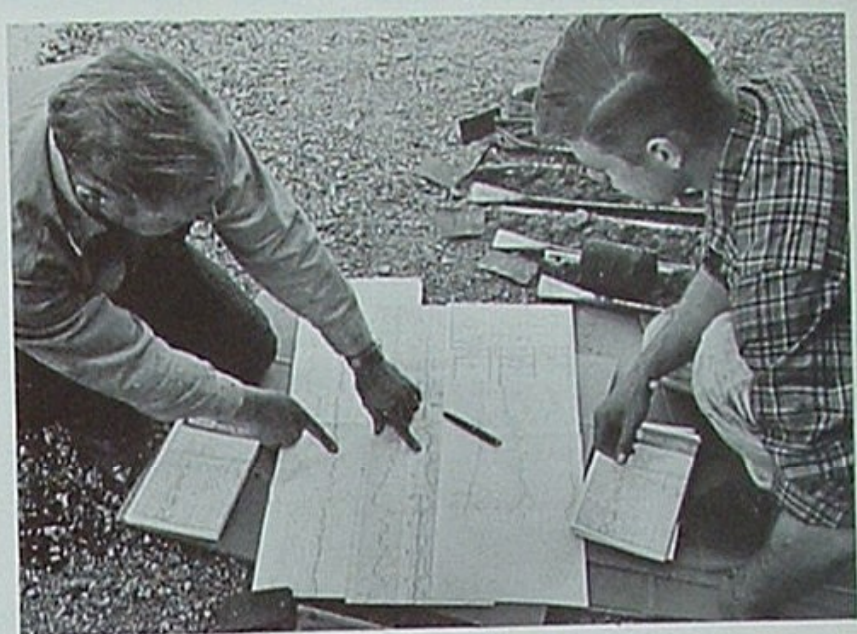
All three newcomers select samples of the core and apply the tongue-and-nose tests. When the pusher repeats his opinion that "The stuff looks a little too gray," Hawes seems anything but pessimistic. "It's the same sand we found in No. 101," he replies. "You're just getting into the top of it. It'll darken up as you drill down, but not as much as you'd

High in the tops of the Santa Susana mountains near Simi, Broad Oaks No. 103 has just drilled into a prospective oil sand. Through coring and logging, the drillers now evaluate their luck.

continued



As the core barrel yields its first cuttings from the target formation, everybody looks for a sign of oil. Below, Geologists Vern Rutherford and Gerry Weber correlate three electric logs.



Broad Oaks *continued*

expect. Remember this is high-gravity crude here—about the best-quality oil we've ever found in the Santa Paula area. It'll be rich in gasoline. Let's take a look at this sand under the black light."

Inside the dog house, the men resort to two field methods of appraising a core sample. One, the black light, reveals oil as a yellow to milk-white substance among the sand particles. The other method is to place the core particles in a small bottle of solvent. If there is oil present, it rises and discolors the clear solvent. In this instance, both tests prove positive. Though there is no wild elation over the discovery, everybody seems in a good mood. Hawes tells the driller to "keep coring ahead."

The unknown factor in Broad Oaks No. 103 is now not entirely unknown. The men believe they have drilled an oil well of sorts. Some important questions remaining are: How deep and productive are the sands? How much oil will the well produce?

Hard on the heels of Union's drilling bosses from the Santa Paula office are the geologists from Bakersfield. After all, it was a team of geologists—including Ed Hall, Gerry Rickels, John Kilkenny, Bill Plant and George Pichel—who recommended the Broad Oaks venture to top management. It was they who pointed out the existence of two geological faults or cracks deep under the earth's cover of brush and reasoned that oil might be stratigraphically trapped under one of these.

At word of the first core emerging from No. 103, Vern Rutherford, area geologist, grabs his raincoat in sunny Bakersfield and drives toward the cloud-mantled Santa Susana mountains. Arriving at the well, he satisfies his own mind about the cores, then wraps several large samples in foil and molten wax for shipment to Union Oil Research Center in Brea. By this means the freshness of cores is preserved and Research can make a highly accurate assay of the formation.

March 18, 1964—In contrast to the rain of six days ago, weather here in the mountain tops is now bright, sunny, ideal. But the drilling crew has reason to feel weary. Every hour of those six days and nights they've been coring. To them this means "coming out of the hole" with more than a mile of pipe each time the core barrel collects another 15 to 25 feet of cores.

But coring finally ends during the sixth night. The drilling foreman spots an abrupt change from oil to salt water in the last core sample and tells the drillers to "Hold everything!" There is a midnight conference of all Union Oil supervisors involved and a decision to make an electric survey or log. To handle the job comes a truck from Schlumberger (pronounced Slumberjay), who are one of the industry's specialists in this line of work.

Electric logging is based on the fact that various layers



Union Oil supervisors, l-r, Charles Greer, Greg Wyant and Art Hawes are obviously pleased with the quality of oil sand they find clinging to the core bit. Later, below, a sump test confirms their hopes.



of underground materials react differently to electrical current. Some formations conduct electricity, others resist it, and there are many variations between the two extremes. As for liquids held in the formations, salt water is a good conductor of electricity while crude oil is usually a poor conductor or non-conductor.

The loggers make use of these variations by lowering an electrically powered instrument to the well bottom and reeling it upward through the formations. A recording instrument in the truck receives the electrical data and prints it, along with well depths, in the form of continuous, irregular lines on long strips of paper. To experienced viewers, the squiggles present a valuable picture of the well's profile. The survey is especially helpful when correlated with logs of other wells in the vicinity.

So, in the shade of the dog house this fine Wednesday morning of March 18, we find Rutherford, the area geologist, and Gerry Weber, his assistant, making an electric-log correlation in the midst of their core samples. They agree that No. 103 has reached the bottom of its target oil sand. They calculate the thickness of the oil sand here at about 150 feet—a thick sand—probably a good well.

March 23, 1964—To complete Broad Oaks No. 103 requires another five days. The drilling crew has first to install casing—steel pipe that lines the well from top to bottom. Then, with a gun perforator, they shoot holes through the casing where it contacts the oil sand. Finally, packers are lowered to seal off the oil zone and tubing is installed to provide an outlet for the oil production.

Meanwhile, Production Foreman Frank Everett, who handles Union's other oil fields on Torrey Mountain, has his crew install a gathering pipeline down to the new well. He is optimistic that No. 103 will flow.

Still, no one has seen any oil come out of this mile-deep

reservoir or knows for certain that it will. Hiding the secret of No. 103's success is a column of drilling mud, filling the hole from top to bottom and exerting a pressure of more than 4,000 pounds against the bottom sands.

To bring a well in, the drillers gradually lessen the column pressure by changing from heavy to lighter fluids. At Broad Oaks they first pump water down to replace the drilling mud, thereby reducing the pressure a thousand pounds. The well shows no inclination to flow. Then they pump down lighter crude oil to replace the water, reducing the pressure another 200 pounds. There is still no sign of sufficient reservoir pressure to lift the mile-high column of oil.

Their next trick is swabbing. This consists of lowering a pump-plunger mechanism down the tubing and reeling it back toward the surface. As the plunger lifts the column of oil, it takes the pressure off the bottom, urging the crude to start flowing through the casing's perforations.

Swabbing is all No. 103 needs. Soon there are gurgling sounds in the tubing and pressure begins to mount on a surface pressure gauge. Opening a valve above the mud sump, Hawes and Everett watch a spray of oil and gas hiss out to meet a reception of cold, rainy weather.

Yes, it is storming again March 23, 1964, in the tops of the Santa Susanas. Riggers, preparing to move the drilling derrick to Union's next location in the new field, are bothered by cold weather and sticky mud.

But our men in charge of the hole are as pleased as punch. They now know the X factor in our Broad Oaks drilling equation. Says Hawes to Everett as they close the test valve: "This well oughta be good for 350 barrels a day of high-gravity crude—maybe 400 or 500 barrels as the pressure rises and we open her up. Say, it's beginning to snow. Let's get out of these mountains and find some lunch!" ☺



The Sparkle Girl: is she real?

*Is the Sparkle Girl real—or merely an advertising stunt?
Here, from the Sparkle Girls themselves, is their answer.*

ON A HOT, DRY summer afternoon in Spokane, Washington, a portly man was walking down a street across from a Union Oil station. He looked up and appeared to recognize someone. Suddenly he dashed across the four lanes and rushed up to a pretty blonde wearing a trim blue and white uniform.

"Are you real?" he demanded.

The young lady, by then accustomed to such strange outbursts, assured him she was the genuine article... a real Union Oil Sparkle Girl.

Scratching his head and looking sheepish, he said, "I thought that was only an advertising stunt used to attract customers."

The Sparkle Girl, Shirley Swannack of Spokane, took the incident in stride. After all, for nearly two months people had been asking her similar questions. So she returned to her duties of checking the housekeeping at the Union Oil station.

For going on six years, Union Oil Company's Sparkle Corps has been keeping a feminine eye on the housekeeping at Minute Man stations from Honolulu to Great Falls. While doing this, Sparkle Girls have learned that meeting the public is one of life's great adventures. In addition to their regular jobs, Sparkle Girls have been pressed into duty as gas pumpers; they have ridden parades, appeared in movies, been proposed to, and been mistaken for movie stars. One Sparkle Girl who was covering the area from the San Fernando Valley northward to San Luis Obispo, California, rode on the Minute Man float in the local Fiesta Parade at Santa Barbara.

"With our bright red truck," she said, "it was quite a sight."

Sparkle Girls usually are school teachers or recent college graduates who spend a summer traveling and working before settling down to duties as teacher, secretary or housewife. For the typical newcomer to the Sparkle Corps ranks, living and working away from home can be a strange

experience. One girl describes her first night as a member of the Sparkle Corps like this.

"It was in a small Northwest town. I stayed at a lovely new motel. About midnight, I was awakened by a key in the door.

"'Oh no matter,' I thought. 'No one can get in.' So I closed my eyes again.

"But I was mistaken. Within seconds the door burst open and a strange man stood in the doorway. I sat up and yelled. My tactics worked because he closed the door and left."

That wasn't the end of it, however.

"A few minutes later," she continued, "I was awakened by the ring of the telephone. The lady at the desk was laughing but apologetic.

"'You're in the wrong room,' she said. 'Instead of room 106, you should be in 107.'

"I told her I had the key for 106 and this was where the bell boy assigned me. I stayed in 106, and she sent the other customer to 107."

To a college coed recently out of school, the experience of driving on strange freeways and battling metropolitan traffic can be an adventure itself. A Sparkle Girl working in Pomona, California, recalls her first day this way.

"It was hot. I braved the freeways, and after getting lost several times I finally found the corner. I looked and looked, but no sign of a station.

"Then I saw it—three pumps and a lone Minute Man. They were remodeling the station, but he was still pumping gas. After all the trouble I had finding the place, I decided to check the station. There wasn't much left to rate him on, but I had him a good score for effort."

Minute Man dealers who receive high scores win valuable prizes. It's their motivation for pitching in and sprucing up the station that extra bit needed to win recognition. Usually this extra housework doesn't go unnoticed by his customers. Many customers, in fact, have a fierce pride in



Mary McLeod, veteran of three years in the Sparkle Corps, tells about her favorite dealer and why she won't be back this year.

their stations, according to Sparkle Girl Janice Pollock of Honolulu.

"When I was traveling around town," she said, "many customers felt their dealers were tops and should win. And they usually told me so."

A Sparkle Girl's arrival in town is sure to touch off a last minute frenzy of dusting and polishing at all Minute Man stations. The first Sparkle Girl's visit might be an eye opener to the dealer—who has overlooked that hidden corner. On the second visit, however, it is the Sparkle Girl who is likely to be impressed. Flora Faye Kessel of Butte, Montana, tells how her eyes were opened.

"On my first visit," she said, "one dealer got a score of 74 out of a possible 110. It was an old station, and I didn't see how he could do much better. On my second visit, I was surprised at the improvements. He must have gotten out the cleaning soap because he won that day's prize with a score of 98."

Was the improvement sustained?

"Well," she said, "you can imagine my astonishment on the third visit when he got 106—and won another set of uniforms."

Before the Sparkle Girls begin their summer rounds, they are preceded by a publicity buildup on radio and television. Primary purpose is to acquaint the driving public—particularly the ladies—with Union Oil Company's belief that cleanliness is next to godliness. But the TV and radio commercials serve a secondary purpose too. That is to remind Minute Man dealers that spring house-

continued



Sparkle Girl Regis Stevens of Sacramento surveys a 300 type Union Oil station prior to inspecting its housekeeping. Members of the Sparkle Corps reveal highlights of their 1963 rounds.



Before a candidate can wear the Sparkle Girl hat, she must undergo a training program designed to show her how to impartially rate the housekeeping of Minute Man dealers. Pictured here are (L-R) Cornelia (Holly) Rempel of Palo Alto, California, Flora Kessel of Butte, Montana, and Jill Schasker of Portland, Oregon. The instructor is Glenn Parker.

The Sparkle Girl: *continued*

cleaning is overdue and notify them there will be someone around to check.

Not all Sparkle Girls agreed on the effectiveness of the advertising buildup. According to Sparkle Girl Barbara Sanford of Phoenix, "People often said they didn't believe there really was a Sparkle Corps. They thought it was just a TV commercial."

In Portland, Sparkle Girl Virginia Snelgrove held just the opposite view.

"Everyone felt they knew me," she said. "People constantly said they had seen me on TV."

Actually Miss Snelgrove hadn't appeared in the TV commercial. The films were made many months earlier, so models were used in the filming. Some Sparkle Girls in the Los Angeles area did appear in a Sparkle Corps training film, however. One Los Angeles area Sparkle Girl recalls it this way:

"Last summer while filming a Sparkle Girl promotion movie I was mistaken for a movie actress. I loved the look on those people's faces; they thought they were watching the filming of some motion picture epic."

Of all the Sparkle Girl's duties, the most sensitive is her responsibility for checking the cleanliness of rest rooms. Normal procedure here is for the dealer or one of his men to run interference to make sure no one is occupying the men's room. Usually he stands guard at the door while she is inside. But dealers are busy men with impatient customers. Often they must leave to man the pump island.

Such was the case for a Sparkle Girl working at the coastal resort town of Laguna Beach, California.

"I caused quite a stir," she recalls. "There was a long line outside the women's rest room. The men's was empty. After checking the men's room, I stepped outside only to bump into a lady. You can imagine the difficulty I had explaining to her that I was merely checking the housekeeping and not dodging the line in front of the women's room."


For all the blushing mixups, the task of rating rest rooms has its brighter side. This was true for Sparkle Girl Mary McLeod who last summer was working the territory from San Pedro to San Clemente in Southern California.

"It happened at my favorite station in San Clemente," Mary said. "It all began when I walked out of the men's room and ran head on into a young man. Naturally he wanted to know what I was doing."

"At that moment Steve Snyder—my favorite dealer—came to my rescue. He explained the whole story to the young man, a tall, handsome marine lieutenant named Levalle.

"And you know," Mary added, "Steve still calls himself cupid today."

Today Mary McLeod calls herself Mary Lavelle. Unfortunately for Union Oil, Mary Lavelle won't be among the Sparkle Girls this summer. She's too busy being a housewife. But she recounts her three years as a Sparkle Girl with fond memories.

"I've checked Union stations and those of half a dozen competitors," she says. "I've pumped gas, checked oil, washed windshields. And now I hold the title of being in more men's restrooms than any woman in the United States. I've not only grown up a lot, learned even more, but Union Oil gave me a wonderful husband too." 

*What has the Gulf of Mexico
done for Union Oil lately?
Here is the answer in this*



REPORT ON THE GULF

JUST EIGHT YEARS AGO—on February 16, 1956, Union Oil began drilling its first offshore well in the Gulf of Mexico. To be sure, the company had been operating in Texas and Louisiana for years—dating back to 1939. True, it had been drilling in the shallow coastal waters of Bay Marchand, but this wasn't regarded as a true offshore well. And the company had participated in deeper water drilling at Block 47 in the Main Pass area, but not as operator.

So mark down February 16, 1956, as the day when Union spudded its first honest-to-goodness offshore well in deep waters of the Gulf of Mexico. It was a well in Vermilion Block 14, and it turned out to be one of the major gas discoveries in the gulf.

When you start drilling in waters as extensive as the Gulf of Mexico, you're working on a project of huge scope. Often it takes years before the results are in and we know whether or not the venture has paid off. How does the Gulf of Mexico look after eight years? Here's the answer.

As of January 1, the company was participating in nine major offshore producing fields. Cumulative production is 2.6 million net barrels of crude and condensate, 163.8 billion cubic feet of natural gas, and 430,000 barrels of natural gas liquids.

Our net daily production today is 4,500 barrels of crude and condensate, 139.5 million cubic feet of natural gas, and 440 barrels of natural gas liquids. The company owns 76 producible wells, and has 14 drilling and production platforms in the Gulf. It has about 120,000 net acres of land scattered over 47 leases and 29 prospects.

And that, in brief, is what the Gulf of Mexico has done for Union Oil lately. Now, let's have a look at the place. On the next two pages is a map of the southern Louisiana and Gulf of Mexico area. Study it a moment, then return for the explanation that follows:

The Gulf Division itself comprises the territory of East Texas, South Louisiana, the Gulf of Mexico and the southeastern states of the United States. This map shows only South Louisiana and the offshore territories.

As you can see by the heavy dotted line running down

the center of the map, South Louisiana and the offshore area are divided into two operating districts, the Southeast and Southwest. First let's look at the Southwest District.

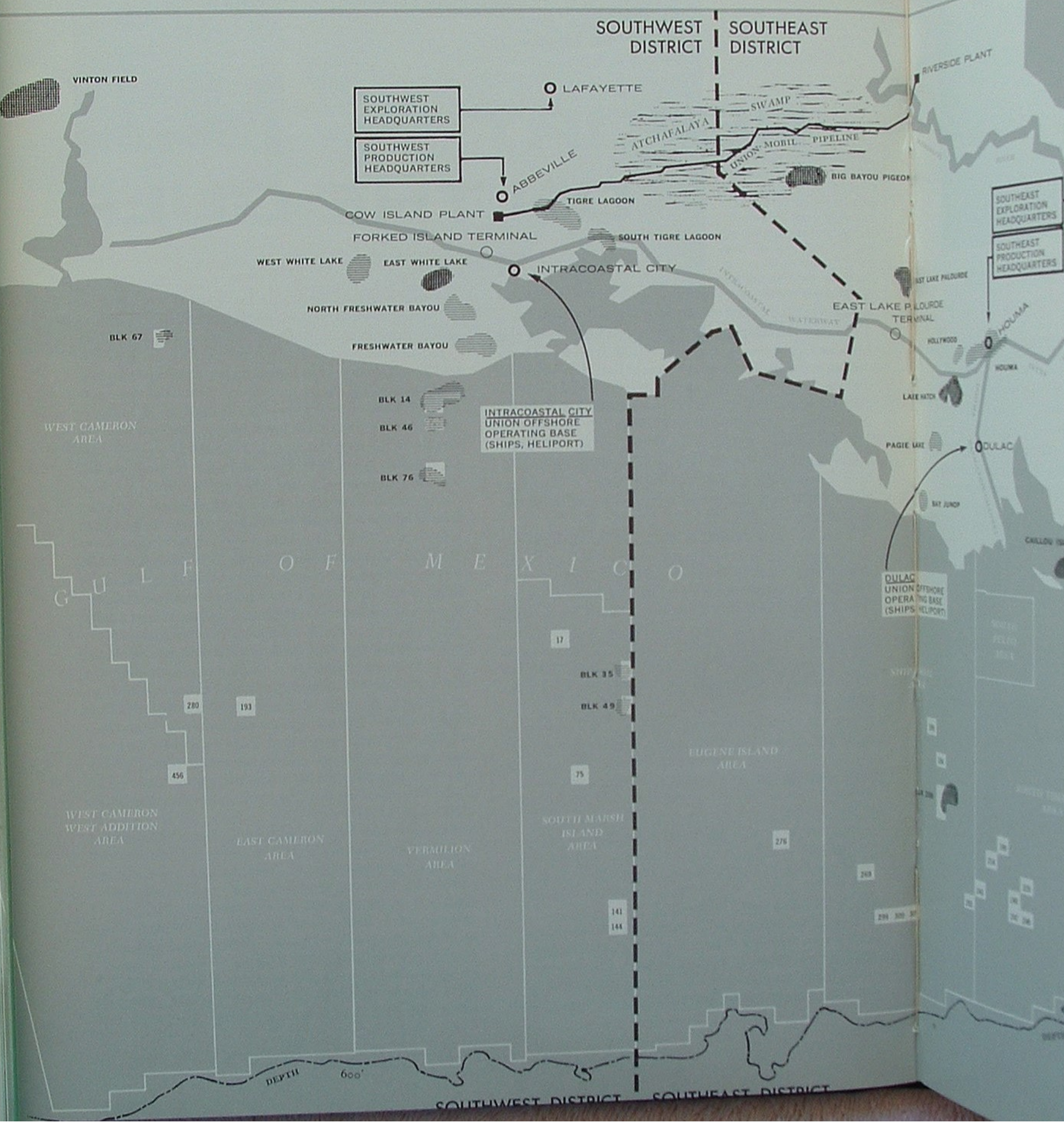
Exploration headquarters—home base for the geologists and geophysicists—is in Lafayette, a university town situated just north of the bayou country. About 20 miles southwest of Lafayette is Abbeville, situated amid lush rice fields. This is production headquarters. Just south of Abbeville, in the marshlands, is Intracoastal City, home base for the crew boats, helicopters and radio transmitters that maintain contact with the offshore platforms. Much of the crude oil is collected at the Forked Island Terminal, from where it is barged on the Intracoastal Waterway to refineries in Texas. The natural gas is sent by pipeline to New York, Pennsylvania and other East Coast states. Gas liquids separated at the Cow Island Extraction Plant are shipped by Union-Mobil pipeline across the Atchafalaya Swamp to the Riverside Fractionation Plant, near a huge petrochemical center in southern Louisiana.

Turning to the Southeast District, we see a similar set of facilities. Exploration headquarters is in New Orleans. Production and drilling headquarters is in Houma, an oil town in sugar cane country about 65 miles from New Orleans. Operating base for the crew boats, helicopters and radio center is at Dulac, a narrow neck of a town south of Houma on the navigation channel. Some of the Southeast District crude is gathered at the East Lake Palourde Terminal for barging to refineries via the Intracoastal Waterway.

Now for a look at the gulf itself. The offshore waters are divided into areas, usually named after a nearby parish (county). For example, the Vermilion Area—site of our Blocks 14, 46, and 76 gas fields—is named after Vermilion Parish. Furthermore, each area is divided into blocks of approximately 5,000 acres. Each block is numbered. When you see three numbers in one rectangular block, it represents some 15,000 acres of offshore lease.

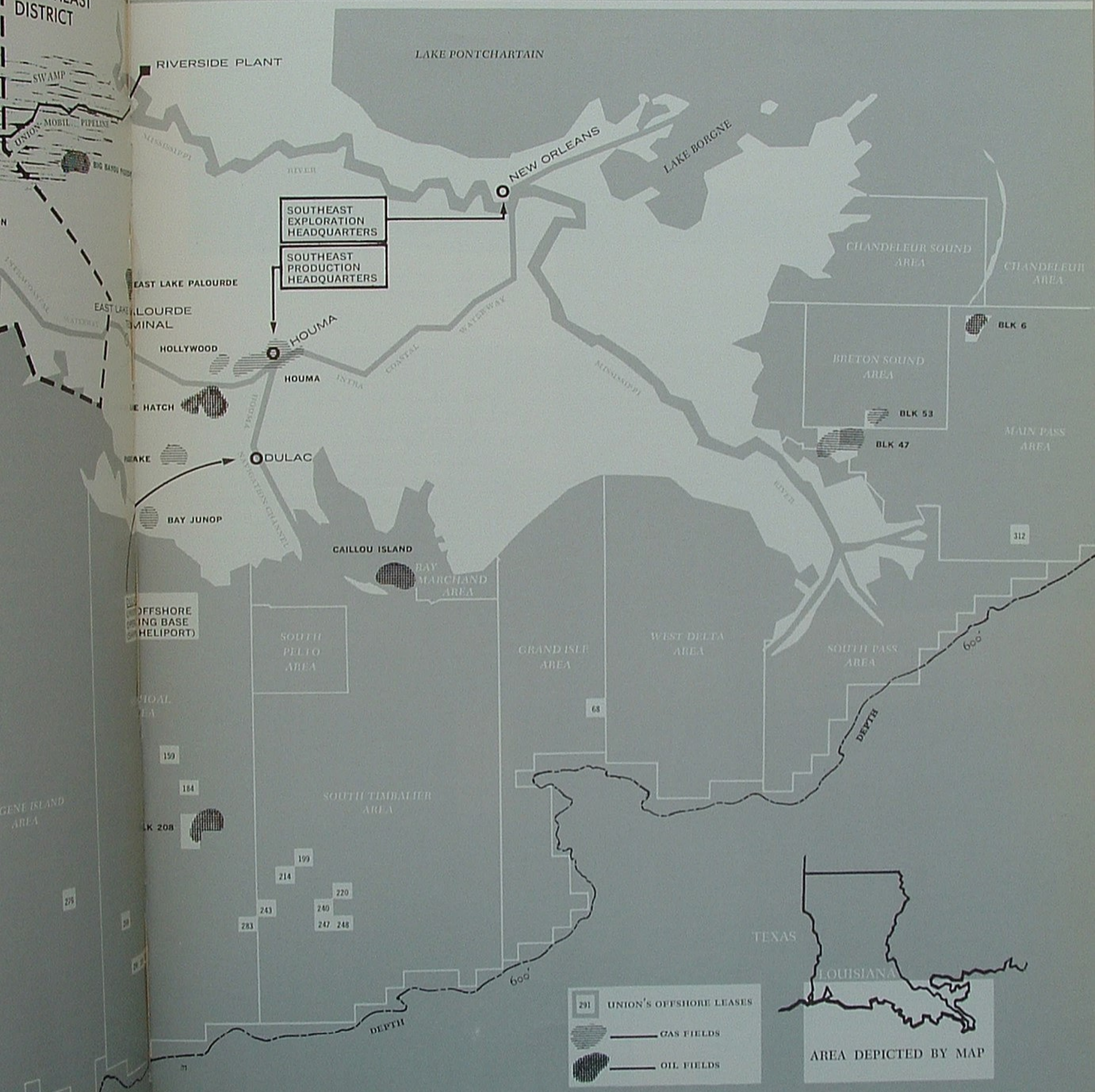
Oil production on the map is represented by cross hatch, both onshore and offshore. Gas production is shown by horizontal lines. 76

UNION'S Exploration and Production Properties in South Louisiana and



s in South
SOUTHEAST
DISTRICT

Louisiana and the Gulf of Mexico





Don Macaulay

HE COVERS THE WATERFRONT

THE COMMERCIAL SALESMAN is to the business world what the Minute Man dealer is to the motoring world. Both are Union Oil Company's direct link between company and customer. One such salesman is Don Macaulay of San Francisco who covers among other areas the waterfront from the Golden Gate Bridge to the Embarcadero. Don's day usually begins at an early hour with a never-ending pile of paperwork. Next come the daily calls. We thought you might like to go along with Don as he makes his rounds one day.

76

Early stop is Crowley's Red Stack tug fleet, where Don makes a service call.



Salesman Macaulay checks oil level when visiting customers. He won \$500 in 1963 Aim for Fame lube oil sales contest.





Coffee break finds Don aboard yacht Wololi for a friendly chat about oil with Andy Cordellos, chief engineer. Wololi is berthed at St. Francis Yacht club.

PHOTOGRAPHS BY RICHARD BROOKS



Aboard Bay & River Navigation motor vessel, Macaulay sniffs oil sample. On left, engineer Manuel Purdy; center, Capt. Charles Rasmussen. Vessel hauls sugar.




At Fisherman's Wharf, Don calls on Bob Van Amburg of Harbor Tours regarding delivery of Union diesel oil.

At Pacific Far East Lines terminal, Don meets Tony Burton to schedule delivery of turbine oil. Terminal is in shadow of Coit Tower.



At Pasha Truckaway dock, Don describes to George Pasha Jr. the advantages of servicing cars before overseas shipment.





Union Oilers describe the

EARTHQUAKE in Alaska

ANCHORAGE, ALASKA

IT WAS 5:30 P.M. ON GOOD FRIDAY. Lights were blinking on as Anchorage prepared for the Easter Weekend. Union Oil Company's district exploration and production manager, Richard Lyon, was at home in the Bootlegger's Cove area playing with his two eldest sons, Steven, 2, and Douglas, 1.

Half a mile southwest in the Turnagain Bluff area, geologist Edwin H. East was reading a newspaper in his living room. Accountant Walter Loftis was at home too, watching his wife arrange Easter daffodils. Angela Kutas, a Hungarian-born draftsman in the E&P office, was at home south of Elmendorf Air Force Base dressing for Good Friday Mass.

Other Union Oilers were engaged in similar tasks. Judy Bailey, a company clerk, was adjusting the TV set for her three sons. Secretary Nellie Beauchamp of the E&P office was sitting down to dinner. Geophysicist D. B. Robinson was on the front porch picking up a newspaper. Doyle Webb, a clerk-dispatcher, was at home dressing for a bingo game at the Moose Lodge. Regional Sales Manager T. B. Cooper was sitting in his living room with his family; he was glancing out the window at a handsome 14-story apartment building two blocks away.

At the Union Terminal in nearby Whittier, the scene

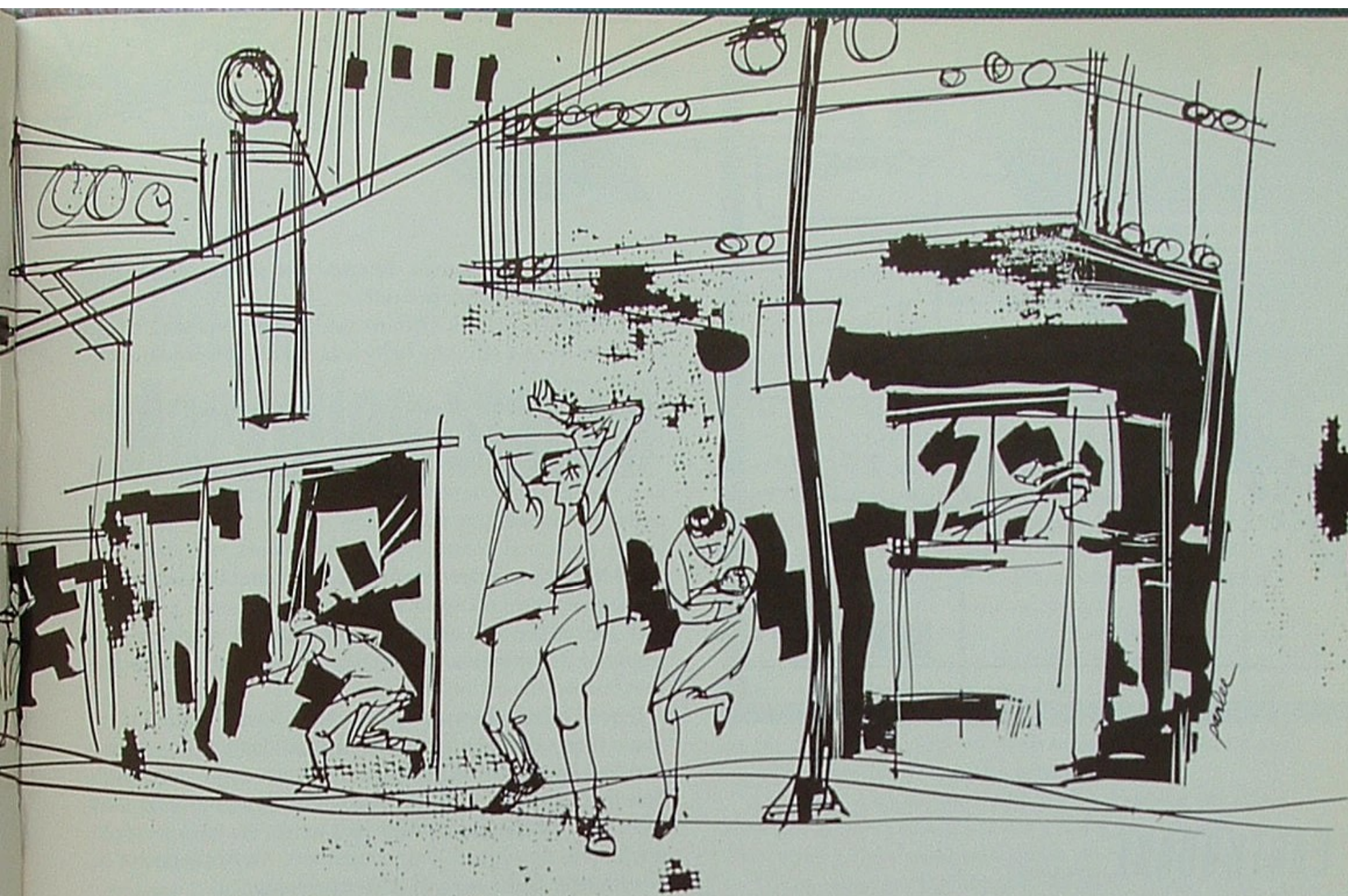
was just as homey. Dick Osburn, his wife and their two sons, Robert, 4, and Steven, 2, and their five-month-old daughter were at home on the first floor of the company house. They were getting ready for dinner. In the upstairs apartment, terminal operator Kent Dowse had just turned on the radio; his wife called him for the evening meal.

Not everyone was at home that day. In Anchorage, land man Robert Church was in his neighbor's basement borrowing some tools. Salesman Lew Ellsworth was at the florist shop buying an Easter lily. In the business district of Anchorage, steno Doris St. Louis and her husband, Don, were coming out of the Caribou Department store.

Suddenly, at 5:36 p.m., the earth began to heave. The ground pitched, rolled and tumbled. Rumbles and growls issued from the earth.

"Earthquake," thought Judy Bailey who ran for her sons. The four-year-old thought someone was dropping bombs. Nellie Beauchamp had experienced three major earthquakes in her lifetime. "But this was the worst," she declared. "It resembled a dog shaking a rag. Doors flew open. Everything not nailed down—pots, pans, dishes, staples, bottles, pictures—everything flew out."

In the basement of his neighbor's home, Robert Church said, "The building seemed to rise and fall much



like a swamped boat—only more violently.” Said Walter Loftis, “The house started to shake. I don’t remember what happened to my wife’s daffodils. Loose items danced around. Dishes came sailing out of the cupboards. There seemed to be a roar with each heave of the earth.”

In the Bootlegger’s Cove area, Richard Lyon described the earthquake this way. “The motion of the house was like that of a medium-sized ship on a very rough sea. The pitching and rolling was accompanied by the clatter of breaking dishes, and the cries of children.”

D. B. Robinson, who had just picked up his newspaper, lived not far from ravaged Turnagain Bluff area.

“We could hear things breaking all over the house,” he said. “Looking out the window, I saw trees swaying back and forth, moving up and down. The house was creaking and groaning, snapping and popping. ‘If this keeps up,’ I thought, ‘the house will fall apart.’ Russell, my oldest son, was outside. The quake threw him to the ground. Every time he got up, it threw him back down.”

Doyle Webb, who was dressing for the lodge bingo game, admitted, “I missed most of the quake. Something hit me on the head and left me dazed.” At the florist shop, salesman Lew Ellsworth underestimated the force of the first shock waves.

“I stayed with the building until it collapsed,” he said. “When the floor went down, it dumped me into the basement. Outside, the company car fell into a hole 25 feet deep.”

At his home in Anchorage, regional sales manager T. B. Cooper was looking at the 14-story apartment building. “It was frightening to see this concrete and steel building sway and twist,” he said. “Windows and storm shutters fell to the ground. Cracks appeared in the building and pieces of concrete fell to the ground.”

Outside the Caribou Department store, Doris and Don St. Louis saw the streets heaving in a crazy-quilt fashion. They grabbed a steel pole to keep from being flung to the ground.

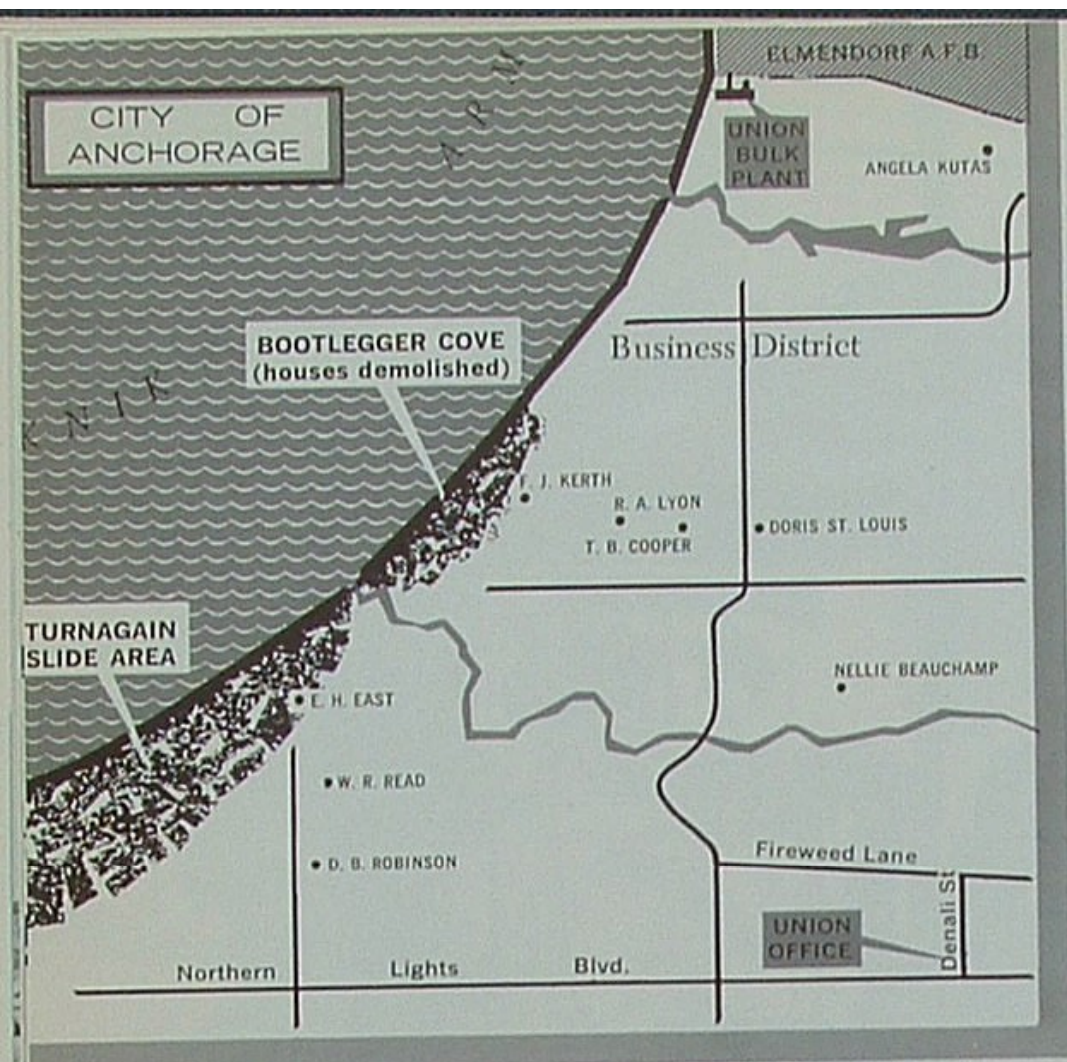
“We watched in horrified fascination,” Doris said, “as the windows crashed to the ground. Mannequins fell like bowling pins. Then I thought of our daughter, Stacy, trapped on top of that 14-story apartment. ‘Hurry, Don,’ I cried, ‘we must get home.’”

“But the streets were blocked by deep fissures.”

After minutes that seemed a lifetime, the sickening motion subsided. People began venturing out onto the streets to take stock of the damage. After-shocks followed to torment the already stricken community. Ultimately damage was to be listed in excess of \$500 million, and the death toll at more than 130. But at the time, no one knew. The electricity stopped. Telephone service was out. There was no heat.

Edwin H. East, who lived at 3000 McCollie Avenue in the wrecked Turnagain Bluff area, was one who may have lost his home. Here is the story of his first few moments after the quake.

continued



EARTHQUAKE *continued*

"After the shaking ended," he said, "a neighbor came running over. She was hysterical. I told her it was all right now.

"No," she screamed. "The bluff is falling away."

"I looked. Across the street, the woods and ground were sloughing off. We grabbed coats and boots and ran for safety. I looked over my shoulder. Another woman was running down the street, screaming. Just as she got out of her house, it collapsed into a chasm. Seconds later, I saw the next house slide into the same fissure. Both houses almost disappeared."

Near Elmendorf AFB, Angela Kutas, the Hungarian-born draftswoman, was on safer ground. "Around us," she said, "there was no fire or panic. Only the cries of desperation and fear from people like us."

Added Walter Loftis, "There was a strange silence."

Back in the Turnagain Bluff area, D. B. Robinson, who lived at 2445 St. Elias Drive, may have lost a \$30,000 home. The entire area was condemned.

"When the shaking stopped," he said, "I stood up. I was dizzy. My legs and knees were weak. I could hardly walk. It was like a bad case of motion sickness."

At the Whittier Terminal, things seemed even worse. Downstairs in the company house, Dick Osburn and his wife grabbed the children and ran.

"We knew the water would come," he said of the tidal waves, "so we got into the pickup." They had gotten no more than two blocks when the water struck. As nearly as can be determined, two opposing tidal waves met right where the truck was. It stalled the vehicle, but didn't

overturn it. The Osburns deserted the pickup and began wading toward higher ground.

"It was then," Dick Osburn said, "that I realized I was barefoot. Worse still, the baby was naked. It was a miracle we survived."

Upstairs in the company house, terminal operator Kent Dowse yelled for his wife. "Stay inside," he called, "We're trapped." Floodwaters swirled around the house and the oil tanks outside, but the company wharf apparently cushioned the main blow of the tidal wave. The house remained intact. When the waters subsided, Mr. and Mrs. Dowse donned warm clothing and began wading through waist-deep water to safety.

"I looked back," he said, "and saw an electrical arc from the boiler room. Apparently this touched off the fire that burned the oil tanks."

Rescue efforts began immediately. Some Union Oilers made it to safety. Others opened their doors to those who had lost homes. In Whittier, the Osburn and Dowse families made it to safety in the Army's Buckner Barracks. But the Osburn's daughter, who had made her escape while unclothed, developed lung congestion. An Army doctor in a helicopter flew in to administer penicillin.

"Thank God for that doctor," Mrs. Osburn said. "The baby's back to normal now."

It took longer for things to return to normal in Anchorage. Sales Manager Cooper described the scene in his home.

"Our place was a mess," he said. "We had no heat, no lights, no water. For heat, we used the fireplace." Within five minutes, friends from the 14-story apartment house began arriving at the Cooper home. Among those who hadn't shown up, however, were Doris and Don St. Louis. "I wondered where they might be," Cooper said.

The St. Louis's were still trying to pick their way through the crevasses and fissures in downtown Anchorage. "Our first concern," Doris said, "was to get home. Stacy was with a babysitter on the 14th floor of that apartment. We didn't know if it was still standing. We had to take a hundred detours. I died a thousand deaths."

"When we finally got there," she continued, "people were milling around. But no Stacy. The electricity was off; there was no elevator service. Don found a flashlight and climbed the 14 flights of stairs.

"The front door of the apartment was jammed; no one had been able to escape. Somehow Don forced his way inside. The place was a shambles. The refrigerator was half way into the living room. My ironing board was upside down, sitting on the couch. The dining table had flipped over. Chairs were everywhere.

"Huddled in the bedroom were Stacy, the babysitter and her children. Don carried Stacy and the babysitter's six-year-old down to safety. I don't know what happened next; I was crying with relief."



at the Marketing Station

SHELDON BEASTER, 24, is a plant operator at Union's marketing station near Elmendorf AFB in Anchorage, Alaska. When the March 27 earthquake struck at 5:36 p.m., Beaster was locking the rear gate at the bulk storage plant.

"The tanks jumped around like corks on rough water," Beaster said. "The warehouse did fine until the tank cars started to bang into it. Then barrels came flying out. Cases of oil, quarts and the like were going everywhere."

Beaster pitched right in to do what he could. He was soon to have help.

Richard J. Kukowski, 29, is a senior clerk. Two minutes after he had arrived home, the quake struck.

"I jumped into my pickup," he said, "and drove to the plant on Ocean Dock Road. It was a rough trip. Streets were torn up and sunken in patches up to half a block long.

"When I arrived, it was apparent that considerable damage had been done. The warehouse was almost flat. The office was a jumble. Files, records, office furniture . . . all were heaped together. The walls were leaning. Numerous after-shocks were rocking the building. The office area was sinking.

"Tom Burnett, the head plant operator, was arriving just as I got there. He cut the power. We closed what water mains we could find. The trucks seemed O.K.

"After the plant was secure, I ran over to the Shell bulk plant. No one appeared to be there, so I jumped the fence and began closing valves on the storage tanks. By the time I had gotten to the sixth tank, one of Shell's men arrived.

"I went back to the Union plant again. We organized a fire watch. A lot of fuel had spilled from the Standard tanks on the other side. Almost immediately the area was placed under civil defense control."

Kukowski was modest about his work. T. B. Cooper, resident sales manager, added a few details Kukowski had skipped.

"After determining that our plant was in no immediate danger," Cooper said, "Kukowski jumped the fence at the Shell plant and closed the valves to the pipeline serving the airport. One tank had spilled 2.5 million gallons of jet fuel."

Another witness said Kukowski had been standing ankle deep in aviation fuel while closing the valves.

From a Union-Marathon wildcat 100 miles south of Anchorage came this heart-warming report from district engineer A. G. Hilton.

"The well was situated 200 feet from an 80-foot bluff over looking Cook Inlet," Hilton said. "We were drilling when the quake began. The driller picked the bit off the bottom and left the drill pipe rotating.

"The quake was a continuous series of rolls that sloshed mud and water out of the storage tanks. The top of the drilling mast described a large circle. But the weight on the mast from the suspended drill pipe acted as a dampener to reduce sway. Other than the loss of mud, water and wear and tear on nerves, there was no damage."

Back at the bulk plant, dispatcher Doyle Webb later told SEVENTY-SIX he'd like to take exception to reports saying the Anchorage plant was delivering gasoline and heating oil on Monday, three days after the quake.

"Actually, a gasoline truck and a heating oil truck were put into service at 11 a.m. Saturday," Webb said. "Two other trucks went into action on heating oil service by 1 p.m. Sunday. By Monday noon all trucks were in service. But at no time were we incapable of delivering fuel if necessary."

Said sales manager Cooper, "Operating under the most adverse conditions, our employees have worked far beyond the call of duty to get fuel and products to emergency projects and customers. I'm proud to say the Anchorage Marketing Station employees are the *finest*." 70



Business



Highlights



CHECK YOUR TAXES NOW OR IT MAY HURT NEXT APRIL 15

If you are single, or are married and your wife is working too—and you aren't making heavy mortgage payments on a home—you might have a surprise coming next April 15.

Everyone's case is different, of course, but you may have to ante up anything from \$5 to \$500. It all comes about from a quirk in the new income tax law. First, we'll show you how it works, then we'll give you some tips on how to avoid a financial jolt next year.

As everyone knows by now, taxes were lowered this spring. As a result, the amount of income taxes the company is required to withhold from your wages has been reduced. Until March 5, the rate was 18 per cent of your wages. After March 5, the rate was reduced to 14 per cent.

But there's a rub. Although the withholding rate is 14 per cent, the minimum tax liability is 16 per cent of taxable income. This means that unless you have special circumstances, you might be required to ante up two per cent of your annual income next spring. If you're single and in a high tax bracket and not paying a house mortgage, the percentage might be considerably higher.

A chart titled "Tax Rate Vs. Withholding Rate" accompanies this article to explain the difference.

To see how this works out in practice, let's take the example of a mythical Union Oiler, Clarence Brown. He is a married man with

two children. He receives \$153 a week, files a joint return and claims the standard deduction.

Tax Rate Vs. Withholding Rate

YEAR	MIN. TAX RATE	WITH-HOLDING RATE	DIFFERENCE
1963	18%	18%	0
1964	16%	14%	2%
1965	14%	14%	0%

Before March 5, the company withheld an average of \$18.18 a week from his wages. After March 5, however, only \$14.14 is being withheld from his weekly pay.

Now for simplicity during this example, let's assume Brown's wages remained constant for three years. Here's how his tax liability would stack up against the amount withheld.

YEAR	TAX BILL	WITHHELD	BALANCE DUE
1963	\$967.29	\$945.36	\$21.93
1964	\$832.08	\$771.64	\$60.64
1965	\$764.48	\$735.28	\$29.20

So we see that although your over-all tax liability for 1964 might be lower than for 1963 this doesn't mean you'll have to come up with less money next April 15. On the contrary, you may have to dig down deeper.

Should you wish to reduce the extra tax bite next April, there are a couple of things you can do. First of all, you might contact your per-

sonnel representative to make out a new W-4 Withholding Form. If you are presently claiming four exemptions, you might consider reducing this to three or even two.

So far this year, about 300 Union Oilers have reduced their exemptions to zero. If you are already at zero and still feel you may have a tax bite next spring, best bet is to open a savings account in a bank or the Credit Union. If you put away \$15 a month, you'll have about \$120 saved when you face that tax deadline. It'll mean a lot then.

* * *

My interest is in the future because I am going to spend the rest of my life there.

Charles F. Kettering

THE REFINER'S REFINERY NOW PRODUCES FOR CUSTOMERS TOO

In the past, the Santa Maria Refinery has been known in the industry as the refiner's refinery. That's because Santa Maria didn't produce any finished liquid petroleum products. Formerly the only finished products that Santa Maria produced were sulfur and coke. The two principal liquid products, distillate gasoline stock and gas-oils, were shipped from Santa Maria to Oleum and Los Angeles Refineries for final processing.

Santa Maria Refinery today still produces distillate gasoline, gas-oils, sulfur and coke. But now it also is beginning to turn out paving asphalt, road oils and emulsified asphalts. These products are being supplied to customers in the Santa Maria area from the new asphalt production facilities at SMR. With the construction of the asphalt facilities, Santa Maria Refinery thus joins Oleum, Los Angeles, Cut Bank and Edmonds Refineries in providing liquid hydrocarbons as finished products.

Construction costs for the new asphalt facilities were about three-quarters of a million dollars. These facilities replace those at the outmoded Orcutt Refinery which has been dismantled.

Engineers expect that the asphalt processed through the new Santa Maria equipment each year would be enough to surface a two-lane highway from Santa Maria to Las Vegas with two-and-a-half inches of asphalt paving.

* * *

The world is full of willing people—some willing to work and the rest willing to let them.

ALGAS VENDING MACHINE WILL APPEAR IN 76 MINUTE MARTS

A handsome new three-commodity vending machine soon will make its appearance in the Minute Mart room of our new service stations. When the company went in search of such a vending machine, there was nothing available. The search ended, however, at one of the company's subsidiaries, Algas Industries.

Algas had the equipment, the ability and—most important—the desire to satisfy the company's requirements. Algas proposed a three-in-one machine: an automatic salesman for cigars, cold drinks and chilled candy bars. Moreover, the unit boasts a sanitized can opener and honest-to-goodness cold water.

A prototype machine was put into shakedown service at Union Oil Center not long ago and has been pronounced a success. The exterior was redesigned to give it the finest appearance, and soon the vending machines will make their appearance at Union Oil stations.

* * *

Often the opinion of the man whose line of reasoning annoys you most is the one you need.

REAL ESTATE PLAYS VITAL ROLE IN WINNING MARKETS

Strengthening our position and planning for the future in the market place are constantly challenging tasks. Our service station real estate activity, for instance, works toward assuring longer tenancy at our leased locations. Whenever possible, they try to purchase the site.

A good example of this is a recently concluded purchase in Los Angeles. Bought were eight prime corners on which we formerly had short leaseholds remaining. These locations not only assure a substantial gasoline market but promise income from diversified investment properties that include a large car wash, two restaurants, a boat shop and a real estate office.

* * *

When the gasoline gauge says empty,

It provides a daily quiz.

How empty can empty be,

Before it really is?

FIRST PIPELINE DELIVERIES MADE TO NEW L.A. TERMINAL

Early in May, first deliveries were made of Union Bunker Fuel Oil by pipeline from our Wilmington Marine Terminal to the new Port of Los Angeles passenger terminal. The new \$16 million terminal is situated in San Pedro and operated by Consolidated Marine Inc.

Vessels of the American President Lines, American Mail Lines and Pacific Far East Lines, with whom Union has fuel oil contracts, regularly berth there.

The city of Los Angeles installed the 12 inch pipeline, which runs for 3,120 feet—some 800 feet of which are submerged below the channel entrance to the West Basin of the Port of Los Angeles. Bunker fuel oil can be delivered at a rate of 5,000 barrels an hour through this line.

* * *

If you were another person, would you like to be a friend of yours?

RADIO, TV ADVERTISING TO COVER BASEBALL, RACING

The company will sponsor half the radio broadcasts of Pacific Coast League baseball in Honolulu, Portland, San Diego, Seattle and Spokane. Tie-in promotions are planned to complement this coverage.

On the TV front, the company has been sponsoring CBS television coverage of the Hollywood Park feature

races that began in May. At least 24 CBS TV stations were carrying the events. This lineup has been giving the company excellent coverage in many metropolitan markets.

BRISON AND CROG ELECTED TO EMPLOYEE MEDICAL BOARD

Elected Administrators of the Employees Medical Plan through recent balloting were Bernard B. Brison of Exploration & Production Division and Richard S. Crog of Research. They will serve three-year terms of office, succeeding Laura N. Abbott and Hal C. Huffman, whose terms have expired.

Our 49-year-old medical plan, administered by the employee board, is currently expending \$500,000 a year for the medical care of members. In addition to Brison and Crog, the board now includes Chairman Wilbur R. Griffiths, Vice-Chairman Elton P. Barnett, Colin H. Chadband and Earl R. McCloud. Advisors to the board are Dr. Richard Call, E. A. McFadden of Legal, and D. S. Povah of Industrial Relations.



Bernard B. Brison

Richard S. Crog



TURNING BACK THE PAGES



CALIFORNIA'S FIRST GUSHER

ABOUT 15 MILES INLAND from Ventura, California, in the broad fertile Santa Clara River Valley is the town of Santa Paula, birthplace of Union Oil Company. About three miles northwest of Santa Paula on the Ojai Road is Adams Canyon. Mark this place well, for it is the site of California's first oil gusher. It is also the site of the first oil field in Union Oil history. It's quite a story.

• • •

TO BEGIN, let's go back to 1884 when W. L. Hardison and Lyman Stewart hit their first oil production, Star No. 1. They sold Star No. 1 to raise capital — money used to buy mineral rights in Adams Canyon. When Hardison and Stewart drilled Adams No. 1, it came in for small production. Encouraged, they drilled Adams No. 2 nearby. It drained No. 1. So they moved south and drilled No. 3. It drained No. 2 and made both wells unproductive. At this rate they were getting nowhere.

Undeterred, they continued drilling. By 1888 there were several wells in Adams Canyon, a few producing up to 300 barrels a day. The deeper wells pointed the way to further drilling that was to pay off. It did pay off one day in 1888 when Adams No. 16 came in as California's first gusher. Here's the log: "Adams No. 16 is the largest flowing well ever struck in California. Oil flowed at the rate of 800 to 900 barrels a day. Before it could be controlled, it sent a stream down the canyon for seven miles."

• • •

MORE GOOD FORTUNE was to come to the Adams Canyon drillers. In 1892—when Union Oil was two years old—Adams No. 28 came in with a real roar. This was a big day, for the well was the state's largest gusher to date. Oil shot over the derrick, filling tanks and sumps. Crewmen worked frantically damming up ravines. Yet, before Adams No. 28 settled down, it gushed out 40,000 barrels of crude. Oil flowed down the canyon into the Santa Clara River and finally into the Pacific Ocean.

This was the California oil strike men dreamed of. The gusher touched off an oil stampede as hectic as the eager struggle in Pennsylvania of the sixties. The well fired men with the spirit of the Gold Rush—only this time the gold was black. Hundreds were to find it; thousands were to lose it—sometimes by striking too much. But Adams Canyon had found its niche in California oil history. And it's still producing today. 76

Business Highlights

continued

OUR 100% DELTA GAS WELL MAY BE BEST IN DUTCH SLOUGH

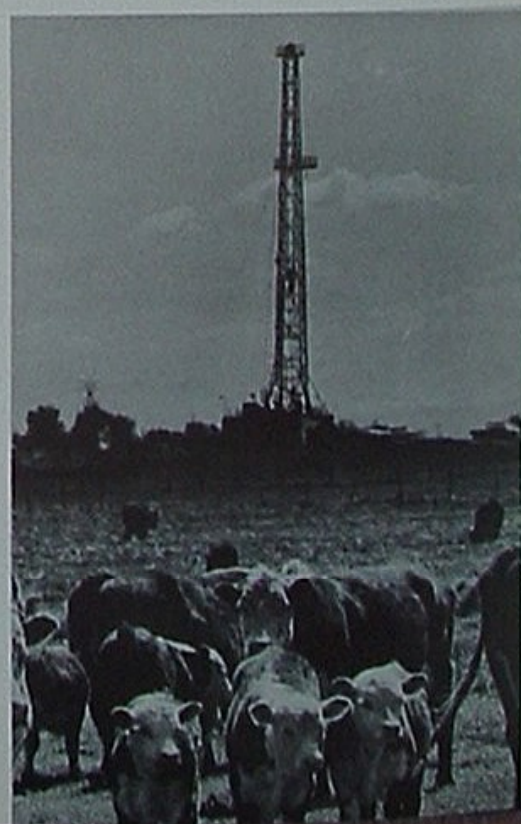
Draw a line on a map from San Francisco to Sacramento, then to Stockton and back to the bay city. This triangle encloses the junction of the Sacramento and San Joaquin Rivers, and is locally known as the California Delta area or more simply as the Delta. Within this triangle there are at least 10,000 miles of waterways, according to land man Stanley Waggoner who has covered most of these miles in signing up land leases.

Stick a pin in the center of this triangle, at Rio Vista, and you are in the middle of California's largest natural gas field. Union Oil has a working interest in a dozen gas wells here.

Just south of Rio Vista is newly discovered territory, the Dutch Slough field in Contra Costa county. The Dutch Slough area is much like the bayou country in Louisiana. Inland waterways dissect the countryside into hundreds of islands. It was on Jersey Island, just a few miles east of Pittsburg, California, that the Dutch Slough field was discovered.

Delta No. 1 is the company's first 100 per cent gas well in the Delta area.

Delta No. 1 at Dutch Slough





**IN
FOCUS**



Champions of the Major Burnham Bowling Playoff for 1964 are the Oleum Refinery team, namely from left, (standing) Captain John Urone, Richard Hall, Thomas Pereira; (kneeling) Mike Matanic and Albert Michelcic. Their three-game score of 2964 pins is the highest since 1942. They also swept the individual awards when Matanic rolled the tournament's highest series with a 636 and Urone scored a 237 high game.
from Bud Fitzgerald



Mrs. Laurette V. Luce of our Credit Department in San Francisco has been chosen by the Desk and Derrick Clubs of North America as general arrangements chairman for their national convention at San Francisco in September. Mrs. Luce, a past president of her local group, will be the chief hostess for nearly a thousand women delegates expected to represent petroleum and allied industries.
from Pat Clark

Grand Jury Foreman is the most recent public service and honor to be impressed upon Consignee J. Carroll Riggs of Dinuba, California. With a steady Union Oil association dating back to 40 years ago, he is perhaps best remembered as the man who promoted Stop-Wear Lubrication throughout the Pacific Coast in the 1930's. Since settling down to a consigneeship, he has been a leader in practically every worthwhile organization and public service in Tulare County. His selection as grand jury foreman is the *finest* vote of confidence from his fellow citizens.

from H. H. Isheim



Yankee ingenuity is one of the foremost characteristics of Bob Stratton, our Valdez consignee. The earthquake destruction of Union's bulk plant there hardly deterred him. While the Alaskan earth was still shaking, he transferred all remaining assets to a tank truck and continued serving his customers throughout the Copper River valley. He predicts a "great future" for Valdez and Alaska.
from W. I. Martin

A unique retirement was recorded at Research on March 31st when both of the company's Ketteringhams, husband and wife, retired simultaneously. Margaret, better known as "Peg," had been a Union Oiler since 1948 and was Research librarian. William M. "Ket" Ketteringham was a research engineer with 41 years of company service. Their teamwork in industry and romance was interrupted only at the retirement farewell dinner, where Ben T. Anderson sat between them in the role of master of ceremonies.
from Betty Guthrie





Union Oil nurses (L-R) Lois Tait, Rosemary Huffman, Jessie Lindsay and Adelaide Tatto took active part as hostesses and officers in a recent Sheraton-West Hotel, Los Angeles, conference sponsored by the Southern California Industrial Nurses Association. Mental health was the subject of a day-long discussion by conference participants.



The Sixth Army's certificate of appreciation has been presented by Col. Robert A. Matter to Union Oil Company through Division Sales Manager W. I. Martin of Seattle "in recognition of faithful and cooperative spirit and release of employees for performance of military duty." Col. Matter said Union has been exceedingly generous in giving employees time off — with pay — for Army Reserve duties.

from Carole Judkins

Seems as if it never rains but it pours — good luck! Mrs. Arthur Hamblin, wife of our insulator craftsman at Los Angeles Refinery, dropped an entry in the contest box every time she made a purchase at the Van de Kamp shop in her Long Beach area. Result: Hers was a top winner when someone's hand reached down and pulled the Hamblin ticket from 1½ million entries. The prize was an expense-paid trip for herself and Art to Holland in "tulip time." Among many tours and festivities planned for them in Europe was a reception by the mayor of Amsterdam. Our photo shows the Hamblins dining with Ted E. Van de Kamp, at right, their host.



Marilyn Woody wife of Richard Woody, our night mail truck driver in Los Angeles, wished for a puppy and backyard fence to entertain and protect her seven-year-old daughter. The child, while delivering a Christmas present to a blind lady next door, had been bitten by the lady's guide dog. Her mother felt that a puppy and a fence would be the best therapy to mend the child's fear and injuries. The story reached Jack Bailey's popular Queen for a Day television program. Well, Marilyn indeed became Queen for a Day in Hollywood. She won the puppy, the fence, and a hundred things more. Among them was a free air trip for herself and Richard to Europe where, at Omaha Beach, she would represent American mothers of soldiers who took part in the D-Day Landing of 20 years ago. Our photo shows Marilyn at the Bailey coronation.





AWARDS

REFINING & MARKETING

June 1964

35 YEARS

DONALD E. CARR Los Angeles
 WILLIAM H. GRAHAM Union Oil Center
 DONALD A. REED Los Angeles
 RUEL L. WANLASS Santa Maria Refinery
 FRANCIS L. WOOD Portland

30 YEARS

CLAYTON L. BERG .. San Luis Obispo, California
 HERBERT W. INMAN Los Angeles
 FRANK C. LAVIGNE Oleum Refinery
 MICHAEL LEMUCCHI .. Torrance Dist., California
 ELVIN B. LIEN Oakland, California
 HAROLD R. MARTINSON
 Santa Maria District, California
 ALLAN E. OHLSON Oleum Refinery
 MILTON E. NICHOLS Seattle
 SAM R. SABELLA Los Angeles
 FRED K. SHERMAN Los Angeles Refinery
 EDWARD W. STERN Oleum Refinery

25 YEARS

JOEL H. MINER, JR. Union Oil Center

20 YEARS

B. O. BROWN Los Angeles
 JOHN K. CHRISTIAN Santa Maria Refinery
 GUY FRYMAN Portland
 JAMES R. HUBBARD Los Angeles Refinery
 SAMUEL H. JUUL Los Angeles Refinery
 FREDERICK S. KEEN Los Angeles Refinery
 ELLSWORTH J. MATNEY .. McKittrick Station,
 California

15 YEARS

DORIS L. BROLIO Union Oil Center
 FLOYD C. CHURCH San Diego
 CONSTANCE Y. DUVAL Union Oil Center
 WINONA S. HARING San Francisco
 JOHN E. KOINES Phoenix
 WILLIAM L. REED Portland

WILLIAM N. STARK, JR. ... Los Angeles Refinery
 HOMER W. WIDENER, JR. Honolulu, Hawaii

10 YEARS

GORDON D. BERGREEN Portland
 W. E. BURTON, JR. Los Angeles Refinery
 JOHN A. CAREY, JR. San Fernando, California
 DONALD W. DE BUSE Cut Bank Refinery
 JOHN ALAN DRYSELT Oakland, California
 MATTHEW L. ERHART Los Angeles Refinery
 REX E. GLOVER Bakersfield, California
 F. D. LONGFELLOW Oleum Refinery
 GENE G. PEDERSON Portland
 L. R. REYNOLDS Phoenix
 DONALD H. SMITH Los Angeles Refinery

CORPORATE STAFF

June 1964

35 YEARS

HENRY B. CHANDLER Seattle

30 YEARS

ELMER L. HOLMAN Research Center
 NICK T. UGRIN Union Oil Center
 CHARLES L. YOUNG Union Oil Center

25 YEARS

DOUGLAS C. GREGG Union Oil Center
 BLANCHE SWAN Union Oil Center

20 YEARS

NICHOLAS L. KAY Research Center
 DAVID L. RUESCH Union Oil Center
 JUANITA M. SCHMIDT Research Center
 ELWYN M. SCHULTZ Research Center

15 YEARS

BRUCE E. BUELL Research Center
 JACK D. McCAWLEY Research Center

10 YEARS

JOHN H. DUIR Research Center
 H. RANDALL EMMERSON Research Center
 ELIZABETH A. FISHER Union Oil Center
 JAMES R. JOY Union Oil Center
 THOMAS L. MARPLE Research Center
 ROBERT E. TALLON Union Oil Center

SUBSIDIARIES

35 YEARS

F. K. CADWELL Unoco Limited
 JAMES E. TRENBERTH Unigas Inc.

EXPLORATION & PRODUCTION

June 1964

40 YEARS

JOE G. HODKINS Brea, California

35 YEARS

EUGENE S. LOPER Houston, Texas

30 YEARS

HARRY D. AGGERS Union Oil Center
 BRADFORD C. JONES Dominguez, California
 ORVEL A. MERRELL Taft, California
 MARVIN S. PAGE Richfield, California
 OTTO PEDRO Bakersfield, California
 HARRY O. STEWART Union Oil Center
 IRA E. TRIGGS Santa Fe Springs, California
 ANTON I. TROJO Rosecrans, California
 RICHARD E. WINTERS Brea, California

25 YEARS

JOE F. HICKS Santa Maria, California
 BASIL C. LOFTIS Orcutt, California
 VAUGHN S. MOYER Union Oil Center

SERVICE EMBLEM AWARDS

continued

20 YEARS

ROBERT J. HOLLER . . . Santa Fe Springs, California
 ERNEST M. MICHEL . . . Bakersfield, California
 LENNIS J. SONNIER . . . Moss Lake, Louisiana
 EDWARD E. ZINSER . . . Orcutt, California

15 YEARS

JOSEPH C. BROUSSARD . . . Intracoastal City,
 Louisiana
 ROBERT C. MaGUIRE . . . Houston, Texas
 W. J. MANSBRIDGE . . . Casper, Wyoming
 ASHTON T. PERRY, JR. . . Tulsa, Oklahoma

10 YEARS

D. R. CHAMBERLAIN . . . Brea, California
 DAVID F. GREEN . . . Union Oil Center
 ROBERT E. HARKE . . . Santa Fe Springs, California
 ZEL L. JOHNSON, JR. . . Coalinga Nose, California
 LOUIS E. MUSGRAVE . . . Santa Fe Springs, California
 N. J. STEFANIDES . . . New Orleans, Louisiana
 GREGORY B. WYANT . . . Bakersfield, California

DEALERS

June 1964

35 YEARS

ELLA FISCHER . . . Ukiah, California

30 YEARS

BREIDFORD MOTORS . . . Blaine, Washington

25 YEARS

F. E. KAMPSCHMIDT . . . Greenville, California

20 YEARS

GEORGE HERMSMEYER, dba
 BAY BRIDGE GARAGE . . . San Francisco

15 YEARS

FALLS MORTOR COMPANY . . . Metaline Falls, Washington
 VIRGINIA McINTYRE . . . Newman, California
 F. W. ORTHMEYER . . . Cayuse, Oregon
 A. G. SCHMIDT . . . Portland
 C. N. STOHLMAN . . . Gridley, California
 WILL-O-POINT RESORT . . . Lakeport, California
 FLOYD WILSON . . . Santa Cruz, California

10 YEARS

C. W. BURNS, dba
 VANS CORNER . . . Preist River, Idaho
 FORREST DIXON . . . Redondo Beach, California
 E. R. KNIFFIN . . . South Pasadena, California
 RICHARD MARKGRAF . . . Fairbanks, Alaska
 ED MATTHEWS . . . Seattle
 BEN WOZNICKI . . . Los Angeles

5 YEARS

DONOVAN M. ANDREWS . . . Rheem, California
 RAYMOND BOGEN . . . Drain, Oregon
 HOYT CARPENTER . . . Greer, Arizona
 HERBERT CASSIDY . . . Allyn, Washington
 DEARDON MOTORS . . . Fillmore, Utah
 THOMAS K. DUNN . . . Watsonville, California
 HENRY EWELL . . . Coulee City, Washington
 FULLERTON CAR WASH . . . Fullerton, California
 LEMUEL T. HAGOPIAN . . . Sacramento
 WILLIAM HYATT . . . Tacoma, Washington
 ROBERT A. JUNER . . . South San Francisco
 TAKESHI KINOSHITA dba
 TAKE'S UNION SERVICE . . . Honolulu, Hawaii
 LONG BROS. AUTOMOTIVE . . . Jordan Valley, Oregon
 R. S. LONG . . . Needles, California
 DAVE McCOY . . . Mammoth Lakes, California
 LESTER NORMAND . . . Jewell, Oregon
 TOM B. PARRET . . . Canyonville, Oregon
 ROY PEARCY . . . Mossyrock, Washington
 F. C. PETERSON . . . South San Francisco
 WAYNE L. PUGH . . . Clatskanie, Oregon
 BYRON REBER . . . Henderson, Nevada
 JOHN M. ROACH . . . Redding, California
 SCOTT SHERMAN . . . Seattle
 E. H. SPERBER . . . Lompoc, California
 P. G. THOMAS . . . Drain, Oregon
 LEE J. WALKER . . . Van Nuys, California

CONSIGNEES

June 1964

40 YEARS

W. D. LAMAR . . . Silverton, Oregon
 J. F. WALLACE . . . Chico, California

35 YEARS

WILLIAM DANIELS . . . Montesano, Washington
 F. C. PETERSON . . . Fort Bragg, California

30 YEARS

JOSEPH M. HEEKIN . . . Merced, California

20 YEARS

W. CLAIRE McCLAIN . . . Skamokawa, Washington

5 YEARS

PAUL TITUS . . . Boonville, California

RETIREMENTS

May 1964

MERVIN J. BRENNAN . . . Richmond, California . . . April 9, 1935
 THOMAS LUCKHAM . . . San Francisco . . . April 12, 1927
 ARTHUR J. OWENS . . . Rodeo, California . . . March 9, 1926
 IRMA C. SPERBECK . . . Long Beach, California . . . April 1, 1927
 CARL E. TROOP . . . Bakersfield, California . . . May 8, 1935
 KELLEY A. WALKER . . . Los Angeles . . . October 20, 1931

IN MEMORIAM

Employees:

EDWARD G. HENDERSON . . . Petaluma, California . . . April 4, 1964
 ARTHUR O. HILL . . . Long Beach, California . . . March 31, 1964
 JOHN CHARLES MILLER . . . Los Angeles . . . March 30, 1964
 FREDERICK A. MYERS . . . La Mesa, California . . . April 5, 1964

Retirees:

CLYDE APPLE . . . Coalinga, California . . . February 23, 1964
 EARL W. GOODLOE . . . Long Beach, California . . . March 27, 1964
 FAY E. JONES . . . Huntington Beach, California . . . March 24, 1964
 VIRGIL L. LANNIER . . . Norwalk, California . . . March 15, 1964
 CHARLES W. LIEB . . . Compton, California . . . March 28, 1964
 WILLIAM C. OKE . . . Los Angeles . . . March 17, 1964
 JOHN V. PEAK . . . Whittier, California . . . March 20, 1964
 WILLIAM H. STEELE . . . Garden Grove, California . . . April 7, 1964



Felix Juda

One of the 61,000

MR. JUDA is one of Los Angeles' more successful stock brokers.

He is also a Union Oil shareowner. This entitles him, along with 61,000 other shareowners, to a report on our 73rd year.

It was the best yet. Our customers paid us \$610,701,000.

We spent 57% of this amount — or \$350,254,000 — with over 18,000 other companies and individuals with whom we do business.

Wages and other benefits for our employees and their families amounted to \$65,414,000 of our income.

More than 1,500 local, State and Federal tax collecting agencies took \$41,803,000. And, we also collected from you, our customers, and paid to governmental agencies \$99,302,000 in fuel taxes.


This left \$53,928,000 as net profit.

Of this profit, a total of \$20,483,000 was paid in cash dividends to our shareowners — including Felix Juda — for the use of their money. In addition, they received a 2% stock dividend.

The balance of our profit we reinvested in the business to expand and modernize facilities.

Under our American free-enterprise system, the rate of growth of our entire U.S. economy and the job opportunities which result from this growth are directly dependent on profits — profits that the Union Oil Company and the rest of U.S. industry are able to plow back into productive facilities.

This opportunity for growth and jobs will continue to exist for all of us as long as our economy remains free and competitive.

UNION OIL COMPANY OF CALIFORNIA 

REFINERS OF THE WEST'S MOST POWERFUL GASOLINES

This advertisement appeared in Barron's, Business Week, Commercial & Financial Chronicle, Farm Journal, Financial Analysis Journal, Financial World, Forbes Magazine, Magazine of Wall Street, U.S. News & World Report, Wall Street Journal, Arizona Farmer-Ranchman, California Farmer, California Farm Bureau Monthly, Oregon Farmer, Washington Farmer and other publications.

UNION OIL COMPANY OF CALIFORNIA
P. O. Box 7600
Los Angeles 54, California



Where
We Work...

Whether you visit San Francisco by land, sea or air, or live there, you're not likely to miss the 425 First Street building—home of Union Oil Company in the bay city. This striking view of the tower reveals how it commands attention from the San Francisco-Oakland Bay Bridge. Photograph was taken from a helicopter one morning at precisely 9:07 a.m.—as evidenced by the clock atop the tower. Motorists in San Francisco use this timepiece to set their driving schedules by.