



February 1961

SEVENTY ⁷⁶
SIX
Union Oil Company of California

Milt Varner's lucky but you've got reason to feel proud, too

On the back cover of this issue, we have a picture of one of the lucky people in the oil business, Milt Varner.

Milt has been with Union Oil 50 years this month. He's done practically everything you can think of in the oil fields. Right now, he is foreman over two fields near Los Angeles.

Milt's lucky because he can *see* the results of his work: producing wells, additional oil coming from those he's repaired, the actual crude oil from his fields.

Most of us don't have that privilege.

When a company grows to the size of Union Oil, the people who work for it seldom see the end product, seldom get a chance to say "I made that!"

Sometimes, there just doesn't seem to be any relationship between a desk job, say, and a gallon of Royal 76. It's hard to feel pride of accomplishment in a gallon of gasoline you never see, hear, or feel. Even when the gasoline's the finest in the West.

If we made chairs, you could sit in them. If we made steel, you could at least look at the skeleton of a new building and see where the steel went.

But we make petroleum products. And even the people in the refineries don't see what they're making unless there's a leak — and then you've got trouble.

Worse, the bulk of the products we turn out — except asphalt and to some extent grease — have value only when they're destroyed: gasoline in an automobile engine, heating oil in a burner, diesel fuel in a truck.

Yet, you have a right to feel that pride of accomplishment. Because in Union Oil, there isn't a man or a woman who doesn't somehow have a hand in producing or selling the things we make.

Machine operators in Comptrollers guide gasoline blending at the refineries. Result: closer quality control.

Research recently solved a secondary recovery problem for the production men at Coalinga, California. Result: more crude oil.

Credit has brought Marketing new customers — and tightened the ties with old ones — by issuing a permanent Gold Credit Card.

Legal helps Advertising choose the words used in every campaign. Result: honest advertising, responsive customers.

Purchasing's experience in buying, packaging, and shipping are essential to Exploration's foreign operations.

These are specific examples. Actually, every department is linked with all the others in many ways — and each is essential to that final goal: making sales that bring in the money for those thousands of paychecks Comptrollers issues each month.

Varner *is* fortunate because he can see the results of his efforts. But anyone who works for the Company has just as direct a reason for feeling personal pride in every Union Oil product.

Remember, *you* made it!

FEBRUARY, 1961

THE COVER: Union Oil's float, "Song of India," in the 72nd Annual Tournament of Roses, New Year's Day, 1961.

In This Issue:

The Mail Room	2
A Tribute From the Nicest People	4
You Too Can Breathe For Two!	6
Rubber Roads	8
Construction for Quality	9
Global Marine Exploration	12
The Most Photographed Parade	16
Exploration and Production Realigns Its Divisions	18
Business Highlights	20
Record for Royal	22
In Focus	23



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, Los Angeles 17, California.

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PRIDE IN WORK

Labor Must Earn It's Pay

By Reese H. Taylor
Chairman of the Board
Union Oil Company

(Reprinted from the New York Journal-American of January 10, 1961)

American business has done a truly amazing job of mastering the techniques of research, production, distribution, marketing, financing, and so on. As a result, we are enjoying the highest level of material living in the history of man. In achieving this enviable status, we have partially lost one of the very factors that made this possible.

That factor is the fundamental pride of the individual in doing the best job he can — to the fullest extent of his capabilities. Somewhere along the ever-accelerating competitive race we seem to have lost sight of this basic human value — pride of achievement.

We need a new era of thinking if America's future is to be as great as the past. To call this an era of "new" thinking is a misnomer. More logically it might be termed an era of "re-thinking", wherein we take a good hard look at ourselves as individuals and as a nation.

Questions Raised

Have we lost some of our individual and corporate pride in integrity and accomplishment?

Are we pricing ourselves out of the marketplace?

Can we stop the wage spiral before it bears no relation to productivity?

Are we really willing to attempt to meet foreign competition?

Are we sincerely and honestly "producing", both qualitatively and quantitatively, to our greatest ability?

Are we losing our willingness to resist the continuing inroads of bureaucracy on the economic, political, and sociological freedoms which form the very basis of our greatness as a nation?

American business and American labor must face the facts.

Continued on page 24

At Union Oil Center, there's a high-speed operation that ranks with First Class Post Offices. But they call it just . . .

"The Mail Room"

The strained expression and the flying hand tossing mail into a pigeonhole at your right belong to John La Fleur. The eyeglasses and the thoughtful look in the background belong to Loyd McDonald. These two are man's answer to the electronic brain.

Stored away in their complex memory channels is a fantastic collection of facts about train, plane, and ship schedules; times and routes to practically every place in the world; and most of the rules and regulations of the United States postal system.

Johnny, with the assistance of Loyd, supervises the mail room at Union Oil Center, the equivalent of a First Class U. S. Post Office. Their job: to see that 12,000 or more pieces of mail and packages flow smoothly into, out of, and through the Center every day.

That's an average day. When such things as the wholesale bills, the Chairman's letter, or the *Seventy-Six* magazine are in the shop, the total can zoom to 50,000.

Because the mail room is such a high-volume, high-speed operation, it breeds statistics.

The ten men who work in it use a machine that stuffs up to 24,000 pieces of mail into 4,000 envelopes an hour . . . another that seals, prints metered postage, and dates 90 envelopes a minute . . . they distribute the day's first mail in 63 separate groupings within 45 minutes after the offices open . . . can separate mail into 774 different groups for the Marketing Department alone.

But statistics tell only the routine side of the story.

Union Oil Center mail room has become a model other companies study because of the thought and knowledge behind its organization. No amateurs involved.

The mail room—more properly called the "mail unit"—comes under the Comptrollers Department, and Ray Teal, Supervisor of Office Services. Ray's been around 41 years; John has 31; Loyd, 20.

They devised a system that circulates mail through the three office buildings and 18 floors of the Center six times a day. On the average day, 22 sacks of U. S. mail are hauled from the Center on four scheduled trips.

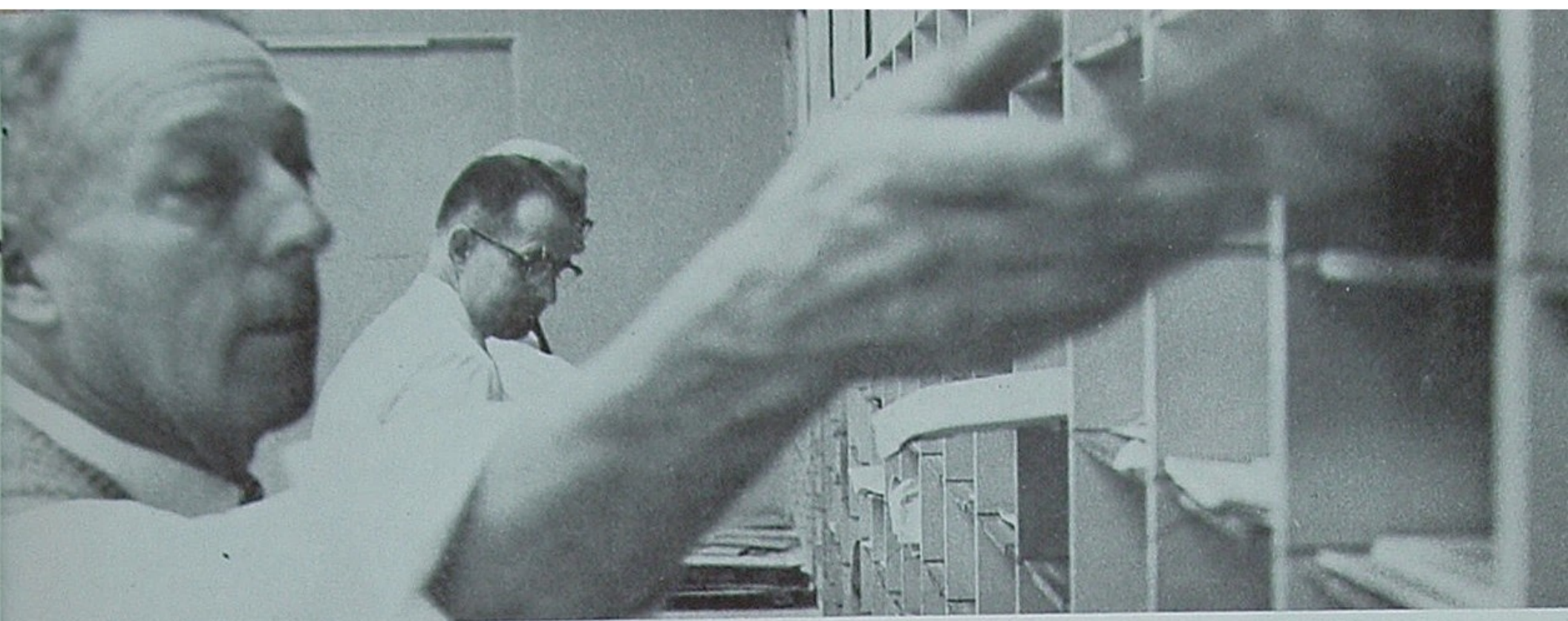
They specify the fastest and most economical way to get a letter or a package from one place to another.

The mail room men get mail from Los Angeles into Oleum Refinery, near San Francisco, faster by train than you can by air. (They mark their deliveries for the right train and have mail thrown off moving cars as they pass through the refinery.)

They'll send a letter to New York and have it re-

This is the stack of mailsacks that leaves Union Oil Center on the day the Chairman's letter is mailed. Pushing the truck: Al LeCornu.





Man in motion: John La Fleur is sorting the first mail of the day in Union Oil Center mail room. In background: Lloyd McDonald

ceived faster by straight air mail than you could by paying the extra cost of special delivery. (The trick: They schedule their last delivery of the day to catch a jet flight that reaches New York within a few hours.)

Sometimes, bus will beat both air and train, depending on the destination and the time of day. To other places — Santa Maria, for instance — a mobile highway post office may be the answer to quick delivery.

Their fund of information makes La Fleur and McDonald handy as consultants.

For example: When Foreign Operation starts work in another country, La Fleur goes to work right with them. He's their advisor about postal regulations; weight, size, and packaging of articles to be mailed; what can go through the mail, what can't.

Little things count here. Like you can't ship toy firearms into some South American countries. You can send only limited quantities of cigarettes and cigars into France; mail playing cards into England, and you must cut a half-inch off a corner of them.

The same broad knowledge is called on by Advertising and Sales Promotion when they plan a mailing campaign for dealers. Everything is checked by the experts: size of mailing pieces, the way they fold, even the weight of paper stock on which the pieces are to be printed.

In addition to their other talents, both men have a sort of second sight. Scads of letters come addressed merely "Union Oil Company"—not directed to any specific department or individual.

Since there's no dead-letter office in the mail room, John and Loyd have developed a real knack for deciding where the sender intended his letter to wind-up and directing it properly. They probably have as broad a knowledge of the function of each department, even of individual people within departments, as anyone in Union Oil Center. As a result, they handle a steady flow of questions about Company procedure and organization

and conduct an informal advisory bureau for people who want information about transportation methods in and around Los Angeles or to and from the Center.

When mail, in volume, goes the other way—out of the Center—Addressograph works closely with the mail room. Another professional, Paul Schoepe, with 29 years service, directs Addressograph.

Here, in files of trays, are 55,000 address plates. They'll be used to address 125,000 pieces of mail a month —can be separated into 57 different mailing lists.

There are lists of dealers who lease stations, dealers who own their stations; dealers who buy a monthly window display; dealers who have a 160 sign—that sign above the pumps—and lists of *all* dealers.

You can find a Girls Club list, a list of those on the executive payroll, of credit bureaus, of 30 collection agencies, of the medical panel, franchised car dealers, Retail Sales Supervisors, and of *all* Union Oil employees.

You can have lists by town, by state, by sales division, by company-wide. The longest list: 22,000 names for the *Seventy-Six* magazine. Shortest: 20 miscellaneous plates for the Employees Medical Plan.

While it's located in Union Oil Center, the influence of the mail room actually touches all the company offices in Southern California. A company truck makes a night mail run linking the offices within a 210 square mile area to each other and to the Center with dependable, overnight delivery — another time-and-money saving service of the Mail Room.



Although the mail room uses many machines, some of the work must still be done by hand—as Bill Grubb is doing, for example.

*The Gold Credit Card
brought mail flowing in*



A tribute from the nicest people

Union Oil customers are the nicest people — and we have letters by the hundreds from our Gold Credit Card holders to prove it!

Remember how, in the middle of November, we started sending out the permanent Gold Credit Card to our preferred annual card holders?

Even before all those Gold Cards were in the mail, "Thank you" notes began flowing back to us. They came on scraps of paper, on personal stationery; they were typewritten, written by hand — one in gold ink, scrawled on a doctor's prescription blank, on the credit card folders themselves.

One envelope contained credit cards from four competitive major oil companies with a simple note "In appreciation!" (All the cards were valid. Two were permanent cards, another bore a "13 years association" impression.)

Many people referred to their "Membership card!"

Five couples let us know how appropriate our timing was because the card arrived within a few days of their golden wedding anniversaries.

A lady in Portland said the card was too beautiful to use. She received a letter asking her to wear it out — we'd keep her supplied!

They appreciated the trust

Everyone seemed to accept the Gold Cards in the same spirit they were given: as an expression of appreciation for years of patronage and as a tangible evidence of the Company's high regard for its dependable credit customers.

Here are a few excerpts from the letters (almost all opened with a "thank you" for the card itself):

"... and what a beautiful card! I really like it and appreciate your trust!"

"We shall always attempt to fulfill our obligation to your company, and we appreciate your confidence in us."

"I wish to thank you for the trust you place in me as a credit customer."

"Thank you for the honor and trust you have bestowed

upon me . . . I will never give you cause to worry . . ."

"I appreciate receiving it (the Gold Card) and assure you there will be no abuse of the confidence you have placed in me."

"... it is a great honor for me, and I will always try to merit the trust you have placed in me."

"We will certainly never violate your trust in us, since, after all, what is credit but a trust?"

"... I will not let you down . . . will endeavor to merit your confidence . . . hope to justify your faith and confidence . . . a symbol of the trust you have in me . . . will do my level best to live up to this trust . . ."

"I am indeed elated to know your organization has placed in me the confidence and trust this card represents. You may be assured I shall strive to be worthy of this consideration."

They praised Union Oil Minute Man Service

Almost every writer praised Union Oil dealers for their service and courtesy. The sincerity of the letter made it sound as though *we* have a trust to guard:

"... may I say that without exception I get the best service from Union Oil stations . . ."

"... and over years of going in your stations, I have yet to find a station which caused me to say to my wife and family, "I don't like the looks of this place . . ."

"... not only the cleanest in appearance, but they have the cleanest restrooms in the country . . ."

"... courteous attention with sincere interest . . ."

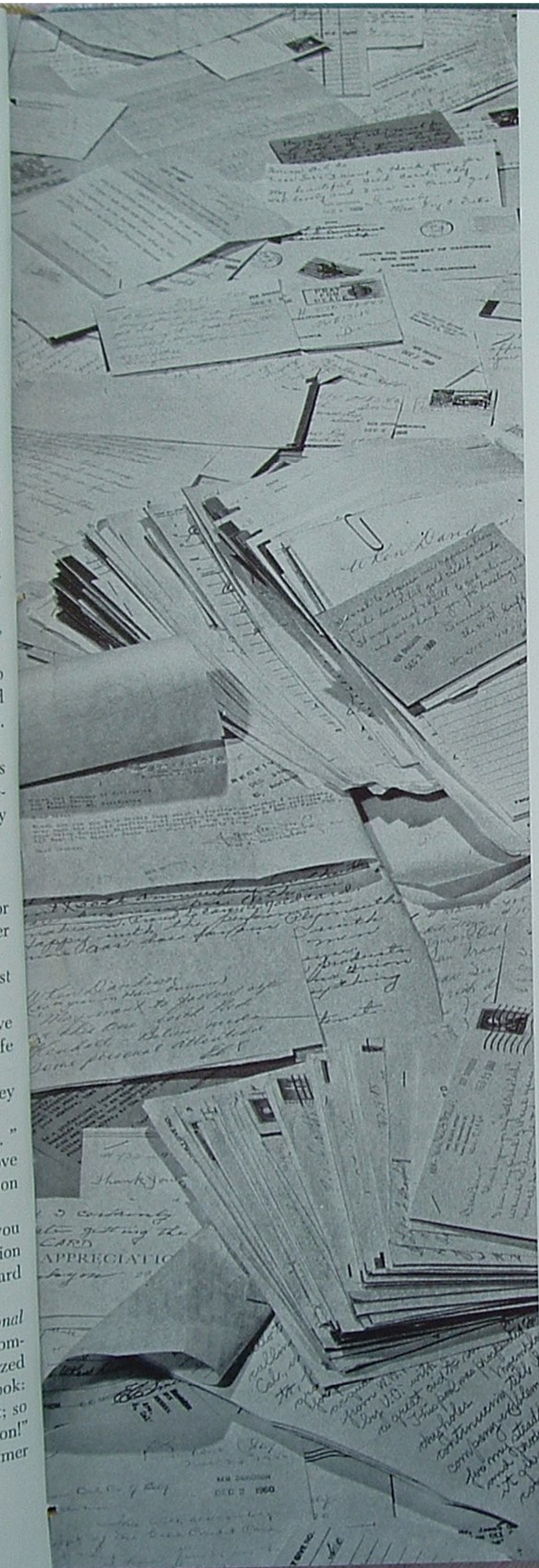
"... we have always liked the products, and above all, the friendly service, regardless of where the station may be located!"

"I was both pleased and surprised. However, you can rest assured if I have a choice, I will choose Union because I have found your Minute Men usually guard your interests well — and mine!"

Most of the letters revealed the amazingly *personal* feeling so many of our customers have toward the Company and its dealers. Often, the customer even apologized for not buying more — and promised to do better! Look:

"... we won 500 gallons of gasoline in a contest; so our purchases have been small. But we'll be back soon!"

"... I regret I am not using as much gas as in former



years due to the small foreign car I am now driving.”

“ . . . at times I have paid cash for gas, but will endeavor to use the card more often so that you may know I am using your products wherever possible . . . ”

“ . . . we live only three miles from our place of employment. That’s why our bill doesn’t amount to much.”

Many of the letters were touching

A great many letters came from older folks, who now drive very little, but who felt the Gold Card was a tribute to their years as solid, dependable citizens. And a reminder that they were still important people.

A lady in Spokane, no longer able to drive, carries her Union credit card so she can buy gasoline for friends who transport her around. Right after she received her Gold Card, she took her friends into a Union Oil station.

“When I handed my card to the attendant,” she writes, “he was very gracious and said, “My, one of the preferred cards. I’ve only seen two or three.”

“I felt very, very proud . . . ”

Then, there was a 50th anniversary letter . . .

“Strange our Gold Card should come at a time when we have just celebrated our 50th wedding anniversary — it seemed so appropriate.

“However, it is more than just a gold card to us, for we have used Union Oil products since 1920. During the depression years, many times it was most difficult to meet our obligations; but with the splendid understanding and cooperation given by your local managers, we managed to come through, although we lost our ranch and had to make a new beginning in life.

“The past years have been good to us, and we never use any other products but Union 76.”

When a corporation such as Union Oil takes any kind of action that affects the public — favors a legislative measure, builds a building, stops billboard advertising — the mail starts flooding in. But much of this mail is from people with a personal interest in our action: when we stopped billboard advertising, for example, many of our letters came from garden clubs and civic beautification groups.

The Gold Credit Card brought a different kind of mail — and that mail was one of the most warming tributes a corporation or its dealers could receive.

Because the letters came from all over, and from everyone: men, women, the young, the old, bankers, business people, and just plain people.

It was, in fact, one big “Thank you” note from the nicest people: our Union Oil credit customers.

/THE END

*This Union Oil couple
saved a child's life.*



You too can breathe for two!

from Don G. Probst

Believe it or not, you were born and are now equipped with one of the best rescue devices known to modern science, namely, your hands and your breathing apparatus. All that you need in addition to halt several of the commonest types of accidental death are presence of mind and the following true story:

Engineer R. C. "Reg" Huggins of our Oleum Refinery is a careful, intelligent Union Oiler who believes that any safety practice learned on the job should be, whenever applicable, practiced also in the home. So, shortly after viewing a safety film, "Rescue Breathing," shown to employees at the refinery, he carried home a page of printed instructions and taught the new technique to his wife. Hopefully they might never have to go through the torture of saving each other or their child or their neighbor, but . . .

The instructions still were fresh in Marilyn Huggins' mind when she heard an arresting note issue from the bedroom of their Concord, California, home. It was not an outcry or a loud sound, just something odd that an alert woman seems to hear mostly through instinct. She knew that a small boy, visiting from out of town, was supposed to be taking a nap in that room.

Dutifully Marilyn walked to the bedroom and peeked in. Yes, the child seemed to be sleeping all right. But he was uncovered and lying in not quite his usual relaxed position. She entered to adjust things a little more comfortably for him — and then made a most alarming discovery. The boy's face was blue. His hands and feet had the deathly appearance that accompanies arrested circulation. His chest was rigid. "Reg," she shouted, "quick, phone for help! Leslie has stopped breathing!"

Reg didn't hesitate an instant. He raced for the phone where, thank Heaven, he had once upon a time taken the precaution of pasting three emergency telephone numbers between the receiver buttons — Police, Fire Department, Emergency Hospital. Now he dialed both Fire and Emergency, briefly reporting the trouble and repeating his Concord address.

Meanwhile, Marilyn fought off nervousness and groped in her memory for those simple instructions:

1. If there is foreign matter visible in the mouth, wipe

it out quickly with your fingers or a cloth wrapped around the fingers.

She examined the child's mouth and probed with a finger, but found no foreign matter.

2. Tilt the patient's head back so the chin is pointing upward. Pull the lower jaw into a jutting-out position.

Already having her finger in his mouth, she grasped the boy's lower teeth and drew gently upward, thus assuring that his tongue would not hinder passage of air.

3. Open your mouth wide and place it tightly over the victim's mouth or, if possible, over both his nose and mouth. If your mouth can cover only one of the air passages, seal the other with hand, finger tips, or cheek.

Marilyn found that she could enclose both the child's mouth and nostrils under her widely opened lips.

4. Now blow gently into the victim's mouth and nose — a deep breath for an adult, or a shallow breath appropriate to the size of any child victim.

She took a shallow breath and breathed into Leslie's nose and mouth. Some air seemed to enter the child's lungs, but his chest, after rising, did not fall. She took another shallow breath and breathed again. There was a slight "ballooning" of the boy's midriff, still his lungs would not deflate.

5. Excess air blown into the belly causes bulging between ribs and navel. To remove air, turn victim's head to one side, open his mouth, and press gently on his bulging stomach. If the air passages are still blocked,



Step one, when you breathe for two, is to remove foreign matter from mouth, then tilt the victim's head as shown.



Your breath works for both, so either breathe into the mouth and nose, or into the mouth alone — covering the nose.



Marilyn is pressing on child's abdomen to remove excess air. Then she'll start the respiration again.

A life saved. The only treatment needed was for shock.



two or three pats between the shoulder blades or holding the victim's head downward will often dislodge the obstructing matter.

In Leslie's case, the pressure of Marilyn's hand on his abdomen brought the first promising result. There was a slight rattling cough as if something had been dislodged. The lungs released their charge of air.

6. Check his throat for solids or liquids before you continue rescue breathing.

Marilyn wiped some mucous from the child's mouth, observing in it a small particle of vegetable. Evidently he had coughed it up during his sleep and inhaled the particle into his windpipe.

7. Resume rescue breathing — at about 20 inflations per minute for a child — 12 for an adult.

Quickly she resumed mouth-to-mouth breathing. Now, after the first two or three breaths, she could see the chest fall, hear the boy's first sounds of exhalation.

8. Artificial respiration should be continued until the victim begins to breathe for himself, or until a physician pronounces him dead, or until the person appears to be dead beyond any doubt. Normally recovery should be rapid except in electric shock, drug poisoning, or carbon monoxide cases where the breathing system is paralyzed or deeply depressed. Mouth-to-mouth rescue is the fastest method of artificial respiration, and can be continued indefinitely by a rescuer of any size or strength.

Marilyn rhythmically continued the inflations. After less than a dozen breaths, she heard the boy gasp. His lungs drew a breath of their own accord . . . coughed . . . emptied . . . filled . . . exhaled . . . inhaled . . . exhaled . . . inhaled . . . exhaled . . . inhaled . . . Soon his eyes opened and he saw two angels bending over his bed — honest-to-goodness angels — Marilyn and Reg Huggins.

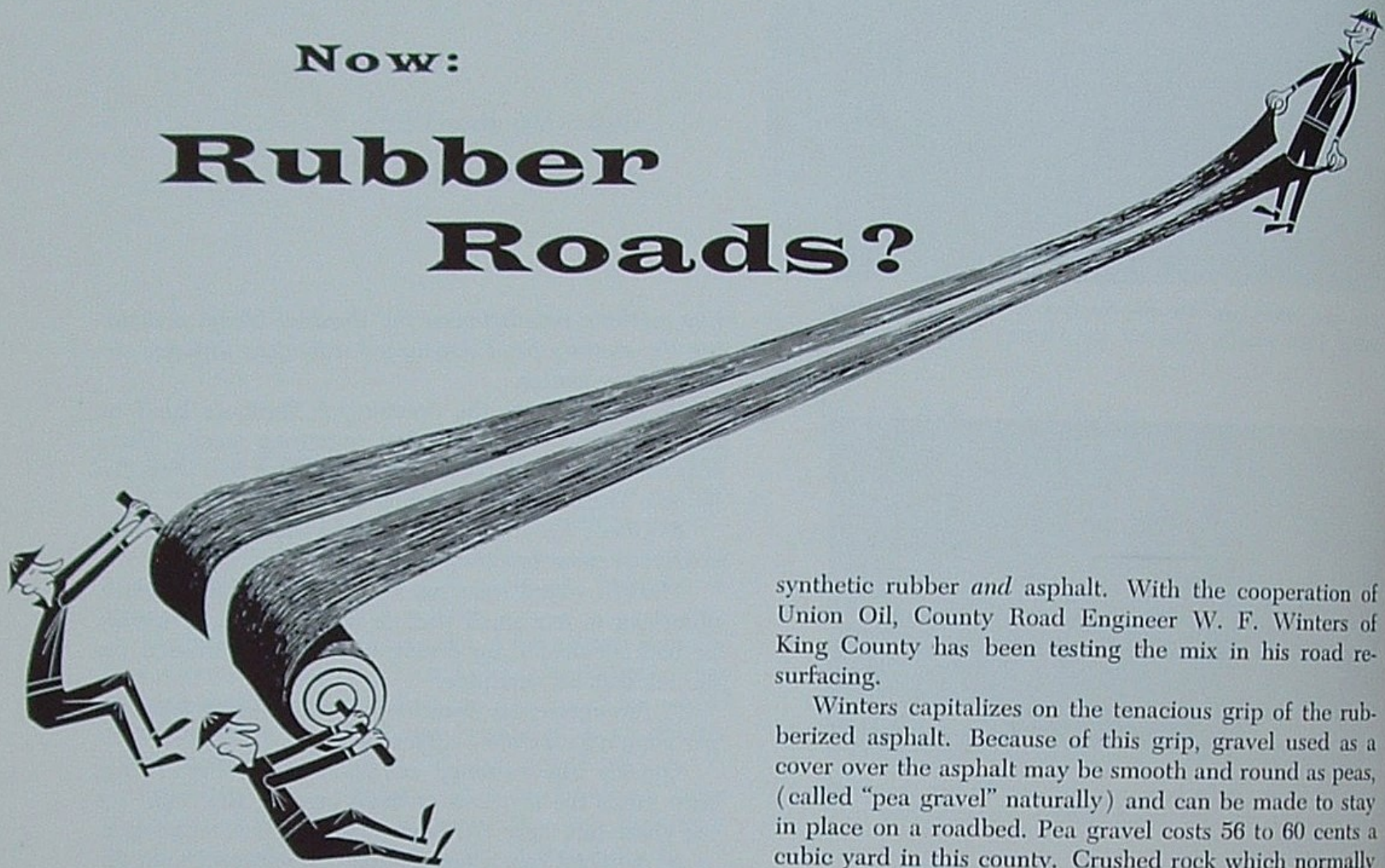
The child was trembling and in shock, but loving hands kept him warmly tucked in and soothing countenances watched over him. When the firemen and ambulance arrived there was need for their oxygen and Pulmotor only to help the boy recover from shock; they complimented Marilyn for saving a life.

All of the foregoing events happened essentially as we have reported — with a single exception: Leslie Childers, the young visitor whose life was saved, had returned to his Northern California home before our Seventy-Six camera reached the scene. His place was played in our re-take by Stanley, the Huggins' four-year-old son, a great actor!

/THE END

Now:

Rubber Roads?



A rubber-asphalt mixture is bringing better, low cost roads to King County

Not long ago, a big shepherd dog tried to cross a road being resurfaced in King County, Washington. He took four steps into the newly-cooled asphalt — one with each foot — and stopped in his tracks. He was stuck and had to be rescued.

A puddle of asphalt was spilled on the warehouse floor at Edmonds Refinery. Normally, you let asphalt cool and pick it up with a shovel. The men tried shovels and couldn't budge the blob. Finally, a lift-truck driver eased his fork into it. The asphalt began to come up — bringing pieces of the concrete floor with it.

Two workmen cleaning out an asphalt tank at Edmonds started out of a man hole pulling strips of asphalt behind them.

One of them yelled, "She's slipping!"

He lost his grip on his load, and it snapped away like a rubber band, across the ground, and down into the tank again.

This last story — it comes from Northwest Division's Distribution Supervisor Jim Hastings — sounds phony. But the others are true.

The unusual, elastic asphalt is really a mixture of raw

synthetic rubber *and* asphalt. With the cooperation of Union Oil, County Road Engineer W. F. Winters of King County has been testing the mix in his road resurfacing.

Winters capitalizes on the tenacious grip of the rubberized asphalt. Because of this grip, gravel used as a cover over the asphalt may be smooth and round as peas, (called "pea gravel" naturally) and can be made to stay in place on a roadbed. Pea gravel costs 56 to 60 cents a cubic yard in this county. Crushed rock which normally is used with regular asphalt costs five to six times as much.

Further: rubberized asphalt roads can be laid during Washington's moist winters; while, for a successful bond with regular asphalt, the weather must be dry.

The use of a rubber-asphalt mixture is not unique; most rubber companies make some variety of rubber blending material. But in King County it has worked unusually well. And the credit for its success is divided between Winters and Union Oil.


County Road Engineer Winters had the initiative and the imagination to test and try something relatively new.

Various producers were asked to help in his commercial testing; but only Union Oil took the initiative. Jim Hastings devised a method for combining rubber and asphalt in a special mixing plant at Edmonds. Asphalt and rubber combined by this method are thoroughly blended, may even be transported in trucks without appreciable separation.

The future of the rubber highways will depend on the results of years of testing, of course. But King County pavement laid five years ago is still in excellent shape. So the tests have been extended: during 1960, 160 additional miles of county roads were resurfaced with the rubber-asphalt blend.

At the moment one thing is certain: Winters has proved a point. Cheap pea gravel will stay in place when held by rubberized asphalt. He has the extra miles of paving built within his budget to prove it.

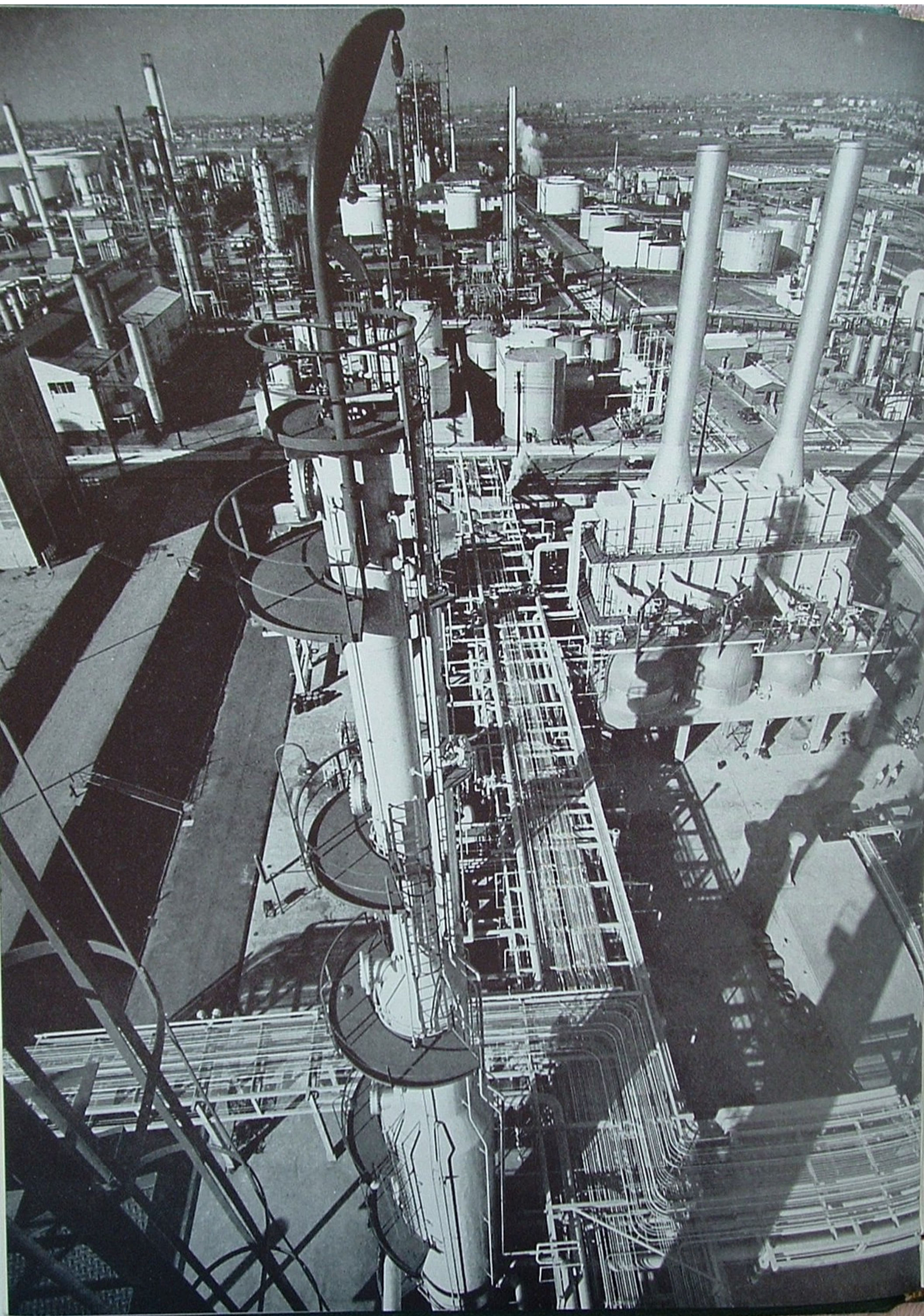
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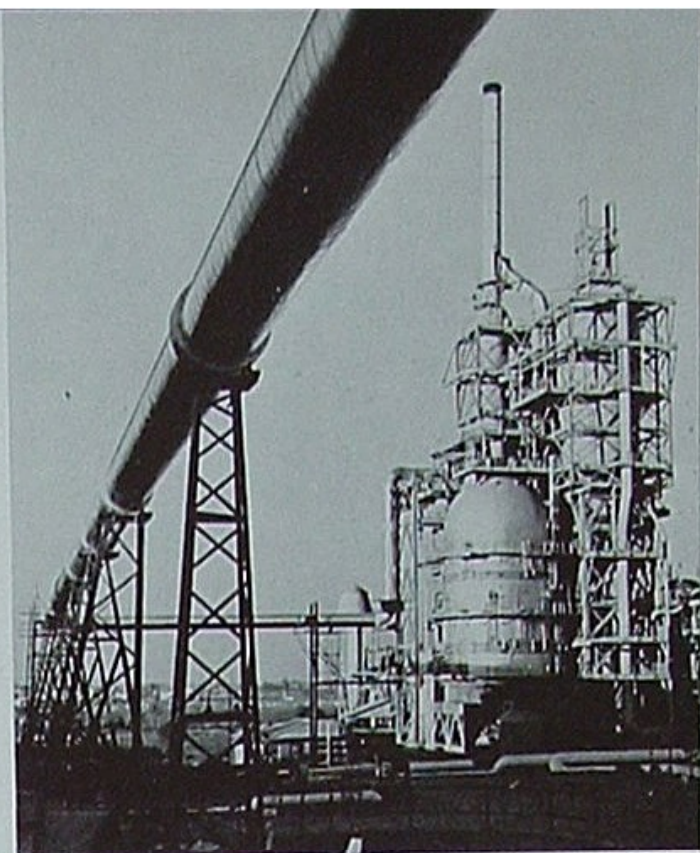
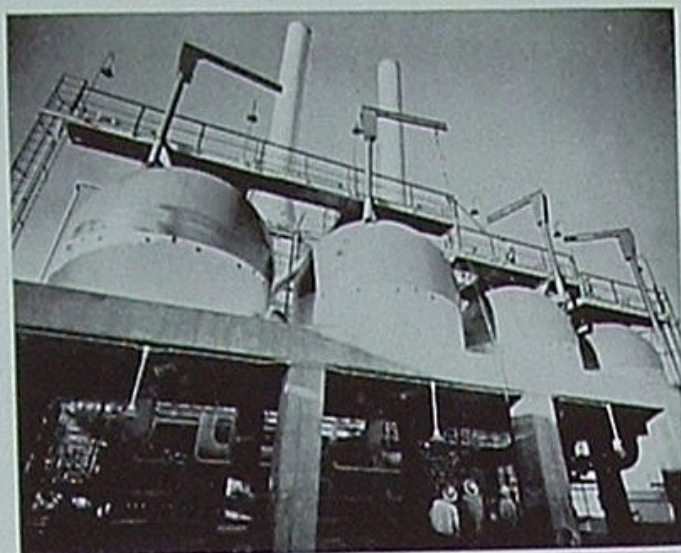
Construction for Quality

*A \$21,000,000 program nears completion
at the Los Angeles Refinery*

please turn page



Construction for Quality — continued



The spheres (above, left) in the reforming plant contain nearly a million dollars worth of catalyst. The tremendous overhead pipeline (above, right) will carry waste gases from the Fluid Cracker to an immense heater which generates steam. Principal reason for the installation: to reduce the small amount of carbon monoxide now put into the air.

On these pages, you see what \$21,000,000 will buy: a series of giant refining plants with higher quality as their primary purpose. From these towers and heaters and catalysts beds are coming better products *today*. And they give us a reserve for tomorrow so our salesmen can continue to offer our customers the *Finest*.

Next month, the last of three big Unifiners—shown under construction on the preceding page — goes on stream to complete a multi-million dollar program. When that last valve is turned, there will be an improvement in the quality of nearly every fuel we make at Los Angeles Refinery, from diesel oils to Royal 76.

Planning for this program started years ago. The first portion, completed in 1960, made it possible for Union Oil to advertise its "All pure power gasolines."

Now, other results will begin to be felt.

It will enable us to produce more aviation fuels.

Vastly improve our diesel oils.

Make us more highly competitive in that growing market: jet fuels for commercial airliners.

The refinery will have greater flexibility. It can more easily change its production to meet market demands.

Probably the most noticeable effect of the quality program as far as the public as well as the Company is concerned, is in our gasolines, both Royal 76 and 7600.

The customer gets a cleaner engine, fewer deposits, less wear, longer oil life, "all pure power."

Newest additions to a gigantic refinery: the plants in the foreground, a Unifiner and a reformer, are an investment in gasoline quality, and in the ability to give the customer even higher octane fuels than today's Royal 76 and 7600. The silvery tower to the left of the large stacks is part of the gasoline Unifiner which enabled us to advertise "all pure power" gasolines last year.

The Company gets an "octane cushion"— a hedge against the future. With the new plants, we can produce gasolines of considerably higher octane number than we now sell. As changes in automobile engines bring demand for these higher octane fuels, we'll be ready.

The three plants that influence gasoline quality are two Unifiners and a gasoline reformer. The Unifiners, of course, purify gasoline blending stocks. The reformer converts low octane material into high octane — on some gasoline stocks the jump is about 28 octane numbers.

A fourth plant, another Unifier, purifies mid-barrel products, principally diesel oils and jet fuels.

And again, the customer gets a whale of a bonus. The clean, light-colored Unifined diesel fuels will contribute to smoother engine operation, cause less smoke, and be nearly free of sulfur. Sulfur brings engine deposits and wear.

With this across-the-board improvement in our fuels from L. A. Refinery, you'd normally expect Union Oil should be able to increase its prices and recover that \$21,000,000 investment plus a profit. But that isn't the way our business works. We will get a return on the money — but not from a price increase.

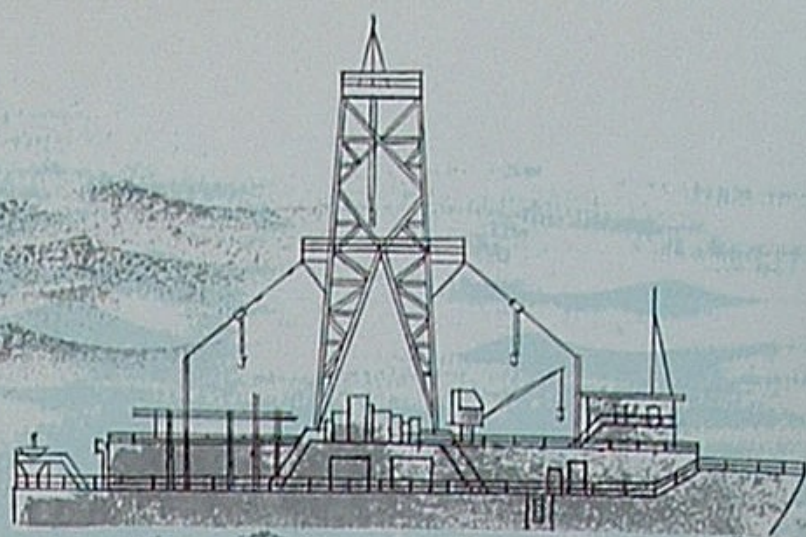
\$4,000,000 of the total is the cost of being a good neighbor in a crowded metropolitan area. The facilities it buys will further reduce the small quantity of gases the refinery puts into the air. (We have spent \$18,000,000 on reduction of contaminant emission.)

Any return on the remainder of the investment will come from internal economies—not from the public. For this program will not enable us to increase the price of our products, despite their higher quality.

Basically, the \$17,000,000 spent for quality improvement is merely part of the day-to-day cost of maintaining our leadership in a highly competitive business.

/THE END

GLOBAL MARINE EXPLORATION



All the waters of the earth—even the land beneath them—are the sphere of this young company.

Global Marine Exploration is a young company — scarcely two years old—with a portfolio of projects as ambitious as its name.

It is preparing to make preliminary tests of methods for drilling nearly four miles through the crust beneath the ocean deeps to reach the interior of the earth.

It has sailed a drilling vessel from the west coast to northern Lake Michigan to inspect a sunken steamer with the probing eye of its submarine television camera.

Off Florida, it has anchored underwater storage systems for fuel, medical supplies, food caches, and the like. Global's drills may sample the rock beneath the Channel for engineers planning an England-to-France tunnel.

Among its proposals for national defense are ocean floor cells for missiles, submarine detection systems, and subsea based rockets.

All these projects are secondary to its basic business: offshore exploration and drilling. Even here, Global has taken a unique approach. Rather than drill from conventional steel islands, Global floats its drilling platforms on specialized vessels. Because of this unique approach, Global can drill more holes in the ocean floor faster and at greater depths than can be drilled by any other method.

Global directs the energy of the ocean while rolling with its punches, say its engineers. They adapt themselves to the limitations of the sea, they say, and capitalize on its advantages.

One of these advantages has intrigued scientists for years. Now, with Global Marine as its instrument, the National Academy of Sciences and the National Science Foundation propose to capitalize on the advantage.

The earth, according to its students, is built like a baseball. The core is probably composed of nickel-iron. Wrapped around the core is a mantle. Around the mantle is the cover, the earth's crust.

The boundary between crust and mantle is called the Mohorovicic discontinuity, known as the Moho. The academy hopes to obtain samples of that interior mantle. To reach it, a hole must be drilled through the Moho—a Mohole.

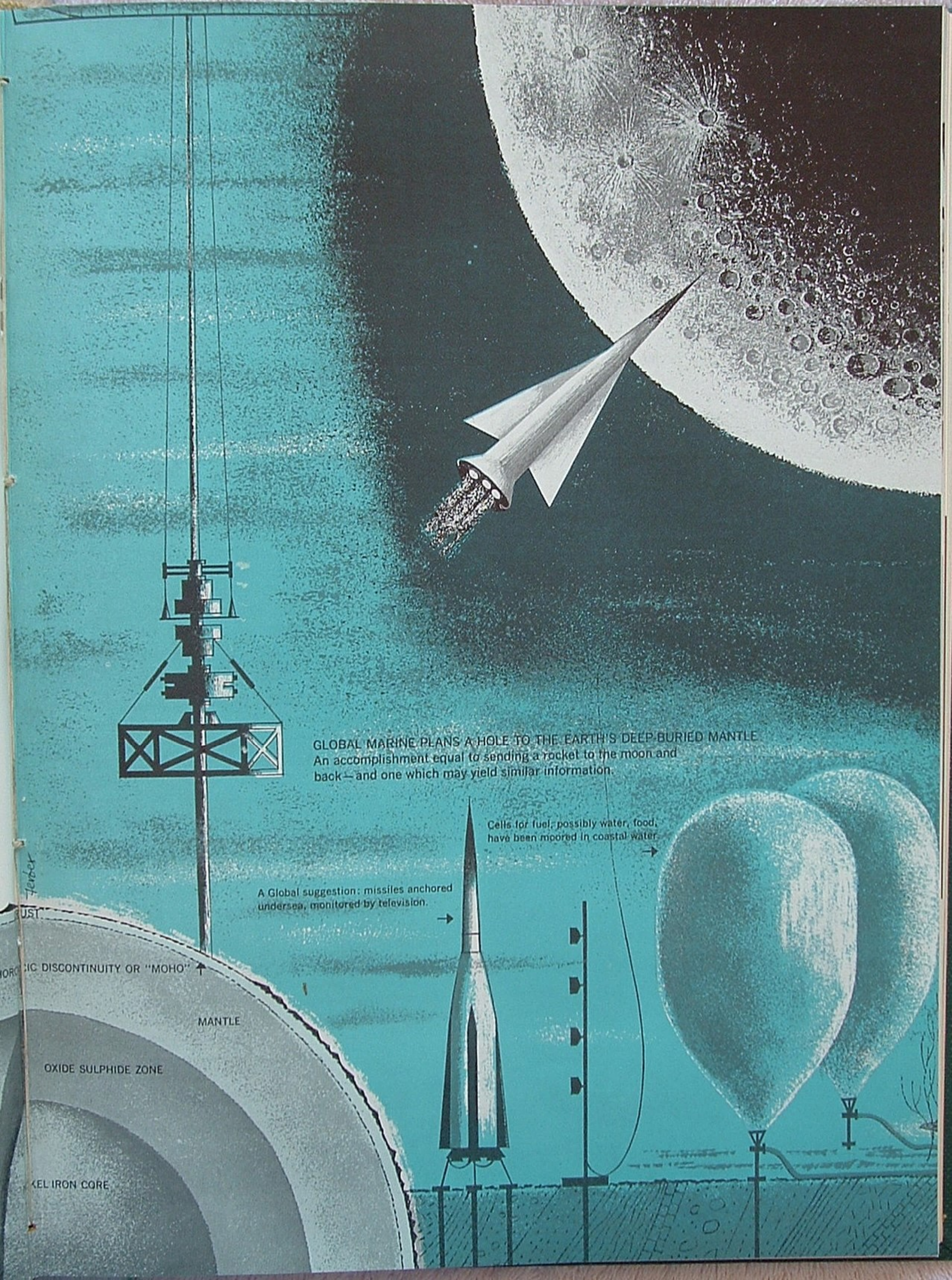
Tapping into the mantle through a Mohole should uncover the most fabulous history book of all time: an uninterrupted record of the earth's development for two billion years. Drilling through the Moho would be an accomplishment comparable to sending a space probe to the moon and back—and might yield the same information. For, apparently, the moon has about the same composition as the earth's mantle. And it may be, the best way to get a sample of the moon's surface is from beneath the earth's crust!

A Jules Verne hero, Arthur Conan Doyle's Professor Challenger, and the Rover boys have all reached the center of the earth; but for flesh-and-blood people, the project is somewhat complicated.

The principal drawback is the thickness of the earth's crust. Under the continental masses, it averages about

continued on page 14

This is the earth. Global Marine, under contract to scientific groups, will soon start experimental drilling of the Mohole—a hole to the Mohorovicic Discontinuity. Although the Mohol penetrates only the skin of the earth, it will be one of the most important scientific contributions of modern times, tell us more about the history of oceans, climatic changes, evolution of life.



GLOBAL MARINE PLANS A HOLE TO THE EARTH'S DEEP-BURIED MANTLE
An accomplishment equal to sending a rocket to the moon and back — and one which may yield similar information.

A Global suggestion: missiles anchored undersea, monitored by television.

Cells for fuel, possibly water, food, have been moored in coastal water.

Ferber
UST

CRUST
ASTHENOLITHIC DISCONTINUITY OR "MOHO"

MANTLE

OXIDE SULPHIDE ZONE

NICKEL IRON CORE

20 miles, an impossible distance when you consider the deepest oil well is barely 25,000 feet deep.

However, in some places beneath the ocean the crust is less than three miles thick. On the abysmal plain north of Puerto Rico, under 14,000 feet of water, the Moho is a mere 18,000 feet down.

Under contract to the scientific groups, Global will soon begin test drilling in 12,000 feet of water off the west coast of Mexico. A Global drilling vessel, Cuss I—modified for this venture—will drill several holes over the period of a month to obtain operating and scientific data required for further planning.

Drilling problems for such Project Mohole are identical with those Global habitually solves in its routine work—but multiplied a million times.

Drill pipe is expected to sway, bend, and even form loops as it moves through the deep-surgings water. Special light, strong, corrosion-resistant metals will have to be used, miniature instruments invented — and a method for holding the Cuss I in position tried.

The present proposal is to hold the vessel in one spot by means of four diesel steering motors mounted at the corners of the vessel. It's position will be determined by sonar transponders on buoys riding several hundred feet below the surface.

Obviously, the program will cost millions of dollars and extend over many years—but reaching the Moho from a drilling vessel appears to be scientifically sound, technically feasible, and economically reasonable.

The group from which Global Marine Exploration grew was originally formed for just that purpose: drilling holes in the ocean floor quickly and economically. The unusual sidelines followed.

Several years ago—in 1953—when California's tidelands were opened for oil exploration, four companies joined in the cooperative venture. The companies—Continental, Union Oil, Shell, and Superior—put together their initials and called themselves the "CUSS group."

Their plan: to devise a way of drilling from a floating vessel. Traditionally, underwater wells are drilled from rigid steel platforms fixed to the ocean floor. At best, these structures are huge, costly, and lack mobility. And as the water becomes deeper, they become entirely impractical. The expense of building enough of these steel islands to probe California's hundreds of miles of potentially productive coastline would be prohibitive.

The cooperative multi-million dollar research and engineering program was successful. Largest of the floating drilling vessels that came from it is the CUSS I. It, and the other Global vessels, are like no other ships afloat.

A tall drilling derrick stands amidships of the CUSS I, formerly a sea-going Navy fleet barge. Below the derrick, there is an immense center well through which drill pipe and other tools are lowered into the water. The vessel has all the mechanical features of a normal dry-land drilling rig ingeniously adapted for subsea work plus quarters for a 36-man crew.

When drilling, the CUSS I is held in place by im-

mense sea anchors. Riding high on the surface, the CUSS I has drilled wells 7500 feet deep—in the teeth of 60-knot winds and with swells running 12 feet high! And it can punch them down below water depths of 500 to 1500 feet.

As for mobility: within less than two months, Global with its floating platforms has drilled 28,000 feet of hole at eight different locations. On two other contracts, it drilled 63,000 feet of hole in 11 different locations within six months. This, in spite of wind, weather, and moving time.

By 1958, the four companies became discouraged by the legal difficulties and unfavorable leasing arrangements California set up for its tidelands. They dissolved their agreement. But during the development years, a great fund of experiences had accumulated—experience not only in subsea drilling, but also in marine architecture, engineering and design, and in oceanography. It seemed criminal to let that fund be dissipated. Hence, Union Oil Company bought out the other three members of the group, formed Global Marine Exploration, and set it up as a subsidiary.

The techniques and tools developed for drilling oil wells under deep water are the basis for most of Global's strange sidelines.

Global pioneered underwater closed-circuit television of necessity. It needed some way of inspecting its connections with the ocean floor and of directing the placement of tools. So its engineers designed a water-tight camera case and a system of floodlights which could be lowered into the deeps. They connected the camera to TV monitors located on deck.

Last year, Global got a call. The steamer CARL D. BRADLEY, of U. S. Steel's Michigan Limestone Division, had sunk in 360 feet of water in northern Lake Michigan. Before salvage could start, the vessel must be inspected for condition. The water was too deep for normal diving inspection; could Global's camera handle the job? It could.

The SUBMAREX, a Navy patrol boat converted for drilling, was at San Diego, California. In 23 days, she sailed two-thirds of the way around the continent: through the Panama Canal, up the east coast, down the Saint Lawrence Seaway, and into Lake Michigan.

The camera was lowered and the vessel's name read for identification. The big eye coursed slowly over the BRADLEY. The vessel was in one piece, it showed. There were fractures in the deck; but the remainder of the hull was sound and in excellent condition.

Its job finished, the SUBMAREX started drilling shallow gas wells in Lake Erie for a natural gas company.

Another Global specialty, setting immovable anchors, has led the company into a number of by-ways. Normally, how well an anchor holds depends on the condition of the bottom, wave action, weather, and the direction of the pull against it. No ordinary anchor can take a pull directly upward. Global's anchors can.

This specialty stems directly from oil well drilling

practices. A hole is made in the ocean floor, pipe with a fastening on top is cemented in the hole, and you have an anchor nothing can move—no matter how hard the pull or in what direction.

The technique caught the interest of the Jet Fuel and Storage Company. In cooperation with Firestone Tire and Rubber Company, Jet Fuel and Global engineers began work on a plan to store fuel in impervious, synthetic-coated nylon fabric tanks anchored to the ocean floor.

In a venture that would have tantalized the imaginative Verne, Global successfully moored the tanks in 200 feet of water off St. Petersburg, Florida.

Global says, enthusiastically, the potentialities of these undersea tanks are "endless." Fresh water, fuel, medical supplies, grain, and other food can be stored in them. In time of war, they provide perfect protection for vital supplies. Flammable gasolines and jet fuels can be buried beyond the reach of any enemy yet be available for instant use, since the tanks can be filled and emptied from a remote control point. In peace, the tanks can free densely populated waterfronts of storage warehouses.

The beauty of underwater storage is it can be located almost any place. Tanks can be placed far below the keel of a surface ship and still be recovered or returned to the bottom quickly.

The same oil well drilling methods are interesting the military. Basically, an oil well is nothing but a hole in the ground lined with steel pipe. These same steel-lined holes filled with non-corrosive fluid and capped provide safe storage for missiles. Large diameter holes drilled in impervious rock to depths of 10,000 feet if necessary, offer a safe method of disposing of our growing quantity of atomic waste.

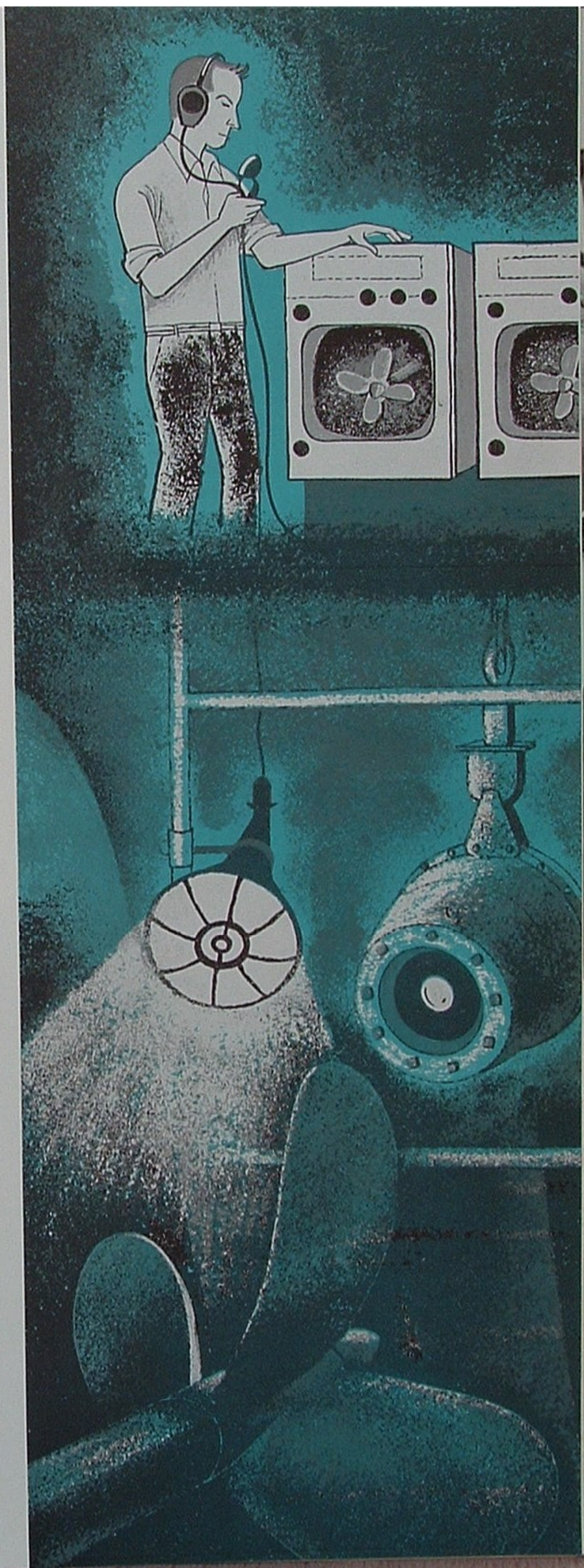
Recent developments in the field of deep space probes prove the ocean is an ideal launching pad. Global proposes its precisely placed anchors and subsea television as a practical method for placing rockets—and for keeping them under surveillance. Deep platforms suitable for radar stations or for satellite tracking are in the cards, too.

Global Marine engineers argue that the sea is an alien element only when you approach it as a landsman. Think like a fish, they say, and the sea becomes a protective mantle under which the tools of peace or war may be stored—hidden, safe, yet retrievable.

Realize the ocean is no longer a bulwark, a traditional barrier, in this day when miles are measured in split seconds. Instead, they say, look on the ocean floor beneath coastal waters as a truly impregnable defense line, impervious to attack from the air, the ground, or even from within itself.

To say Global prospects are unlimited would be an understatement—by the company's own definition. Global claims as its sphere all the oceans of the world, the structures man may build that encroach upon them, the land beneath the sea, and—considering Global's specialty—the land beneath *that, too!*

/THE END





The most photographed

*Delicate handwork brings out beauty
of Tournament of Roses floats*

On New Year's Day morning, the greatest concentration of cameras — television, newsreel, press and private — you'll find any place in the world line the six-mile route of Pasadena's Tournament of Roses Parade.

The color shot on our cover and the strip of film at left are a few of literally tens of thousands of pictures taken of the *Song of India*, Union Oil's entry in the 72nd Tournament.

Although the parade lasts only two hours it is the most photographed and most widely viewed in the world: Pasadena had a transient population of 1,700,000 people that morning, and other millions of viewers followed the colorful pageant on television.



She's planting a garden of roses and fern.

parade



Float Designer, Doctor Sam Coleman, "plants" rose border on Union Oil's float, Song of India.

People with blankets, sleeping bags, and portable barbecues begin staking claims along the curbs the night before. But none of the viewers were sleepier last New Year's morning than the hundreds of high school and college youngsters who had decorated the floats.

Starting about three days ahead, they live constantly with buckets of blossoms and pots of glue. Every inch of the floats must be covered with living flowers, bark, leaves or branches. Usually, the final petal isn't in place until after midnight, a few hours before the floats are moved to the formation area.

The photographs give you an idea of the painstaking handwork in Union Oil's beautiful *Song of India*.

/THE END



Position is everything—you can't walk on floats while you're pasting blossoms.



Skin tones, eyes, mouth, of diety Siva, which rode front of float, are patiently detailed in flower petals by these two careful and precise young workers.

Exploration and production realigns its divisions

The map of Union Oil's exploration and production activities in the continental United States has been given a new look, with the announcement of the expansion of the Gulf Division, and the combining of the former West Texas, Rocky Mountain, and Oklahoma Divisions into a single "Central Division."

At the same time he announced the geographical changes, Vice President Basil Kantzer also appointed two men to share his executive load: Ray A. Burke, as director of exploration, and Arch Dawson, as director of production. The appointments were made January 1, 1961.

Both the new directors started with Union Oil in the Gulf Division.

Burke is a graduate of the University of Texas. He took his first position with the Company as a geologist in Corpus Christi ten years ago this month. Exploration has been his field ever since: as district geologist, area geologist in New Orleans, and, in 1955, as chief geologist

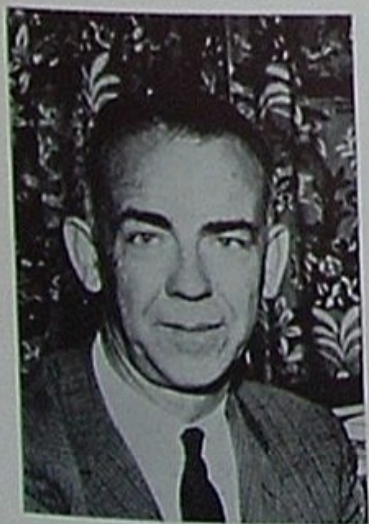
for the Gulf Division. For the last year, he has been Manager of the West-Texas Division.

Dawson came up a different route: through the production end of the business. He started as a petroleum engineer in 1947, was Gulf Division production engineer, and division production superintendent. In 1959, he took over the managership of the Oklahoma Division. Dawson was graduated from the University of Missouri.

C. F. (Chuck) Bowden is managing the newly created Central Division with headquarters in Midland, Texas. Bowden has been with the Company since 1939. Surprisingly, he started in the Refining Department, as a junior engineer at L. A. Refinery shortly after he was graduated from Pennsylvania State College. However he switched to petroleum engineering after three years, and subsequently became the Company's Chief petroleum engineer. Prior to moving to the Central Division, he was Assistant to the Vice President.

Shirt-sleeved vice president Basil Kantzer and his two new directors: Ray A. Burke (center) for exploration and Arch Dawson for production.





C. F. Bowden
Central Division



E. W. Scott
Canada Division



Charles E. Smith
Alaska Division



K. C. Vaughan
Gulf Division



A. F. Woodward
Pacific Coast Div

BUSINESS HIGHLIGHTS OF THE MONTH

Unifining now licensed in Germany, Formosa, Guatemala, Italy

Unifining, which was largely developed by the Research Department, is used by the Company to provide the "Pure Power" for Royal 76 gasoline. Unifining is now also used commercially to improve the quality of solvents, kerosene, jet fuels. Unifining has even invaded the chemical field and is licensed to purify such products as benzene, toluene and xylene derived from petroleum as well as other chemicals derived from coal tar.

Unifining is a widespread success because the process is simple and flexible and the catalyst is rugged and cheap. In addition to increasing a refiner's profits, Unifining reduces smog. Unifining is a worldwide "household" word throughout the petroleum industry.

Overseas, Unifining has grown impressively during the past year. We have licensed units in Germany, For-

mosa, Guatemala and Italy. Union provided the design bases and process know-how for all of these units. A Union engineer recently spent two months in Germany training personnel and assisting in the start-up of two units. An engineer will go to Formosa in February to provide technical service for two units there. In connection with these units, two engineers from Formosa spent two months this past fall at Los Angeles Refinery learning first-hand about Unifining operations and maintenance. The owners of the Guatemala plant have requested a Union engineer for the start-up early next spring. Construction has just started on the Italian Unifiner.

In spite of the success we are enjoying with Unifining, we continually strive for further improvements. During the past year the Research Department developed a catalyst which will lower the cost for a refiner to fill his Unifiner reactors. New techniques that increase catalyst activity

and catalyst life are continually being investigated. These studies are expedited by the fine teamwork and support given to the Research Department by other departments of the Company.

Research such as this ensures the continued growth of Unifining.

Research, from W. E. Bradley

Refineries Use Enough Fuel to Heat a Large City!

The largest single item of expense in the Refining Department's 1961 budget is the cost of utilities to operate Union's California refineries. Total: almost \$13,000,000.

The biggest part of this bill goes for gas and fuel oil consumed to produce heat in refinery processing. The gas may come from the processes themselves or be shipped in by pipeline from the oil fields.

This quantity of fuel is equivalent to 17,000 barrels a day of fuel oil. Or, expressed as fuel gas, it's equivalent to more than 106 million cubic feet a day — enough to supply over 400,000 California homes.

The electric power alone required to operate the refineries would supply more than 143,000 homes!

Naturally, refinery personnel scrutinize utility consumption closely, and make a continuous effort to obtain the most efficient use of it.

Deliveries — on schedule

Products travel from our refineries to Marketing Department Terminals by tanker, barge, and pipeline. Scheduling these shipments is the job of the Bulk Supply Group of the Refining Department.

Included in their work is the

The Refining Bulk Supply group (see "Deliveries—on Schedule," this page): from left S. T. Crosby, Jr., Charline Durant, M. G. Ordronneau, Charles S. Parker, Jr.



scheduling of tankers to the terminals, of deliveries via the Southern Pacific Pipeline into the Southern California-Arizona region, and of barges from L. A. Refinery to Ventura and San Diego.

Correctly forecasting liftings by tanker, pipeline and barge so that proper inventories are maintained at the terminals calls for close liason between the Bulk Supply Group, the Marketing Supply Department, and the Marine Department.

A New Raw Material: Crude from Gach Saran

The first cargo of Gach Saran crude oil from Iran has been received and is being processed at Los Angeles Refinery.

On its way from the fields to the U. S., the crude goes through 99 miles of pipeline (71 miles over desert and rugged terrain and 28 miles by submarine pipeline to the loading terminal on Kharg Island in the Persian Gulf), and then half-way around the world by tanker.

For the Refining Department, Gach Saran crude is a new raw material, somewhat lower in sulfur content than Kuwait crude oil.

Refining, from J. W. Towler

From the Cold Heart of Puuwaawaa

From the now-cold heart of Puuwaawaa, a fiery Hawaiian volcanic hill only 1,700 years ago, is coming building material for the Islands' burgeoning construction industry — with the help of Union Oil products.

Puuwaawaa contains an estimated two billion yards of lightweight aggregate, a material used for paving and decorative cements. (The red roads of Nevada and of Oregon have a "running surface" of similar volcanic aggregate.)

Volcanite, Limited, was formed recently to mine this valuable light colored, rough volcanic pumice. Union's consignee, Kona Petroleum Company, serves the new corpora-

Ancient Puuwaawaa, a real cool volcano.



tion's petroleum requirements 100 per cent.

Marketing, from C. H. Finnell

Military Contracts

Military Petroleum Supply Agency has awarded the Company contracts for the six months ending June 30, 1961, covering 13,020,000 gallons of marine diesel, 6,300,000 gallons of arctic diesel and 100,000 barrels of bunker fuel oil for delivery from California refineries.

Marketing, from F. K. Cadwell

Volume Buying Saves Dollars

When we go to market for Union Oil, the Purchasing Department has to watch the pennies as closely as does any other shopper.

One of the ways we save is by volume buying.

Many identical items—light bulbs and paper towels are examples — are used throughout the Company. So, as a matter of economy, we try to combine the requirements of the operating departments for such items into single contracts. In this way, we are able to secure the benefits of large volume buying—regardless of the quantity or frequency of use at any one location.

We also make volume savings by contracting for a year's supply of material — catalysts, perhaps—when quantities are large. Further: where possible, materials are delivered from our suppliers as needed, saving us the cost of warehousing.

We also get a lower rate on many services by annual contracts, in contrast to handling each job as it comes along. Example: the maintenance of service station signs.

A number of material and service contracts covering our anticipated needs for 1961 have been renegotiated and renewed. To give you an idea of their variety, here are a few of the items they cover:

Fire extinguishers; gases for weld-

Modern machinery mines aggregate.



ing and for the refineries—oxygen, nitrogen, helium, hydrogen, and argon; wire, cable, conduit; brushes, dry ice, and hand tools; maintenance of the 80-foot-high sign at Los Angeles Refinery; insulation service, industrial and cleaning materials.

And, of course, the SEVENTY-SIX magazine.

Purchasing, from C. S. Perkins

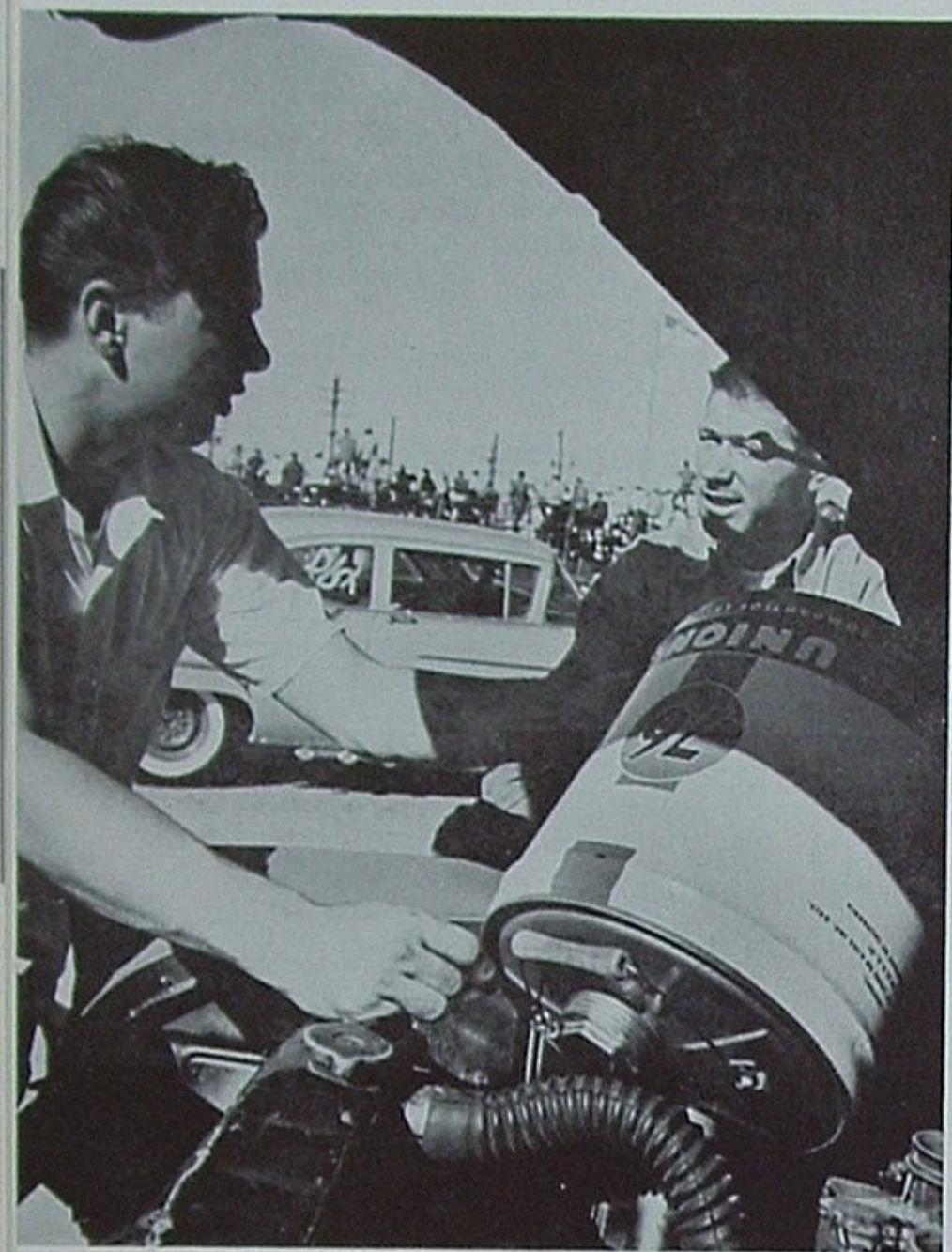


If We Catch Up With the Soviets . . .

In order to enjoy the glories of the present Soviet system, we would have to abandon three-fifths of our steel capacity, two-thirds of our petroleum capacity, 95 percent of our electric motor output, destroy two of every three of our hydro-electric plants, and get along on a tenth of our present volume of natural gas. We would have to rip up 14 of every 15 miles of our paved highways and two of every three miles of our main-line railroad tracks. We'd sink eight of every nine ocean-going ships, scrap 19 of every 20 cars and trucks, and shrink our civilian fleet to a shadow of its present size. We would cut our living standard by three-fourths, destroy 40 million TV sets, nine of every ten telephones, and seven of every ten houses; and then we would have to put about 60,000,000 of our people back on the farm.

It is plain to see that we have a lot of work to do if we catch up with the Soviet Union.

Bryce N. Harlow, Deputy Assistant to President Eisenhower, Reprinted from the Butte, Montana, Standard-Post



In front: Driver Dave Lewis fills crankcase of dragster with Triton. Kennedy in background.



In back: Ken Kennedy pours Royal 76 into special five gallon tank in trunk of his record-making dragster.

Record for Royal

Dragster sets record after switch to "all pure power" gasoline

Carrying on its rear fender the legend, "this car powered exclusively by Union Oil products," a '56 Oldsmobile has set a new record for Class C stock dragsters — and provided amazing proof of the "all pure power" claim made for Royal 76.

Ken Kennedy, of Compton, California, who owns the car recently made a switch from a competitive gasoline to Royal 76. Before using Union Oil products, the car's top speed was 97.98 miles an hour.

On the first run with Royal 76, the Olds hit 100.11 miles an hour. On the second run it did an even 100. On the third trial Ken's driver, Dave Lewis, reached the record 102.88 — and this within a quarter-mile from a

standing start. Then — three weeks later — Lewis got the car up to 106 miles an hour.

For this record to stand, he must make another run — at a different track — and come within 2% of the speed. Ken still has three weeks to "back-up" his record.

The car itself is quite a piece of machinery. Ken bought it for \$800. He's invested an additional \$2500 in making it go fast. To give you an idea of the changes: this eight-cylinder engine has six carburetors.

But the most successful change of all was the change to Royal 76 (and Triton and Unoba grease, of course). Because in that all pure power gasoline was the extra push Kennedy needed to set his record.

/THE END

Kennedy's dragster (without bumper, at left) steps away from the starting line at the Pomona, California, drag strip.



A few Union Oilers who were honored . . . won elections . . . set sales records



MOTHER APPOINTED: Oregon Division Merchandiser Bill Wool-siffer looks with pride at the certificate given his mother, Mrs. Marjorie Kauffman, on her appointment to the National Council of Consultants of the Small Business Administration. Mrs. Kauffman's personal small business: the Exkman Creek Quarries.



CONTEST WINNER: A. G. Cochran (center) proved himself as a tire salesman by winning a trip to Hawaii. R. G. Moritz, of Firestone, is presenting him and Mrs. Cochran with their tickets.

ELECTED COUNTY COMMISSIONER: Howard L. Madden, of Skamokawa, Washington, has been elected a County Commissioner of Wahkiakum County. Madden, a Union Oil dealer for seven years, has served on the County Board of Education and is a volunteer fireman.



ELECTED PRESIDENT: Joe Dockwiller of the Exploration Department has been elected president of the Anchorage, Alaska, Petroleum Club. Joe has been in Alaska on assignments off and on for the past 13 years. He is now Senior Scout.



WIN TROPHIES: Holding the fancy hardware: Betty Lyman, of L. A. Refinery and Liz Lavers, of Industrial Relations. The two ladies won their flight championships in the Head Office Girls Club annual golf tournament.

ELECTED TO CLUB ROYAL: Resident Sales Manager J. B. Cambell, Bakersfield, California receives a Club Royal membership certificate from Director of Marketing Haines Finnell. The reason: Consignee Robin Corbett, of Livingston, and the Bakersfield Marketing Station showed a 20 per cent increase in gasoline, Diesel, lube oil and grease sales. AND stayed above the Division average in collections.



LABOR MUST EARN IT'S PAY continued

Both management and labor must move to meet their responsibilities. The future is not so secure that we can afford to sit idly by while the rest of the world surges forward. It is high time we re-activated our wits and our muscles to begin working and producing and selling in the traditional American way.

If we don't — and soon — we are threatened with losing control of our destiny.

What Went Wrong?

The nation's disappointing economic performance of 1960 is, or should be, a warning signal. What went wrong? What can we do to stimulate business, to keep our nation advancing?

At least some of the business "softness" of recent months reflects temporary adjustments brought about by the lengthy steel strike. However, there are also long-term weaknesses affecting our growth potential — weaknesses that must be corrected if we are to advance vigorously in today's shrinking, highly competitive world.

Look at our "crazy-quilt" tax structure. Part of our tax laws remain from depression days when the aim was to use taxation as a means of redistributing income; part represents the hanging-on of wartime emergency needs; and part is a rag-tag collection of Congressional compromises and governmental extravagance.

The adverse effects of our confiscatory personal income tax have been all too often discussed and then ignored. Our nation needs the risk capital and it needs the initiative that individuals with high earning power can provide, but lack incentive to provide under today's personal income tax structure. If the tax rate were limited to a 50% top, itself a high level, the revenue loss of revenue. Certainly this is a small price to pay for out of about \$45 billion now collected from individuals. Increased incentive would soon restore this temporary loss of revenue. Certainly this is a small price to pay for the contribution to economic growth that the upper-income group is capable of providing.

Increased Incentive

The 52% federal corporation tax, which is further raised a few points by most states, remains at its "wartime emergency" rate. It is the highest of any major industrial nation in the world. Much of America's employment, production, research, and investment flows, directly and indirectly, from our corporations. The 50%-plus tax rate, by sharply reducing a corporation's earned income and its competitive abilities in world markets, appreciably dampens our growth potential.

Corporation growth would also be stimulated by permitting depreciation allowances that promptly and properly provide for the recovery of invested capital.

A related tax inequity is the double taxation of corporate dividends. With minor exceptions, dividends are taxed not only when earned but also when received as income by the shareowner. Obviously, this procedure restricts the flow of needed investment funds.

Union Monopoly

A second national weakness is the unfettered monopoly power of the big labor unions and the way they use this power to push wages higher and higher, with little regard for the slow but steady advance of productivity.

It has been repeatedly pointed out that labor unions engage in monopolistic practices, yet no legislative action has been taken to correct this situation. The steel industry is a good example of what the abuse of this power can do.

Must Earn Pay

During the past 20 years steel wage costs per man-hour have increased about four times as fast, on the average, as output per man-hour. Although the steel companies have managed large cost savings through various efficiencies (often by the making of huge new investments), these savings have not been enough to prevent steel prices from rising over 5% per year on the average.

In the face of this we should not be too surprised that foreign-made steel can now cross the ocean and undersell American companies in most of the United States. No wonder steel employment has fallen.

Certainly good wages should be paid whenever possible, for high income and high purchasing power play a key role in maintaining and advancing America's standard of living. But if this standard of living is to remain the envy of the world, these good wages must be truly earned.

America in the Sixties has no place for make-work jobs, for stand-by-pay, for featherbedding. Vigorous economies, such as Western Germany and Japan, are moving ahead rapidly. If we tolerate inefficiency, poor workmanship, sloppy salesmanship, our already weakened position in world markets will deteriorate even further.

Other weaknesses could be mentioned. A major one is the renewed threat of federal action to further reduce individual initiative and business freedom. We must oppose this threat promptly, boldly, and articulately.

American enterprise can advance in the Sixties, as it did in the past, if given the environment and the opportunity to do so freely. This will require individual skill, effort, and pride of accomplishment, path-breaking initiative, and enormous private capital accumulation and investment. It can be done if we get our thinking into proper focus and act accordingly.

/THE END

RETIREMENTS

February 1961	Service Date
THOMAS F. G. BOYD Northern Field	Nov. 22, 1915
GEORGE W. DICKERSON Oleum Refinery	April 19, 1926
ROBERT E. DONOVAN Northwest Division	Nov. 11, 1919
ALMA S. FEES Los Angeles Refinery	Oct. 19, 1948
ADOLPH O. GORANSON Northern Pipeline	Dec. 28, 1934
CHARLES R. HIATT Northern Pipeline	Nov. 26, 1920
LEO B. KEOUGH Calif. So. Coast. Div.	June 30, 1919
CARL F. MADSEN Los Angeles Refinery	May 22, 1922
LESLIE G. MORRIS Northwest Division	March 16, 1932
ADOLPH PODOLL Glacier Division	March 3, 1939
J. HOWARD ROBINSON Pipeline	Jan. 29, 1920
WADE A. SPENCE Calif. No. Coast. Div.	Sept. 5, 1923

IN MEMORIAM

Employees:

JAMES L. BARNES Oleum Refinery	December 24, 1960
ERMAL E. McCLAIN Southern Pipeline	January 3, 1961
ORVAL L. RINEHART Los Angeles Refinery	December 29, 1960

Retirees:

CLYDE E. LOCKARD Los Angeles Refinery	December 15, 1960
ALFRED S. LUTTRELL Field - Orcutt	December 10, 1960
CLYDE L. PETERMAN Oleum Refinery	January 6, 1961

SERVICE

BIRTHDAY



AWARDS



EMPLOYEES

February 1961

50 YEARS

MILTON L. VARNERField—Southern Div.

35 YEARS

GOURLEY B. ANDERSONLos Angeles Refinery
 JAMES L. BRADLEYOleum Refinery
 WILLIAM P. BRADEENLos Angeles Refinery
 CLAUDE R. CLARKField—Southern Div.
 LEON C. GLENDENNINGTax—H. O.
 JESSE H. RADERLos Angeles Refinery
 NORMAN A. WOODResearch—Brea

30 YEARS

P. G. CUNNINGHAM.....Mktg.—Calif. No. Cst. Div.

25 YEARS

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 H. M. BRIDGMANMktg.—Calif. So. Cst. Div.
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 ODUS J. JOHNSONField—Southern Div.
 JOHN M. ROBERTSONInd. Relations—H. O.
 HENRY J. SUDERMANMktg.—Calif. So. Cst. Div.

20 YEARS

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 WILLIAM W. BUSBYRefining—H. O.
 LYMAN G. DRUMAuto. & Eng.—Southern Div.
 "R" "E" THOMPSONProp. Admin.—H. O.

15 YEARS

BENJAMIN R. AIREYPipeline—Southern Div.
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 ROY L. BARTHOLOWField—Southern Div.
 CHARLES H. CALDWELLPipeline—Southern Div.
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 EDWARD H. CUTLERField—Northern Div.
 GARRET R. CYPHERField—Southern Div.
 RICHARD D. DAVISMktg.—Calif. Cent. Div.
 LELAND, S. DUNHAMField—Southern Div.
 ERNEST E. EKMktg.—Calif. So. Cst. Div.
 ETHEL E. GARLANDComptrollers—H. O.
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 MERVIN J. HOSTETLERMktg.—Calif. So. Cst. Div.
 STANLEY T. HOVERSTENComptrollers—H. O.
 VIOLA C. KUNZLERComptrollers—H. O.
 VIRGINIA R. LINDField—Southern Div.
 JAMES L. MABERYMktg.—So. W. Mtn. Div.
 JOHN E. McGUIRELos Angeles Refinery
 ARNOLD L. MORRISONMktg.—Oregon Div.
 LEO J. PFENNIGSField—Glacier Div.
 JUNE L. SHILLESTADCompt.—San Francisco
 FREDERICK P. SMITHField—Southern Div.
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 G. M. WOODARD.....Mktg.—Calif. So. Cst. Div.

10 YEARS

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 JOSEPH B. BLANCHARDResearch—Brea
 GEORGE G. BOTTINMktg.—No. W. Div.
 RAY A. BURKEField—W. Texas Div.
 JOHN CATRINO, JR.Oleum Refinery
 PHILLIP G. COOKField—Southern Div.

ROLAND E. FOSSMktg.—No. W. Div.
 WILLIAM R. HANSONPurch.—Seattle
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 MAURICE W. JEFFERSONLos Angeles Refinery
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 JOHN E. KILKENNYExploration—H. O.
 NORMAN D. KOCHResearch—Brea
 WILLIAM C. LADNERMktg.—Calif. Cent. Div.
 CLIFFORD McNEELYOleum Refinery
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 CLAYTON E. HINRICHSENBaldwin Park, Calif.
 KEN JOHNSONBishop, California
 H. U. SCHADGarden Grove, California
 EARL WARNIXLudlow, California
 SIDNEY S. YOUNGSanta Maria, California

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 J. G. JIMENEZSanta Barbara, California
 BRUNO W. KLOSSProject City, California
 G. R. LIENHARDEncinitas, California
 WILL MORFORDTacoma, Washington
 VICTOR OWWalnut Grove, California
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 PAUL BURTONGrants Pass, Oregon
 IRWIN GREENTREECulver City, California
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 STANLEY KUFFELOrange Cove, California
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UNION OIL COMPANY OF CALIFORNIA
P. O. Box 7600
Los Angeles 54, California



Fifty year man

*Milt Varner,
at left,
literally grew up
with Union Oil.*

When Milt was six, his father came to California, and started with the Company at Torrey, not too far from Union Oil's birthplace, Santa Paula.

In those days, if you worked on an oil lease, you lived there too. So Milt did his growing on the Torrey and later on the Stearns Lease, about 40 miles east of Los Angeles.

That's where he took his first job with Union Oil, on a repair crew at Stearns No. 45. He was two months shy of his 15th birthday.

Now foreman for the Long Beach and Huntington Beach fields, Milt celebrates a half-century of service to Union Oil on February 17, Union Oil's first 50-year man.