

SEVENTY ⁷⁶ SIX

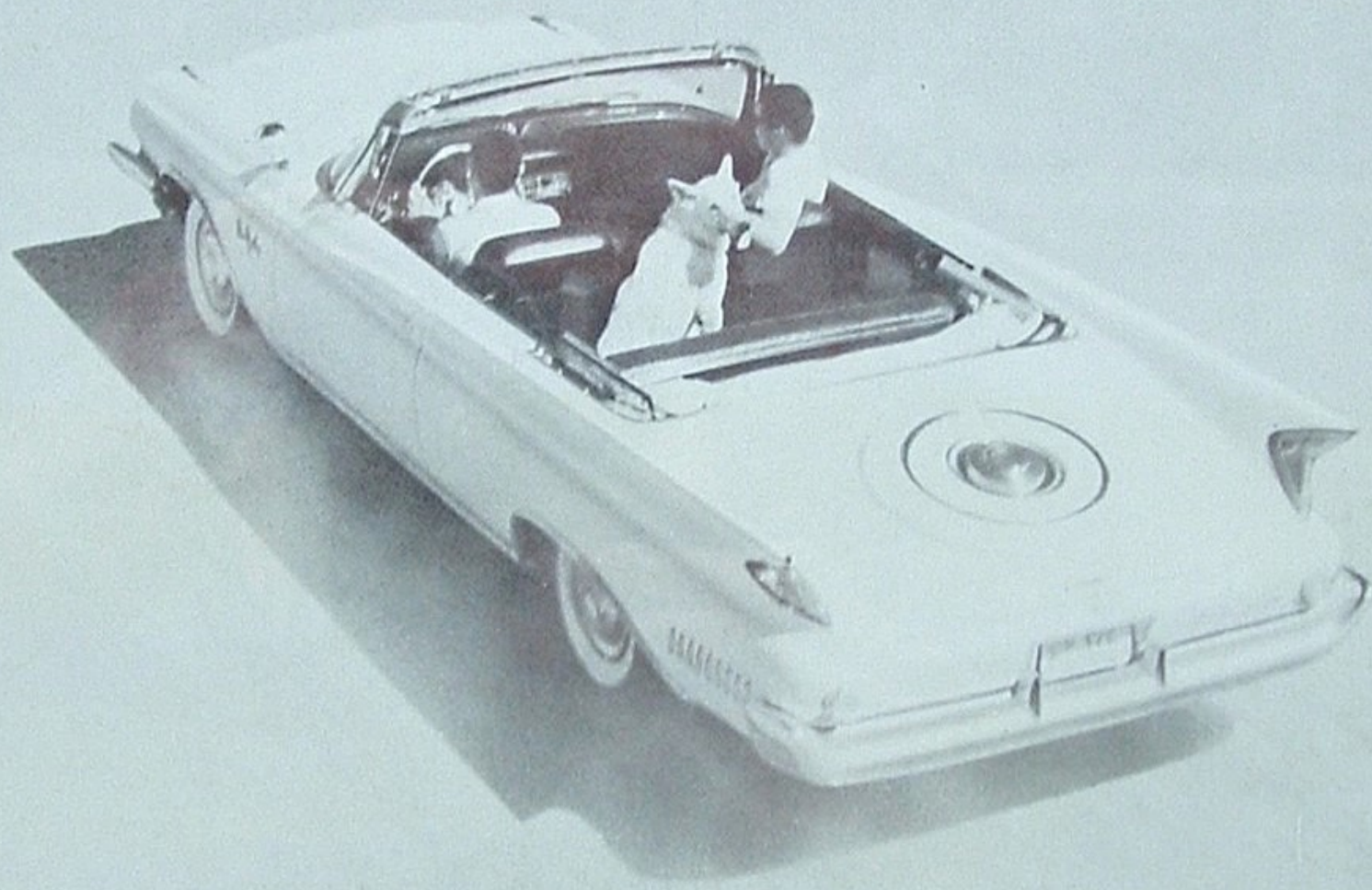
Union Oil Company of California

September 1960



You get **ALL**
PURE
POWER

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

SEPTEMBER, 1960

Fred Devine's powerful tug, SALVAGE CHIEF, plunges in green water as Devine prepares to pull the freighter Lipari off a beach near Astoria, Oregon. For another view, see page 2.

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

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You alone could swing the election!

In the presidential election of '76—1876, that is—candidates Rutherford B. Hayes and Samuel J. Tilden were kept in doubt even after the last vote was counted. It appeared that Tilden had a slight edge in the popular vote but was no better than even in electoral votes. The election was contested and referred to an Electoral Commission comprised of 369 members. By a margin of one vote, 185 to 184, Rutherford B. Hayes was elected President of the United States.

Amazingly, one of the Commission members who voted for President Hayes was a lawyer from Indiana who himself had been elected to Congress by a margin of one vote. Furthermore, it was learned that an Indiana supporter of the lawyer had gotten out of *sick bay* on election day in order to get the man of his choice elected to Congress.

So, you might say, President Hayes was elected by one solitary American who had a good excuse to stay in bed—but didn't!

Nor is this the only case of its kind in U. S. history:

Thomas Jefferson was elected President by one electoral vote. So was John Quincy Adams.

By a single vote each, California, Idaho, Oregon, Texas and Washington were granted statehood—meaning that the millions of people now living in these five states became full-fledged citizens—by one vote!

Even the Draft Act of World War II passed the House by a single vote.

Indeed if the full record of American democracy were scanned, it would be found that the "Ayes" or the "Nays" had it by this narrowest of margins. Probably a majority of one crops up in this country's voting tabulations oftener than any other number. Laws, public decisions, governors and legislators by the hundreds have been put into action or office by some lone member of the community who determined to exercise his voting franchise.

In this year of 1960, some of the most crucial decisions in human history are being made. Hasty decisions, selfish grasping and unwise leadership could lead not only to our national ruin but to world chaos and the almost inevitable aftermath of total war.

Never before did so much depend upon the voting wisdom and aggressiveness of our people. And remember, you alone could swing the election!

/THE END

The Salvage Chief



Fred Devine

Fred Devine first saw the Columbia River a little more than 60 years ago. He was then a two-year-old who had migrated with his parents from Nebraska to Portland. The mighty stream that drifted slowly past the family residence was to challenge the boy to a restless lifetime of action and adventure.

He played along its shores, learned to swim in its waters, and experimented with homemade craft of uncertain craftsmanship. But one day, when he was 13, a crazy impulse seized him. Leaving several young friends on the Washington shore, he pointed his bow toward Oregon and started swimming. The stream was a mile wide at this point, but his husky arms never stopped churning until he reached the opposite side.

This scene of triumph always held a special appeal to Devine. Years later it became the headquarters of his Fred Devine Diving Company. His powerful tug, the *Salvage Chief*, was moored there. The Devines built a home overlooking the same section of river.

Since that first victory over the Columbia, Devine



has made a career of thwarting the river *and* the ocean into which it empties.

At 15, young Devine was diving for fishermen whose drift nets often were caught by underwater snags. Soon he bought his own fishing gear in order to keep busy between diving jobs. When a new bridge was being built across the Columbia, Fred marveled at a pressure suit made for underwater work. He immediately volunteered as an apprentice to the diver. Presently, with a young man of similar stamp, he formed the Devine & Zimmerman Diving Company. They specialized in surveying the bottoms of grounded vessels and in salvaging sunken equipment and small river craft.

But in 1930 a tragedy occurred which opened his eyes to an opportunity. The steamer *Sea Thrush* ran aground in a storm near the Columbia's mouth. Fred went aboard and battened down the hatches. His efforts were wasted. Even the largest tugs couldn't pull her off the sand. The *Sea Thrush* was a complete loss.

Years of determined thinking and planning followed that defeat. Devine felt a powerful shallow-draft tug could be built specifically for salvage work. No one had ever designed such a vessel. Fred did — but pigeonholed most of his plans for lack of money.

One day, ten years later, Fred looked up from his World War II job as diving boss at the Portland-Vancouver shipyards. Coming up river was an LSM (landing ship medium), the first he had ever seen. It so closely resembled the pigeonholed drawings of his salvage ship that he stared in unbelief.

When the first surplus LSMs were placed on sale in 1948 at Swan Island, Devine was there to buy one — also a deck-load of winches, generators, gear and steel decking that might come in handy. When relaunched, the former LSM had her bow doors welded tight and twin 1800-horsepower diesel engines — enough generating power to light a small city — were installed. She carried anchors big enough for a battleship plus eight windlasses and winches of Herculean pulling power. A Union Oil Industrial Sales engineer made the first lube survey and recommended products. (Devine has been a Union Oil customer for more than 30 years.)

The first job was hardly a workout. A small cannery tender ran ashore at Long Beach, Washington. The *Salvage Chief* dropped its five-ton anchors beyond the breakers, backed into shallow water, put lines aboard the tender, and routinely winched her off the sand.

Subsequently, a half-dozen small craft ran aground on shores or river bars of the area and were duly rescued without loss of cargo.

The big test came in 1952. In a December storm, the freighter *Yorkmar*, 10,000 tons, missed the entrance to Grays Harbor and went aground. Previously a Japanese

ship had beached and broken up at the same spot. Everyone considered the *Yorkmar* lost.

That is, everyone except Devine and his *Salvage Chief* crew. They hurried to the churning ocean from Astoria (now his headquarters) and, after many disheartening attempts, put a "messenger line" aboard the *Yorkmar*. It parted as the steel tow cable was being hauled across. The job had to be started over again. A second attempt came to grief when the *Chief's* own anchor chain snapped. A new anchor and 10 sleepless days of fighting set the stage for another try. Three steel lines grew taut between the *Chief's* winches and the freighter. The bow moved seaward in inches, then in feet. At last the *Yorkmar* floated free, and moved under her own power back into the useful channels of commerce. It was one of the greatest ship-salvage feats ever achieved.

The *Salvage Chief* and its master are about the busiest team on the coast. Their abilities lead them into all manner of operations. Devine has salvaged sunken aircraft and pulled a locomotive out of the Deschutes River. He's laid marine cable, fought fires, handled underwater demolition, and recovered nearly four miles of anchor chain and countless anchors.

Devine raised two enormous, 4,000-ton sections of the Hood River Canal when they mysteriously sank. This, after large construction companies had tried and failed. The *Salvage Chief* has towed more than 300 ships from Astoria to Portland.

One of Devine's more remarkable feats was raising the sunken fishing vessel, *Cape Douglas*, from a record 666-foot depth in the East Passage between Seattle and Tacoma. The *Salvage Chief* carried the vessel underwater for three miles into shallow harbor waters. Devine's success received national publicity.

The *Chief* and Devine's other vessels — diving barges, work boats, sea sleds, and his second salvage vessel — all run on Union Oil products. He's a customer for T5X, Diesol, 7600 gasoline, cable lubricants — and barrels. Many rescues made by the *Salvage Chief* begin with the lowering by helicopter of several Union Oil barrels to the tug's deck. "Messenger lines" are attached to the barrels, which are then dropped overboard and floated to the stranded vessel.

Devine apparently intends to continue ringing up victories in his struggle with rough water which began so long ago. Now, in his *Salvage Chief*, he has a powerful ally. Quoting marine representative Ken Oliver, who, with Hugo Seaborg, marine consignee, services the account, "Mr. Devine has considerable competition as far as the diving business is concerned.

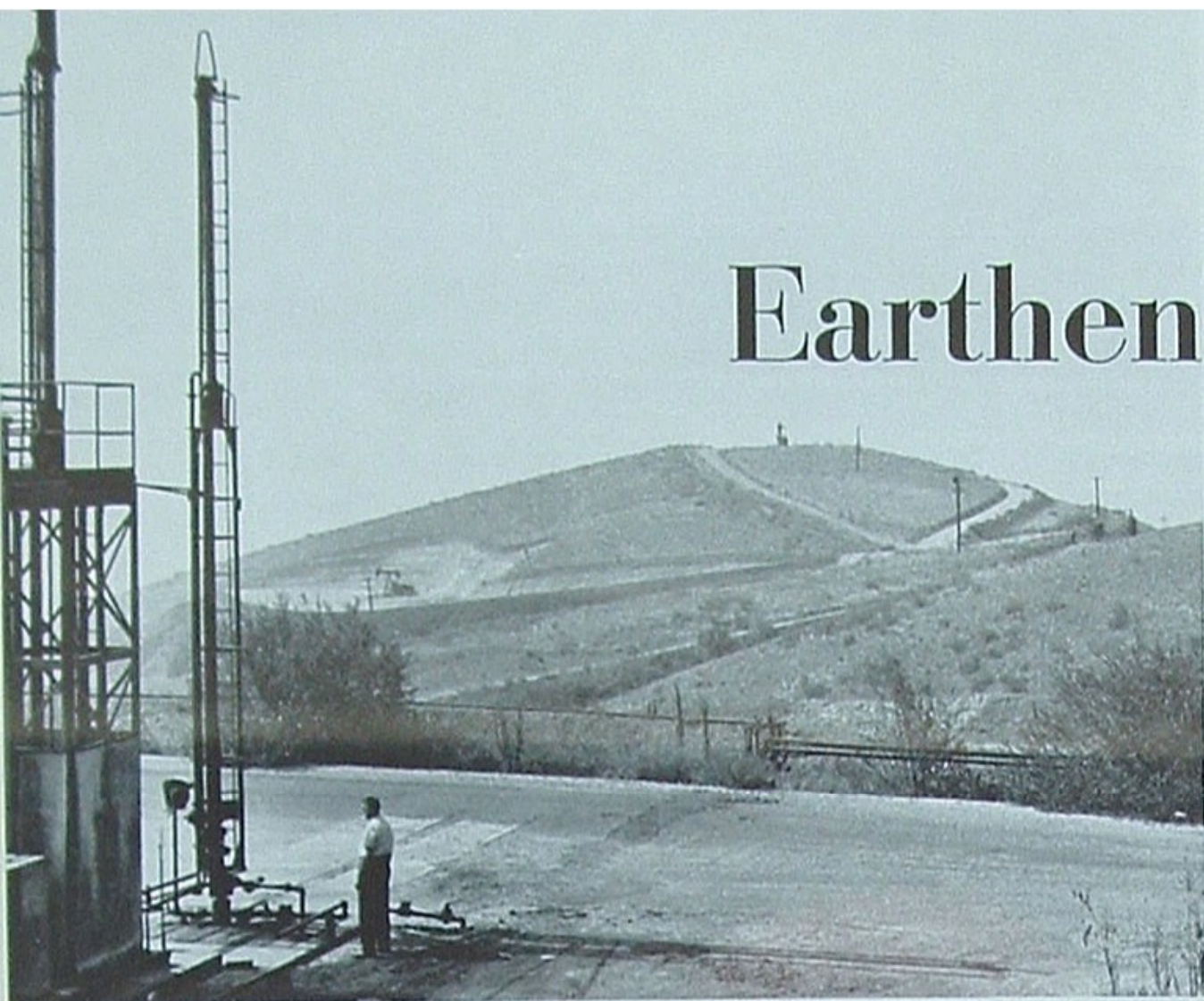
"But nothing in the world can compete with him and his fabulous *Salvage Chief* as a ship rescue team!"

/THE END

While spectators dot the shore, Devine's powerful *Salvage Chief* prepares to free the stranded freighter *Lipari* from the beach near Astoria.

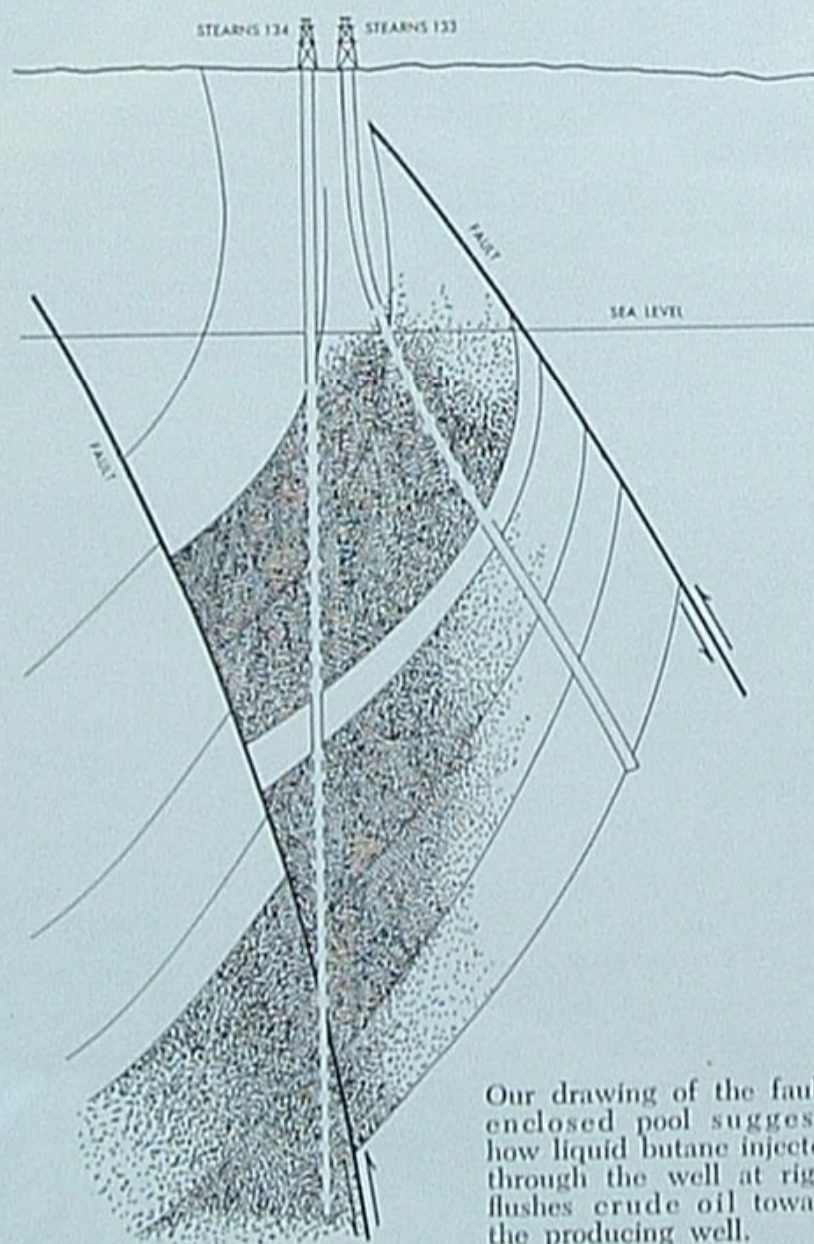
Earthensphere

or how we use butane (1)



Through the bizarre wellhead apparatus at left, valuable butane is being pumped back from where it came. Reasons: the earth offers good storage and butane works for its keep.

Technical data from H. H. Ewing.



Our drawing of the fault-enclosed pool suggests how liquid butane injected through the well at right flushes crude oil toward the producing well.

In the Company-owned Stearns Lease Field near Brea, California, we are dumping into the ground a commodity worth about 9½ cents a gallon while, at the same time and place, drilling for and producing crude oil worth less than seven cents a gallon!

If this sounds a little *wacky*, hang on. Perhaps in the end you'll agree there are occasions when the *plowing under* of valuable butane to *grow* more crude reflects sound common sense.

For the benefit of any late comers to the oil industry, let's start off with a short refresher course in petroleum chemistry:

Natural gas as it comes from the well consists of methane, ethane, propane, normal butane, iso-butane and natural gasoline. Usually the methane and ethane, called *dry* gas, are separated from the crude in field absorption plants and delivered into the pipelines of natural gas distributors. Or the *dry* gas may be injected into underground formations as a secondary-recovery means of stimulating more oil production.

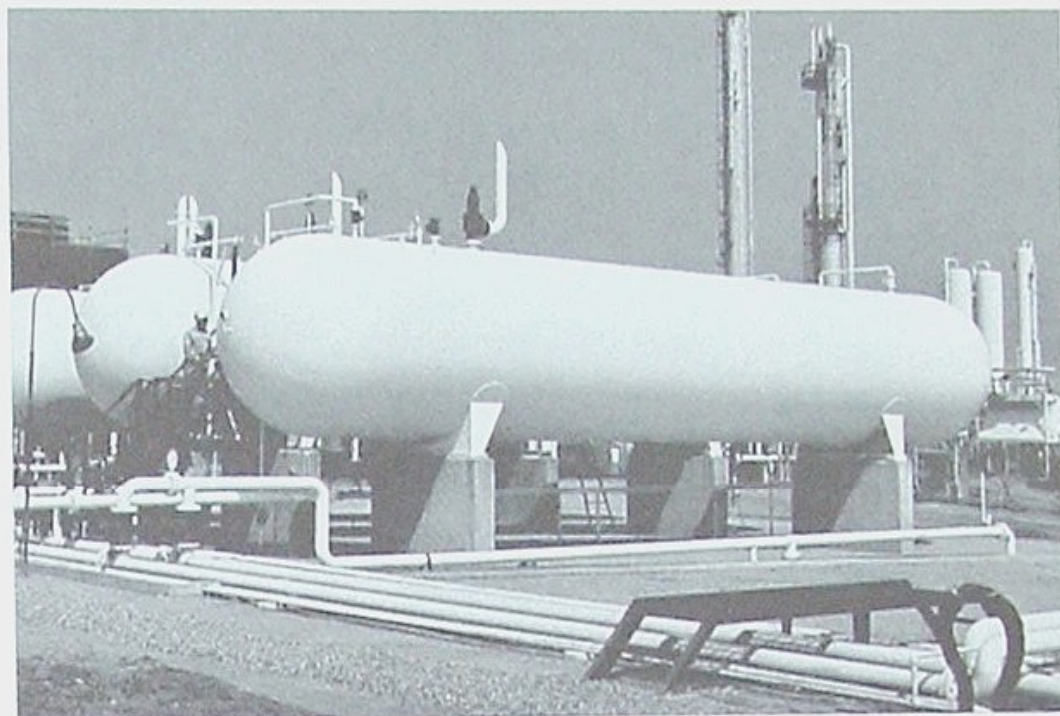
At Stearns Lease, field installations also take out the propane, a *wet* gas that can be liquefied under moderate pressure and sold as a domestic fuel principally for heating purposes. But the butanes and natural gasoline proceed with the stream of crude oil directly to our Los Angeles Refinery.

During recent years, Los Angeles Refinery has faced quite a bothersome and worsening butane problem. The butanes delivered to them from the field and the similar butylenes they are manufacturing through refinery cracking processes are valuable and desirable but the de-

Production Foreman Floyd LaGraffe keeps track of the butane via recording meter.



Our gas plant at Stearns Lease stores extracted propane in the three horizontal pressure tanks. It is sold or injected.



Keep it too!

mand for them is seasonal. Butane, for example, is important during the winter months as a blending ingredient for maintaining relatively high vapor pressure in our finished gasolines. In the hot summer season, on the other hand, when gasolines of lower vapor pressure are manufactured, much less butane is needed. So in summer the product has to be used elsewhere or stored. When used as a refinery fuel, butane's 9½-cent market value drops to about three cents per gallon. To store it requires costly high-pressure tanks and space to install them.

Recalling that *dry* gas oftentimes is stored in certain types of nature's oil reservoirs, our Manufacturing Department asked the Field Department whether liquid butane could be stored similarly and, if so, whether a suitable formation existed in the Los Angeles area.

Field engineers had the answers on the tips of their tongues. It so happened they had been searching for a source of light hydrocarbons in large quantities to inject experimentally into certain Stearns Lease oil reservoirs as a means of washing or flooding out additional crude oil.

Many of the earth's oil reservoirs are of such shape and complexity that waterflooding does not produce the most efficient results. Solvent flooding with light hydrocarbon materials, the field men hoped, would better penetrate the rock pores, flushing out higher percentages of the adhering crude. Furthermore they believed that careful selection of tightly enclosed reservoirs would permit nearly complete recovery of the solvent itself.

Their reply to the Manufacturing Department was in effect: Send all the butane you can spare. We'll store it in our "Earthensphere;" make it work for its lodging this summer; and return it to the refinery before snow flies.

A Stearns Lease reservoir called the Northeast Olinda Pool was chosen for the initial butane injection. The porous formation comprising the pool is at shallow depth, steeply dipping, and completely closed by *faults* or *pinch-outs*. It lies entirely under *fee* property, that is, surface and subsurface ground owned exclusively by Union Oil Company. Stearns No. 133 well was selected as the injection site and Stearns No. 134, nearby to the south, was watched closely to measure the first fruits of this rather daring gamble.

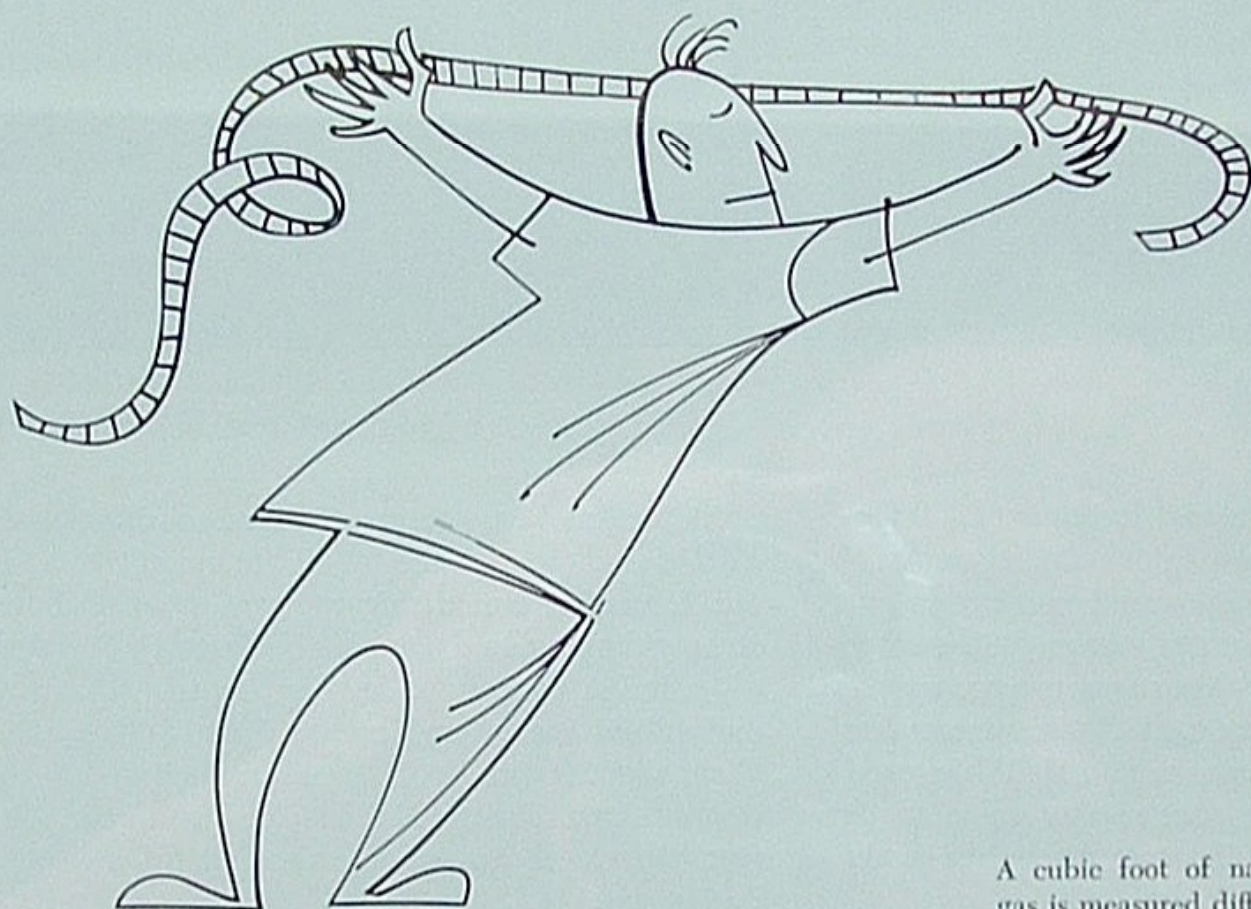
Since April, 1956, when the injection program began, over 250,000 barrels of butane and a small surplus of propane have been pumped into the Northeast Olinda Pool. Not only did Stearns No. 134 increase its rate of production many fold, but several other wells in the area were stimulated remarkably. Though the full value of this injection will not be measured for several years yet, we already know the venture is successful.

How are the butane and propane recovered? Well, the crude now being produced from these wells is richer in light fractions, proof that part of the injected liquids already has been returned. To recover the remainder is a neat trick in production practices: By lowering the reservoir pressure to a certain point, field operators can cause the light liquids to *boil out* — change to gaseous form. They then emerge from the producing wells under their own power — are recompressed into a liquid state — and are ready either for winter grades of ALL-PURE-POWER gasoline or for more summer work in the oil fields.

In brief, it pays to send 9½-cent butane down to find 7-cent crude, providing both hunter and hunted emerge from our producing wells.

Some
measurements
of

NATURAL GAS



A cubic foot of natural gas is measured differently by different users.

While we're on the subject of natural gas, perhaps you'll be interested in knowing the following facts about it:

In American oil fields and markets, *dry* gas is measured and sold by the cubic foot. Technically, this is the volume of gas, at a temperature of 60 degrees F., that will occupy one cubic foot of space under pressure of 14.73 pounds per square inch, which is the normal atmospheric pressure at sea level.

A housewife might measure it quite differently. To her, a cubic foot of gas is better defined as the amount of heat energy required to bring three quarts of water from tap temperature to boiling — at a cost of about 1/10 of a cent. Or 100 cubic feet — about 10 cents worth — will heat 100 gallons of cold water to just the right temperature for household use. Costwise, the amount of gas used by mother and the girls to prepare a Thanksgiving dinner is about equivalent to the electricity used by father and the boys while watching an hour of football via television.

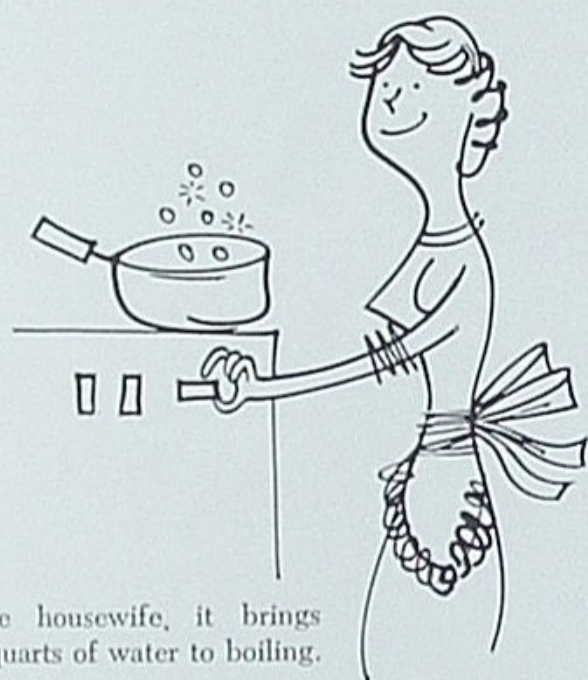
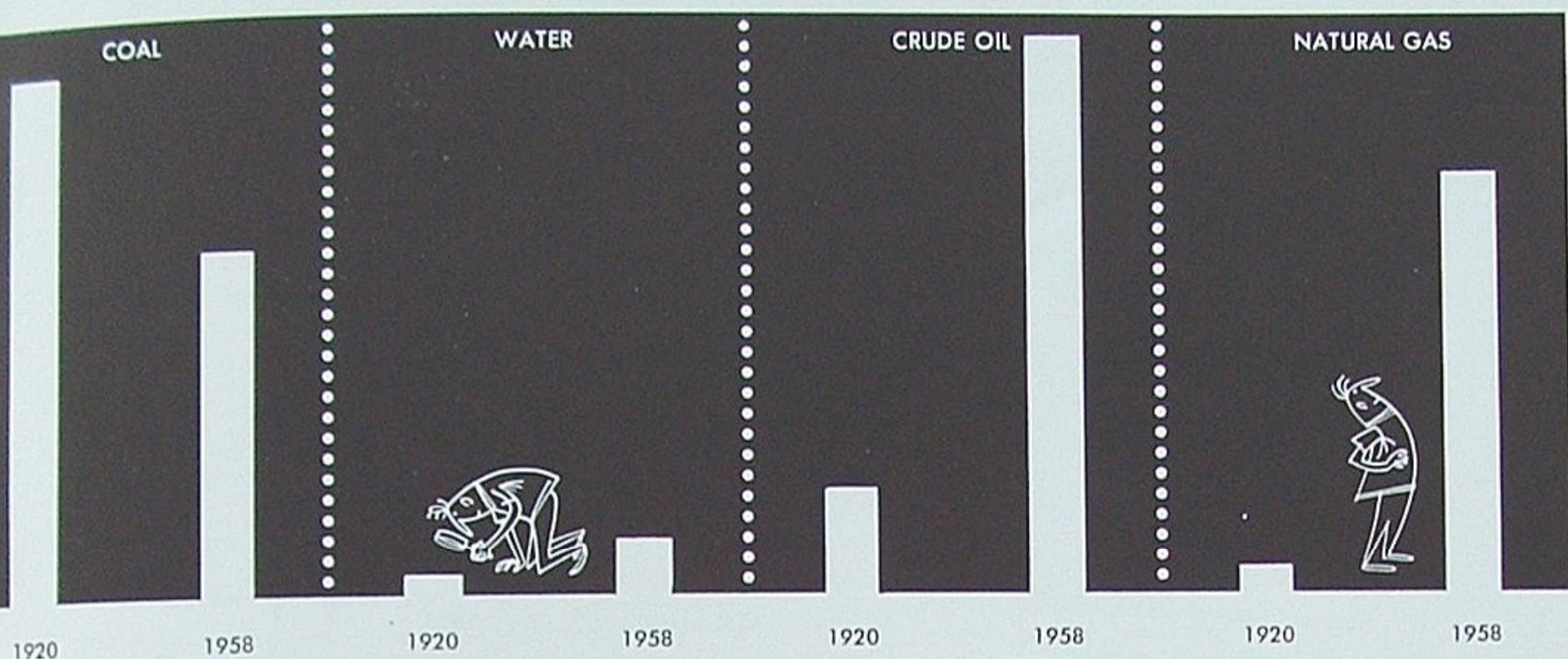
Ten cents worth of gas will keep the average house warm for an hour during freezing weather. Or it will keep foods in an 11-cubic-foot refrigerator cold or frozen for three days.

To the typical head of a household in Southern California, the quantity of gas used in his home amounts to about 7,500 cubic feet a month — an average gas bill of around \$7.50.

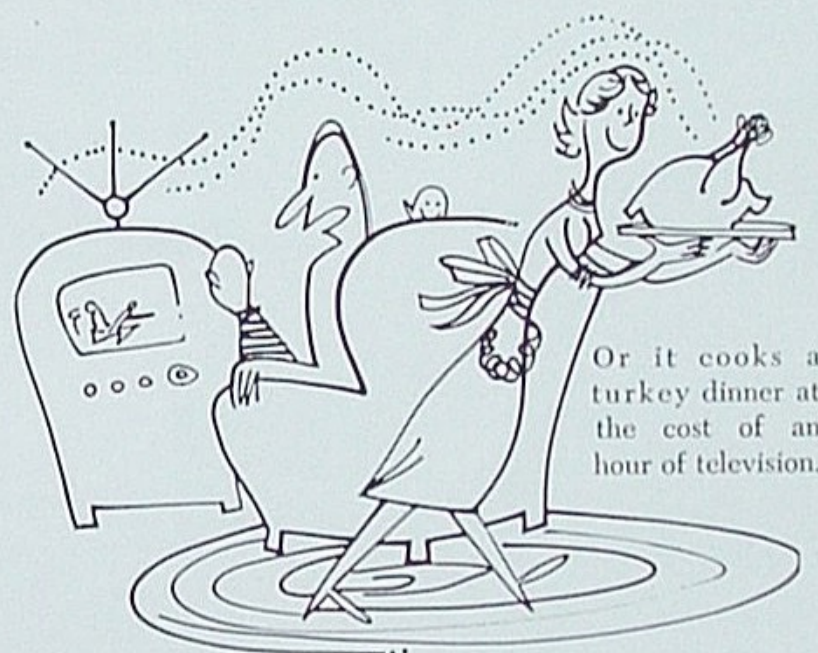
According to figures compiled by oil industry statisticians, coal was the principal source of energy for the United States in 1920. It accounted for 15,504 trillion BTUs (British Thermal Units) in that year, but by 1958 had declined in importance to 10,060 trillion BTUs. Water power accounted for 775 trillion BTUs in 1920, and 1,566 trillion BTUs in 1958.

During the same span of years, crude oil consumption rose from 3,027 trillion to 16,037 trillion BTUs. And natural gas, of both *dry* and liquid varieties, rose from 869 trillion to 12,121 trillion BTUs.

Over the years, crude oil and natural gas have replaced coal as our principal sources of heat, light, and fuel.



To the housewife, it brings three quarts of water to boiling.



Or it cooks a turkey dinner at the cost of an hour of television.

As the cubic foot unit of gas measurement is extremely small compared with the output of a gas well or gas field, oil men usually use an MCF (thousand cubic feet) as their basic unit of measurement. Thus when they say, "The well flows gas at the rate of 1,790 MCF per day," they mean the rate of yield is 1,790,000 cubic feet.

Unlike domestic crude oil production, which has been curtailed because of large imports of foreign crude, domestic gas production is climbing steadily. Compressing *dry* gas to the liquid state and transporting it overseas is not yet economically feasible, because of the extremely high-pressure tanks that would be required to hold the gas in liquid state. However, natural gas has been transported successfully from Louisiana to England in a tanker. This was done by first refrigerating the gas to about minus-260 degrees F., at which temperature the gas becomes a liquid at atmospheric pressure.

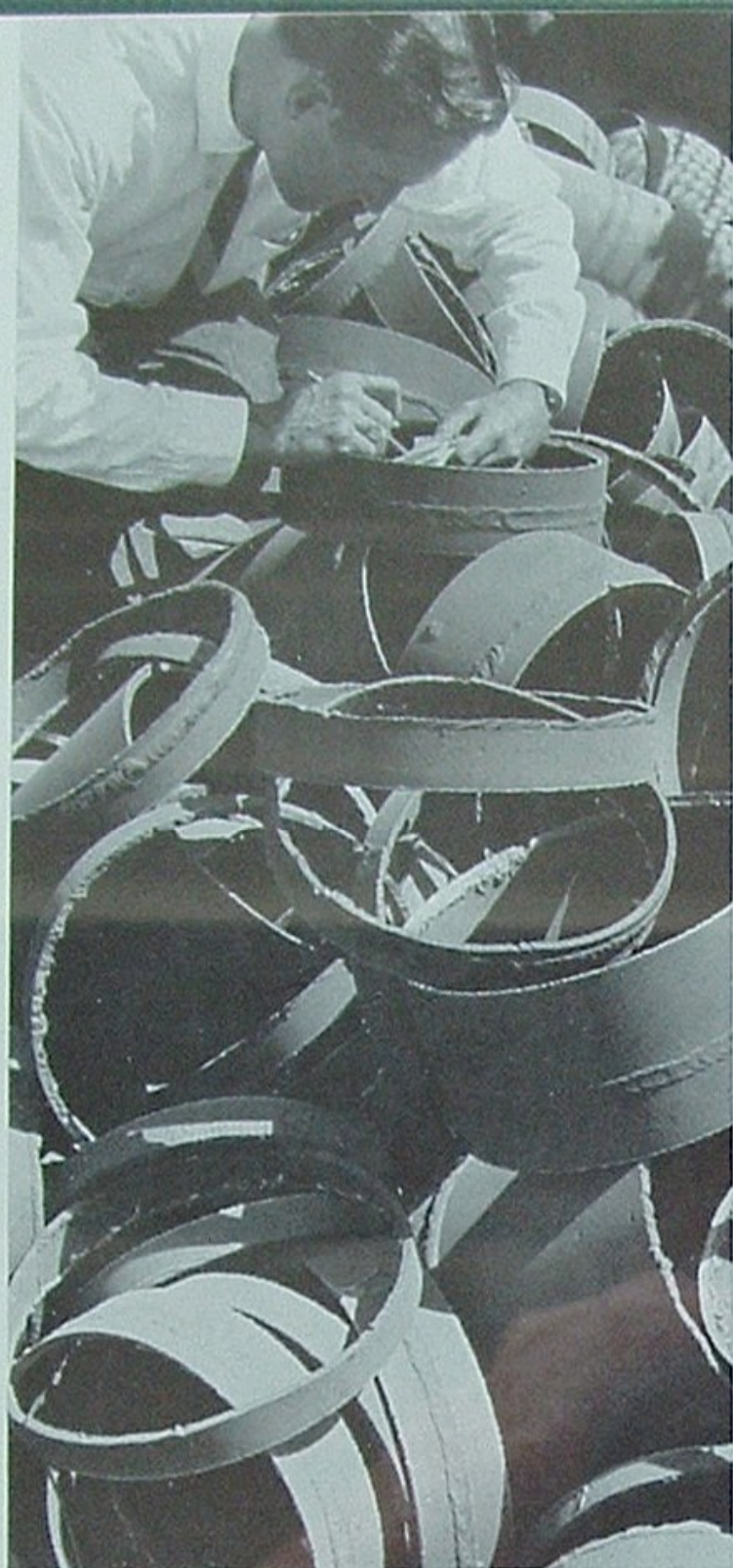
Union Oil Company is among the veteran gas producers of the United States. We have supplied large

volumes of this vital fuel to the West for more than half a century. Currently the Company is selling over 13,000,000 MCF monthly to natural gas distributors supplying the Atlantic and Pacific seaboard and hundreds of cities in between.

Our chief sources of natural gas at present are Louisiana and Texas fields in the Gulf Division. Located in cultivated tracts, offshore, or in swamps and marshes, these gas fields represent an increasingly important source of Company revenue.

Probably our biggest gas fields have yet to be developed. One of our discovery wells in the Louisiana area encountered more reservoir pressure than conventional well casing and surface valves can stand. As pressure gauges neared 12,000 pounds per square inch, past their tested bursting point, and pressures continued rising, drillers filled the hole with concrete and moved out. Some day we may find equipment tough enough to cope with such extreme forces.

/THE END



Scrap? To the Junk Man, that's a pile of money.

*Frank McMullen helps
Union Oil wring every
last dollar of
value from equipment*

Junk Man

Frank McMullen is a stocky, ruddy-faced Scotsman with a cold eye for value and a great enthusiasm for a dollar. At a modest price — a man has to live — he'll sell you anything from a piece of used pipe for a clothesline pole to a refining unit, if we have one to spare.

Frank is the Company's junk man. Or, more formally, he's Frank W. McMullen, Jr., Superintendent of Surplus Material Sales for the Purchasing Department. It's been years since he saw anything new around Union Oil. Everything he handles is either worn out, used up, or isn't needed any more in the Company.

McMullen says — and these words are the junk man's creed, "If we don't need it, we can usually find someone who'll pay money for it."

Farmers irrigate their fields with junk pipe. Old but clean tanks hold water for cattle down in Arizona. Spent acid sludge goes into soil conditioners.

"Why, before the city began collecting it, we even

sold the garbage from the refinery cafeteria," McMullen says. "It was No. 1 Select, great for mixing with the No. 1 Fancy from hospitals as hog feed. They couldn't feed straight No. 1 because the hogs got a rash. Too rich."

And, as he says, there's a customer for almost everything. Surplus Material Sales has found buyers for the tugboat, *Avila*, for a diesel locomotive from Oleum, office furniture, pipe, typewriters, old IBM tab cards, a mass spectrometer, empty aluminum Royal Triton cans, miles of pipe, and even surplus absorption plants, such as the Bell plant at Santa Fe Springs, California.

Some old-time pipeliners in the Company may feel a little sad to hear that, last year, we sold the ancient dormitories, cottage, and boarding house at Junction Pipeline Station — all relics of the days before fast cars, good roads and automation. Crews slept, ate, and worked right at the isolated pipeline stations.

Now that the shale research project at Rifle, Colorado,

Frank McMullen (in white shirt) talks with both hands as he and trucker Morris Korn discuss weight of scrap metal Frank has just sold

continued on page 12



is completed, McMullen has the job of disposing of excess equipment, including a massive rock crusher. Who needs rock crushers? A company near Milwaukee, Wisconsin — did.

"We figured now that they had a crusher, they needed something to load rock into it with," McMullen says. "So we sold them a skid loader, too."

Finding customers usually isn't difficult. Over the years the Department has built up a regular clientele of scrap companies and used equipment buyers. Word-of-mouth through the people who sell to us and ads in trade journals help move unusual or very large items.

Actually, giving something to Surplus Material Sales is a last resort. As McMullen explains it, there's a system for wringing every penny's worth of value to Union Oil from things before they're turned over to him.

"Here in Purchasing, we feel we're one of the guardians of the Company's money. So, first of all, our fellows try to buy at the best price, considering service and quality. Let's say we buy a 50-horsepower motor.

"Production puts the motor in service. Perhaps, after years, they don't need it because of a change in operations. So . . . they check other sections of the department to see if there's a place for the motor. If not they call in Purchasing which sometimes acts as a clearing house for equipment.

Back at the office with his coat on, McMullen looks the perfect gentleman as he sits dictating reports to secretary Annis Tully.



"If there's a place for the motor — perhaps in Refining — it's transferred and it goes back to work. We'll handle it, just as we sent furniture from the shale plant to offices in New Orleans, Midland, and Lovington, New Mexico. If it can't be used, it comes to Surplus Material Sales.

"Of course, much worn or damaged equipment is reclaimed. Furniture is frequently refinished and put back in service. Expensive valves are reconditioned for half the cost of new ones. (Material is sent out by operating departments themselves for this type of repair.) Everything that can be salvaged stays on the job."

But when the value to Union Oil is gone, here comes McMullen, still guarding the Company's money.

"First thing we do is try to sell an item — say a valve, a pump, a tank — for the purpose it's designed for," he says. "We can get \$9 an inch for steel valves that can be repaired; but we get only \$30 a ton for them as scrap.

"We even go further. As operating departments accumulate scrap, they segregate it: different kinds of pipe in one pile, carbon steel in another, cast iron in another. Then when we take scrap dealers out to bid, we get a different price on each pile.

"For instance, stainless steel mixed in with the general pile brings only \$30 a ton. By themselves certain types are worth \$100 a ton. That's extra money we like."

The fact of Frank's Scottish ancestry has nothing to do with his present job. During World War II, he was made chief of the scrap disposal section for the army and navy in the European theatre. In that job, Captain McMullen traveled the continent with a group of industrialists who were evaluating the battlefield scrap situation.

"I thought they were nuts," Frank says. "I'd go along with them enjoying all the nice scenery; but the only time they'd get excited was when they saw a pile of scrap.

"Now, after 12 years of selling the stuff, I'm the same way. I can't ride down Alameda (a Los Angeles street lined with junk yards) without almost driving off the road when I see something interesting."

When the commission returned to Washington, Frank came back also, assigned to the Institute of Scrap Iron and Steel. Then, after his discharge, he returned to Union Oil — Frank is a 30-year man — in the buying end of the business. Former Manager of Purchases, Buck Weaver (now retired), read his army record, "and I've been a junkie ever since," says McMullen.

To a company with sales in the hundreds of millions, the half-million dollars a year it recovers from salvage doesn't sound like a lot of money. But to put it another way, a half-million will build five or six good service stations, drill several oil wells, or pay the Company's bill for wages, salaries and benefits for three days. Union Oil must sell \$7,500,000 worth of products to bring in \$500,000 in net earnings. That's a lot of gasoline, oil and grease.

And a lot of junk. Also, it's a tribute to the sagacity of the Purchasing Department and Mr. McMullen, who live by the motto, "Waste not, want not — and before you sell it, let's see if we can't get a better price."

/THE END

Joe Rutana's had a ball since he started being a

String saver

By Vince Ducette

In the small incorporated city of South San Gabriel, California, dealer Joe Rutana is confronted with a knotty problem growing more obvious daily. His problem sits upon the floor of his salesroom, where it threatens to eclipse the entire station office.

Eclipse is the word, for his problem is a huge ball of string resembling a close range view of the moon. The ball measures 42 inches across — at last count.

Many of his customers, noticing the ball through the doorway, have insisted upon posing atop or beside the kinky sphere. Joe humors all requests, no longer blinking from the flash of cameras.

"I try to take care of the needs of my customers," Joe declares. "And it's amazing how many of them need their pictures taken on top the ball. . . ."

Joe calls it "the ball" because he hasn't thought of a more appropriate name for it yet.

"But I'm working on it," he advises.

Birth of the ball began three years ago on a late Sunday afternoon. Joe was sweeping string from the packing area he rented to bakery truck drivers. Apparently the drivers were more concerned with dough than with cleaning up excess string from doughnut boxes. Disposal methods were left to Joe.

"Sweeping up after the trucks was no ball — at least at that time," Joe says.

On that quiet Sunday, Joe was visited by little 6-year-old Frankie Col who was in the habit of dropping in on Joe now and then. Frequently he was heard to declare that he, too, would some day be a dealer. Frankie's leadership asserted itself to Joe that day when he suggested the string be made into a ball. Joe was skeptical. But he has an obliging nature. He agreed.

"Yes," he sighs, "I strung along with the idea."

That was the beginning of the station ball. The two of them wrote their names on a piece of parchment and began wrapping the string along this core.

But shortly thereafter, Frankie proved himself fickle



Joe's problem: how to get it through the door?

by shifting his interest to a nearby baseball diamond — and a smaller ball made of leather.

Joe didn't see much of Frankie after that, so he strung along with the ball alone. "At this point I was becoming wrapped up in the project," he admits.

Joe, 52, has a wife named May. The latter took a dim view of the ball, saying it was foolish.

"I agreed with her. How can you defend saving a ball of string?" Joe saved anyway, while May tried to ignore the obvious progress.

However, area residents didn't ignore it. Some of them began dropping in for Royal 76 more than their usual twice per week. "They were getting involved with the ball, too." The word — and the sphere — was spreading. A local newspaper sent a skeptical legman down to see the thing.

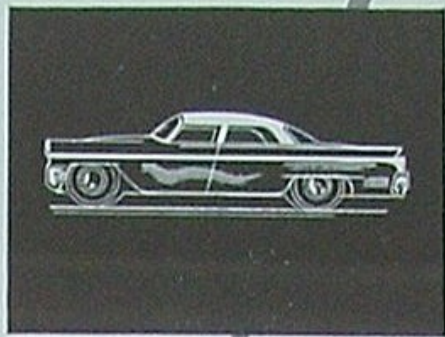
"Before he went away he left his autograph on it, too," Joe remarks.

Today the ball weighs 515 pounds and is growing steadily. It is 133 inches in circumference, and Joe figures it is held together by some 346,000 knots. Stretched end to end, the strings would be 134 miles long. May no longer ignores the ball, for business at the station has kept pace with the "other" development. It is up 15 per cent.

Joe pumps 27,000 gallons a month, a steady increase over the days when the ball was a mere loose end around the station. And when he completes plans for his new Union station, he intends to take the ball with him — by removing a wall to get it out.

But one fear remains for Joe and an array of staunch customers who've grown fond of the ball. "If it ever got away from us it could flatten the pumps." Customers smile and say Joe is "knot" concerned. . . .

/THE END



Versatile Unoba is finding a new use down in Florida



GREASED

Grease is smooth, slippery stuff that keeps cars from squeaking. If it does more, most people who pay their \$1.75 or so for a Stopwear Lubrication don't know and haven't really learned to care.

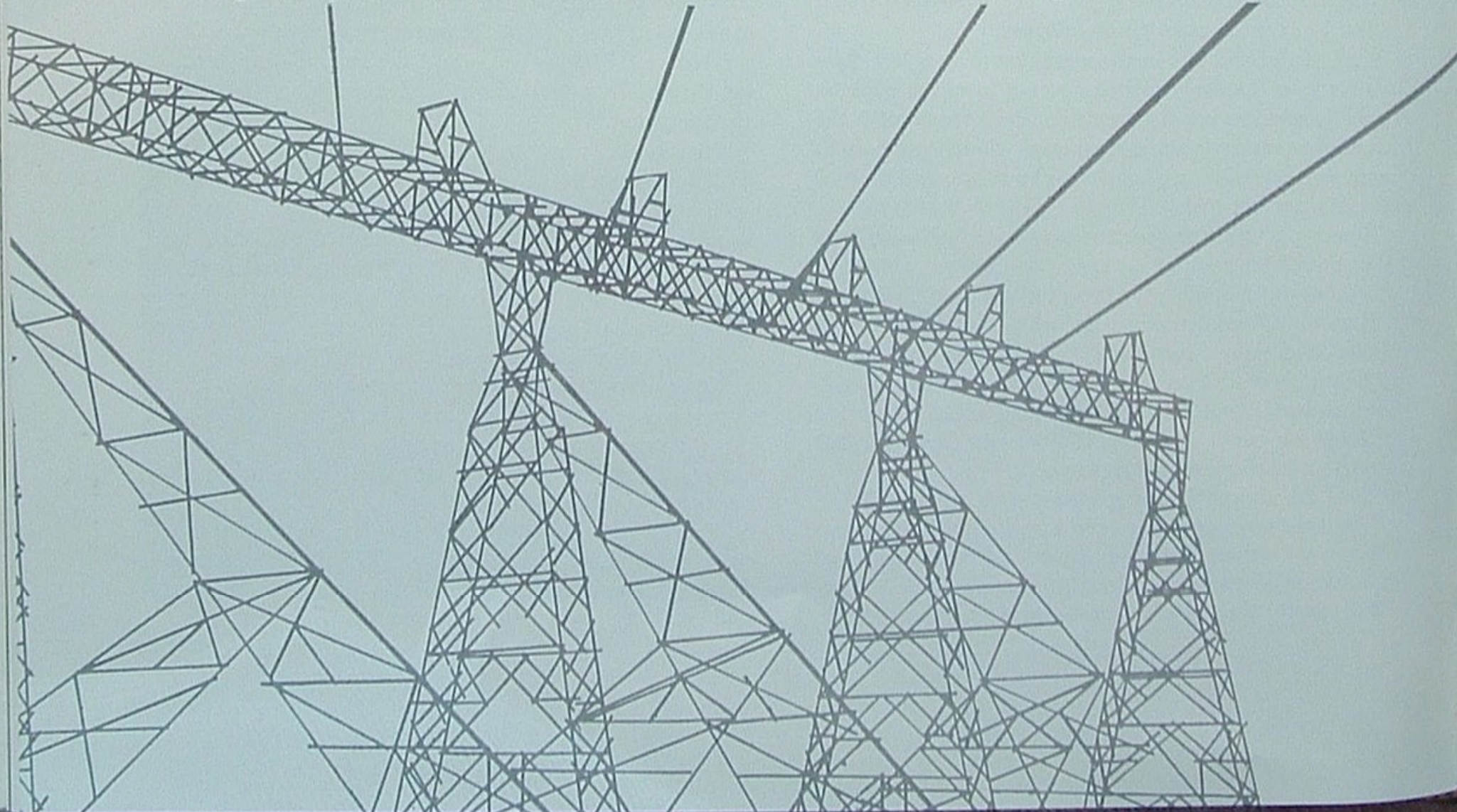
Which is unfortunate. They should know. Because Unoba is a pretty fancy product. It's as slippery as they come; and the way it safeguards automobile parts is something fantastic. To give you an idea of its protective powers from *outside* the automotive industry, consider what General Cable Corporation is doing with the identical Unoba A-2 we make for service stations.

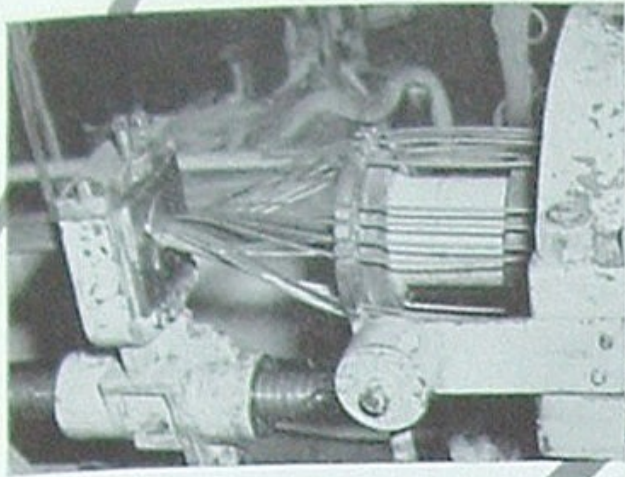
Down on the southeast coast of Florida, the Florida Power and Light Company has just connected its Lauderdale and new Port Everglades plants with a 7½-mile conductor. (To professionals, a conductor is never a cable nor a wire.) The Port Everglades plant is Florida's largest power producer and the conductor is one of the most important power lines in the entire Southeast.

Half of that conductor is of conventional copper. But the other half has a steel core wrapped with 45 strands of aluminum wire. The aluminum-steel combination, a total of 52 strands, combines strength and conductivity. It lessens the load on supporting towers.

Manufacturing specifications for the aluminum-steel conductor are interesting. Written into them are these sentences: "The core at the time of cabling shall be coated with Unoba A-2 . . . the cable shall be thoroughly infused with Unoba A-2 so that all openings are filled . . ."

Bobolink, the industry-wide code name for the conductor, starts with a steel center. The center, coated with Unoba, is wound with six strands of steel. Then the 7-strand steel core is coated with Unoba and wound with nine strands of aluminum. A third coat of Unoba readies the interior cable for 15 more strands of aluminum. Finally a fourth coat of Unoba is applied under and around the remaining 21 strands of aluminum as they





The fourth coat of Unoba goes into the Florida Power and Light cable as the final 21 strands of the big conductor are wound.

LIGHTNING

are wound on to complete the conductor. When reeled for shipment, a 4500-foot length of conductor weighs 7600 pounds (believe it or not!).

That's where the title of this story—"Greased Lightning"—comes in: the high voltage electricity does literally move through its conductor like greased lightning.

The film of grease is an anti-friction cushion for the conductor of steel and aluminum while it is being installed and while it sways, contracts and expands during exposure to the elements.

Neither the rain nor salt-laden ocean spray will contaminate or dissolve Unoba. The Florida sun at its hottest can't cause the coating to melt and drip away. In other words: the conductor gets the same dependable protection from Unoba a car does.

From a grease chemist's standpoint, developing such a lubricant was a technical triumph somewhat more exciting than bowling a 300 game, running a four-minute mile, and shooting a hole-in-one — all in one afternoon.

Before Unoba, there were two types of grease in general use. One type resisted water but failed in the presence of heat. The other could stand heat but water washed it away. Union Oil's research people aimed to make a single grease that would take the place of both, as well as of many specialized greases.

Greases combine oil and various kinds of soap. Our researchers settled on what is called a "barium soap"—although the industry considered barium soap greases impossible to make commercially. After years of experimentation, Union Oil chemists whipped the problems that had stumped others. They came out of their labs with a grease neither water nor heat could faze.

Since it was made with barium soap, they combined parts of the words UNION OIL BARIUM into the trade name Unoba.

The grease is not only a superior lubricant, it also replaces many other greases. With Unoba you can lubricate an entire automobile or an entire industrial plant from the same barrel. OR, from that barrel, you can guard the strands in a conductor against damage from



Joseph Walters, General Cable Corporation, shows a sample of cable to Union Oiler Frank McCarthy and Palmer Crandall.

salt air and Florida sun as General Cable Corporation of Tampa has done.

You can use a little *more* Unoba in a conductor than in a car: General Cable Corporation purchased 75 barrels of it from our distributor in Tampa, Carl W. Lindell, Co., for this one job.

However, from the few ounces in Stopwear Lubrication, you get—or if you're a dealer, you give—the identical lasting protection the power conductor gets from its barrelsful. In fact, you can't buy a better lubricant or a less expensive safeguard for a car than you buy in Union Oil's All-Purpose Unoba.

Business Highlights of the Month

MARKETING

Among large consumers of petroleum products who began favoring Union Oil brands this summer were the following:

In the Pacific Northwest, Union will supply the petroleum requirements of John P. Hopkins Company, Mercer Island, Washington, during their 3.9 miles of Highway 99 freeway construction near Tacoma. The \$2,470,000 job, including the moving of some three million cubic yards of fill, will be completed in 24 months . . . Transport Storage, distributors of General Motors automobiles, have elected Union Oil as their suppliers at Renton, Pasco, Spokane and Wenatchee, Washington . . . Potlatch Forests, Inc., one of the largest logging, lumbering and paper processing companies in western America are obtaining substantial portions of their refined oil requirements from us at Lewiston, Idaho, and Deer Park, Washington . . . In the Eugene, Oregon, area, the sale of heating oils through Company operation instead of resellers has been launched through an extensive advertising program.

In the California Central Division, Isbell Construction Company has started work on the second largest paving

contract ever awarded by the State of Nevada, all asphalt requirements to be supplied by Union.

In Southern California, the Los Angeles Department of Water and Power has contracted for delivery of 540,000 barrels of Union fuel oil . . . A new marine outlet at Morro Bay is now providing boating enthusiasts with the *Finest* of products and services.

Southwest Mountain Division recently opened a new service station in the multi-million-dollar College Grove Shopping Center, San Diego . . . Division personnel also landed the petroleum requirements of J. H. Ball Construction Company's highway job near Baker, California. Also a substantial sale of Domestic Diesol to Phelps Dodge Corporation, a major Arizona copper producer.

from C. H. Finnell

A contract with Military Supply Agency calls for delivery during the last six months of 1960 from our California refineries of 700,000 barrels of fuel oil and 5,040,000 gallons of diesel fuel.

At the July, 1960, meeting of Unimar, Ltd. in Hong Kong, F. K. Cadwell was re-elected chairman of the board, and re-elected as directors were K. Takii, J. H. McGee, K. Moga and F. A. Culling. S. Uchiyama, at Los Angeles, was newly elected to the Unimar board.

Long term contracts have been negotiated between Unoco Trading Company, Ltd. and Maruzen Oil Company, Ltd., under which Unoco will supply Mid-East crude oils to Maruzen for its refining operations in Japan and Singapore.

from F. K. Cadwell

MARINE A stitch in time!

Recent expenditures of \$450,000 in coating the cargo tanks of our SS SANTA MARIA are expected to save the Company from 1½ to 2 million dollars in steel renewals between now and 1972 when her charter expires. The coating of all cargo tank interiors with a modified phenolic coating or an inorganic zinc coating was done to prevent rusting. In addition to saving the cost of steel renewals, savings are anticipated in repairs to pumps and valves, in butterworthing time and fuel costs, in safeguarding cargoes against degradation due to residues, and in tank-cleaning to facilitate changes of commodity. The coating was completed August 12 at Todd Shipyards Corporation, Alameda.

from Captain Darrel L. Povey

PURCHASING

Some of our largest material and service needs — amounting to an annual expenditure of approximately \$11,260,000 — are supplied through 123 negotiated contracts now in force. Good contracts assure advantages to both buyer and seller. The buyer benefits through volume prices, price protection, assurance of supply, and quality

control. The supplier, confident of a continuing flow of business, is able to reduce his costs through better planning.

from C. S. Perkins

EXPLORATION Rocky Mountain tests.

The Company has under way three tests in our Rocky Mountain-Glacier area — one a gas test near our gas discovery called Buzzard Creek in Mesa County, Colorado — the second a test for oil and gas in the San Miguel area, Montrose County, Colorado — the third in extreme western Montana near where we drilled the unsuccessful Morning Gun test several years ago.

The Montana well is being drilled on a "farm out." It is located on what we call the Two Medicine Prospect, about one-half mile south of the Morning Gun location. Continued interest in the area by Frank Whetstone of the Cut Bank Pioneer-Press resulted in the present drilling of the Two Medicine Prospect wildcat by his company, Montana Power Company and Great Northern Drilling Company. Union Oil retains a one-half interest in the leases involved.

This is one example of the substantial part played by individual enterprise and initiative in the search for oil and gas reserves. A commercial gas discovery in this area would benefit many Montana communities and be a fitting reward for these Montana wildcatters.

from Basil Kantzer

RESEARCH Phantom in the driver's seat!

Three years ago an electronically controlled chassis dynamometer was installed at the Research Center so that evaluations of petroleum products in cars operating under road conditions could be done off the highways. Safety was the big reason. Frequently this road testing requires repeated accelerations, at wide-open throttle, and decel-

erations — within a speed range from 15 to 70 miles per hour — certainly not a safe way to drive on public roads. Now we are able to drive the rear wheels of a car onto the huge steel rolls of the dynamometer, step on the gas, and go. Electronics automatically provide all highway conditions, even including a blast of wind corresponding to the speed. Simulation of road speeds up to 100 mph is possible with complete comfort, safety and realism.

As one further development, an electronic phantom has replaced the human driver. The phantom is composed of several "black boxes" containing the latest gadgets, some of which were designed by our Research personnel. For example, to make an acceleration requires only pushing a button. The car accelerates to the desired speed, the phantom takes his foot off the gas, and brakes are applied to slow the car back to its starting speed. Push the button again and the cycle repeats.

Most useful is the phantom driver's willingness to work night shift. All night long the car keeps going unattended, simulating, for example, a cruise through city and suburban traffic. If a tire goes flat, if the engine overheats, or if any of several other things should go wrong, appropriate safety devices shut the whole operation down and sound an alarm. The phantom already has more than saved his "wages" in evaluating various gasolines and motor oils in today's cars. Incidentally, Royal 76 and Royal Triton 10-30 are the best combinations he has found for smooth operation and carefree motoring!

from W. E. Bradley

CREDIT Charge!

The number of active credit card accounts as of July 31 reached a new record in Union Oil history. Applications for credit cards through employee and dealer solicitation are being received in ever increasing numbers. More than 11,000 new cards were approved during July.

from W. W. Workman

Our Distributor Oscar Greene of Lake Isabella area, California, is proud of this new retail unit designed by Retail Sales Supervisor F. J. Wilson. It harmonizes nicely with its surroundings while complementing "76" products and services.

from R. H. Campbell





16



Trees

Until recently, no one paid much attention to the 200

Washington Robusta palm trees within a block of our service station at 1799 North E Street in San Bernardino, California. City employees complained a little about climbing so high to keep the taller ones trimmed. And Union Oil Dealer Fritz Dennis became apprehensive every time the wind came up, bending tree trunks as if they were bamboo fishing poles. But generally the trees excited no comment.

This year, however, the good folks of San Antonio took special Texas pride in one of their Washington Robustas — a 61-footer — claiming it to be the tallest tree of its kind in the world. San Bernardino then promptly got out its tape measure and started looking for the highest of its 200. They found it within a few feet of our service station property and promptly advised the world that it was 86 feet from top to bottom. Pictures of the tree were wire-photoed across the nation and across the seas. In most of the pictures appeared Union Oil's famous "76" target sign.

Dealer Dennis and his Minute Man John Fletcher (the latter seen in our photo at far left) still are somewhat apprehensive about those top-heavy stalks whenever the wind blows from down Texas way. "But let 'er blow," they say, "as long as townspeople and tourists keep driving in to ask about the world's tallest Robustas."

In another Southern California town, Chatsworth, quite a different tree tells quite a different story:

It seems that, when a new Union Oil station was built one year ago at Owensmouth and Devonshire streets in that community, a huge oak on our property was scheduled to come down. Oaks usually litter a service station yard and raise Ned with the advertising. But as a woodsman prepared to fell the tree, there arose first a soprano solo of protest, then a chorus. The ax was stayed and the Company willingly re-considered.

Dealer Bill Morinskey (seen under the oak with two prospective customers) obtained financial help from the Marketing Department and proceeded to turn the back-set into an asset. He installed a bench 'round the oak and lights to emphasize its beauty even at night. Since Chatsworth people are fond of riding horses, he's also installing a watering trough and hitching post in the shade. He explains, "Horses don't buy gas, but the people who ride 'em do."

Chatsworth people have responded in kind. The soprano soloist who saved the tree gazes upon it daily with new-found pride. The Chatsworth Women's Club has written us a letter of appreciation. Equestrians and their mounts invariably stop for rest and a cool drink. And Dealer Morinskey pumps an extra gallon of "76" horsepower for every extra swish of the broom. Trees!

THE END



Freeway Results

*Union Oil Dealers
whack up an extra
million and a half dollars*

The Freeway to Vegas contest is long over, but the memory certainly lingers—even if you weren't among the hundred twenty-three Dealers & wives who chose the trip to Las Vegas, or the merchandise prizes. Here are some results from this most successful promotion Union Oil and its Dealers ever attempted.

During the two-months contest, Union Oil Dealers made more than *four times* the number of budget sales recorded during the May 15-July 15 period last year.

They whacked up more than \$1,500,000 in *extra* dollars—the amount over and above last year. The total volume of budget sales during the campaign was \$2,250,000. (This total doesn't include cash sales nor those on regular 30-day charge accounts.)

They sold more than 130,000 gallons of *extra* lube oil—again compared to the same period last year. Multiply that out, and you get another \$132,000 extra gross dollars for you dealers.

Best of all, budget sales during the month following the campaign have held high: the Credit Card Center in San Francisco is processing 20% more budget tickets now than they did a year ago.

Of course, you can't average those figures and say "each Union Oil Dealer made this many extra dollars during the campaign." Sales such as these don't average. Many Dealers—certainly those 123 winners—banked a great deal more money than others. But the beauty of the Freeway To Vegas campaign, according to reports from Retail Sales Supervisors, is this: Dealers who had never before really been in the TBA business started selling.

Union Oil has wry proof. When a budget is set up for a promotion such as the Freeway To Vegas, you figure the cost on past experience. Experience meant nothing this time! Average sales were so high that prize awards to Retail Sales Supervisors—which were based on the total points for their fields—went way over budget. But it was money the Company was happy to shake loose of.



Winners from Portland, Oregon: (L-R) Jerry Brown, Howard Martin, Manager C. C. Corsiglia, Dan Lindberg, Pete Brousseau and Dick Martin.

For the record, here are a few of the top Dealers—those who lead entire Divisions in points scored for budget tickets and lube oil sales:

Northwest Division: Howard F. Emmick, Olympia, Washington;

Portland Division: Bob Harriss, Portland, Oregon;

California North Coastal Division: Harry N. Ikeda, Oakland, California;

California South Coastal Division: Lawrence Smith, Tujunga, California;

Southwest Mountain Division: George Quidort, El Cajon, California;

Honolulu Division: Hank Fujita, Honolulu, Hawaii;

California Central Division: Stan Martin, Denair, California

You might be interested in which prizes winners chose. Of the 123 winners, 66 and their wives went to Las Vegas; 53 took merchandise prizes; and two took cash. Not surprisingly, most of those who chose merchandise came from Southern California—Las Vegas was too close to home!

The contest is over but remember—Union Oil's Budget Plan is still available. Gallonage has a habit of slumping during the winter months; however what with the normal demand for winter tires and the drain on summer-weary batteries, the Budget Plan can be—if you want to keep your income up—the Dealer's best friend:

Sales Manager Orv Dorsett with winner Irving Leader and Mrs. Leader, from Phoenix, Arizona.



(L-R) A. C. Rubel, director; Sir Kenneth Coles, of Australian Oil and Gas; and Union's Board Chairman Reese H. Taylor. They're talking about oil in Australia.



Activity in Australia

Cabawin No. 1 will be spudded during October

Australia is the only continent in the world without oil production. With high hopes of curing the lack, Union's first exploratory well in the land down under—Cabawin No. 1—will be spudded-in during the middle of October. Target depth for the well is 12,000 feet, unless shallower production is found or basement rock are encountered.

The Company is operating in Australia through a wholly-owned subsidiary, Union Development Corporation. The Corporation has a 40% interest in a program to explore southeastern Queensland and northern New South Wales. Its partners in the venture are Kern County Land Company and Australian Oil and Gas, Ltd.

Two men who are probably the strongest hopes for the success of Cabawin No. 1 had lunch together last month: Reese H. Taylor, Chairman of the Board of Union Oil and his counterpart with Australian Oil and Gas, Sir Kenneth Coles.

The luncheon gave Sir Kenneth a chance to meet Union Oilers his company works with: members of the executive group and Foreign Operations department.

As he pointed out at the luncheon, the Australian government is concerned because of its country's position as an oil importer. To encourage exploration, it has made geophysical surveys with its own crews. Based on those surveys, Union Oil selected the most likely area for more detailed geophysical work. It turned out to be the Cabawin property.

The property is in the Surat Basin, approximately 250 miles east of Brisbane, capital of Queensland. Most of the basin is sparsely populated sheep and cattle country. Largest of its few towns is Toowoomba, with a population of 50,000, where Union Oil has its headquarters.

From their surveys, the geologists found a promising structure where Cabawin No. 1 will be drilled. With the hopes of two continents that it lives up to the promise.

Autoscrip

Janet Dillon is holding a book of the new 76 Autoscrip by the safe in the Treasurer's office at Union Oil Center. The safe is a reminder that 76 Autoscrip is just like cash in Union Oil stations - can be used for any purchase. Christmas is only a few weeks away - count 'em - and you'll find the neat little booklets make welcome gifts.





THE DIRTY SIDE OF THE SKY

by James Peck

Remember when smog was caused by industrial smokestacks?

That was in the old days, when you were just a tyke. And then it was caused by backyard incinerators.

Nowadays, as we all well know, smog is produced by automobile exhausts and can be effectively controlled only by the installation of certain little yet-to-be-perfected gadgets on our tailpipes.

At a cost of a few hundred million dollars to the car owners of Los Angeles County.

But today, class, we shall discuss the case of the egregious olefins, a more obscure but nevertheless notable period in the hydrocarboniferous age (sometimes referred to erroneously as the griswoldian era.)

Olefins, as any PhD. in petroleum chemistry knows, are the more unstable of the carbon compounds in gasoline. The Air Pollution Control District (an organization devoted to smog) tried its best to work with them, but found them absolutely unamenable. So APCD got a law passed.

Rule 69, passed June 16, 1959, required that the olefin level in all gasoline sold in Los Angeles County be reduced to a Bromine number of 30 (about 18.7 per cent) by June 30, 1960, and to Bromine 20 (12.5 per cent) by December 31, 1961.

APCD estimated gasoline sold here then was averaging about Bromine 40.

What would this law accomplish?

Listen to Mr. Smith Griswold, chief of APCD — but remember that you're listening to him in 1959, not 1960:

"Even without an effective exhaust control, the olefin emissions can be reduced by 1960 to only slightly above the level of 1940 and then will slowly rise with the in-

crease of automobiles until 1972, when they will again reach the 1959 level."

Thus 1960 was scheduled as a smogless year.

Something obviously had gone wrong.

Perhaps the oil companies haven't conformed to the law? Nothing of the sort, an APCD spokesman informs me. In fact they are well ahead of schedule, with olefin levels already reduced to an average of Bromine 25.

Was I wrong about the smog this year? Here are the APCD figures:

Days of eye irritation during May-June-July period:

1958	1959	1960
27	18	33

Visibility at alert level:

1958	1959	1960
13	19	20

I don't know how much it costs the oil companies (you and me in the long run, of course) to take those olefins out, but Griswold predicted last year it would cost \$50,000 a day.

Right now, I'm wondering how much it would cost to put them back in.

Reprinted through the courtesy of the Los Angeles Examiner

Dear Editor:

. . . The July cover of Seventy-Six caught my eye immediately inasmuch as I had read "An American Creed" a few days previously in a small booklet entitled "Cheer." Also, my daughter, a Union Oil employee during the summer months, is taking a course in government at Odessa Junior College this summer and commented that the teacher had read the same message the very same week. Quite a coincidence! This is an encouraging sign, that so many of us are turning our thoughts to what is our true American heritage . . .

Sincerely yours,
(Signed) Barbara Parkinson
Midland, Texas

Dear Editor:

Your cover, July issue, features the beautiful American Creed . . . Happened to run across your *mag* through a parts dealer here in Waseca. Found it interesting and very informative. Will use the American Creed in one of my future columns.

Sincerely yours,
(Signed) Bob Oser
Waseca Journal-Herald
Waseca, Minnesota

Dear Editor:

May I congratulate you on the continuing excellence of your magazine, *Seventy-Six*. It is very readable and always contains wonderful photographs and items of more than passing interest.

Particularly do I like the little philosophical and inspirational articles that appear from time to time. "An American Creed," which graces your front cover, is particularly timely and, as a director of Western Air Lines, I like the publicity we received on Page 26 of the last issue. . . .

Sincerely,
(Signed) Sid Woodbury
Portland, Oregon

Dear Editor:

It was my pleasure to read your July 1960 issue of *Seventy-Six* and I was delighted with the American Creed on the front page. May I have four copies of it so that I may have this creed framed for my sons who have just started in business for themselves.

"An American Creed" expresses my ideas better than anything that I could put into words for myself, and I am sure it will serve as an inspiration to them to keep plugging along in the face of all difficulties which they may face.

Thank you for your kindness.

Most sincerely,
(Signed) Helen O. Erdner
Swedesboro, New Jersey

Dear Editor:

The July cover of *Seventy-Six* and message impressed me so strongly that I wonder if it might be possible for copies of the cover, without magazine identification, to be made available suitable for framing. I would like many copies for passing this important message to businesses, chambers of commerce, city officials, state legislators, etc.

Thank you,
(Signed) J. E. Boyle, Jr., Consignee

Dear Editor:

Have you prepared any replicas of the American Creed suitable for framing? If so, we would like to obtain one to frame and put up in our office.

Sincerely,
(Signed) C. R. Paxman, M. D.
Norwalk, California

Chairman of the Board
Union Oil Company

Dear Sir:

Being 17 and a recent June graduate, people say that you are not *dry behind the ears*. To some respect this is certainly true. However, many teenagers have a greater awareness of what is going on in world affairs than adults comprising the "informed" American public.

It is painful to see what little knowledge many people have of the free competitive society as it exists in the United States. The best example I can recall is my senior American History teacher. While he had a PhD., was connected with many civic organizations, and was generally the best teacher I have yet come in contact with, however, his knowledge of our free competitive society was slim. He thought that the "xd" next to a stock on the stock pages meant that the stock was paying an extra dividend. (°) He thought that several years ago when Chrysler Corporation was in need of a loan it borrowed \$250 million from General Motors and Ford. Instead, Chrysler borrowed \$250 million from the Prudential Life Insurance Company.

Faced by many misconceptions, in an age when they are ruinous to a country locked in a life-and-death struggle with the Soviet Union, your advertisements are not just advertisements, but a public service. They clearly explain how forward-thinking corporations are working to keep America ahead of the Soviet Union.

Lastly, could you forward a copy of Union's 1959 Annual Report?

Respectfully,
(Signed) Howard S. Muse, Jr.
Glen Head, N. Y.



(°) *Editor's note:* In case you're in the same class with the history teacher and me, here are the facts: The term "xd" or ex-dividend is not to be confused with extra-dividend; it means without dividend. Every dividend is payable on a fixed date to shareholders of record on some previous date — say payable Sept. 15 to holders of record Sept. 5. But since four business days are needed to transfer ownership on the corporation's record books, the stock in question will go "ex-dividend" Sept. 1. You would have to buy it before that date to receive the declared dividend.

SUMMER BOWLING CHAMPIONS among Union Oil Center devotees of the sport are, from left, Mary Van Blaricom, Clarence Rode, Jack Flynn, Trophy Contributor Bill Thompson and Edna Twohig.



THESE UNION OILERS were photographed while they were keeping themselves up-to-date on what's new in the automotive world during the National West Coast meeting of the Society of Automotive Engineers in San Francisco. Left to right: W. A. Wright, Research; F. H. Ott, Marketing; W. P. Lakin, Research; M. K. Carter and Al Lien, both of marketing.



GEORGE CABRAL, Operator No. 1 in the Lube Oil Department at Oleum Refinery, spends many of his leisure hours in the hobby of developing new floral strains. He has succeeded in growing calla lilies that continually produce double blooms and, on occasion, a third bloom for good measure. His botanical lab is called Cabral's Garden of Flowers and Happiness."
 from D. G. Probst

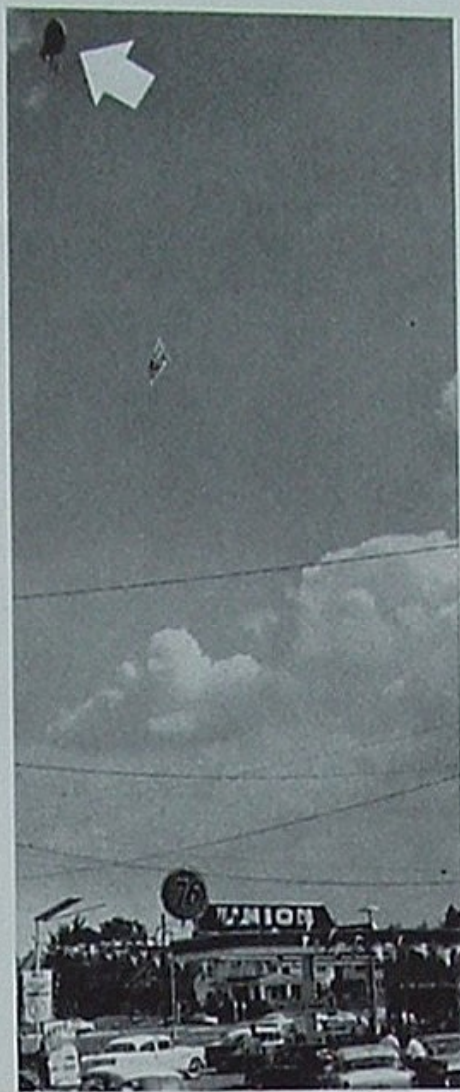
20 WINS, NO DEFEATS was the remarkable season's record of the Union Oil sponsored Harbor City Little League Dodgers, who have won their league championship for the second year in a row. During their victory tour and luncheon at Los Angeles Refinery, each received a "76 Sports Award" from Retail Sales Manager Clay Petray, left. The champs include, from left, Gene Sampson, Mark DuBose, John Meenan, Donald Graham, Steve Okamura, Steve Fukuzaki, Norman Giffen, Harold Stevens, Steven Kegley, Mark Schleibaum, Pat Schleibaum, Charles Morrow, John Kopchick and Coach Joseph Kopchick.

from S. D. Reiner





in focus



GRAND OPENING on August 26 and 27 of our ultra-modern service station at Lloyds, the world's largest shopping center, in Portland, Oregon, featured the captive balloon (arrow) and banner seen floating overhead. (If you decide to duplicate the balloon stunt, check with your police department first. There may be laws against flying them in your area.) Sales Supervisors Jim Peterson and Vince Davis, dressed as clowns, and Sparkle Girl Joan Dieninger had to join Station Manager Jon Hall and his crew in serving the steady traffic jam of customers. Many other Union Oilers pitched in to wash windshields and circulate handbills.

from C. C. Corsiglia



CONSIGNEE VERYL BOMMER of Blythe, California, has been praised by the Palo Verde Valley Times for letting nothing—not even a freeboard ride on the Colorado River—interfere with his interest in the news. It was Veryl's son, Terry whom we last year portrayed water skiing, barefooted and without skis, on the same stream. Mrs. Bommer is equally at ease on land or water.

from T. E. Luke



DENNIS WHITE, left, son of Union Oiler J. W. White, Portland, was chosen with John Littlehaes, right, to be a guest of the U. S. Coast Guard Academy in New London, Conn., during August. Only 50 applicants in the entire nation were so honored after being tested on a basis of scholarship, leadership and personality. Later the applicants may compete in examinations for entrance to the Coast Guard Academy.

from James E. McCaffrey





SCOUT TROOP 76 of Long Beach, California, though not Company sponsored, has a large roster of Union Oilers. Shown just before the troop's departure to the National Jamboree in Colorado area, from left, Robert Switzer of Research, his son Bill; John Hannaman whose father Jack works at Union Oil Center; Mike Maddy, grandson of retired LAR Supervisor Merle Maddy; Chuck Fawcett, son of LAR Supervisor Phil Fawcett; Patrol Leader Brian Overhulls; Brian Page and father William Page who is assistant scout master and a supervisor at LAR.

from S. D. Reiner



LEO OLSEN, right, of Oleum Refinery is cub master of the Pacheco, California, Pack. At scouting's golden jubilee observance held in Curry Creek Park, Contra Costa County, he presented awards and jubilee emblems, aided by the finest loud-speaking equipment. Present were 125 Cubs and their parents and families.

from G. B. Stone



A RESEARCH CHEMISTS' TOUR of Los Angeles Refinery was conducted July 28th to promote closer ties and teamwork between Research and Manufacturing. In the photo, Refinery Supervisor Arthur F. Stribley, Jr. is pointing out features of the Unifiner-Platformer where Pure-Power stocks of our gasolines are made. Other employees identifiable in the picture are, from left, T. L. Marple, D. O. Alford, W. G. Gross, Edward Parry, U. Niwa, Jack Galey, Elihu Goldfish and L. W. Burdett.

from S. D. Reiner



PAUL O. GOODER of the Manufacturing Department, Union Oil Center, serves as a major in the U. S. Air Force Auxiliary, California Wing. During August he was encampment commander for the second consecutive year at Norton Air Force Base, San Bernardino. A major purpose of the encampment was to stimulate young people, between the ages of 14 and 18, toward careers in aviation and aerospace technology.

from Civil Air Patrol

HAL SCHAPER, right, retail sales supervisor at Seattle, seems to be the only in-coming officer (he recently was elected vice president of the Lake Hills Community Club) who is even mildly pleased. From left, out-going officers Fred Kern and Lee Windall are elated to unload unfinished business on President Bob Layne and Secretary Lois Rhodes. The club is a civic organization to which county offices delegate such worries as zoning, speed, and safety laws, sewers, water and parks, etc.

from Carole Judkins



RETIREMENTS

September 1960	Service Date
ROBERT F. ANGELL Los Angeles Refinery	August 3, 1922
JOHN W. BROWN Southern Field	January 23, 1922
JAMES DAVIDSON Comptroller's—H. O.	July 27, 1934
WILLIAM H. FAIN Los Angeles Refinery	January 19, 1942
ALFORD L. FOSTER Calif. So. Cstl. Div.	August 20, 1933
RALPH HILTON Southern Field	November 15, 1917
THEODORE R. LAIDLAW Calif. So. Cstl. Div.	June 14, 1916
GUS A. MALKOS Oleum Refinery	February 20, 1931
RAYMOND L. MONREAL Northern Pipeline	August 16, 1923
ANDREW J. ORENS Southern Field	January 28, 1922
WILLIAM R. PENCE Research Department	December 5, 1925
HARRY M. SCHAFER Marketing—Distr.	October 23, 1928
ROBERT W. THOMPSON Automotive—H. O.	June 2, 1920

Employees:	Retirees:
JAMES DAVIDSON Comptroller's—H. O.	August 21, 1960
LERoy BLANKINSHIP Southern Pipeline	July 28, 1960
EDWARD J. BURGE Res. Mgr.—Escondido	August 15, 1960
RALPH G. FORD Southern Division	August 12, 1960
FRANCES S. MANLEY General Sales—H. O.	August 29, 1960
JAMES G. MOONEY Manufacturing—H. O.	August 15, 1960
GUY E. PYLE Prod. & Trans. Field—Valley	August 2, 1960
ALBERT L. YOUNG Los Angeles Refinery	August 5, 1960

IN MEMORIAM

SERVICE BIRTHDAY AWARDS

EMPLOYEES

September 1960

40 YEARS	
JOSE A. PAES	Oleum Refinery
35 YEARS	
LESTER A. BILLINGTON	Auto. & Eng.—So. Div.
HOMER H. HOSTETTER	Mktg.—San Diego
MARY A. KNOLL	Comptroller's—H. O.
HAROLD W. LOWREY	Santa Maria Refinery
DENMAN E. TALLEY	Field—No. Div.
CLARENCE TRUESDALE	Pipeline—No. Div.
MARION L. WANLASS	Oleum Refinery
30 YEARS	
MANUEL R. ARRIAGA	Oleum Refinery
CLARENCE K. HOHU	Mktg.—Honolulu
EARL C. STINSON	Oleum Refinery
25 YEARS	
DARWIN I. GANTZ	Los Angeles Refinery
JACK F. GRAHAM	Research Department
FRANK T. GRAY	Mktg.—So. Division
HARVEY W. LEE	Exploration—H. O.
CARL D. MORTON	Los Angeles Refinery
RICHARD E. PERRY	Marketing—H. O.
CHARLES W. ROBISON	Los Angeles Refinery
RICHARD C. VERRAN	Oleum Refinery
ERNEST L. WARD	Purchasing—H. O.
20 YEARS	
JOHN W. ALBRIGHT	Los Angeles Refinery
MALCOLM M. HULL	Los Angeles Refinery
PAUL F. LUETH, JR.	Econ. & Plan.—H. O.
EARLE F. MEAD	Comptroller's—H. O.
RUSSELL R. RENTZEL	Los Angeles Refinery
LOREN F. GRANDEY	Refining—H. O.
15 YEARS	
REFUGIO R. ALVARADO	Oleum Refinery
BERNARD J. AVERBECK	Mktg.—Phoenix
NORMAN L. BAKKE	Oleum Refinery
RAY F. BOTELLO	Mktg.—So. Division
WARREN W. BOUSMAN	Los Angeles Refinery
JOHN W. BOYD	Los Angeles Refinery
JAMES H. BRICKEY	Field—No. Division
MELVIN C. BRIDGES	Auto. & Eng.—So. Div.
EDDIE H. CAPITANI	Field—No. Div.
LEO M. CHAPMAN	Oleum Refinery
BILLY E. COLE	Oleum Refinery
CHARLES L. COOK	Oleum Refinery
WILLIAM D. COOK	Oleum Refinery
HOMER L. ERICKSON	Oleum Refinery
FRED D. GIRARD	Oleum Refinery
RICHARD F. HANCOCK	Mktg.—So. Div.
EDWARD H. HANSON	Mktg.—San Francisco
EDWARD G. HARDIN	Los Angeles Refinery
JOHN HARMON	Oleum Refinery
LEE M. HARP	Santa Maria Refinery
THOMAS HENRY	Oleum Refinery
EUGENE F. HILL	Oleum Refinery
HARLEY E. HOOKER	Marketing—Utah
JOHN W. HUNT	Los Angeles Refinery
FRANK M. IRWIN	Los Angeles Refinery
FRANK J. KERTH	Marketing—Alaska
WALTER E. KIER	Oleum Refinery
CONRAD W. KURTZ	Field—No. Division
ELO J. MALEK	Oleum Refinery
RAYMOND J. McLAUGHLIN	Los Angeles Refinery
CHARLIE MEEKS	Los Angeles Refinery
HAROLD O. MILLER	Los Angeles Refinery
RALPH A. NICHOLS	Mktg.—San Diego
FRANK J. OSTER	Pipeline—No. Division
VERNON E. OWEN	Cut Bank Refinery
CHARLES S. PARKER, JR.	Trans. & Sup.—H. O.
FRANCIS A. PATE	Research Dept.
NELLIE P. PRICE	Mktg.—Seattle
EDWARD J. QUINN	Oleum Refinery
LEO G. RECCHI	Oleum Refinery
DANIEL B. ROSE	Oleum Refinery
FRANK A. RYSAN	Research Department
MILTON T. ST. ONGE	Oleum Refinery
DAVID W. SANDERSON	Oleum Refinery
GLENN E. SIMMERS	Oleum Refinery
CHARLES W. SMITH	Field—No. Division
WESLEY G. TAMES	Oleum Refinery
IRA W. TUCKER	Comptroller's—H. O.
EDWARD E. WALTON	Mktg.—Seattle
KENNETH W. WATSON	Research Department
CLARENCE L. WILDMAN	Oleum Refinery
ERNEST R. WIVEL	Oleum Refinery
JESSE J. ZUPPAN	Oleum Refinery

10 YEARS

JAMES L. ANDERSON	Oleum Refinery
JAMES L. BARNES	Oleum Refinery
JOE N. BOYLES	Los Angeles Refinery
CHARLES L. CARVER	Oleum Refinery
DAVID F. CHARLES	Calif. So. Cstl. Div.
OLIVER F. CONREY	Trans. & Sup.—H. O.
RICHARD COX	North West Division
FORREST B. CRITES	Oleum Refinery
HERBERT R. HANSEN, JR.	Purchasing—H. O.
MELVIN L. INGALLS	Oleum Refinery
HANS KOLFF-VAN OOSTERWIJK	Oleum Refinery
CHANDLER H. NOERENBERG	North West Div.
ANTHONY PALUMBO	Oleum Refinery
ROBERT D. READY	Cut Bank Refinery
J. JUNIOR SNIDER	Calif. So. Cstl. Div.
WILLIS M. STANLEY	West Texas Div.
LOUISE K. TULLEY	Comptroller's—H. O.
DONALD C. TURNER	Exploration—Canada
JOHN T. URONE	Oleum Refinery
ROBERT J. WALLACE	Field—Southern Div.
LOUISE M. WITT	Oleum Refinery
EDWARD C. WOLLERT	Pipeline—No. Div.
ROBERT E. YOUNG	Cut Bank Refinery

DEALERS

September 1960

35 YEARS	
CHESTER HEATH	Pasadena, California
PALAMA AUTO CO., LTD	Honolulu, Hawaii
30 YEARS	
J. A. MASKROD & SON	Snoqualmie, Wash.
SCHOETTLER GENERAL TIRE DISTR., INC.	Madera, Calif.
25 YEARS	
F. R. MUNOZ & SONS	Santa Maria, California
H. SARVELA & SON	Winlock, Washington
20 YEARS	
SERVICE MOTOR CO., LTD.	Wahiawa, Hawaii
15 YEARS	
CHRIST ANTHONY	Los Angeles, California
WALTER F. CORNEHL	Bridgeport, Washington
EDWARD H. HUETH	San Francisco, California
PALOMAR MOTORS	Escondido, California
10 YEARS	
FRED CLAWSON	No. Hollywood, California
JOHN M. EPPLER	Firebaugh, California
GORDON GILL	Saticoy, California
ROBERT NEALE	Stanwood, Washington
LEONARD S. REED	Sherman Oaks, Calif.
CHARLES TARUTANI	Honolulu, Hawaii
RAYMOND L. TOLLE	Pismo Beach, California
5 YEARS	
CHARLES F. ANDERSON	Reardan, Washington
HARRY BEATY	Dundee, Oregon
EUGENE BENNER	Glendale, California
G. & H. EASTMAN	Escondido, California
R. L. FAIRCHILD, JR.	Klamath Falls, Oregon
J. B. GODDARD	Barstow, California
CLYDE T. HUGHES	Burbank, California
MICHAEL MICHAEL	Seattle, Washington
GARNETHA NOVAK	Robe, Washington
August, 1960	
5 YEARS	
ARTHUR L. LARSON	Salem, Oregon
TROUTMAN BLDG. MATERIALS CO.	Maupin, Oregon
CONSIGNEES - DISTRIBUTORS	
September, 1960	
30 YEARS	
L. M. MORAN & W. A. MORAN	Omak, Washington
25 YEARS	
JOHN G. HANSMANN	Mt. Vernon, Wash.
20 YEARS	
H. A. MADDEN	Skamokawa, Oregon
15 YEARS	
J. W. SCOTT	Milton-Freewater, Ore.
A. J. STEIN	Dallas, Oregon
5 YEARS	
A. G. BRADLEY	Show Low, Arizona
CLIFF C. DAHLSTROM	Poulsbo, Washington
D. M. LANGFORD	Cottonwood, Arizona
August, 1960	
10 YEARS	
BOB HEMPHILL	Gresham, Oregon

Louella Stickler

Meanwhile, back on this planet



"In the race for the conquest of outer space, Russia seems to have put up bigger Sputniks than we have.

"But I saw some figures recently which make me wonder if they're doing half as good a job as we are for the folks on this planet.

"According to recent authoritative studies of Soviet wages and prices, it takes an hour and 4 minutes of labor for the average worker in manufacturing to buy a pound of sugar in Moscow. (In New York, it takes 3 minutes.)

"In Moscow, it takes 15 hours of work to buy a man's cotton shirt. (In New York, it takes 56 minutes.)

"In Moscow, it takes 275 hours of work to buy a man's wool suit. (In New York, 23 hours.)

"I could go on. But it's the same for every item. You'd have to work considerably longer to buy it in Russia.

"You see my point. Bigger and better Sputniks may be scientifically important. But equally important is how well an economy serves the average citizen.

"On that score, we've always done a better job in the United States.

"Union Oil's 8 million dollar Research Center is a case in point. Some 400 people here spend all of their time searching for new ways to provide continually better products at a lower cost for our customers. This work is possible only because of the incentive of our free-enterprise system."

* * * *

Louella Stickler is a Research Assistant in our Process-Research Group.

Louella's comments point up a fact of life. The citizen of a free and competitive economy always enjoys more of the fruits of his labor than the citizen of a communist or socialistic state.

YOUR COMMENTS INVITED. Write: Chairman of the Board, Union Oil Co., Union Oil Center, Los Angeles 17, California.

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MANUFACTURERS OF ROYAL TRITON, THE AMAZING PURPLE MOTOR OIL