Union Oil Company of California

January 1961

76

UNION

YOU GET IT IN THE WEST'S MOST POWERFUL PREMIUM

Royal 76 Gasoline gives you pure power clean through.

That's because hydrogen refining (a process Union Oil developed and owns) cleans out impurities, leaves in only hard-working octanes (100-plus, of course).

You get Royal 76 at the sign of the big 76. It is pure and simply—The Finest.

UNION OIL COMPANY OF CALIFORNIA

ROYAL 76

SEVENTY 76 SIX
Union Oil Company of California

Volume 5, Number 1

JANUARY, 1961

THE COVER: Under the big orange and blue "76", Consignee John Kearns gases up a cruiser at Tonga, Union Oil's new marina on Balboa Bay near San Diego. For the complete story, see page 8.

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76 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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When the interest came due, He remembered the principal!

A young man lived with his parents in a public housing development. He attended public school, rode the free school bus, and participated in the free lunch program. He entered the Army, then upon discharge retained his national service insurance. He then enrolled in the State University, working part time in the State Capitol to supplement his GI education check.

Upon graduation, he married a public health nurse and bought a farm with an FHA loan, and then obtained an RFC loan to go into business. A baby was born in the county hospital. He bought a ranch with the aid of the veterans' land program and obtained emergency feed from the government.

Later he put part of his land in the soil bank and the payments soon paid out his farm and ranch. His father and mother lived very comfortably on the ranch on their social security and old-age assistance checks. REA lines supplied electricity. The Government helped clear his land.

The county agent showed him how to terrace it; then the Government built him a fishpond and stocked it with many fish. The Government guaranteed him a sale for his farm products at highest prices.

Books from the public library were delivered to his door. He banked money which a Government agency insured. His children grew up, entered public schools, ate free lunches, rode free school buses, played in the public parks, swam in public pools, and joined the FFA. He owned an automobile so he favored the Federal highway program.

He signed a petition seeking Federal assistance in developing an industrial project to help the economy of his area. He was a leader in obtaining the new post office and Federal building, and went to Washington with a group to ask the Government to build a great dam costing millions so that the area could get "cheap electricity."

He petitioned the Government to give the local air base to the county. He was also a leader in the movement to get his specific type of farming special tax writeoffs and exemptions. Of course, he belonged to several farmers' organizations, but denied that they were pressure groups.

Then, one day, he wrote to his Congressman: "I wish to protest these excessive governmental expenditures and attendant high taxes. I believe in rugged individualism. I think people should stand on their own two feet without expecting handouts.

"I am opposed to all socialistic trends and I demand a return to the principles of our Constitution and the policies of State Rights."

Know him?

From an extension of remarks of Hon. Frank T. Bow
Entered June 6, 1960 in the Congressional Record

/THE END


Dollars

Down on the Gulf Coast there's a storehouse of natural gas that's bringing Union Oil . . .

with a drawl

Down where the marshy Louisiana shore melts into the Gulf of Mexico, it's easy to be lulled into a wrong impression.

You still see decaying, Gone-with-the-Wind plantation mansions beside the slow curves of the Mississippi. You sip strong, dark-roast coffee while you talk business. All around, you hear the soft, slurred syllables of the Louisianan and the easy drawl of the Texan.

Listen, and life seems relaxed and somnambulant. But that's an illusion. The softness and the drawl mask a vitality the oil industry hasn't known since its youth. For here, in Union Oil's Gulf Division *is* youth: the BIG young natural gas industry that has burgeoned in recent years.

Union Oil is in the natural gas business from Alaska down through Canada, into California, the Rocky Mountains, New Mexico, in Texas and Oklahoma. But, it's doubtful if any place else you get a greater feeling of urgency, of important things being done today, right now, than you do in green, water-bound coastal Louisiana. There's a reason.

Deep, very deep, under the bayous and lagoons, under the swamps and marshes, under the Gulf itself, is a fabulous storehouse of raw, wild, natural gas. Less than 15 years ago, the gas became valuable. That's when great interstate transmission pipelines began connecting the fields of Texas and Louisiana with the heavily populated East Coast and Midwest.

Within those few years, the miles of transmission lines have doubled, linking wells to blast furnaces and kitchen stoves over most of the United States. The number of families who use the inexpensive, clean fuel has doubled, too: people in more than 22,000,000 homes are cooking with natural gas.

Driven by this multiplying demand, the Gulf people are running more and bigger drilling rigs than any other division of the company. On the average, they drill deeper holes — 10,000, 12,000, 17,000 feet deep. They're sending wildcats more than three miles into the earth.

And they're going many more miles offshore into Gulf waters. Seismic crews exploring for new production, have covered the Gulf of Mexico 40 to 45 miles offshore, where the water is 120 feet deep. Sharp crews, too. Of the 31 wells we've drilled offshore, 29 have found gas or oil. And this, in a business where the industry average for successful development well completions is six out of 10. Wildcats average only *one* producer out of 10.

The gas grows wild

On the Gulf, they spend over a half-million to punch down a hole — and there may be more than $300,000 worth of ultra-strong steel pipe in that hole to control the abysmal pressures they unleash when they tap a natural gas field.

For gas as they know it in Louisiana isn't the gentle stuff that whispers through the burner when you light your stove. Those soft-talking Louisianans and Texans live with natural gas the way an animal trainer lives with his half-tame tigers.

Gas in the raw is violent. It can spit a drill stem out of a hole, tear down a derrick, and cost a company a two-million dollars to control — as a wild Gulf gas well did Union before it was "killed." (See 76 for January, 1957).

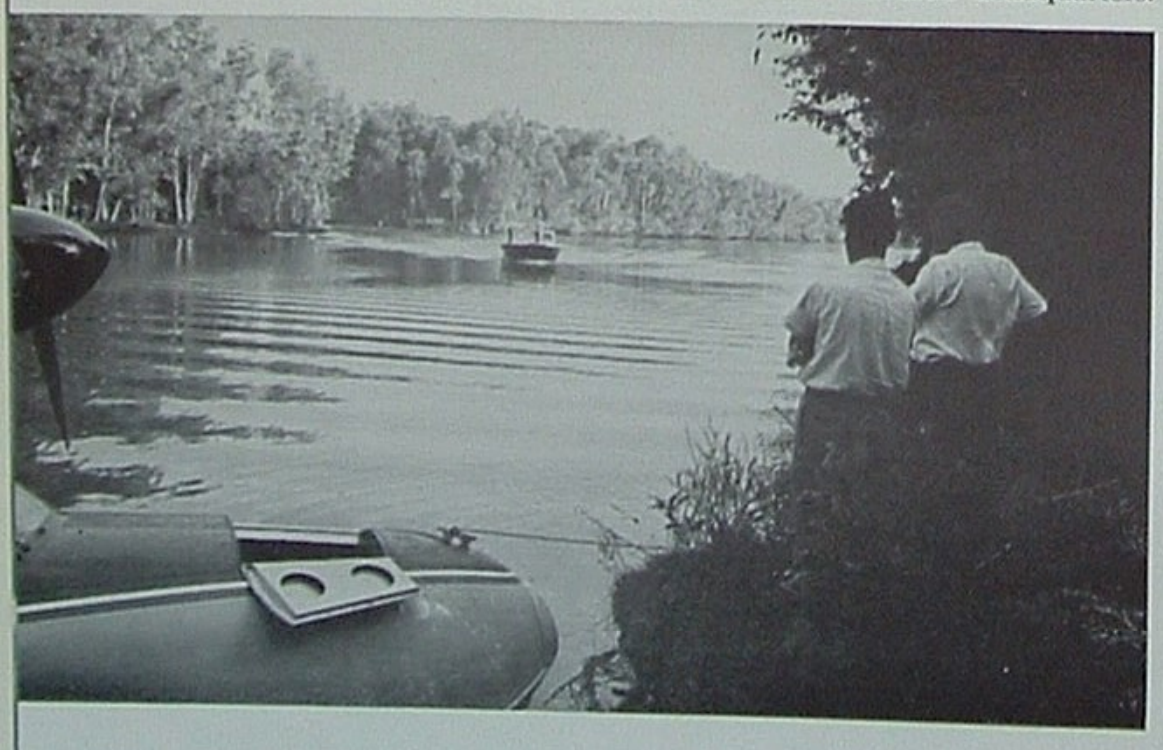
Now and then, they find pressures no oilfield pipe can hold, as they did in a deep well at Houma, Louisiana. The gas made muscles, stretched thick steel until it ruptured. When pressures get that high, there's still a

Continued

Union Oil drilling rig in Gulf looks like this as you come in for helicopter landing. Crew, materials are ferried to offshore wells in fast boats, ride cage-like elevators (left) from high platforms.

"Fleet" of small flying boats land in lakes, canals, give fast communication between widespread fields in watery southern Louisiana. Above: engineer Jerre Carlson climbs onto the the bank at Fresh Water Bayou; Right: the welcoming hand of pilot Gene LeBlanc.

Ducks and oil men thrive in Louisiana. Carlson and LeBlanc await boat to take them to East Lake Palourde headquarters.



life insurance policy called a "kill string" – a device typical of the gun-chair-and-whip precautions you'll find where gas grows wild.

The kill string is a long hollow tube that goes right down the middle of all the pipe in the hole. It has a single purpose: to enable the operator to control a wild well. At Houma, they pumped drilling mud down that tube until a 13,000-foot column of heavy liquid blanketed and smothered the gas by sheer weight.

They talk in trillions

In the Gulf Division, they talk in numbers no one except a government accountant should understand. Millions of cubic feet a day from wells; billions from a field; reserves in the trillions.

Today, two-thirds of Union's total natural gas reserves are sitting under the Gulf Division. Those reserves have risen spectacularly. During the 20 years since our first gas discovery in Louisiana, we have grown four times as fast as the industry.

At the end of 1959, we had total reserves of three-and-a-half trillion – that's 3,500,000,000,000 cubic feet. By the end of 1960, we'll have four-trillion. Looking at it another way, our natural gas reserves are equal to 270,000,000 barrels of oil – one-half as much as our present liquid hydrocarbon "oil" reserves!

In the Gulf Division, they look at natural gas still another way: the Division's gas production now yields more income than does its oil.

Yet, when our exploration men went into Louisiana in 1939, they not only weren't looking for gas, they didn't want it. There was no money in natural gas, no demand. We went looking for oil, and we found it first at East White Lake.

These are the shining towers of the Goliad-Union Cow Island extraction plant. The plant recovers valuable liquids formerly left in natural gas sold to interstate pipelines to be burned as fuel. There's no doubt where this island location got its name!

As an afterthought to the same leasing deal that brought us East White Lake, we got another piece of watery property called Fresh Water Bayou. There, we made our first big gas discovery. And shut it in. With gas selling for three cents an MCF we couldn't afford to produce it.

(An MCF – a thousand cubic feet – is the standard measure of natural gas. An MCF is about the amount you need to keep your home warm for 10 hours in freezing weather.)

As recently as 1947, we drilled wells at Tigre Lagoon – and shut in the gas formations for three years because there was no profitable market for natural gas.

All told, Union Oil has discovered 15 new fields and shared in the discovery of several more during its years in the Gulf Division. But those early gas discoveries were a nuisance. Right now, though, exploration men along the Gulf would rather find a good gas well than a good oil well, any time.

The change in their attitude is a matter of simple economics. When we started in Louisiana, there was little market for natural gas and the price was impossibly low. Now, there's a tremendous market and at better prices. Oil, on the other hand, has become less profitable; demand isn't as great, and the supply is excessive.

Long, hungry interstate transmission pipelines linking markets with natural gas fields made the difference. The bulk of Louisiana gas is sold along the eastern seaboard, in New York, up the western side of the Appalachians and into the Great Lakes area. And we – Union Oil and the industry – can't yet supply the demand. In Chicago alone, there are 250,000 unfilled applications for service.

Even California, a big oil and gas producing state, imports more than two billion cubic feet of gas a day.

The waiting ends of the transmission pipelines are also one of the reasons for the air of urgency in the Gulf Division.

In most oil fields, your production goes to tanks, thence through a pipeline to a refinery, into transport trucks, and finally to service stations. 'Way out in the distant mists, is the customer who finally uses products made from the oil you produced last month or a year ago.

Not in Louisiana. Gulf fields are like unbelievably huge service stations, with an extra-long hose from the pumps into the customer's tank. Instead of "I'll take 10 Royal 76," the pipeline company says, "Fill 'er up – 75 million cubic feet!" The word goes by radio from production offices to field men and you do fill 'er up – now!

Natural gas vs oil

With the transmission pipelines came demand for gas at the better prices that now contribute to the support of expensive exploration and drilling programs. Oil, alone, would support neither today.

For example, the work done in the canal-laced East Lake Palourde field is considered some of the toughest and costliest exploration known to the industry.

Say the Gulf Division spent that kind of money and found an oil field. Whether in Texas or Louisiana, they'd be faced with tight restrictions on production. Production is tied to market demand – and they can produce their oil wells only a few days each month. At that rate, it takes a long time to get back your costs, much less show a profit. Gas production is also tied to market demand, but in a different way.

When a natural gas field is discovered, the Gulf Division engineers estimate its reserves: how much gas they can finally recover from the ground.

Continued

A transmission pipeline company or companies seek the amount of gas they can sell from the field. Gas contracts are written for 20 years in the Gulf area. So the pipeline company contracts for an amount that theoretically will clean out all those reserves in exactly 7,300 days — 20 years.

Then: when you produce natural gas, some high gravity liquids similar to natural gasoline and called "condensates" come with it willy-nilly. Since they happen to be light, desirable oil, they're welcome to gas producers, such as Union.

This system of controlling production obviously makes a gas well more attractive than an oil well. Union has a dependable market at a contract price. The pipeline transmission company has a dependable source also at a contract price. So now we *look* for gas as well.

As long as the price is equitable, everyone's happy. Exploration goes on apace, those deep, productive wells are drilled, and a quarter-million people in Chicago will be able to buy gas-fired heating systems before long.

Price, of course, is the crux. Along the Gulf Coast, low price kept gas in the ground and drills out of it for years. In the future, it will be even more crucial.

Witness the half-million and more the company spends to drill each well from massive platforms in the Gulf of Mexico. Offshore leases are unbelievably costly. Last year, Union Oil bid $14,000,000 for drilling rights alone on offshore state and federal lands! And there, in deeper and deeper waters, say the geologists, is where Louisiana's future reserves will be found.

But looking to the present: although the Gulf Division people are making gas a profitable career, there is — or there has been — a blank space on their profit and loss sheet.

New plants for lean gas

In many places, natural gas as it comes from the well brings with it valuable liquids other than the condensates. The liquids have a high value as raw material for the petrochemical industry and refineries.

Until recently, Union's Louisiana gas has been sold only as fuel; it has gone into the pipelines carrying its cargo of valuable liquids with it. The only way Union could afford to build a plant to extract them was to have a tremendous volume of natural gas pouring through it. For those big Gulf wells produce a "lean" gas with a very low liquid content.

There has always been another hitch. The vast, gloomy Atchafalaya Swamp, an overflow basin for flood waters from the Mississippi, is a barrier separating our gas fields from the market of the South. And to have a profitable gas processing operation, you must be able to sell your products nearby — or be able to get them to market without great expense.

Time, and a successful exploration program solved the first problem: volume.

We've had a dramatic increase in natural gas production during the past seven years — in Louisiana as well as in other areas. During 1959, we produced 105 billion cubic feet of gas, up 14 per cent over the previous year; the 1960 total should exceed 125 billion; in 1961 we expect to do 175 billion cubic feet. With Louisiana's share of that tremendous volume, we had enough gas to justify a plant.

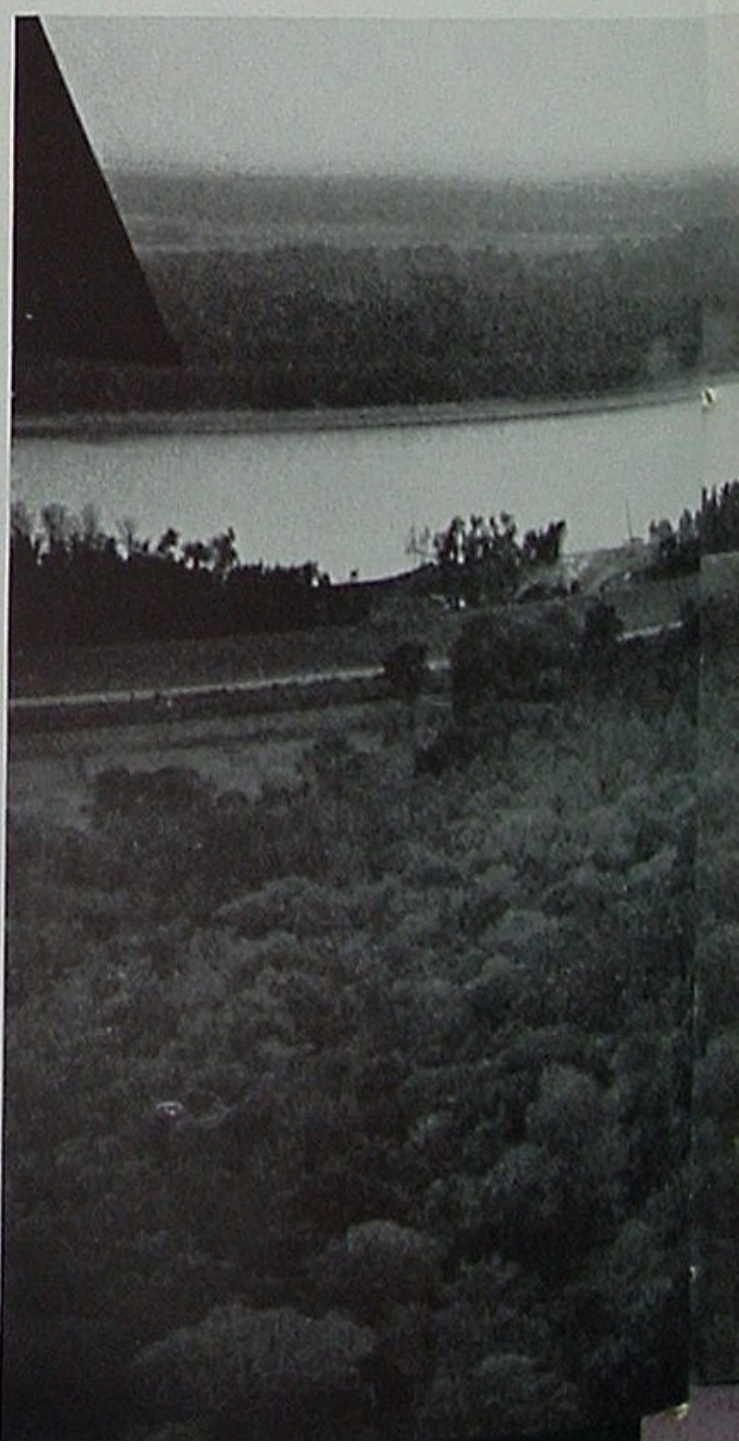
Ingenuity solved the problem of watery geography.

Originally, we had thought in terms of a conventional gas plant, where liquids are taken out of the gas and separated into their components, all at the same location.

But an outside company, the Goliad Corporation, came in with a novel idea. Goliad is a major gas processor in Texas and Canada.

"Why not," they asked, "take out the liquids near the fields, separate them near markets, and connect the two plants with a pipeline?" And that's what was done.

So, during the last days of October, Union Oil and Goliad, the operator, started up a unique south Louisiana gas processing system, the largest of it kind in the state. The system should put black ink in those blank spaces in the Gulf's profit and loss sheet.



Although the thickly-wooded site of the Riverside plant looks like what it is — part of an old plantation — it is actually in the midst of one of the world's great concentrations of petrochemical plants. Here, natural gas liquids are separated into chemical building blocks, and material used in blending gasolines.

The liquid are taken from the gas at an extraction plant at Cow Island. Cow Island is on the *west* side of the Atchafalaya, near the producing fields at a spot where two transmission pipelines pass close together.

Nearly a half-billion cubic feet a day of natural gas will be routed from the pipelines through the plant for processing then back to the pipeine again.

Defeating the Atchafalaya

Then came the ingenious gimmick that made the system practical: an 88-mile pipeline. The Atchafalaya section was spanned by digging a canal across it and laying the pipeline from barges. Raw liquids from Cow Island go through the line to the Riverside Fractionation Plant.

Riverside is on the east bank of the Mississippi, about 26 miles south of Baton Rouge, in the midst of a growing chemical empire. From this ideal location, products are shipped by river, rail, truck, and pipeline.

There, surrounded by one of the world's greatest petrochemical plant concentrations, Riverside turns out such essential products as ethane, a building block for polyethlene-type plastics; propane and butanes, used by all chemical industries and as "bottled gas"; and natural gasoline for blending automotive and aviation fuels.

To give you an idea of the demand for these essential liquids: long before the system was completed, we had contracts for the sale of all its products!

The processing system literally creates something where nothing existed before. It adds approximately 18,000,000 barrels to the Company's net reserves of gas liquids — plus about 19,000,000 more barrels we'll receive through processing arrangements with others.

Reflecting the optimism normal to the Gulf Division, both plants are designed for expansion as our own gas output increases or we contract to process for others.

Optimism? It's justified

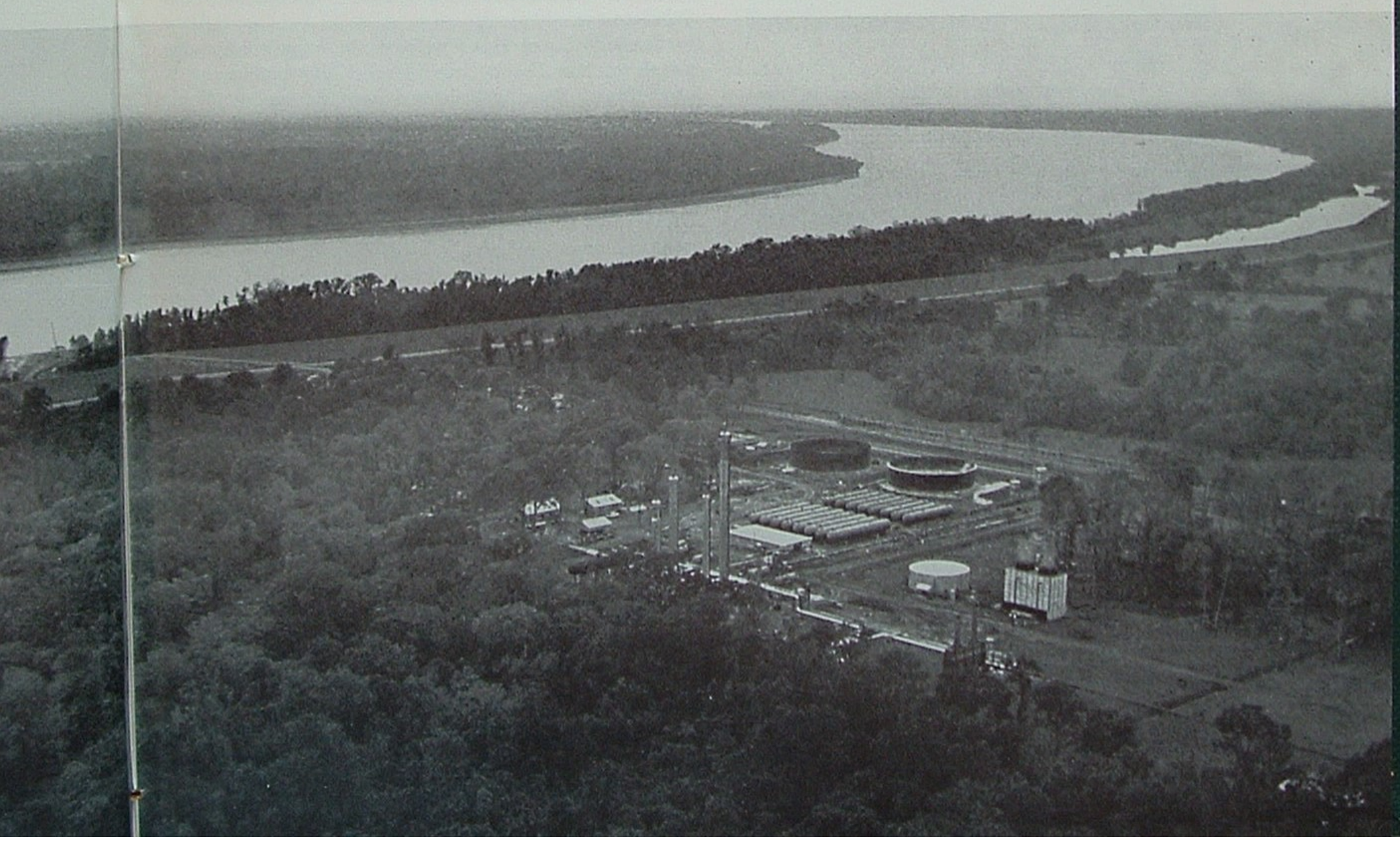
The optimism is justified. Union Oil was lucky in the Gulf Division. Its men found production; but they sunk money in the ground for 12 long years before they began to break even. Then came what amounted to a rebirth: the upsurge in demand for natural gas.

This year, natural gas sales reached the highest volume in the Company's 70 year history. They have run a million dollars a month in 1960. Within the next few years, that figure should climb to a million-and-a-half.

Texas, and California contributed to that record. We have developed tremendous gas reserves in Alaska. We recently made important finds in New Mexico.

But the bulk of our natural gas sales today come, as they'll come in the predictable future, from the land of strong coffee and the deceptive drawl: from the deep, high-pressure wells in the waters offshore and in the lakes and lagoons of the Gulf Division.

/THE END



"Tonga," the Company's latest word in marinas starts

Sea Service at San Diego

It's only about four or five hours by motor-driven yacht from Los Angeles anchorages to handsome Shelter Island at San Diego. Furthermore, it's about the most pleasant four or five hours a mariner could ever hope to spend. Year around nearly, the water is blue and inviting, the air cool and bracing. Eastward, almost rubbing shoulders, sparkle dozens of seaside towns and resorts, flanked by green or tawny mountains. Straight down awaits some of the world's best sports fishing. To the west an infinite horizon hints of a thousand Pacific isles.

No wonder that every holiday and weekend – even the week day for some – finds this coastwise boatway dotted with hundreds of pleasure craft. If the trend continues, you soon may see traffic lights mounted on anchored buoys and yachtsmen signaling their port and starboard turns as they drive this deep blue freeway.

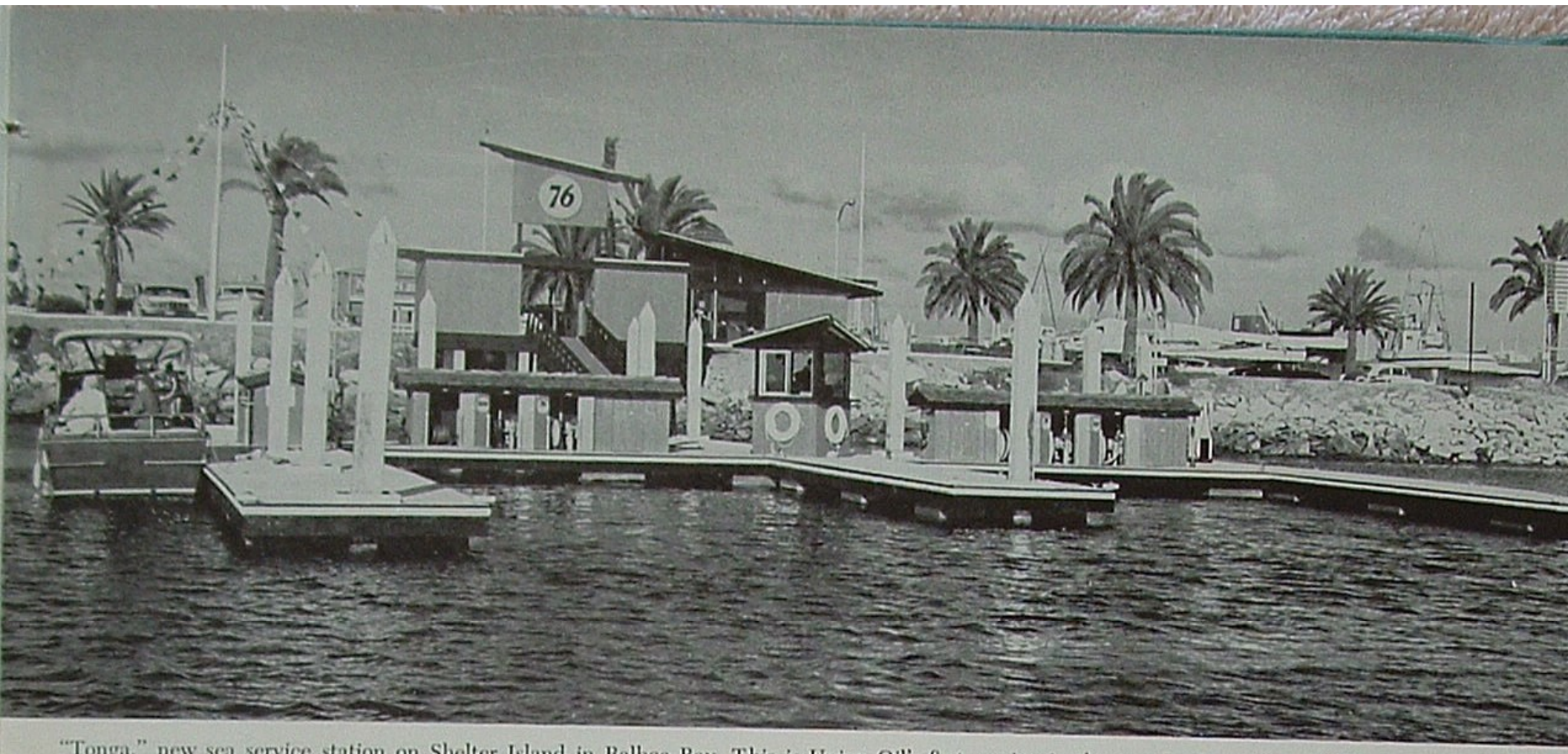
Keeping pace with the times, San Diego has made the destination fully worthy of the voyage. Crescent-shaped Shelter Island originally was dredged out of Balboa Bay to provide anchorage and shelter for small craft. Now the island does more. It is palmed, grassed and landscaped. Only a few feet from the boat slips are beautiful "boatels", clubs and restaurants. And right at the end of the shimmering blue mall is "Tonga" – Union Oil's latest word in sea service.

Sensing the need as well as the opportunity, our people at San Diego have planned and built what is probably the *Finest* petroleum-service marina anywhere:

Tonga's floating wharf can handle more than a half-dozen small craft simultaneously. Its commodious underground storage tanks dispense our full line of fuels – Royal 76 Marine, Marine 7600, Aviation 80/87, G/M Diesol, 7600 Outboard Fuel. Available also are white gasoline, domestic Diesol, stove oil, pressure appliance fuel, kerosene, S-76 solvent, and all of our marine lubricants.

Services include a large refrigerated walk-in cooler

And Tonga's busy! Consignee Jim Slaughter takes it on the run as the slips fill up. More than 800 credit cards have been issued to local pleasure boat owners around San Diego.



"Tonga," new sea service station on Shelter Island in Balboa Bay. This is Union Oil's first marina in the popular San Diego, Calif., area.

room for ice, a vacuum pump quick-oil-changer, shore-to-boat radio communication, and walkie-talkies for communication between office, dock and repair yard. Docks are lined with scratch-proof bumpers. Fuel and water hoses are within convenient reach of any boat's fill pipes. Union Oil credit cards are honored courteously.

Of course, no service outlet is better than its proprietors. To assure the finest personnel also, Union Oil has chosen Jim Slaughter and John Kearns as Tonga consignees. Jim is owner of nearby Shelter Island Yacht Ways and has an interest in the Half Moon Marine boat slips. John picked up a chronic case of boat fever while rowing on the University of California crew and graduated to a 15-year role of invaluable experience with the San Diego Kettenburg Boat Works. Both partners have what it takes to serve every type of yacht and please every variety of yachtsman.

Or, if you'd rather judge for yourself, sir or ma'm, just step into that sea-going sedan you've been thinking about, and follow the off-shore traffic to San Diego's Shelter Island. That big orange moon with a "76" face you'll see among the palms rises over Tonga!

/THE END

At the opening: (Standing) Sales Manager Jim Foster, Division Manager Reg Brenchley, Sales Supervisor Joe Miller; (seated) consignees John Kearns and Jim Slaughter.

Convenient? This wide gangplank to Tonga's floating wharf which can handle more than a half-dozen craft at a time is typical of the planning that went into the new marina.

CHANGE THAT OIL!

Research says it's false economy to skimp on oil changes

After an era of wrapping jet-like horsepower in fly-away fins, the automotive world has taken a couple of whirls and come up with a new emphasis: *economy.*

The fins are furled. The horsepower's still there — but in smaller type. Every manufacturer is plugging his standard-size cars that use regular gasoline and his compacts that use practically no gasoline at all.

Neither type of car seems to care whether you change its oil or not.

The continuing trend to longer drain intervals is a worrisome thing. There's a probability the few oil dollars you save by economizing on drains are a lot smaller than the repair dollars you may spend.

So, if you're among the many employees of Union Oil who will buy a new car this year — or if you're one of the thousands of Union Oil dealers who will service them — you should know the answer to a pertinent question:

Can you safely save money running your oil longer between changes?

a few ground rules . . .

Everyone agrees oil should be changed sometime; but that's about the extent of the agreement. Oil change interval recommendations vary all the way from 2000 miles to 6000 miles. So let's set a few ground rules.

A common oil change recommendation is "every 4,000 miles." We've picked that interval as undesirable. Too long.

As desirable, we've picked 1,500 miles.

Union Oil and its Research Department agree with the American Petroleum Institute recommendation: "Change oil every 60 days in summer, every 30 days in winter, but never go over 2,000 miles."

Our 1,500 mile interval allows a margin of error for people with bad memories, those who can't make it to a station on time, and those who aren't reminded by their dealer.

The annual costs we'll mention are based on driving 9,000 miles a year. The average comes from the Research Department, which collects such statistics.

how much does real protection cost?

From a dollar standpoint, the controversy about long and short oil drain intervals is much ado about nothing.

You have to spend some money on oil, no matter what service pattern you follow. And, *over the life of your car,* the money you save by giving it a minimum of care wouldn't even pay for your optional push-button-radio-with-rear-seat-speaker. Look:

If you buy our most expensive oil, Royal Triton 10-30, and change it every 4,000 miles. you spend about $10.25 a year.

Change every 1,500 miles, and you spend about $20.45 a year.

The difference between the least and the best drain pattern is less than a dollar a month! Other considerations make the difference even less.

When you follow the 4,000 mile recommendation, you're expected to change filters at the same time you change oil. Filters cost around $3.75 each, installed.

Use Royal Triton 10-30, change every 1,500 miles, and you can safely extend your filter replacement period to 6,000 miles.

Also: over 4,000 miles of driving, you'll need at least one quart of make-up oil. With the shorter drain interval, you shouldn't need that quart.

Add in these factors, and you pay $7.40 extra a year, for the finest engine protection you can buy. That's 62 cents a month!

Economy?

Whether you save *any* money depends on the length of time you expect to keep your car. On whether you trade your troubles or live with them. Because if you follow that longer drain interval, your car's going to give either you or a later owner some expensive headaches.

oil wears out

Crankcase oil wears out, just as tires do. The difference is, you can't tell an oil's worn out by looking at it.

Modern automotive oils are made by combining the

oil itself with various chemical compounds. You must have the chemicals, because plain oil won't lubricate today's engines satisfactorily.

Since the man-made chemicals are expensive, there's a dollar limit to the amount you can include in your oil, even in your best oil, such as Royal Triton.

That limit is the amount needed to do a certain job *for some definite period of use*. By the end of the period, the chemicals are worn out. Your engine protection is gone.

How long before they wear out? When should your oil be changed?

Again, Research goes along with that API recommendation: every 60 days in winter, 30 days in summer, never over 2,000 miles. They'd *really* prefer a shorter drain interval — change every month.

Realize: this is the opinion of some of the most expert automotive oil men in the world. *Eighty per cent of the cars in the United States run on oil containing additives covered by Union Oil patents.*

Realize, too, the flat "not over 2,000 miles" recommendation is a compromise, an average that should be satisfactory for the majority of cars. Actually, driving conditions are a better measure of the need for oil changes than is mileage.

For example: if you're an easy driver, who rolls his car fast, you can expect your oil to give protection longer, probably for the entire 2,000 miles. A hot engine and continuous driving, few stops, little traffic: oil thrives under these conditions.

But most people don't drive under those conditions. If you're the typical American motorist, you drive only 750 miles a month. Your median trip is 3.8 miles: half of them are longer, half are shorter.

Don't say you're not typical either — that you drive ten miles each way to work and head for the mountains every chance you get. Count in those trips to the hardware store, that quick run to the market, that visit the other night around the corner when you didn't feel like walking — and count one trip each way.

This kind of driving is about the cruelest thing that can happen to oil or an engine.

and when oil wears out . . .

You can begin to get corrosive wear within 900 miles. Under very unfavorable conditions — more stops, fewer long trips — corrosion begins to chew away at your engine around 650 miles.

As oil wears out, deposits plug oil screens and passages, pile up in the engine. Piston ring and cylinder wear increases. Wear spoils the close fit of hydraulic valve lifters, and your expensive car sounds like a piece of junk.

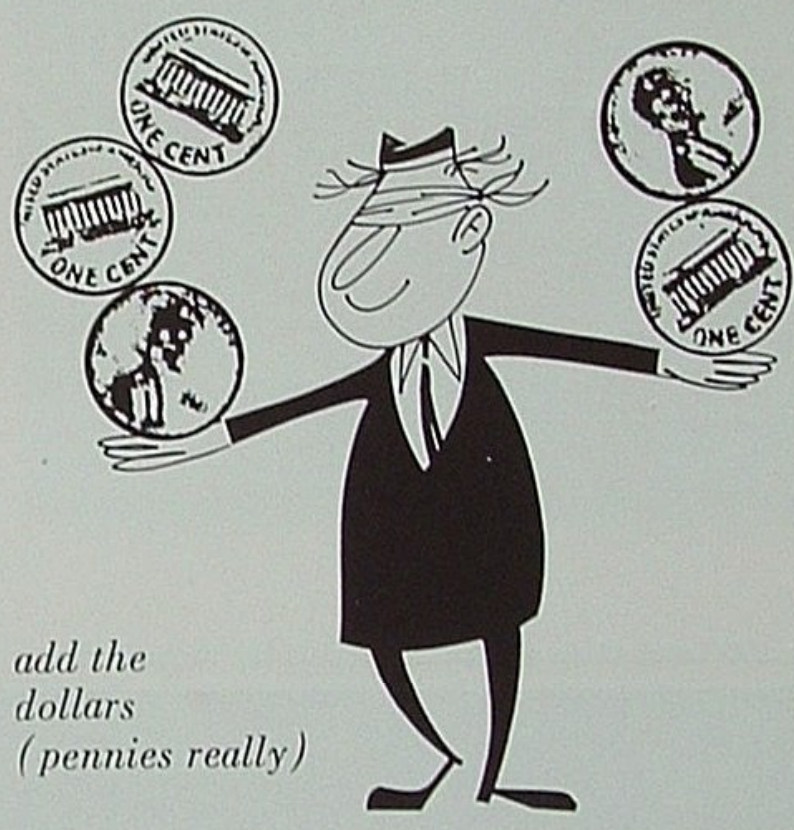
That's *economy?*

People who keep close records of their costs know the value of the best oil and sensible drain intervals.

Among Research's data on road and laboratory engine testing are case histories. One example: a shorter drain interval (in contrast to a long, 4-5,000 mile interval) *doubled* the time between major engine overhauls for a taxi fleet.

Our own commercial customers, companies which operate trucks, heavy machinery, and the like buy four times as much premium oil — Royal Triton and T5X — as they do the less expensive Triton. And these people are cost conscious.

(In contrast, we sell twice as much Triton as we do premium oils to our retail customers.)



add the dollars (pennies really)

Getting back to the original question: "*Can* you save money running your oil longer between changes:

Answer: Try to economize at your own risk. You'll be money ahead to follow the A.P.I. drain interval recommendation.

Stick with longer drain intervals — 4,000 miles and up — and you invite costly mechanical trouble resulting from worn-out oil. If you do follow this pattern, trade your car early and let the next owner pay the bills.

Remember this when you think of economy:

You'll have to spend some money no matter what pattern you follow. And the difference in cost between the minimum of care and true protection is only *$7.40 a year — 62 cents a month.*

There's no question: regular drains with the top quality oil are a cheap guarantee of longer car life and a high return on that stack of money you invested in performance.

Make-up department — Annis Tully and Barbara Wight.

They danced — Francis DeMello.

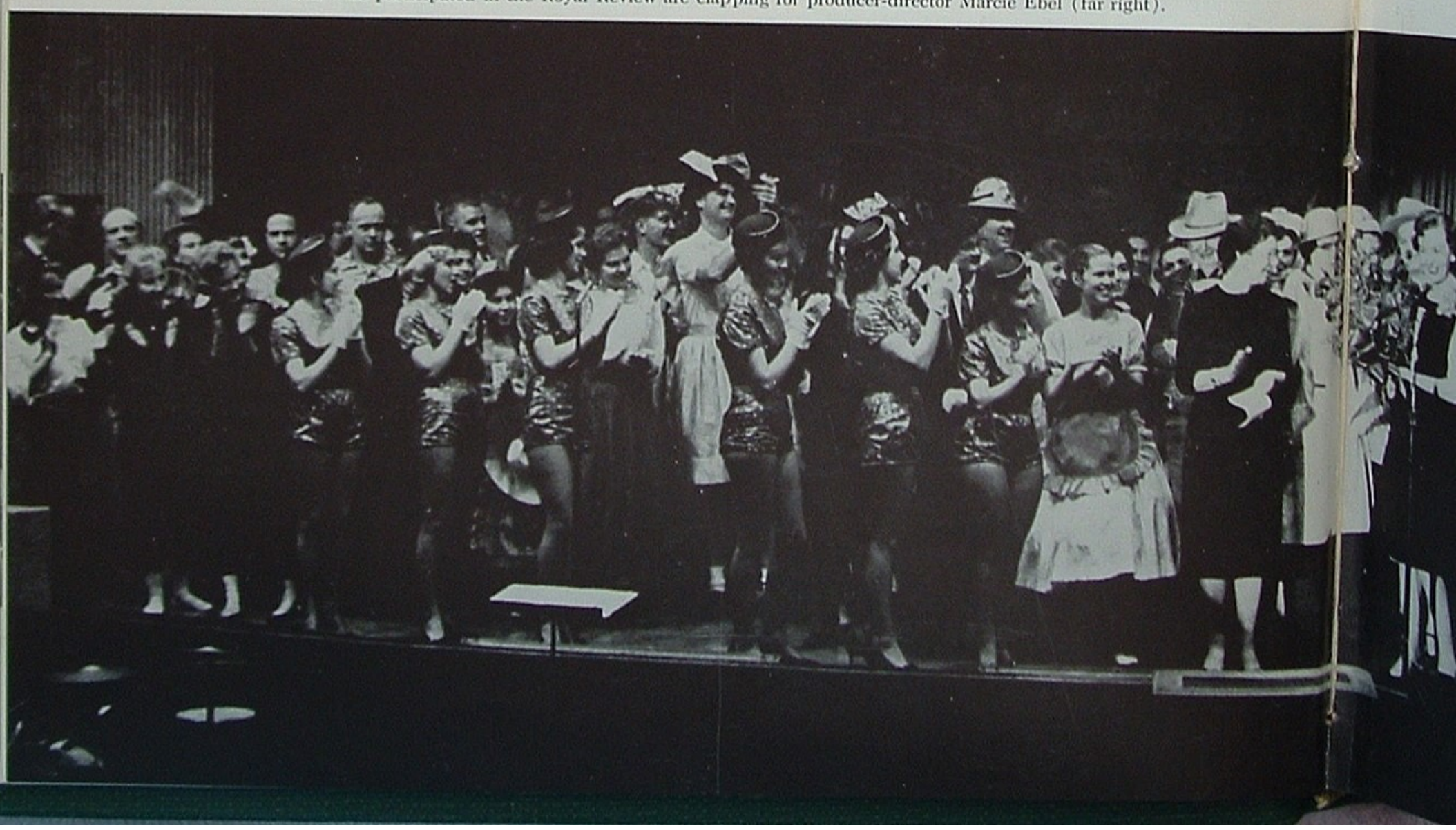
Royal Revue

If Union Oil decides to take on a sideline, there's no question about the business it should get into: *show* business! There's enough talent on the payroll right now.

The Union Oil Girls Club proved that when they put on the Royal Review, a two-and-a-half hour variety show that played to three packed houses last November. Actually, the show had been scheduled for only two evenings; but the demand for tickets was so great, it was held over. Nearly 1600 people saw the review! Donations will help pay for the Club welfare projects.

The all-employee cast featured everything from a slick magician (Dr. W. E. Bradley, of Research) to

The 200 Union Oilers who participated in the Royal Review are clapping for producer-director Marcie Ebel (far right).



They read commercials — "Mark" Markwick.

They sang — Lucille Zaikis, a soloist with the Union Oil choir.

female impersonators (Dick Symmes, Fred Conroy, and George Webster, of Distribution), to a choir (the Union Oil Choir directed by Purchasing's Dee Erb). The choir was so good the standing-room-only audience wouldn't let them stop singing. Marceil Ebel of the Land Department produced and directed the show.

Many of the performers, it develops, had either sung or played with bands to pay their way through school or were ex-professionals who had gotten into the oil business because the eating's more regular.

But now — if the oil business gets too tough, move over, show business.

/The End

They made like trees — John Towler.

The men's chorus. The chorus, and the choir which sang the concluding numbers, stopped the show. Recordings of their songs are being pressed.

BUSINESS HIGHLIGHTS OF THE MONTH

- *Pilot plant for people — Research*
- *Around the world and through — Exploration*
- *More watches than watchers — Treasury*
- *Road maps by the ton — Purchasing*
- *Construction is big business — Marketing*

World-Wide Exploration

The Company's search for new sources of crude oil is now on a world-wide basis. In the past, our oil-finding efforts have been confined pretty much to the Western Hemisphere, where our recent Latin America exploration labors were unsuccessful.

Areas of most active Union Oil interest at present are in Australia, where currently we are drilling a deep wildcat test on a very large jointly-owned concession, and in the Spanish Sahara, where our first exploratory well will be spudded early in 1961. We also are endeavoring to establish a position in the more favorable areas of Libya.

Other Company geologists have been assigned the job of undertaking reconnaissance geological studies of oil-finding provinces throughout the world. These regions include Indonesia, Pakistan, the Philippines, French Algeria and the Middle East. No area considered to hold promise will be overlooked in our broadened search for new crude oil reserves.

Foreign Operations, E. C. Babson

Geophysicists Look for Oil Beneath Marshes and Jungle

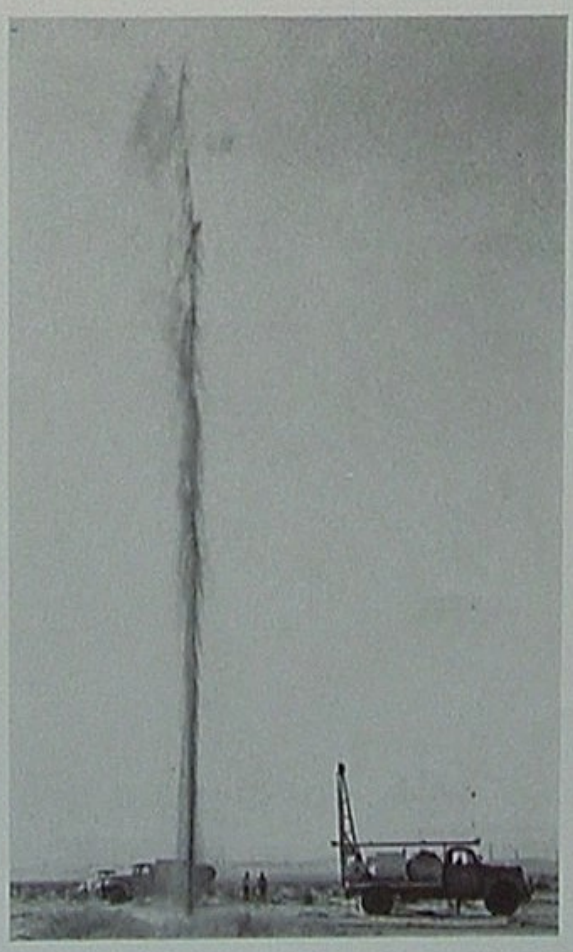
A high percentage of oil and gas discoveries during recent years has been in areas covered with sand, water, marsh, or jungle, all of which hide the surface geology. Hence, geophysics is an important tool in Union's exploratory efforts.

The role of the geophysicist is to map underground structures in these places where the surface gives little clue to subsurface structure, but where the regional geology — either from wells or distant outcrops — indicates exploratory work is worthwhile.

Most people think of geophysics as consisting only of seismic surveys, but Union uses many other methods.

Gravity Surveys: These, in effect, measure the changes in weight of a surface mass caused by variations in density of subsurface rock. These changes result in extremely small variations in the earth's gravitational field. Gravity surveys are often useful for locating light rocks, such as salt domes, or faulting and uplifts in buried, heavy rocks, such as granite basement. (Basement rock means just what it sounds like; The bottom, or hard rock—underlying sediments in which we sometimes find oil- or gas-bearing formations.)

Seismic crew sets off a shot.



Aeromagnetic Surveys: Minute variations in the earth's magnetic field are measured with an instrument called a "magnetometer" which is towed or carried by an airplane. These measurements provide data for computations of the thickness of the sediments, from which the outline of the structural framework of basement rocks can be made. Sometimes such studies indicate basement uplifts or faulting where likely places for oil accumulations may exist.

Geochemical Surveys: Hydrocarbons sometimes percolate up to the earth's surface from buried oil or gas accumulations. Geochemical surveys measure the amount of these hydocarbons in surface soil, and the pattern of these measurements may indicate the presence of oil or gas fields. Some of these methods even make use of the measurement of the amount of metals in surface plant life as indicators of subsurface structure.

Geophoto Surveys: Geological surveys made from aerial photographs. Recently, color photography has been added to help identify surface rock

types. Union is also using a new tool called the gas exploder which is effective in water-covered areas for mapping shallow structure by seismic techniques. The gas exploder makes use of a "bomb" or tube containing an air-propane mixture, in contrast to the conventional explosives ordinarily used in seismic work. The recording techniques are also different from ordinary seismic work.

Extensive use is made of magnetic tape recording and digital computer techniques in reducing and interpreting our geophysical studies; and our instruments are now carried by helicopters, ships, airplanes, trucks and snow-sleds.

Effective results from these different tools depends on coordinating the interpretation of geophysical results with data from wells, geophoto surveys, and regional surface geology.

The successful search for oil and gas today involves all the old and new techniques of exploration. Union is constantly seeking ways to improve the use of geophysics — but there is still no direct way to find oil except by drilling.

From the office of Basil Kantzer

We Move the Earth

Over the years, a large part of Union Oil's commercial sales has come from construction companies—outfits that move the earth for highways, dams, and even ballparks, such as the Chavez Ravine home of the Los Angeles Dodgers.

You get this type of business because you have the right product at the right price; but you also get it on the basis of service. And it is the element of service — willingness to put the diesel oil right in the contractor's equipment, for example, or to go out of your way to make life easier for the man on the job — that has kept Union in the forefront as a supplier to the construction industry.

Union Oil products are being used by contractors building freeways in the Seattle-Tacoma area; on dam and water resource conservation work in the Sierra Nevada near the Oregon line; on road work in the Redwood Highway country north of San Francisco Bay; on flood control projects east of Los Angeles; and on San Diego's freeway realignment and extention program.

How many jobs are we involved in? Our part in Arizona's very energetic roadbuilding program gives you an idea. During October, we were successful in contracting to supply part or all the petroleum requirements on 11 highway construction jobs in the state.

As a secondary benefit to the company: Much of Arizona's program includes improving roads into the state's historic sections. Among the improved roads is State Highway No. 177, a route through colorful south-central Arizona that will carry tourists from Phoenix and Tucson.

On Highway 177 at Hayden, 90 miles from Phoenix, we've just completed a new combination marketing station and service station. This new unit — the best station on the highway — will be a mecca for the tourist trade, and it also puts us in

Continued

Heavy earth movers powered and lubricated with Union Oil products at work on the Yakima, Washington freeway.

a position to serve major companies in one of the most important copper mining areas of the state.

As a footnote to the contractor business: Union Oil sells not only fuels and lubricants used by construction equipment, but our good reputation with the builders also contributes heavily to our asphalt sales.

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The combining on November 26, 1960, of the Oregon Division's Beaverton and Cornelius marketing functions into one area, with headquarters at Cornelius Marketing Station, is expected to bring greater efficiency and economy.

° ° °

California South Coastal Division has begun deliveries of bunker fuel oil to the City of Los Angeles, Department of Water and Power, at their Harbor Steam Plant Installation in Wilmington, California.

Marketing, from C. H. Finnell

° ° °

Military Petroleum Supply Agency has awarded the Company a three-year contract, beginning January 1, 1961, calling for the delivery from Los Angeles Refinery of 5,475,000 barrels of Navy Special Fuel Oil.

Marketing, from F. K. Cadwell

Receive Watches

At the Jonathan Club on November 14, Senior Vice President H. W. Sanders presented gold watches to Hilda Bills, Mary Gray, H. H. Hansen, J. E. Kunkel, F. B. Bremer, H. S. Temple, F. L. Croce, W. S Newton and R. M. Shaffstall — all Treasury Department employees with 30 years or more of Company service. Mr. Sanders had previously received his watch from Reese H. Taylor, Chairman of the Board. Also present was W. W. Workman, the department's Credit Manager, who received his watch award at our Company's 70th Birthday Dinner.

Vastly outnumbered were W. R. Craig, M. E. Smith and L. B. Houghton, relative newcomers who brought their own watches but shared in the good-natured reminiscences.

Treasury, from L. B. Houghton

Maintenance Supervisors Visit Research

At the invitation of Asphalt Sales Supervisor Kelly Walker, of the California South Coastal Division, 150 members and guests of the Equipment Maintenance Supervisors' Association visited Union Oil Research Center in November. Through motion pictures, lab demonstrations, and engine laboratory, tours, the master mechanics and supervisors in charge of earch-moving and other heavy equipment used by contractors were made aware of research progress in fuels and lubricants for the heavy construction field.

Above: Asphalt Sales Supervisor Kelley Walker and a diesel engine connecting rod which was split when metal failed.

Right: Research host Bob Tanner does the talking while members of the Maintenance Supervisors' Association examine bearing parts through microscopes.

Research Hosts Future Leaders

The Research Department recently had the pleasure of hosting 12 Coro Foundation interns and explaining to them the role of research in the petroleum industry. Coro Foundation selects a group of liberal arts graduates and post-graduates each year who are planning to enter the public service field, and provides them with scholarships for a nine-months internship in public affairs. Each intern gains first-hand experience with government agencies, political parties, business firms, labor unions and civic organizations through field assignments and projects. Our participation in their training was part of a cooperative petroleum industry program arranged by the Western Oil and Gas Association. It is deemed essential that these potential future public leaders have some understanding of the oil industry's operations and some insight into the complex technological and business problems oil men deal with.

George R. Lake of Research received a Certificate of Appreciation from the American Petroleum Institute at their annual meeting in Chicago on November 14, 1960. The award was for "distinguished service" on various advisory committees having responsibility for a program of fundamental research of the composition of crude oils, sponsored by the petroleum industry. For some 10 years, George was active on the research project concerned with sulfur compounds and, from its incep-

tion in 1954 until 1959, was chairman of the committee for the research project on nitrogen compounds.

Research, from W. E. Bradley

George R. Lake

A "Thank You" From the Girls Club

After their successful "Royal Review" variety show (see story page 12) the Union Oil Girls Club presented a "thank you" note to Chairman of the Board Reese H. Taylor. The note read:

"On November 28, 29 and 30, 1960, employees of Union Oil Company presented a Variety Show in the Beaudry auditorium. The proceeds of these performances will be deposited in the Welfare Fund of the Union Oil Girls' Club for our 1961 projects.

"We feel that the degree of good employees relations that resulted from the over 200 participants in the show plus the 1600 who attended the performances could never be measured in words.

"All this could never have been accomplished had it not been for the cooperation of Mr. Ugrin, Mr. Weld and those who participated.

"We wish to thank our Company for all the wonderful assistance it has given us, by building stage settings, furnishing mikes, lights, arranging space for rehearsals, etc.

"We sincerely appreciate the Company's cooperation."

It was signed by Annis Tully, president, for all the girls in the club.

Orcutt Refinery Sets Safety Record

On December 12, 1960, the employees at Orcutt Refinery passed another milestone—they have worked four years without a disabling injury. The total number of manhours worked in this four-year period is 215,189 and is still accumulating.

° ° °

Significant changes over the years in the quantity and quality of crude oil processed in Company refineries have heightened our concern about the sulfur content of petroleum products. Facilities have been or currently are being added at Los Angeles Refinery to remove sulfur from gasoline and mid-barrel products. Also we are in the process of re-arranging some refining facilities so that even the sulfur content of fuel oil can be reduced.

Refining, from J. W. Towler

Compacts Get O.K.

The use of compact cars for business purposes within the city has met with favorable employee acceptance. Home Office pool-car users were unanimous in reporting that the general performance of our three test compacts is satisfactory. A number of users enjoy the ease of handling small cars so much that have little or no preference for larger ones. In the future, a higher percentage of compacts will be purchased for use in metropolitan areas.

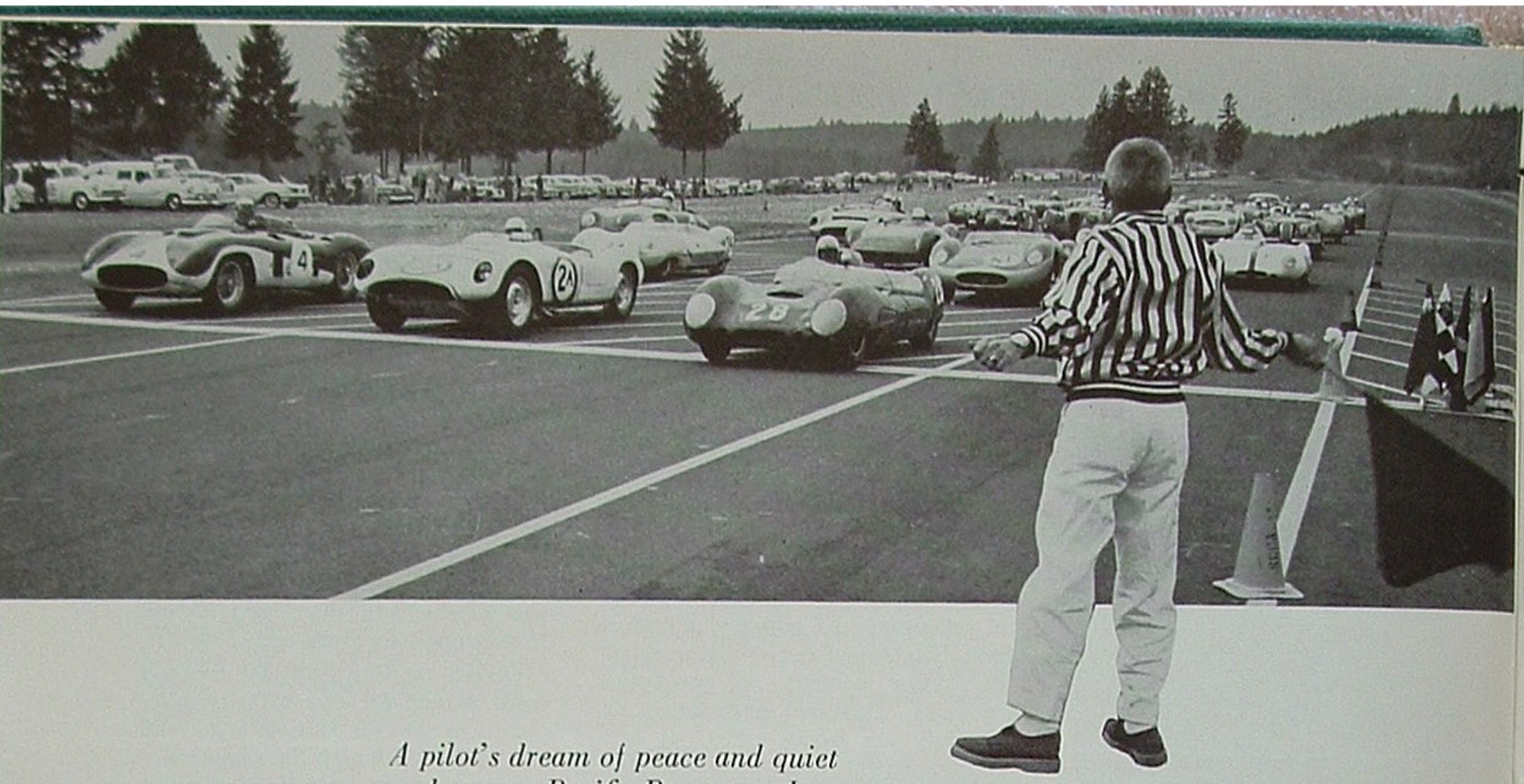
Orders totaling $160,000 recently were placed for our 1960 requirements of service station state and city maps. Although the importance of maps is seldom measured in terms of weight, many of our customers might be interested to learn that Union Oil gives away 50 tons of road maps annually.

Purchasing, from C. S. Perkins

/THE END

Oleum Refinery will again fly the Green Cross Safety Flag signifying more than one-million man hours without a lost-time injury. The flag will continue to fly as long as no lost-time injuries mar the hour record. This is the seventh time that the Refinery has been able to fly the safety flag since 1953. Their best record to date is 2,229,400 hours without a lost-time injury. With the safety flag are from left: W. T. Jameson, Manager; R. V. Lewis, Foreman, Lube Oil Department; R. V. Cargo, Maintenance; C. E. Hamilton, Safety Supervisor; R. L. Cooper, Operations; and G. E. Jackson, Laboratory.

Chairman Reese H. Taylor receives a "thank you" note from Girls Club president, Annis Tully, right, and Marcie Ebel, who directed the employee talent show, "The Royal Review."



A pilot's dream of peace and quiet becomes Pacific Raceways, Inc.

High speed in the tall timber

Airlines Pilot L. E. Jones entertained an ambition to build his home deep in a tract of tall timber convenient to but well outside the community of Kent, Washington. There during his three days or so of off-duty each week he could get away from crowds and roaring engines — enjoy the peaceful quiet of a forest — and exchange motor fumes for the scent of pines. Jones bought the large chunk of forest he had in mind and, with the help of an understanding wife, started to build their dream home. Then it happened:

Downtown in Kent, some of the townspeople voiced a problem. Their youngsters were building hot rods and using public highways to try them out. Worse still, sports car enthusiasts were converging on the thinly patrolled county roads for many a clandestine road race. How could the dangerous speeding on public roads be stopped?

Jones still doesn't know exactly how or why he got into the argument. But presently he found himself elected president of Pacific Raceways, Inc. Behind him, barring all hope of retreat, were several local businessmen, including Union Oil Dealer Lamar Strain. And the whole town was applauding plans for Pacific Raceways. The new race track, finest in the world, would have a mile long straight-away for *drag* racing, a 2.4 mile continuity of loops and bends engineered for road racing, and the safest possible viewing accomodations for thousands of spectators. It would be located right in the heart of Jones' forest primeval, and his unfinished house would serve, with some revision, as an ideal headquarters.

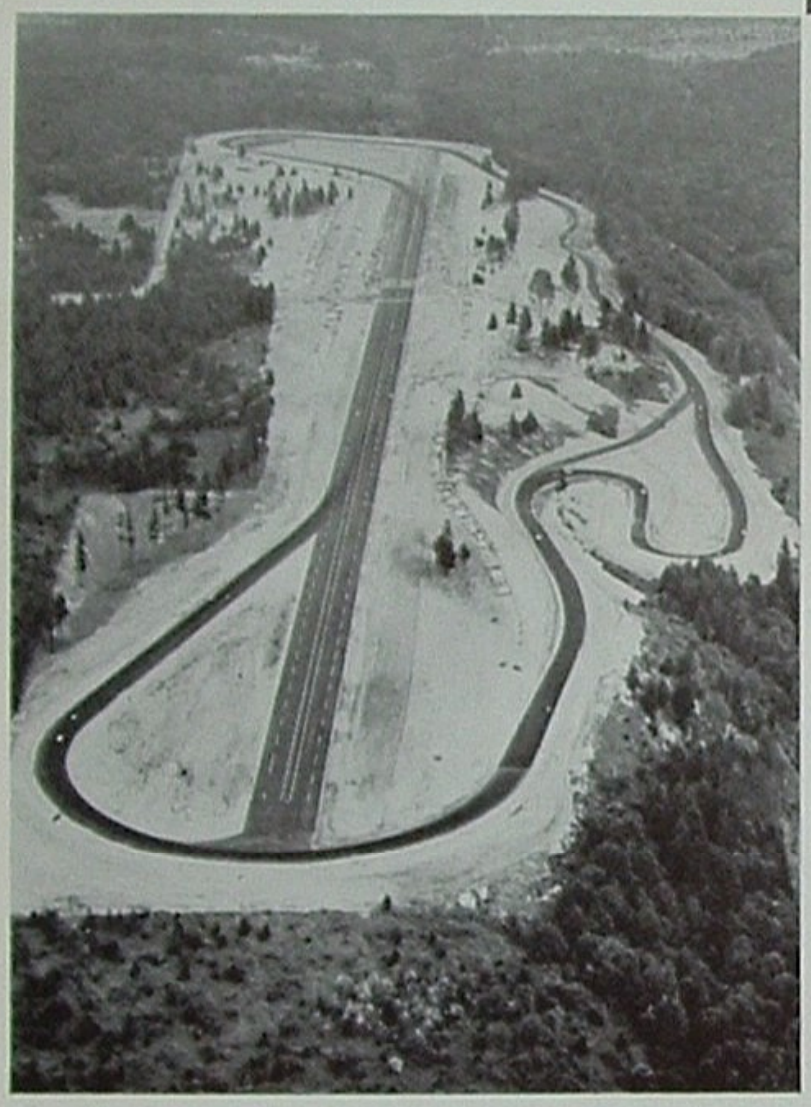
Union Oil Company also is a little at loss as to how we got into it. But the now finished race course is paved with Union asphalt from end to end, and two of our gasoline pumps near the pits remind racers and spectators alike that we wouldn't mind getting some of our money back.

Handy to both Seattle and Portland, Pacific Raceways already has proved to be a major sports attraction in the Northwest. Over 12,000 spectators viewed the inaugural competition last July 3rd. Since then, a steady succession of events sanctioned by the larger racing associations has attracted hundreds of the country's best drivers and fastest cars. Between times, the *hot rodders* and sports car owners of Kent vent their machines and enthusiasm on a roadway made to order. Pilot Jones invariably comes home to the whine of a Ferarri and the slightly petrol-scented aroma of pine.

Sports car racing is dominated by amateurs. Their machines range through a dozen classes from $15,000 super-speedsters down to quarter-midgets for the kids. Many a record breaker is built and raced by boys who put away their tricycles just a few short years ago. With two- or three-hundred dollars they sometimes convert the old family automobile into a rocket on wheels.

Track rules on such courses as Pacific Raceways classify the cars on a power-to-weight ratio, thereby

Viewing and safety advantages were achieved by locating the track's S-curve beneath spectator location on a hilltop.



The mile-long center strip of Pacific Raceways is for drag racing; the tortuous outer ribbon of asphalt, 2.4 miles long, is a road-racing challenge to both drivers and cars.

Union Oil Salesman Bill Knight, left, and Pilot L. E. Jones never dreamed of building a race track; they were swept into it by eager citizens of Kent, Wash.

keeping each class within its field of competition. Rigid mechanical inspection and close race supervision keep the accident rate very low despite speeds of nearly 200 miles an hour. Rivalry is intense but clean. All factors combined make of it one of the most thrilling and fastest-growing spectator sports in America.

So, although Mrs. Jones may not agree with us, we believe that her husband's dream is coming to a happy ending in Pacific Raceways. At least the tall timber will never want for weekend visitors and the town of Kent will ever be grateful to one of its most unselfish citizens.

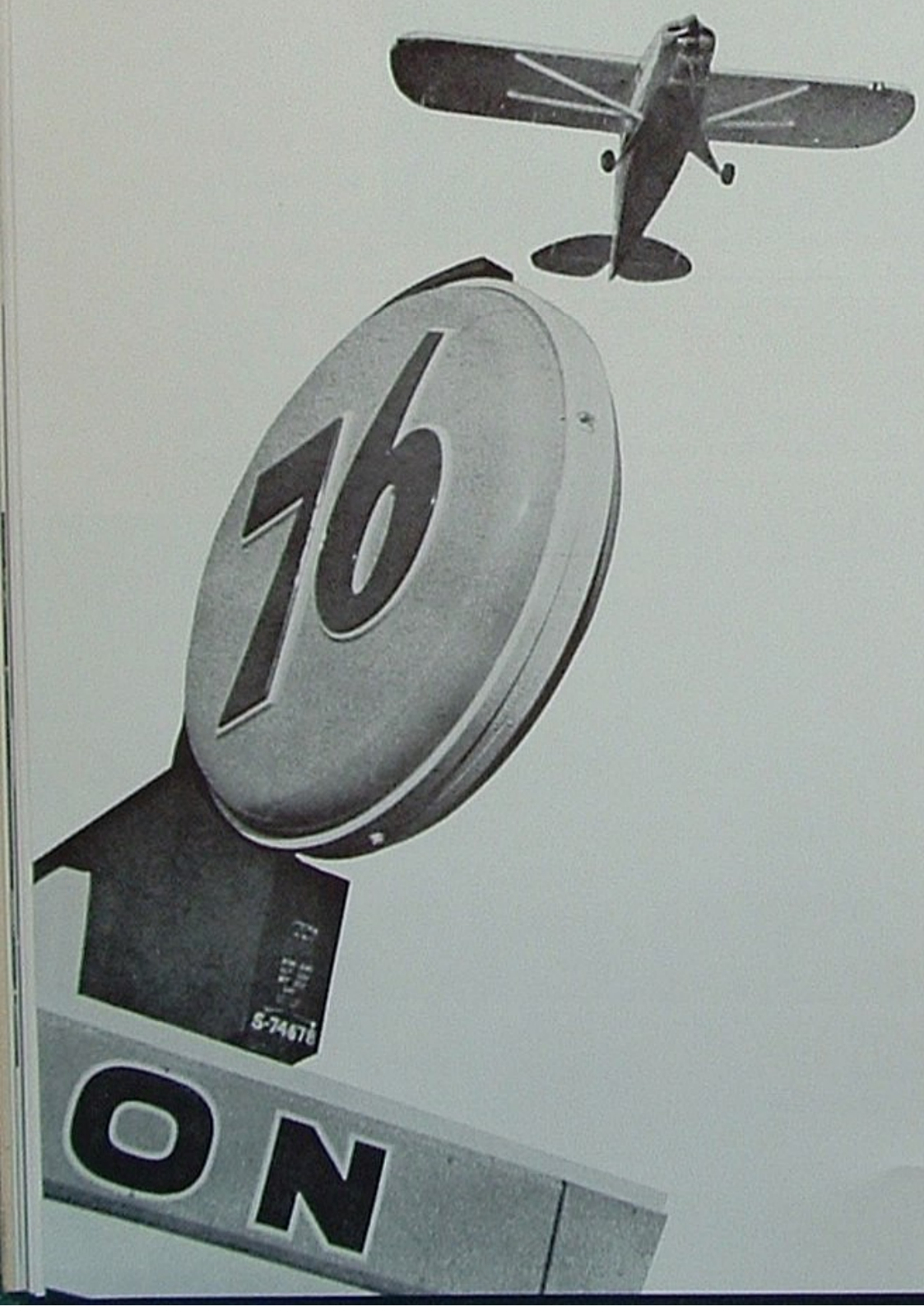
/THE END

Minute Men with

by Russ Halford

Besides a nearly empty gas tank, the thing that pulled me off Highway 18 and into Martin Fisher's "76" service station near Apple Valley was an airplane. It had taxied to the station from an adjoining airstrip and was receiving the "blue yonder" equivalent of Minute Man service.

Nor was the trim little monoplane alone. Airplanes nearly outnumbered automobiles at this gasoline oasis on the Mojave Desert and were getting their full share of attention. As I nosed around, I sensed that something extraordinary was taking place here. Faces were thoughtful if not grim. Several semi-uniformed persons, obviously airmen, were poring over maps and talking about "grids."



I singled out Fisher himself in his name-labeled shirt—pouring coffee for the pilots, then hurrying outside to resume his duties as ground crew. "A Minute Man with wings!" I heard someone remark, and turned to see the airmen lift their coffee cups in a spontaneous toast to the hurrying figure of Fisher.

The flyer who had spoken was a woman and, as I later learned from the others, a most remarkable woman. She's a grandmother in her 50's—has two children, six grandchildren—didn't start flying until she was 43—now operates the Flying Realty and Bell Bookkeeping Service out of Fullerton, California. She was a contestant in the 1952 Powder Puff Derby, a coast-to-coast airplane race for women. Now she pilots prospective customers everywhere to ranches and desert properties listed for sale.

But today Edna Stennett had dropped business at the urging of a more serious call. A private airplane with three people aboard had been reported missing in rugged country to the west and north of Apple Valley. Civil Air Patrol, a civilian auxiliary of the U. S. Air Force, had been asked to conduct a search in the Bakersfield-to-Las Vegas area, where radio contact with the pilot had been lost. Eight private airplanes, each with a CAP pilot and observer, had responded to the Southern Area Commander's call this Tuesday in October. Edna Stennett, with Pilot Wesleigh Carrell at the controls of Mrs. Stennett's Cub Tri-Pacer, had volunteered as observer.

Such programs of rescue, I soon discovered, are as expertly staffed and thoroughly planned as any military mission. In a small CAP command post next to Fisher's service station, pilots present their credentials and register for the search. They must have skill and equipment to match the terrain. Searching is never done at random, but in accordance with two plans:

First a *route* search is conducted—that is, the reported route of the lost craft and a margin five miles on each side is examined for evidence of a forced landing, fire, broken tree tops, wreckage, distress signals. This failing, the rescue program resorts immediately to a *grid* search.

Back at the CAP command post, the area is blocked off on a map into grids, each representing approximately 270 square miles. The grids are in turn divided into halves and quarters. Finally each search plane is assigned to a grid or some portion thereof, according to

n wings

the craft's fuel supply and the type of terrain it will cover. In this systematic manner an entire area can be covered without duplication of effort and at minimum risk to the searchers.

Invited by Edna Stennett and Pilot Carrell to help them search an assigned portion of one grid, I soon discovered why western mountain ranges are respected for their ruggedness and weather. Clear desert air gave way just a few minutes from Apple Valley to storm clouds along the mountain tops and dense fog in the valleys beyond. Shining ridges alternated with deep, black canyons. Forests protruded from the season's first mantle of snow. Vicious air currents pounced from nowhere to force the Cub up or down.

Despite everything, the search moved on—over hog backs and granite outcrops—up and down canyons—often within a few feet of tree tops or rock walls until both pilot and observer were convinced their portion of the grid held no evidence of a crash.

Then we turned back to the "76" service station under the clear sky of Apple Valley. While Fisher refueled us with gasoline and coffee, the pilot and observer made their report to the CAP commander. We had saved no lives, but we had narrowed the area of search by quite a few perilous square miles. Not until a week or so later would another team, flying another grid, locate the lost plane—this one, unfortunately a thorough tragedy.

Certainly Dealer Fisher doesn't make much, if anything out of servicing a CAP air search. But there are other rewards of long-lasting significance to people who place the welfare of others above financial gain.

Personally, I don't believe I'll ever be able to pass this "76" service station without dropping in for a fill of gasoline and asking about those three "Minute Men with wings"—Edna Stennett, Wesleigh Carrell, and Martin Fisher, the ground crew.

/THE END

On air-search days in Apple Valley, Minute Man Martin Fisher serves as one-man ground crew.

Pilot Wesleigh Carrell, right, gets a search grid from Maj. Painter of CAP.

Mission accomplished, Pilot Carrell and Observer Edna Stennett return to Fisher's service station for a refueling and hot coffee.

14 OF THE 634 GOLD WATCHES recently awarded to Union Oil's 30-year employees, dealers and consignees are exhibited by recipients at Los Angeles Terminal. The wearers are, from left, Reynold Miller, Dale Ralph, Charles Brown, Art McDougal, Russ Pace, Robert Coombs, Al Lathrop, Sid Bartel, Kenneth Six, Frank McCullough, Harry Ritzer, Donald Reed. Additionally, recipients Don Carr and William Cozad were not present when Division Sales Manager Ed Kendall, Jr. and Distribution Manager Vic Griddle unwrapped the congratulations.

CONSIGNEE K. H. JOHNSON, right, of Ojai, California, headed Ventura County's Boy Scout leaders to a Golden Jubilee Annual Meeting of 800 Scout executives in Sacramento during November. Active in Scouting for 14 years, he currently is president of the Ventura County Council. With him in the photo are, from left, Scout Commissioner Thomas R. Carr of Ventura County, President Ellsworth Agustus of the National Council, and Chief Scout Executive Joseph A. Brunton, Jr.

from J. B. Gessford

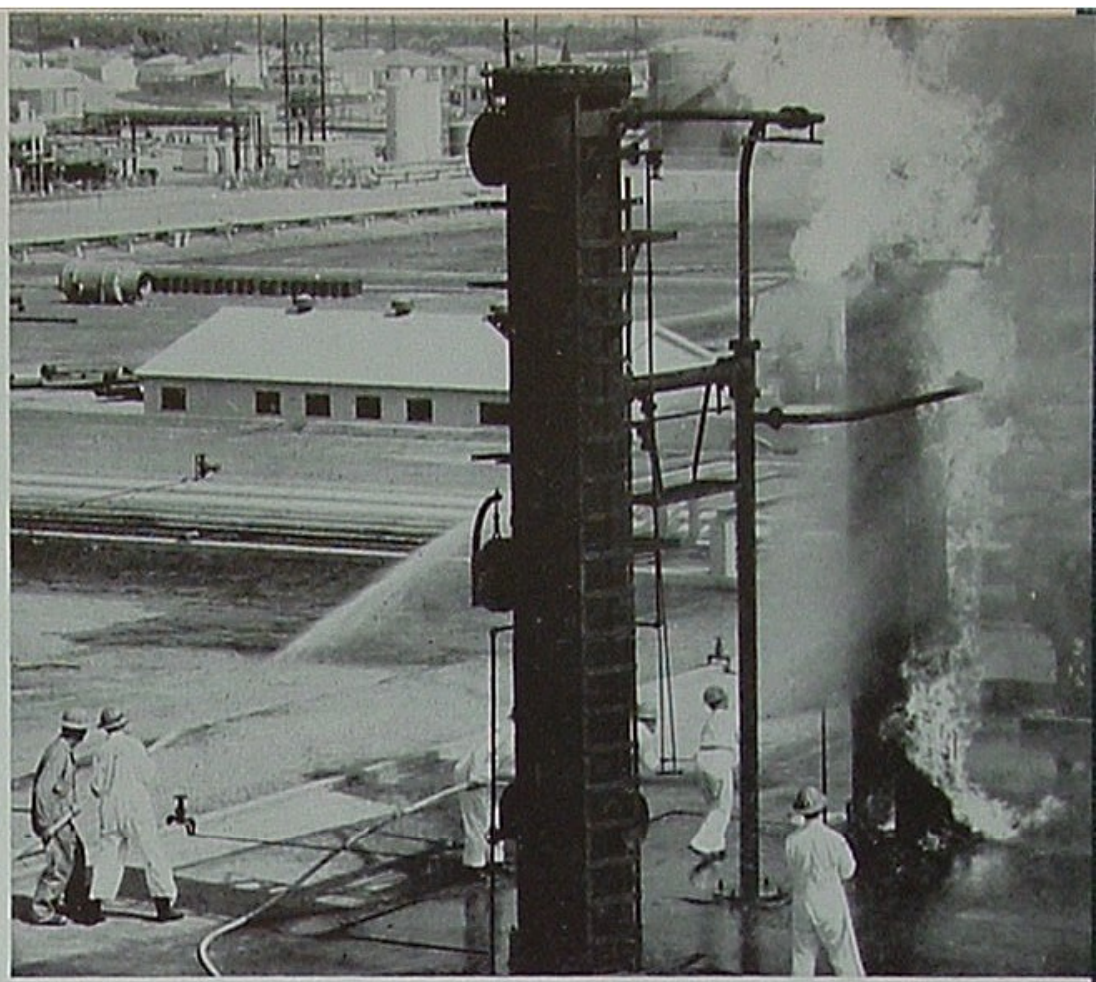
LARGEST NEON SIGN IN THE ORIENT is Maruzen Oil Company's $166,000 display atop the nine-story Tsukamoto Building on Tokyo's famous Ginza Street. It is over 64 feet in length, 55 feet high, and holds 13,000 neon bulbs. Displaying seven colors at night, it achieves 48 changes of color design each 45 seconds. An estimated 2,625,000 people view the display daily. Maruzen Oil are distributors of Union Oil products in Japan and are affiliated with us in other oil industry activities.

from Frank A. Culling

PAUL S. GRANDLE, engineering supervisor at Union Oil Center, was one of five Southern Californians to receive Scouting's highest award, the Silver Beaver, at appropriate ceremonies in November. From left, Dr. Theron Freese commends Elliott Stiles, Roy Herbold, Virgil Sponberg, Union Oiler Paul Grandle, and Leo Forman for their "Outstanding service to boyhood."

from Boy Scouts of America

in focus



NOTHING UNTOWARD HAPPENED when this fire engulfed training equipment at Los Angeles Refinery. The flareup and its prompt extinguishment were part of a Military Petroleum Indoctrination Course for 30 military leaders gathered in Southern California from all parts of the United States. The oil industry's experience and techniques are always available to help strengthen the nation's first line of defense.

from Jim Hawthorne

DEALER VINCENT SIMILI, right, of Los Angeles celebrated his 10th anniversary with Union Oil by selling 11,803 gallons of gasoline in two days — an area record. The anniversary was sweetened by free gifts of sugar and candy. A sound-car alerted the neighborhood and Stiltman Harold De Garbo was on hand to give the youngsters free balloons. Among Vincent's assistant hosts were, from left, Mike Simili and Retail Sales Supervisor Ken Clark.

from C. H. Duncan

KIWANIANS, starting on their annual motorcade from San Diego to San Jose, were launched in the *Finest* style by Union Oil Resident Sales Manager M. V. Morrison and Mrs. Morrison. The hostess is seen supplying the motorcade at 6 a.m. with "76" maps, map folders, bumper stickers and credit cards. Similar Company hospitality was extended at Oceanside, Ventura, Paso Robles and San Jose, where other groups joined the parade. In all, 4,000 people attended the Kiwanis convention. So many expressed their pleasure with "76" service enroute that we know the extra effort is bound to produce lasting friendships.

from J. S. Foster

DON FINK AND NORM DENTON, standing at left, are our assistant credit managers in Seattle. They are seen as guest teachers of the 9th grade at Seattle's Lincoln High School, explaining the American credit system and telling how to use it more intelligently. The commendable program was established and is being promoted as a public service by the Retail Credit Association of Seattle. Now in its fourth year, the educational program reaches 100 separate classes each year. Another program sponsored by the same Association is "Debtor Counseling," in which the creditmen donate freely of their evening hours to help adults and families plan a way out of financial difficulties.

from Richard I. Noland

The Racket Squad: Seated from left, Chuck Seibert, Larry Higbee, Max Lorimore, Dick Dulaney, Lee Spencer (doubles champion), Bob Koch (singles and doubles champion), and Kent South. Standing from left, Hans Baer, Lew Lawrence, Andy Hauk, Fritz Skinner, Elmer Cinnater, Jay Phillips, George Stephens, Don Jordan, and R. Lownes.

The 1960 tennis racket

Following quite a bit of office banter about who might be the best tennis player in Union Oil, a score of the boys repaired to California Institute of Technology during November and decided matters scientifically:

Following a holiday and two Saturdays of elimination, Sales Manager Robert F. Koch of Export Sales took charge of the singles racket (I believe they called it) by blasting Engineer Charles Seibert of the Field Department 6-3 and 6-0. (This Koch, my bookie tells me, is a *ringer* — an ex-college champion from Utah.) General Manager Lee Spencer of National & Special Accounts and Comptroller Max Lorimore were singles semi-finalists (mourners).

In the doubles, *Ringer* Koch (the bookie was right) paired with Spencer to cross the finish line before Lew Lawrence of the Tax Division and Assistant Counsel Andy Hauk hardly got out of the starting gate — score 6-0 and 6-1. Which goes to show that even tax experts and attorneys are putty against a tennis racket — scientifically conducted.

/THE END

RETIREMENTS

December 1960	Service Date
COLBERT A. DOMINGES *Northern Field*	Mar. 27, 1923
January 1961	
PIERRE S. BEAULIEU *Los Angeles Refinery*	Oct. 7, 1921
ARTHUR J. BELS *Northern Field*	Mar. 7, 1944
LEWIS A. FELDMAN *Calif. Cent. Div.*	July 19, 1929
RUSSELL H. GARRETT *Northern Field*	Mar. 1, 1950
ALBERT E. GOSSELIN *Calif. So. Coast. Div.*	July 11, 1946
MARY C. GRAY *Treas. Credit—Seattle*	Jan. 2, 1931
ROY E. KIES *Northern Field*	Dec. 2, 1922
EDWARD J. HINDERS *Los Angeles Refinery*	Aug. 3, 1925
FRANK V. HOLLISTER *Field Drafting*	Nov. 17, 1926
THOMAS G. MILLER *So. Field-Automotive*	Nov. 29, 1920
WILLIAM B. MILLER *Los Angeles Refinery*	Apr. 24, 1944
ANTONE REBELLO *Oleum Refinery*	Aug. 17, 1920
WALTER E. STOWELL *Northern Pipeline*	May 10, 1934
JOSEPH A. WILSON *Legal-Tax*	Sept. 8, 1919

IN MEMORIAM

Retirees:

CALVIN R. GOSS *Northern Pipeline*	November 23, 1960
BERT STICKLER *Oleum Refinery*	November 14, 1960

SERVICE BIRTHDAY AWARDS

EMPLOYEES
January 1961

45 YEARS
FLOYD LA GRAFFE .....Field—Southern Div.

40 YEARS
JAMES E. HILL .....Ind. Relations—H. O.

35 YEARS
WILLIAM H. BENNETT .....Oleum Refinery
OSCAR S. CHAPLIN .....Pipeline—Northern Div.
ELROY T. KERWOOD .....Field—Northern Div.
JOSEPH P. LYNCH .....Field—Northern Div.

30 YEARS
JAMES W. HASTINGS .....Mktg.—Northwest Div.
THERESA B. NEUMANN .....Comptrollers—H. O.
LOWELL C. PLANALP ....Mktg.—Cal. So. Cst. Div.

25 YEARS
ROSE R. BROSNAN .....Comptrollers—S. F.
EUGENE MAYO .....Mktg.—Cal. No. Cst. Div.
RALPH W. RAMPTON .....Field—Northern Div.
LINDSEY F. WHITTLESEY .....Field—Southern Div.
FRED J. WOLF .....Field—Southern Div.
ELMYRA I. NELSON ..Mktg.—Southwest Mtn. Div.

20 YEARS
WOODROW W. BEATTY ....Field—West Texas Div.
ROBERT L. CLARKE .....Field—West Texas Div.

15 YEARS
JACK BAILES .....Research—Brea
HAROLD G. BILLMAN .....Expl.—Foreign Oper.
ROBERT L. BOWKER .....Compt.—Rocky Mtn. Div.
CORBETT F. BRAMBLETT .....Los Angeles Refinery
JAMES F. BROWNLEE .....Los Angeles Refinery
ROBERT C. CAMPBELL .....Los Angeles Refinery
RUBEN I. CEBALLOS .....Oleum Refinery
CLYDE B. EMERICK.....Mktg.—Southwest Mtn. Div.
WILLARD J. GALLANT .....Field—Northern Div.
HERMAN A. GARVER .....Field—Southern Div.
CHARLES A. GREER .....Field—Southern Div.
CLARENCE C. HALTER .....Field—Northern Div.
WILLIAM E. HARDCASTLE .....Comptrollers—H. O.
BRUCE F. HARRELL ....Mktg.—Southwest Mtn. Div.
CLIFFORD C. HENDREX .....Los Angeles Refinery
ORA V. HICKMAN .....Los Angeles Refinery
JOHN M. HOULE .....Los Angeles Refinery
JOHN A. HOWE .....Mktg.—Calif. So. Cst. Div.
MARTIN W. HUDNALL .....Field—Southern Div.
HAROLD D. LASLEY .....Research—Brea
JAMES R. McGLAUGHLIN ....Los Angeles Refinery
ROBERT E. NICHOLSON ....Mktg.—Northwest Div.
WILBUR B. OHRT .....Mktg.—Cal. So. Cst. Div.
GEORGE L. PAGAN .....Field—Southern Div.
LEO E. PAULSEN .....Field—Southern Div.

15 YEARS
PHILLIP A. PEW .....Los Angeles Refinery
CHARLES H. ROGERS .....Field—Gulf Div.
MAE R. RUPERT .....Comptrollers—H. O.
FRANK D. RUSSELL .....Pipeline—Southern Div.
ROBERT M. SENFF .....Field—Northern Div.
RAYMOND E. STONE ....Mktg.—Cal. So. Cst. Div.
EVELYN C. TATHAM .....Los Angeles Refinery
A. A. TAVERNELLI.....Mktg.—Cal. So. Cst. Div.
TEMPLE C. YOUNG .....Field—Gulf Div.

10 YEARS
ROBERT J. ALLEN .....Field—Northern Div.
CHARLES E. ATKINS .....Field—Northern Div.
PAUL M. BALES .....Santa Maria Refinery
CALVIN C. BECKER .....Oleum Refinery
ALVIN J. BOURQUE .....Field—Gulf Div.
BERNES L. BROUSSARD .....Field—Gulf Div.
CLIFFORD BROUSSARD .....Field—Gulf Div.
LLOYD H. BRUNOT.....Field—Southern Div.
JOHN E. CAMPBELL .....Mktg.—Cal. Cent. Div.
MELVIN H. CHAFFIN .....Field—Northern Div.
BETTY R. COOLEY .....Exploration—H. O.
VIRDA M. COWHIG .....Compt.—San Francisco
BILLIE R. DEAN .....Treasury—H. O.
RAVELY DOMINGUE .....Field—Gulf Div.
HARVEY T. ELDER .....Field—Northern Div.
MICHAEL GALVIN .....Field—Southern Div.
MOSES F. GARRETT .....Field—Northern Div.
GEORGE M. HARPER .....Field—Gulf Div.
CHARLES R. HARRIS .....Comptrollers—H. O.
CHARLES R. KEEGAN.....Exec.—Miscellaneous
WILLIAM A. KONTER .....Field—Southern Div.
EVI B. LA BRIE .....Mktg.—Cal. No. Cst. Div.
PHILIP H. MARSH .....Los Angeles Refinery
HARLOW F. McCLAIN .....Mktg.—Hawaii Div.
VERNON J. MICHAEL .....Field—Northern Div.
ROBERT R. MONTGOMERY .....Research—Brea
JAMES D. MULLEN .....Compt.—San Francisco
JOAN L. PATTERSON ....Crude Oil Supply—H. O.
HENRY L. PERRIN .....Field—Gulf Div.
RICHARD C. PERYAM .....Field—Gulf Div.
JOHN I. PRICE .....Field—Exploration
HOWARD S. SAMSEL .....Field—Oklahoma Div.
ANTHONY A. SAVINE .....Oleum Refinery
BENJAMIN F. SCHMIDT .....Field—Northern Div.
CARL E. SMITH .....Field—Gulf Div.
HARRY A. SORENSEN .....Field—Southern Div.
BOB JOE TAYLOR .....Exploration—H. O.
IVAN W. TAYLOR .....Oleum Refinery
SAMMIE C. TERRY .....Field—Gulf Div.
DENZEL W. THOMAS .....Oleum Refinery
JAMES THOMSON .....Field—Canadian Div.
EARL M. WELTY .....Pub. Relations—H. O.

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WALTER BINGGELI .....Windsor, California
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STAGNARA'S SERVICE ....San Francisco, California

10 YEARS
FRANK L. DENNIS .....Santa Cruz, California
BEN KRAFT .....Kodiak, Alaska
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DILKON TRADING POST .....Winslow, Arizona
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KARL FAST .....Connell, Washington
HENRY FELKINS .....Spanaway, Washington
PAUL C. FRENZ .....Portland, Oregon
HUSTON'S UNION SERVICE ....Sultana, California
HOWARD J. JONES .....Redding, California
LAKE CHEVROLET COMPANY .....Lakeport, Calif.
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MOUNTAIN MOTORS .....Placerville, Calif.
MARION J. NOGGLE .....Allyn, Washingotn
FLOYD SCHOPF .....Mt. Vernon, Washington
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