

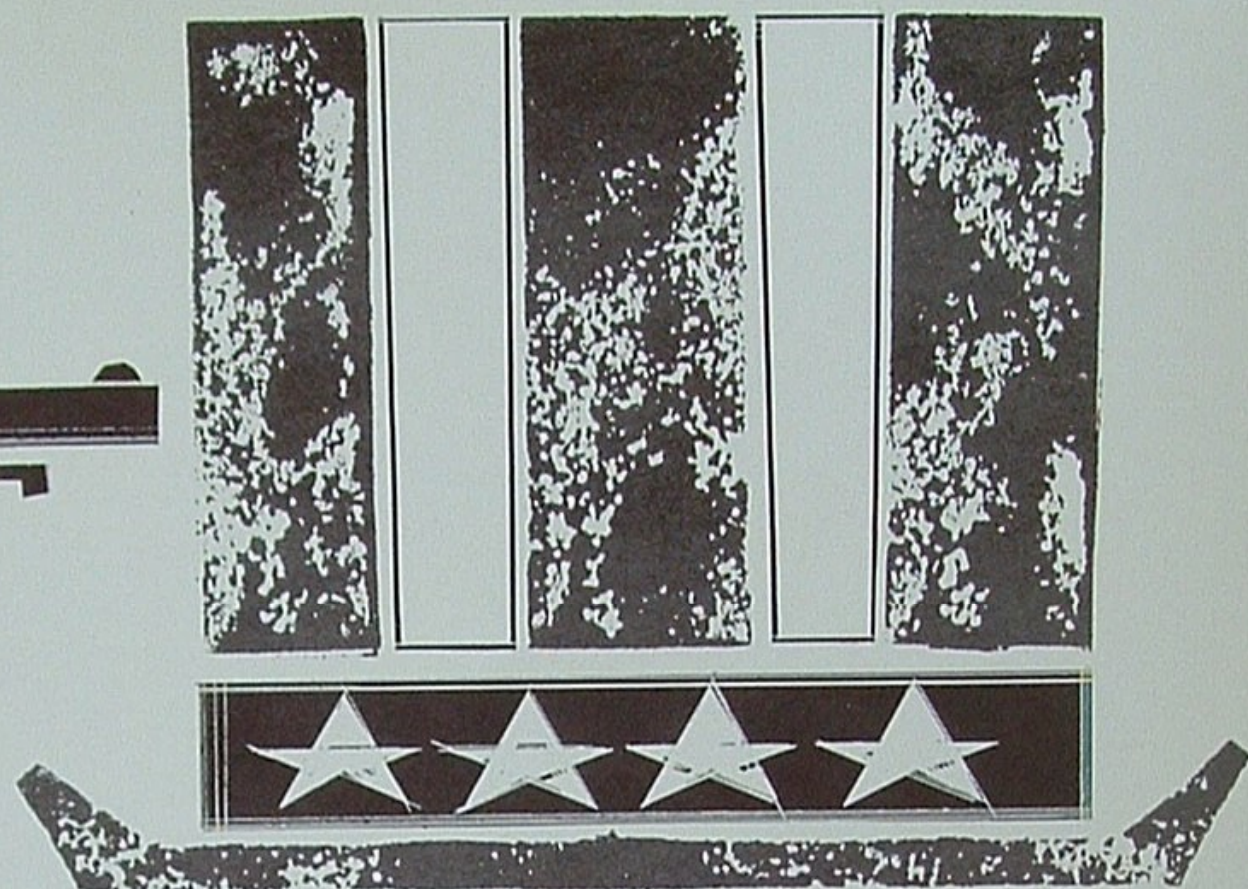


SEVENTY ⁷⁶ SIX

Union Oil Company of California

August 1961

6 ways
the
U.S.



can commit economic suicide

- 1. DESTROY INCENTIVES.** One reason for America's economic drive is the employee's urge to improve his job and thus to better his living conditions. Anything which denies him these incentives, such as severe or punitive tax laws, will reduce his enthusiasm (and) slow economic growth.
- 2. ENCOURAGE IMMORALITY.** Juvenile delinquency, one manifestation of a rising trend to shun personal responsibility by passing it on to others, tarnishes the U. S. and saps its strength. Efforts to subvert the individual's integrity can undermine the nation.
- 3. REDUCE INVESTMENTS.** Investments provide the funds to start new businesses and to expand older ones. Anything which discourages investments restricts business expansion and the creation of new jobs.
- 4. DISTRUST DEMOCRATIC INSTITUTIONS.** A sure way to hand the U. S. over to its enemies is to cast doubt on the ability of the nation's democratic traditions to meet any crisis and to disparage institutions, such as elections, which are basic to a free society.
- 5. ENCOURAGE INFLATION.** Inflation means that the dollar buys less. Thus it erodes purchasing power, reduces the value of savings and lowers living standards of people on fixed incomes. Inflation results when increased costs in production are not offset by increased efficiencies in production methods.
- 6. DESTROY LARGE BUSINESS.** The backbone of the economy are the nation's industries which provide high-value, low-cost output and support much of U. S. industrial research. Large business is a prime enemy target. If large industries are destroyed, the economy will suffer a fatal blow.

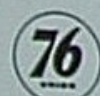
*Reprinted from "Better Living"
E. I. duPont de Nemours & Co.*

August, 1961

THE COVER: Mountain, glacier, waterfall, virgin timber and great fishing still attract thousands of vacationers to Glacier National Park during summer and fall. Story Page 2. Better still, get out the Gold Card and get Going-to-the-Sun!

In this issue:

<i>In Glacier National Park</i>	2
<i>The Lonesomest Job In Town</i>	4
<i>They File On Microfilm</i>	6
<i>"Underway Replenishment"</i>	8
<i>Riding A Free Horse To Death</i>	10
<i>Lawyers With Two Hats</i>	12
<i>Gradually Grandpa Graduated</i>	15
<i>Business Highlights</i>	16
<i>Highest Power And Performance For Outboards</i>	18
<i>For "Royal" Oil It's Stainless Steel</i>	20
<i>In Focus</i>	22



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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Ringings words frighten nobody

From an editorial by Henry J. Taylor

Aggressor nations choose their victims among windy bluffers, not among those of sober strength; among the craven, not among those with stout hearts, great productivity and an absolute determination to fight if they are trod upon.

We must first feel this strong determination and stout heartedness and then make it known by our policies and actions. This feeling—this will—is the factor that counts. This—and only this—will stand guard for us in the perilous years ahead. The words will largely take care of themselves and are relatively unimportant. A brave nation needs no other ornament.

Our vast foreign aid programs are no substitute for this essential. We can live without them but we cannot live without a willingness to fight. We cannot do with dollars what we need to do with guts. In fact, the more we talk exclusively about money, tractors, ransoms, and enlisting America's youth into a Peace Corps—as if these would give us security—the softer we sound to the barbarians.

Men died for what we have. We are their heirs. Our heroes fought for this country and unless we are still willing to fight for it—not just talk for it or spend money for it—we will lose it.

"My son, that which I bequeath you, you must own anew if you would keep it," says an epitaph in a Concord graveyard.

We must banish defeatism. We have only one true choice for the future. We must never be afraid to stake our life and honor against all the might and fury of the vicious, disciplined and ruthless enemy of the United States.

To do otherwise is like the mole baiting his own trap. But once we act like the Americans we really are, our enemies will respect us too much to risk war against such a nation; for we are the greatest power on the face of the earth.

By not being afraid to fight we will, with that key, open the only door to peace. And if we are afraid to fight, you and I will do nothing but die in the war that need not be.

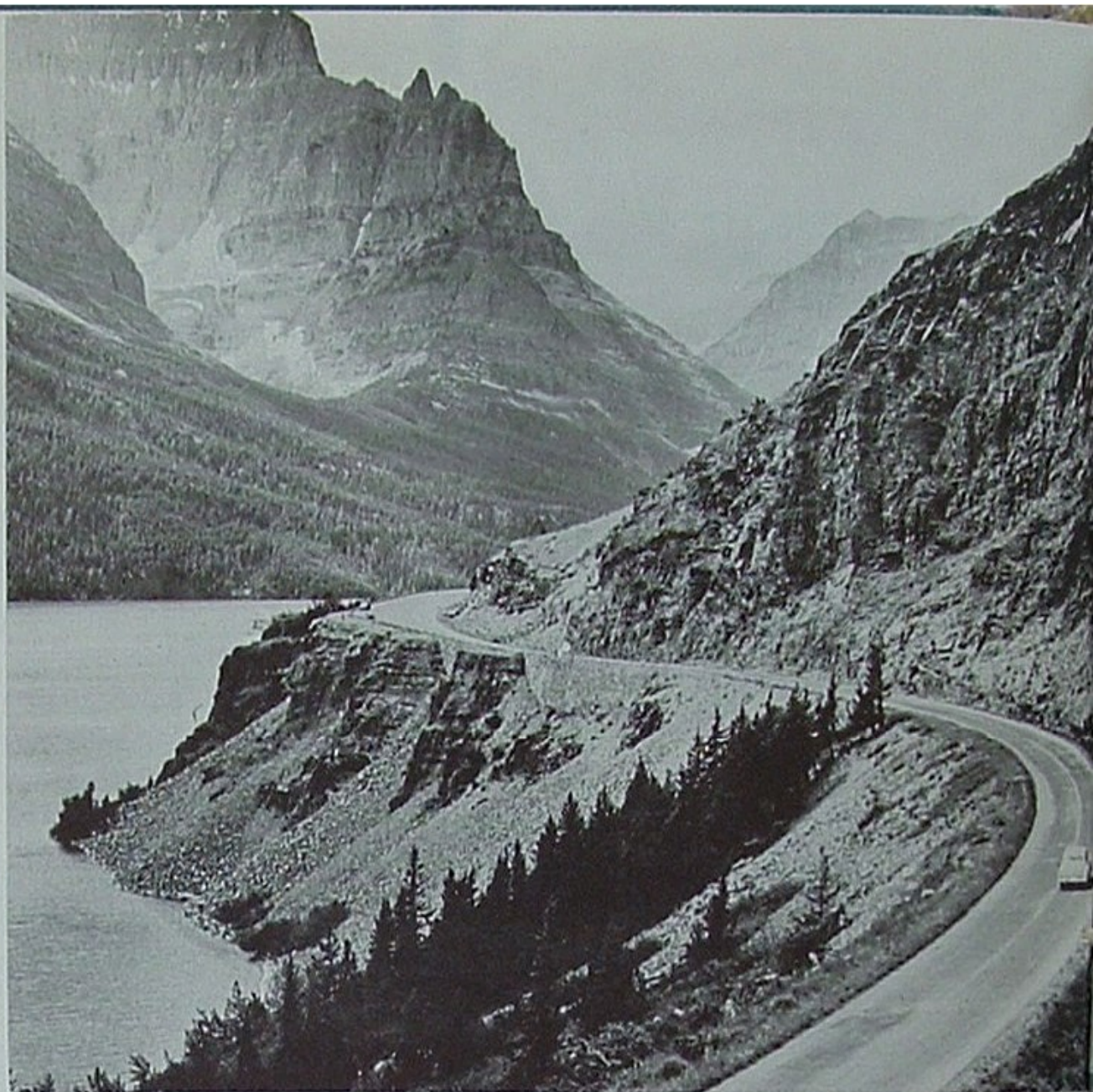
Reprinted through courtesy of Los Angeles Times

★ ★ ★

"We cannot expect the Americans to jump from Capitalism to Communism, but we can assist their elected leaders in giving Americans small doses of Socialism, until they suddenly awake to find they have Communism."

NIKITA KHRUSHCHEV
(3½ mo. before visit to U. S.)

*On the magic plastic
of a "76" Gold Card
you may now travel
Going-to-the-Sun Road*



IN GLACIER NATIONAL PARK

Long before we *pale faces* came on the scene, Indians of the Blackfeet Nation turned westward annually from Montana's buffalo plains toward a magnificent section of the Rocky Mountains. There, they knew, were 60 large glaciers struggling with jagged, dark mountains for scenic supremacy. Icy rivers and creeks plunged down the rocky slopes into 200 beautiful lakes. Forests mantled the valley floors. Fish abounded in the waters. Deer, elk, moose, bear, mountain sheep and wild fowl were plentiful. Nature provided roots and berries for the preparation of *pemmican*. It was a very attractive country even to the aborigines.

Maybe the Great Plains grew too plain or buffalo hunting became monotonous. At any rate, loading all of their possessions on *travois* and harnessing dogs or horses to do the pulling, the plains Indians moved, during early summer, westward and upward. It was a happy journey. They pitched their *tepees* beside the blue lakes — fished and feasted — met and traded with friendly tribes — danced and sang — or rested under the gentle rays of the summer sun.

There is an old Blackfeet legend telling of a chief who, while climbing one of the glacier-shrouded mountains, disappeared in a sudden snow storm. When sunshine returned, only a single trace of the chief could be

found — his profile carved in the rock of the mountain. Ever since that day, the mountain and one of the routes leading toward it have been known to the Indians and *pale faces* alike as Going-to-the-Sun.

Today, a 50-mile asphalt trail, called Going-to-the-Sun Road, starts the westward trek at beautiful St. Mary Lake, climbs to the Continental Divide at Logan Pass, then moves down through an area of forests and lakes to West Glacier. Enroute it unfolds the fantastic beauty of Glacier National Park, a million-acre public domain established by Congress in 1910. Except for the fine highway and its bordering hotels, camp sites and service stations, the park is preserved in all of its virgin wonder. The chief's profile is still in evidence. In several places glaciers dispute the right-of-way. You can follow game trails through country that has never seen an automobile or bridge. You can fish without a license for rainbow and other varieties of cold-water trout. You can even pitch your *tepee* beside a glacier-fed lake, feast, tune-in the *tom-tom*, trade with the Indians, dance and sing.

Incidentally, your Union Oil Credit Card is now *good medicine* from portal to portal, and beyond, in Glacier National Park.

Load up your 1961 *travois* and let's get Going-to-the-Sun!

/THE END



Many Glacier Hotel on Swiftcurrent Lake extends warm hospitality to thousands of visitors annually. Glacier National Park was designated a public Going-to-the-Sun domain by President Taft.

One of 200 lakes in the park is Two Medicine; it is nature's reflecting pool for Mt. Sinopah.





*Our Union Oil Center
dispatch rider has*

The lonesomest job in town



Richard Woody drives the night mail run out of Union Oil Center, the loneliest job in town.

He comes into the Center around five o'clock in the evening, after almost everyone else has gone home, loads his blue panel truck, and starts on a loop that will take him to Union Oil offices throughout the L. A. Basin.

For the next eight hours, the only people he'll talk to are the guard at the Los Angeles Refinery gates and the waitress who serves him pie and coffee in an all-night restaurant.

Trying to follow him on his route — as our photographer did — is a frantic experience, even though Woody stays within the speed limits and has a perfect safe-driving record.

He pulls in at a darkened oil field office, drops a load of mail in a deserted mail room or outside locker, picks up another load, climbs behind the wheel, and he's gone. Woody has handled the night run for three years. So he knows all the freeways, highways, by-ways, and shortcuts. He'll drive 130 miles, make 25 stops, and be back at the Center after midnight, ready for home and sleep.

A brief sleep, because Woody's is an around-the-clock schedule.

Daytime, he's a senior in education at Los Angeles State College. This year, his program is loaded with psychology courses. Eventually — he estimates it will take him most of two more years to graduate — he expects

to go into a school system as a counselor.

And he's married. He and Mrs. Woody have two young daughters, Danice and Shawn. With daytime school, night-time driving, and weekend studies, Woody is forced to be a part-time family man.

"I couldn't hold the job and go to school, too, without a very understanding wife," he says.

(Woody's opposite number, the day driver Howard Williams, is a night student at Pasadena City College.)

The Union Oil part of Woody's 24-hour schedule is a money and time saver for the Company. He carries the mail, but he also delivers stationery and supplies; medicine from the Center to other dispensaries; product samples from refinery to research, office machines, and even old records on rush request from storage.

In years past, home office, refinery, terminal, research, field headquarters and its satellites each handled its own mail exchanges, a slow, awkward, expensive arrangement. Realize: for these operations Union Oil is spread over 210 square miles of the Basin. Woody and his fast panel truck, by making the circuit in one direction and then back-tracking over the same route, link all the offices with each other and with the Center. And everyone gets dependable over-night service. Economically.

His may be a lonesome job. But for Woody and Union Oil the mutually profitable arrangement works out very well.

/THE END



The Center's basement parking garage is nearly empty when Woody loads his fast panel truck for night run.

Woody drives 130 miles through the night—and neither rain-swept highways nor the mud of oil field roads delays this courier on his rounds!



Even eating is a lonesome business. Because his cargo is often valuable, Woody sits where he can watch his truck from the restaurant windows.

*The Credit Department is serving
twice as many customers
with half as much red tape,*

They file on

Two documents are essential to the issuance of every Union Oil Credit Card — an application from the customer and a satisfactory report from his creditors. If these documents are prepared properly and the applicant appears to be a good credit risk, that is all our credit men want to know. They'll gladly file the information away and hope the need never arises to refer to it again.

However, among an average 100 Union Oil Credit Card customers there's approximately half a man (.39 of one per cent) who doesn't pay his bill. This statistical dwarf of a fellow not only spoils the perfect paying record of 99.61 good solid citizens but makes it necessary to keep everyone's credit documents on file. The slow-payer's credit history helps to determine whether collection efforts should be continued or the account should be written off.

A few years ago our credit filing system included an envelope for each account, in which was placed all pertinent credit data. It was a good system and served the Company well for many years. But it had two weaknesses: the envelope consumed too much filing space and the filing clerks developed quite a broad

definition of *pertinent*. Despite meetings, printed instructions, pleadings and merit increases, supervisors often found in the envelopes information that didn't belong there. Filing clerks reach a stage of conscientiousness, it seems, where even such items as a lock of hair from the customer's newest grandchild might deserve a place in the credit file.

At any rate, the envelopes got too "stuffy" and were abandoned in favor of an "aperture" file card that came on the market. This patented device had a small window in which was mounted microfilm duplications of the credit application and credit report. These could be projected and copied at will. Since the window occupied less than a square inch of space, the remainder of the card was usable for such notations as payment irregularities. The card defeated most temptations to store customer mementos, such as kindly vacation postcards, and, aside from an occasional doodle on the margin, most of the data it attracted were pertinent.

Our credit men liked the "aperture" card and would have continued using it. However, during 1960, manufacturers of the patented card announced its discontinuance in favor of a new type. This necessitated revamping the credit filing system or devising something better.

Well, we devised something better! Today every new credit application and credit report is microfilmed. After the film is developed, verified and mounted on reels, the original material is destroyed. Accounts are coded in a manner that allows simple indexing for prompt referral to an individual account. Up-dating and revision of the files is accomplished by making entries on a card form whenever an account becomes seriously delinquent. Only about 10% of the accounts ever do.

The new method has reduced manual filing time by approximately 90 per cent. Eventually, as microfilming replaces the older system, there will be a greatly reduced need for filing space and floor space. Savings in mechanical equipment and aperture cards will amount to \$15,000 annually. Considerable detail work has been eliminated.

Interestingly, this Credit Department transition has changed the nature of several jobs but has occasioned no reduction of personnel. While the changes were taking place, Union Oil's active credit card accounts approximately doubled in number to the present total of over 500,000. The increased business is handled under

From left, Sidsel Hoygaard, Elaine Lewis and Sybil Kayser demonstrate filing-space economy of microfilm over older card and envelope trays required for same number of customer accounts.



microfilm

the new system with a staff equal to that of the envelope-filing days.

As every credit worker will agree, the Credit Department is the busiest spot in Union Oil Company. In Los Angeles, for example, where over half of our retail credit accounts are serviced, each credit man and his assistant now handle 25,000 accounts. Phone calls in and out of the office average well over 600 daily. There are close to 10,000 letters to write each month — most of them fortunately with the help of two semi-automatic typewriters.

When a letter is opened or the phone rings, a credit man is prepared to expect anything: A dealer may want a new credit card for one of his customers in tomorrow's mail. A lady with a tri-annual credit card wants to know why she doesn't rate one of those pretty Gold Cards. A man whose paying record could stand improvement wants just one more chance to prove his better intentions. A newlywed whose bride drove home to mother wonders if he's still responsible for her signed purchases of gasoline.

But now none of this red tape ever gets into the Credit Department files. All the microfilm wants to know is who the customer is, where he lives, what he does, what he has, and how he pays. We doubt very much that his picture in color, standing in the scenery of Yosemite, will ever gain a pertinent place in the microfilm record.

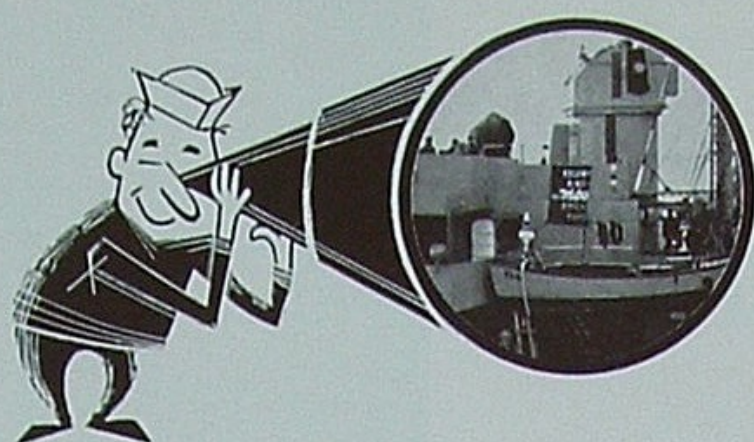
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In Los Angeles office, the streamlining of credit work now makes it possible for each creditman and his girl "Friday" to service as many as 25,000 Union Oil accounts via phone and letter.



Tryout of a new microfilm projector meets the approval of Jerry Baldwin, General Credit Manager W. W. Workman and Los Angeles Credit Manager F. B. Bremer. Filming of records is done in San Francisco by Lucy O'Brien, in lower photograph.





“Underway

“Underway Replenishment” is the naval term for filling ‘er up while warship and fueling vessel cruise side by side in the open sea. It is a ticklish maneuver requiring expert seamanship and Minute Man Service of heroic proportions.

Incidentally, during recent summer exercises in the Pacific, one tankship appeared on the underway-replenishment scene flying a genuine “7600” banner from the bridge. Though the *oiler* dispensed Navy Special Fuel Oil, sailors enjoyed this commercial aspect of the fill immensely.



Lt. (jg) Frank W. Meyer, right, former engineering trainee in our oil fields of Los Angeles Basin, is on military leave as fueling officer aboard USS HELENA.



A slack loop in the cargo line permits slight variance of distance between ships.

Way Replenishment"

term for
el cruise
maneuver
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y-replen-
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f the fill

Among quite a number of Union Oil people who are manning the country's salt-water defenses through full or part-time Navy service is Lt. (jg) Frank W. Meyer. Employed by Union as an engineer trainee following graduation from U.C.L.A. in 1956, Frank worked for more than a year in production assignments at our Santa Fe Springs location. He chose Navy enlistment in 1957 when military service beckoned.

An oil man is given quick recognition these days, even in military circles. Meyer soon was commissioned; moved to the Bureau of Ordnance in Washington, D. C.,

then overseas to Saudi Arabia as an inspector of vessels and petroleum stores. Currently he is fueling officer of a Task Group attached to the First Fleet. At the conclusion of his active duty he plans to return to petroleum engineering.

Photos taken during a recent San Diego-to-Portland training cruise show the lieutenant and his compatriots sharpening their underway-replenishment skills. Despite new applications of atomic energy, our national safety depends largely upon oil and Minute Men who know how to put it aboard wherever it's needed.

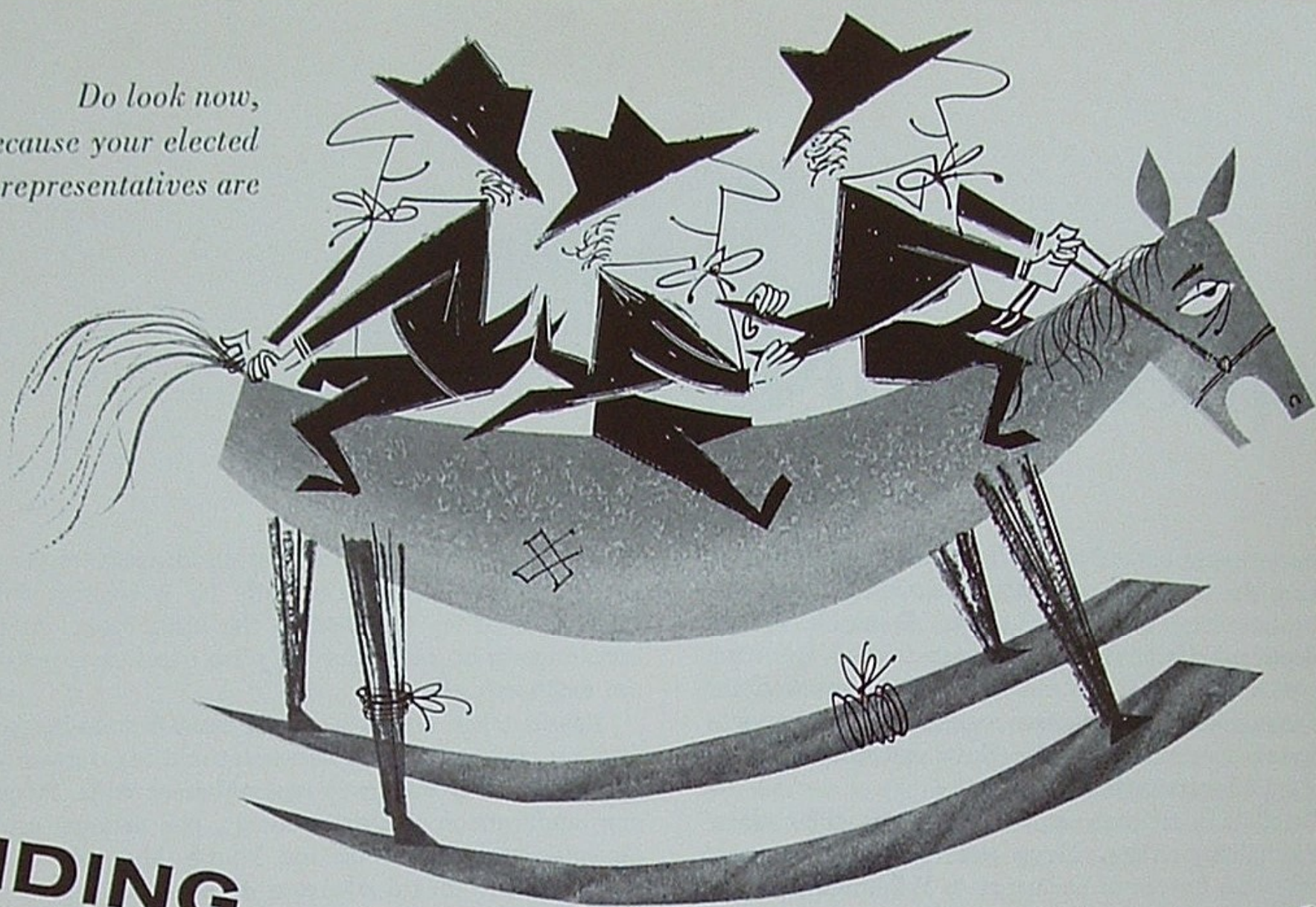
/THE END

Refueling of a cruising warship at sea, although a ticklish maneuver, is a necessary safeguard against submarine warfare.



o line permits
between ships.

*Do look now,
because your elected
representatives are*



RIDING A FREE HORSE TO DEATH

Over the past 10 years, Americans have produced an average of 5½ million automobiles each year — more than half of the world's production. As a matter of fact, the U. S. scraps as many cars each year as the rest of the world produces.

Back in 1901, there were only 15,000 passenger automobiles in the U. S., and the average man or woman traveled barely 200 miles a year. Today, in its car or cars, the average American family motors 9,500 to 10,000 miles a year, to jobs, to school, to church, to stores, on vacations.

One of the things that has made us a nation on wheels has been low cost gasoline that everyone can afford:

From 1950 to 1960, for instance, the actual retail price of gasoline, excluding the tax, rose only 4½ per cent. On the other hand, the price index for all consumer items, according to figures compiled by the U. S. Bureau of Labor Statistics, went up 23 per cent over the same time. Milk prices increased 26 per cent; shoes, 34 per cent; bread, 43 per cent.

The gasoline tax, however, has soared more than 50 per cent in the last decade alone. The total price of a gallon of regular grade gasoline, coast-to-coast, today averages a little more than 31 cents. Of that amount, on the average, 21 cents is the actual price of the gasoline; the rest — over a dime — is tax. This heavy tax —

roughly equivalent to half the price of the gasoline itself — on an item most people use every day is five times the rate of the luxury levies on diamonds, mink coats and perfume.

The whole idea of a gasoline tax began in 1919, when Oregon imposed a one-cent-a-gallon levy for the support of its highways. Within 10 years, every state in the Union had adopted the measure (and raised the tax ante several fold).

In 1932, the federal government imposed a "temporary" one-cent-a-gallon levy. This tax is still in effect, and has quadrupled to four cents a gallon.

KILLING THE GOOSE

Many of us have a difficult time visualizing just how much revenue can be derived from a 10-cent tax on gasoline. Perhaps this will help focus the picture:

In 1960, federal and state governments were collecting gasoline taxes at astronomical rates:

In one second	\$182
In one minute	\$10,920
In one hour	\$655,200
In one day	\$15,724,800
In one year	\$5,740,000,000

But signs are beginning to appear that the gasoline tax is hurting:

Three years ago, compact cars (then most all foreign made) were one of 20 sold. In 1960, compacts accounted for one of every four new-car sales. George Romney, president of American Motors, predicts that by 1963 compacts will outsell standard-size models two to one. In numerous consumer-attitude surveys, the desire for cheaper operation and better gasoline mileage was by far the primary reason cited for the purchase of a compact model.

Because of the compact car, several states announced that revenues from gasoline taxes for 1960 would be less than expected. In New York state, gasoline taxes were much less than anticipated. New Jersey officials figured their gasoline revenues would be several million dollars shorter. North Carolina gas tax revenues fell \$1 million under the 1959 estimate. And some economists predict that, if the trend toward small cars continues, state and federal gasoline tax revenues will be as much as half a billion dollars below earlier estimates.

Furthermore, the compact trend is partly to blame for depressed operations in many industries, including steel, rail transportation, rubber, aluminum, chemicals, textiles, glass, etc.

MOTORIST CARRIES THE LOAD

Recently the new administration in referring to the highway program cited "the vital contribution this program makes to our security, our safety and our economic growth. Timely completion of the full program authorized in 1956 is essential to a national defense that will always depend, regardless of new weapon developments, on quick motor transportation of men and material from one site to another."

However, this concept has not been observed when it has come to financing the plan. No military funds or general fund revenue have been used to help pay for the federal highway program. It is a matter of record that, primarily through his payment of the federal gasoline tax, the motorist has borne the brunt. He is actually over-paying the full cost of the program.

For example, during the last fiscal year, American motorists paid \$4.3 billion in special federal highway user taxes (on gasoline, new cars, tires, automotive parts, accessories, etc.). But only about \$2.6 billion of this amount was channeled into the Highway Trust Fund. Approximately \$1.7 billion was diverted to non-highway purposes. Similarly, approximately 40 per cent of the federal highway user taxes paid by motorists since the program was launched in 1956 have not been used for highways.

There are strong indications the 50 per cent tax on gasoline has reached a point of diminishing returns.

Mr. Loyal M. Graham, who first introduced the gasoline tax to the Oregon legislature in 1919, was asked to comment on the situation during his recent 100th birthday celebration. He described the 50 per cent tax as "the tendency of a Yankee to ride a free horse to death."

Reprinted through courtesy of Empire Trust Letter

★ ★ ★

HIDE THAT CHRISTMAS AD: THE REVENUERS ARE COMIN'

The Timken Roller Bearing Co. has had the courage to put up a fight for freedom of speech and freedom of the press against the Internal Revenue Service, which acts as a censorship agency.

Timken is suing the Government for \$1,500,000 which it claims it has overpaid for income taxes, the Internal Revenue Service having taken upon itself the duty of deciding that advertising is not a cost of running a business.

The Treasury objects to institutional advertising, that is, the use of advertising space paid to attract attention but delivering a message instead of directly advocating the use of a product.

Institutional advertising is used because the advertiser finds that a message attracts greater attention to the product than boosting the product itself.

The Metropolitan Life Insurance Co. has for many years used its advertising space to tell about health. Its object is to prolong life.

It is possible to say that the insurance companies are charitable organizations which love mankind and therefore seek to prolong life.

On the other hand, these advertisements are keenly read because they are informative, and are good business because they keep the name of the company before the public in a favorable manner.

Whether it is a noble act or a gimmick, it is of value.

In the case of Timken, the Government objected to advertisements which "... hailed the spirit of Christmas, urged gifts to the United Fund, presented the company's side of a controversy with a union, and promoted the city in which the company's plant was located in the hope of attracting other employers to the area."

*From George E. Sokolsky column of
Herald-Express, Los Angeles*

Lawyers with two hats

*The Patent Division is the Guardian
of Union Oil's Know-How*

When the men who wrote the Constitution of the United States set down Article 1, Section 8, they inadvertently created a breed of lawyers who wear two hats.

That particular article is the basis for our patent and copyright laws. It gives Congress power to "promote the progress of science and the useful arts by securing for a limited time to authors and inventors exclusive rights to their writings and inventions."

If you're going to try to secure those exclusive rights, you have to understand what an inventor's talking about when he comes walking in with an idea. A knowledge of law, even with special training in patent law, isn't enough. Hence the men who wear two hats. The men in the Patent Division of our Research Department, for example, are really lawyer-scientists. They have to be. Ideas that come from the Company's invention factory, the Research Center, can be so complex no one except another scientist could understand them — much less write an intelligent patent application.

Although the Patent Division handles copyrights, trademarks, and patents for all departments, the bulk of its work does come straight from the research laboratories. Few, if any, of the ideas conceived there are for simple, complete articles such as a doorknob or putting an eraser on the end of a pencil (which, incidentally, was held unpatentable). Our most important patents — and most profitable ones from a licensing standpoint — are for products and processes.

Patents aren't shown on the Company books as assets having a specified value; but patents and "know-how" — knowledge which may not even be patentable — actually have a high dollar-value. Their first value is to Union Oil: they enable us to make superior products and to utilize our raw materials in the most efficient way. An-



other value comes from licensing: permitting others to use our patents and know-how, for a fee.

Typical of our product patents are those for lubricating oil additives (80 per cent of the automobiles in the United States use lubricants containing patented Union Oil additives), greases, catalysts, corrosion inhibitors, drilling muds, and the like.

The process patents cover such chemical wizardry as Unifining (enables us to advertise All Pure Power gasolines, is licensed to 100 other refiners around the world); Unidak (to be used by Collier Carbon and Chemical for making naphthalene, a starting point for a wide variety of plastics, paints and dyes); Unicracking, the most advanced form of cracking process to date; and our clathration process which makes materials that could eventually wind up in textiles, plastics, and biochemicals.

Sometimes we get values we don't expect. A new method of swelling rubber applies not only to making a well packer but to making better golf balls. Our "mass flow lift" was developed primarily for lifting catalysts and absorbents, but is being licensed for lifting steel balls which are dropped on boiler pipes to remove scale.



Union's lawyer-scientists: (from left) Patent Counsel Milton Lee; his assistant Dick Hartman; John Crowe (foreground); Hooper Linford and Jack Miller (on couch); Lannas Henderson; and Bob Strauss (standing).

Right now, we are being granted about 70 patents a year, a very high average for a research organization the size of ours. Through 1960, about 1100 patents had been issued to Union Oil people. Six hundred and thirty of these are still active; and more than half of them have been issued during the past five years.

Incidentally, Union Oil's first patent was issued to founder Lyman Stewart, then Chairman of the Board. Stewart's patent was for a crude oil still.

Patent work is a specialized branch of law. Petroleum patent work, because of its complexity, has become a specialty within a specialty. We carry specialization a step farther. Each of our men, in general, handles a particular line of research.

Milton W. Lee, who came out of our own laboratories and helped develop Unifining, is Patent Counsel, the man in charge. He also handles the license agreements, not only where we grant licenses to others, but where we take licenses from others.

His assistant, Dick Hartman, in addition to helping with the contracts and general supervision, gets involved with chemicals and production research. (Research's vice

president, Dr. W. E. Bradley, was at one time assistant patent counsel.) Bob Strauss, a former Patent Office examiner, is in the chemicals and production field, too.

Dr. Hooper Linford is the trademark, fuels, and lubricants man; Jack Miller, shale and miscellaneous apparatus. Both Miller and Linford are also graduates of the Center's laboratories.

Lannas Henderson, another ex-Patent Office examiner, handles catalytic processes; and John Crowe works on separation processes.

A law degree isn't essential for patent work; but all but one of our men — who already had degrees in chemistry or engineering — are either lawyers or soon will be. All will have secured their legal training the hard way; by attending universities at night.

These 7 men represent 15 different universities; and although their average age is only 43, they have accumulated a total of 36 years of research experience and 98 years of specialization in patent law. And speaking of specialization, think of the six stenographers who have to take dictation in this chemical-legal jargon: Mary Jane Walsh, Dixie Larson, Maxine Powers, Isabelle Hill,

Lawyers with two hats—continued

Dorothy Abbott, Mary Morrison.

The need for specialization and for the blending of science and law results not only from the type of material the men handle; but also from safeguards with which the patent right is surrounded.

A patent gives the inventor the right to exclude others from making, selling, or using his invention for a period of 17 years. But Congress has laid down certain requirements which the Patent Office makes every inventor meet before it will grant him a patent.

A theory or mental process cannot be patented — only a specific process, product, machine, or article. It must also be (1) useful; (2) new (ideas may be rejected as having been described in any "prior art" publication, other U.S. patents, magazines, theses, foreign patents — even the Bible); and (3) it must involve "invention," a nebulous something which is more than ordinary skill but not necessarily a blinding flash of genius.

With these legal safeguards and because of the mass of knowledge that has accumulated in our field, patents aren't easy to come by. The inventor (anybody in the Company who has an idea which might possibly be patentable) first sends a brief description of his idea (a "conception sheet") directly to the Patent Division. But before a patent application is even drafted, our men search the "prior art" — that mass of knowledge — to ferret out descriptions of the ideas most similar to ours. They assure themselves, and they collect evidence to prove, that the essential ingredients, especially invention, are present. Then they draft a 10 to 40 page "specification" describing the idea, and a set of about 20 "claims" defining the boundaries of the inventor's rights.

Few patents are issued on the first "Office Action" on the application. Usually the Patent Office examiner cites lots of prior art and says the claims are too broad; so our man has to argue the point or narrow the claims. Years may pass before the claims are either issued or denied. During those years, questions raised by the Patent Office and answers by our people clarify the extent of the inventor's right as defined by his claims.

While this ping-pong game between the Patent Office and the Patent Division goes on, the patent men may act more like scientists than lawyers. They often have to devise experimental work for the inventor, to prove "invention" over other patents within the field. Sometimes they are able to suggest to our inventor related lines of research that result in additional patents.

In return for the exclusive rights granted an inventor, the patent laws require full disclosure and publication of the invention. The U. S. Patent Office publishes a "Weekly Gazette" which summarizes every patent

granted that week; and the complete patent is on sale at the Patent Office for twenty-five cents.

This "full disclosure" is the crux of our patent system. A published patent may stimulate new lines of research; suggest new approaches to the solution of an old problem; be the basis — through licenses — of entire new businesses. Secrecy would benefit no one except the man who holds that secret.

But behind many of our patents is another valuable element that is kept secret: "Know-how".

Know-how includes unpatented theories, systems, ideas on ways to do a job better, comparative technical data, and other information leading to a better understanding of the product or process. And unpatented know-how is valuable. For example, unpatented know-how — operating data for licensed Unifining units — plays a large part in selling more Unifining licenses. Another example: A chemical company manufactures an additive we used in one of our products. They paid Union Oil substantial sums for information showing how we used *their* product to best advantage.

As guardian of the Company's know-how, the Division's motto is, "Don't tell anybody anything without consulting your lawyer!" Because unpatented know-how has value only as long as it is a Company secret.

Our lawyer-scientists and their predecessors (ours was the first corporate patent department west of Chicago) are a small group; but they've had a large hand in shaping Union Oil's growth and progress.

Their's has been the job of protecting a most important property: ideas. Their existence and importance is the result of the attitude the Company takes toward the complicated business of extracting value from all its raw materials.

When you go into the petroleum refining business there are two approaches you can take.

You can buy the processes you need and pay other companies a fee for the use of their ideas.

Or you can bet your brains against the rest of the industry, devise your own processes, stake your future on superior research.

Union Oil has always taken the second course. Union Oil's was the first petroleum laboratory in the West. And its brains have come off very well indeed. Although our research men develop ideas primarily for the Company's own use, royalties from licensing our patents and know-how to others have paid a very substantial proportion of our research costs.

More important, perhaps, that same know-how — patented and unpatented — has enabled Union Oil to maintain its position as a quality house, and has established the "Sign of the 76" as the sign of leadership.

/THE END



With some of his classmates of '61, Union Oiler "Cap" Weir "challenged" the college style of headgear worn by graduating engineers. He preferred the hard hat, but bowed to tradition and a mortar-board.

"Gradually Grandpa Graduated"

Via the grapevine we learned that Union Oiler Casper J. Weir, Jr. was graduating from California Polytechnic at San Luis Obispo with a degree in mechanical engineering. What made the report newsworthy was that "Cap," as his associates call him, was already a topnotch engineer in our Northern Division Pipeline Department. Furthermore, he had reached 54 — an age when most men are beginning to think of retirement.

A peek at his personnel record didn't give us much of a clue. His first Company job was that of clean-up roustabout following the big 1926 fire at San Luis Obispo Tank Farm. Then came a variety of pipeline assignments, including the titles of fireman, engineer, tractor driver, welder, machine shop foreman, contract inspector, and in 1953 cathodic protection engineer. Under "special skills" he was described as a welder, machinist, aircraft mechanic, and holder of a private pilot's license. "General comments" classified him as a 4H Club leader, a PTA worker, church and lodge member. And under "other comments" he was praised as an outstanding and enthusiastic employee, with unlimited possibilities — a perfectionist in mechanical lines. But no mention of his cap-and-gown ambitions.

So, cornering "Cap" during one of his post-graduate studies of a cathodic device at Santa Margarita Pump Station, we put our questions bluntly. He gave us the following replies:

"Guess I just opened my mouth too wide one day in front of Superintendent Howard Robinson and Engineer Sam Taber. Told 'em I'd always wanted a college degree

but couldn't find the time. They dared me to register at Cal Poly and even offered to arrange a work schedule that would get me to school on time. That was six years ago. And here I am in the Class of 1961.

"Were the courses tough? Well, yes and no. Some, along my line of Union Oil experience, were easy; I simply *challenged* such courses, that is, took the examinations and received the credit. But quite a few challenged me. I burned my share of midnight oil keeping up with the younger generation.

"No, I was not a curiosity on the campus. There are quite a few adults enrolled in college these days. Believe it's a good thing for the schools as well as the individuals.

"My family? Oh, they were all very cooperative. Of course my three grandchildren will always poke fun at the age I got out of school. But gradually grandpa graduated!"

/THE END

He's now our cathodic protection engineer in diploma as well as payroll title.



BUSINESS HIGHLIGHTS OF THE MONTH

EXPLORATION RESUMED IN PACIFIC NORTHWEST

Union Oil Company of California is again expressing its confidence in the ultimate oil and gas potential of Washington and Oregon. After a seven-year interruption, our exploration program is being renewed in those states.

The encouragement and knowledge obtained from our past experience in the area provides a good framework on which to base continued effort. This, coupled with new and improved seismographic techniques to be used in our present effort, should define areas of interest both onshore and offshore on which lands can be acquired. While most of the Washington-Oregon region is being considered carefully, several areas of prime interest are due to receive immediate attention.

Thus far, approximately 7,000 acres of offshore leases have been purchased in the Grays Harbor area of Washington on what indicates to be a sizeable structure, and 3,600 acres of onshore lands are under lease on another prospect in the general area.

Future plans call for a more detailed investigation of established prospects and a general reconnaissance of various prospective provinces throughout both states.

Field, from Basil Kantzer

WHETHER BY AIR, LAND OR SEA, SEVENTY-SIX!

Union Oil has been awarded Naval Exchange business in San Francisco Bay area and North Island Naval Air

Station, San Diego, amounting to approximately eight million gallons of gasoline during the coming year.

Southwest Mountain Division is now receiving Los Angeles Refinery gasoline via the new Cal-Nev pipeline terminating at Las Vegas, Nevada. These shipments moved previously by truck from our Colton, California, terminal.

A series of boating guides—one each for the Puget Sound, Los Angeles-Long Beach, San Francisco Bay, and San Diego areas—is being distributed at "76" marinas on the Pacific Coast. The guides show launching locations, mooring and service areas, and, in addition to excellent map descriptions of local waters, list helpful safety rules provided for boating and water skiing.

The Company has signed a contract to supply Lockheed Aircraft Corporation with their West Coast requirements for lubricants over the next three years. Teams of Union Oil sales engineers are surveying Lockheed plants and installations to assure proper application of our products.

Marketing, from C. H. Finnell

Military Petroleum Supply Agency has awarded the Company a contract covering 9,196,000 gallons of diesel fuel for delivery from California refineries during the last six months of this year.

Marketing, from F. K. Cadwell

LET'S EMPTY THE SHELVES!

A prominent objective of the Purchasing Department for the last several months has been to reduce inventories of materials and supplies, particularly tubular products, to an absolute minimum. With fine cooperation of the operating departments, the dollar value of warehouse inventories reached a new low during May. Meanwhile tubular prices have been reduced considerably. The two-fold advantage to the Company of such inventory control means a savings in cost of supplies and cost of warehousing.

In view of the ready availability of nearly all materials we purchase, it is recommended that departments reduce Company inventories even further and place increased reliance on suppliers' stocks.

Purchasing, from C. S. Perkins

COMPUTERS MAY SHRINK PILOT PLANT TIME AND EXPENSE

A high-speed computer doesn't look like a refinery and hasn't yet processed a barrel of crude. However, it can be made to simulate mathematically a refinery's many operations and help predict the changes in product quality and product yields under various selected refining conditions. Equally important, a computer can show the effects of introducing a new process into an existing refinery complex.

For these reasons, among others, high-speed computers can play an important part in guiding research activities. Recognizing this, the Research Department has installed its

own computer center. Already a large proportion of the available machine time is taken up in helping to solve costly or time-consuming problems. For example, pilot plant work in the development of a new process now under study has been reduced greatly by computing the particular applications that will be most attractive for addition to existing refining facilities. Chemical analyses of complex materials, which calculations used to require hours and even days of time, are now available in a matter of minutes. Even the problem of handling geophysical data, an important step in our search for oil, may be speeded up markedly by the computer techniques currently under study.

Research, from W. E. Bradley

REFINERIES TAKE TO WATER LIKE DUCKS!

The largest single expense item in the Refining Department's operations

is the cost of fuel to produce heat. This heat is utilized not only to promote chemical reactions, such as cracking and reforming, but primarily to effect separation of various products by the process of distillation. After the reactions and separations are completed, the products must be condensed and cooled to handling temperatures.

In order to conserve heat energy, extensive use is made of heat-interchange devices and insulation. Ultimately, however, the products must be cooled to handling temperatures by mediums colder and more abundant than the hydrocarbons being circulated.

Most commonly, water is used as this colder medium, both fresh water and salt water (sea water). When fresh water is used, it is circulated continuously, the returning water being cooled for re-use by intimate contact with an air stream. Such cooling systems at the Los Angeles

and Oleum refineries circulate 70,000 and 14,000 gallons of fresh water per minute, respectively.

Since both of our major refineries are located on tidewater, substantial volumes of water are pumped from the sea, screened, and used as a coolant on a once-through basis. The pumping and screening facilities at Los Angeles and Oleum handle some 30,000 and 25,000 gallons of sea water per minute, respectively. Automatic controls on the salt water system have been installed at Oleum and are planned for Los Angeles.

Collier Carbon and Chemical Corporation, our major subsidiary, has started operation of their new sulfuric acid manufacturing plant adjacent to our Los Angeles Refinery. This plant is converting refinery waste products into 250 tons per day of sulfuric acid, a vital industrial chemical. Pipelines deliver molten sulfur, spent alkylation acid, and hydrogen sulfide gas directly from LAR to the Collier plant. A portion of Collier's production is returned to the refinery for use in the gasoline alkylation unit.

Refining, from J. W. Towler



At a recent birthday dinner in the Beverly-Hilton Hotel commemorating Western Air Line's 35th year in business, it was announced that Western is initiating operation of the new Boeing 720B fan jet, fastest passenger airplane along the coast. Also Vice President Stanley R. Shatto announced the signing of a new long-term fuel contract with Union Oil. Among those toasting the event were, beginning at left of top photo, Western's D. P. Renda, S. R. Shatto, J. J. Taylor, Union's Dudley Tower; Union's C. H. Finnell, J. T. Raabe, W. I. Martin, Western's M. W. Landis, P. E. Pierce, B. D. Lynn; Western's A. F. Kelly, Union's R. H. Rath and F. L. Hartley.

from W. L. Spencer

*Our new 7600
Outboard Fuel assures*

Highest power and performance for outboards



It has been said by some humorist (probably looking for a good buy in boats) that there are two really happy days in the life of a boat owner — the day he buys it and the day he sells it.

Even though the assertion belies the facts, most owners of outboards admit that prevailing methods of fueling the powerful little motors add nothing to the sport.

Unlike automobiles, outboard engines are lubricated through their fuel supply. That is, the motor oil and gasoline are mixed together and poured into the fuel tank. So, if you've ever seen a boat operator on a beach, wharf or river bank, bending over an array of containers and complaining about a messy job, most probably he was a do-it-yourself fuel mixer.

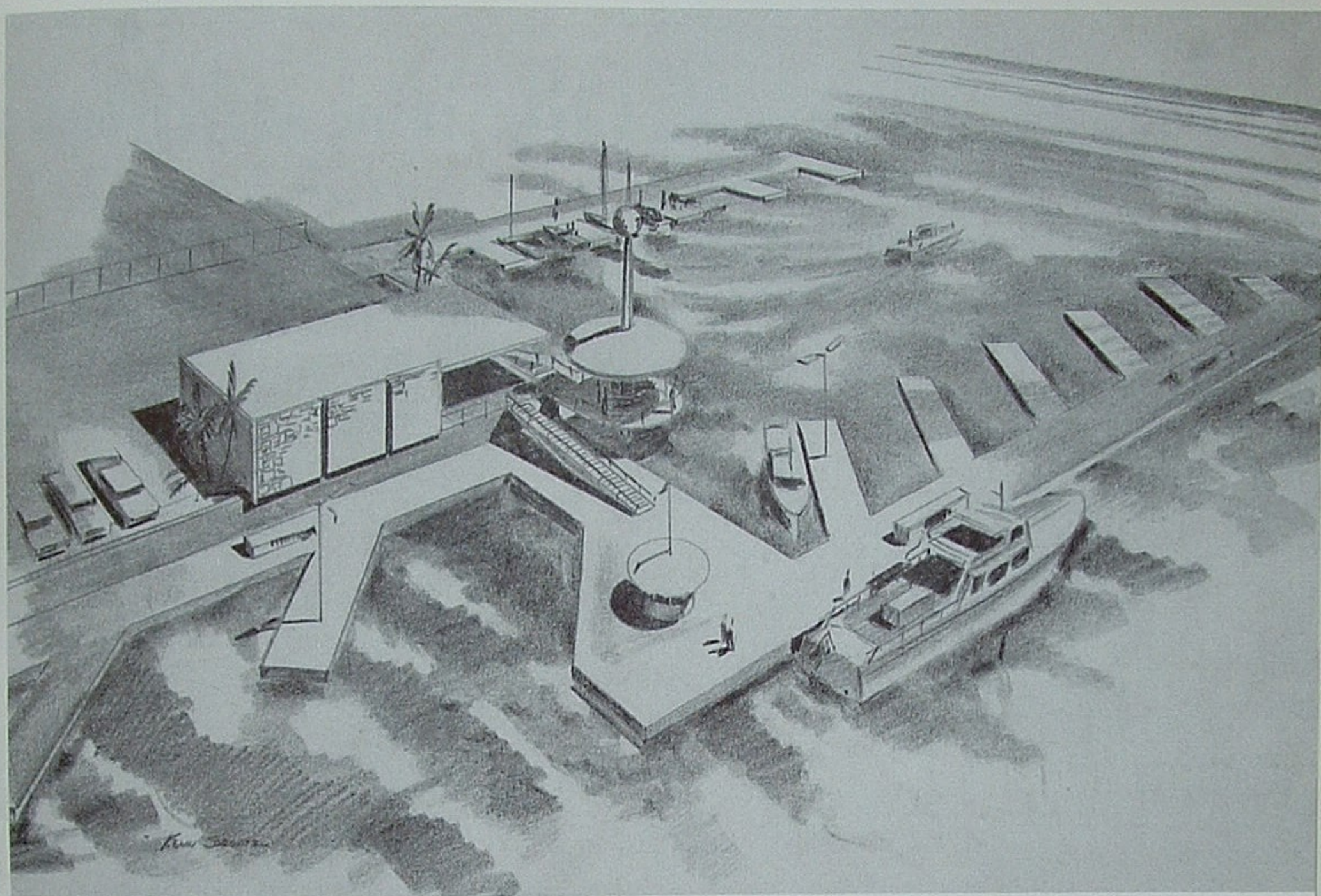
May his tribe decrease! Now, thanks to Union Oil initiative, he may scoot up to many "76" marinas and

say to the attendant, "Fill 'er up with 7600 Outboard Fuel." The salesman will oblige immediately via typical Minute Man service station delivery. No waiting. No mixing. No mess. Just 7600 Outboard Fuel — pure power and lubrication clean through!

When you come to analyze it, 7600 Outboard Fuel brings a great deal more than added convenience to our boating customers:

Hand-mixing at its best means a rather doubtful ratio of oil to gasoline. Also the pour-and-shake method of homogenizing the two liquids often leads to uneven motor performance, carburetor *coughing*, disagreeable exhaust fumes, fouled spark plugs, combustion chamber deposits, and other maladies that impair performance and engine life (to say nothing of boatmen's tempers).

Again 7600 Outboard Fuel is the answer:



The newest of Pacific Coast marinas where 76 Outboard Fuel can be obtained is nearing completion at Playa Del Rey, near Los Angeles. It will welcome all types of pleasure craft to Union Oil service. Even marine maps, called the 76 "Boating Guide," are being offered free to acquaint customers with every port o' call on the coast.

The Outboard Motor Oil used in its blending is basically one of our premium motor oil stocks. To the oil is added an ashless detergent that keeps engines clean, reduces combustion chamber deposits and helps prevent spark plug fouling.

The 7600 Fuel contains the same high-octane gasoline fractions employed in our aviation gasolines. These stocks are exceptionally stable and will not form gum or lacquer after long storage periods. Lead content is kept to a minimum, not exceeding .05 ml. per gallon.

Put this oil and gasoline together, in exact proportions and through a highly thorough process of homogenizing, and you have 7600 Outboard Fuel — the *Finest*.

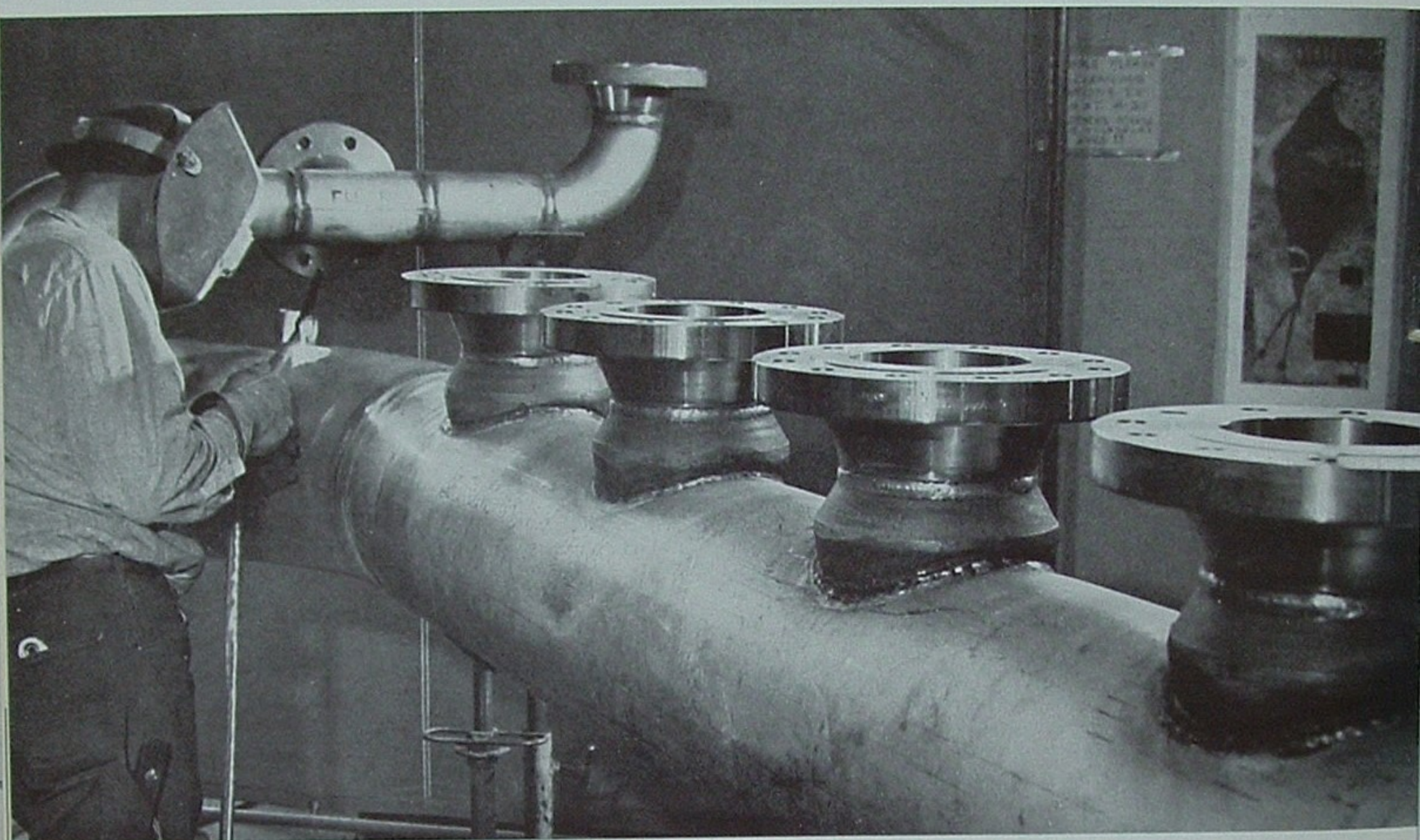
Now, Mr. Humorist, add a lot more happy days to the life of a boat owner — the days he wipes his hands of mixing outboard fuel and lets Union Oil do it.

/THE END



*Oleum Refinery's Duo-Sol Unit
Dons New Coat of Mail*

For "Royal" Oil, it's stainless



Welding of a new stainless steel manifold for the Duo-Sol Plant calls for the inert-gas technique. At right, Pipe Shop Foreman Frank Van Meter and Warehouseman C. B. White make a detailed inspection of material before its assembly.



steel

by J. T. Patrick

Like many of industry's basic products, steel has undergone unending improvements almost from the time of its invention. Once, Damascus steel was the envy of Christian Crusaders because of its toughness and hardness when fashioned into swords. Later, industry in Europe and America developed mild steel, medium steel and hard steel by altering its carbon content, giving the metal versatility and wider use. Finally in our era came steel alloys — the combining of steel with other metals to produce products never before equalled in malleability, toughness and endurance.

Among these miracle metals of our day is stainless steel. It is heavily alloyed with chromium and nickel and can be polished into a smooth, mirror-like finish rivaling that of silver. Besides being one of the toughest steels ever manufactured, it has outstanding qualities of endurance. Practically none of the elements commonly associated with our atmosphere and water supplies will cause it to rust.

Food manufacturers have found stainless steel machinery and containers invaluable in maintaining food quality. In hospitals the shining metal has gained a reputation as one of the most hygienic of materials. Thousands of the most immaculate American kitchens boast of stainless steel sinks, cabinets and utensils.

And now even a portion of Oleum Refinery is donning this bright new coat of mail:

Faced with a high and increasing demand for the *Finest* lubricating oils, Oleum Refinery engineers conducted a re-appraisal of the Duo-Sol Unit where these base stocks are refined. Their chief concern was to condition the plant for longer runs between scheduled maintenance shut-downs. At the same time it was important that no weak link in the refining chain precipitate failure and an unscheduled shut-down.

Out of these studies came the decision to replace extensive portions of the Duo-Sol piping and tubing with stainless steel. Though considerably more expensive to buy and install, the precious metal will better withstand heat, pressure and the external elements that have long been enemies of steel.

The current task of assembling the heater tubes and piping is the largest ever tackled at one time by Oleum's shops. All welding utilizes the inert gas method. The work is being radiographed to insure that workmanship during construction matches the steel.

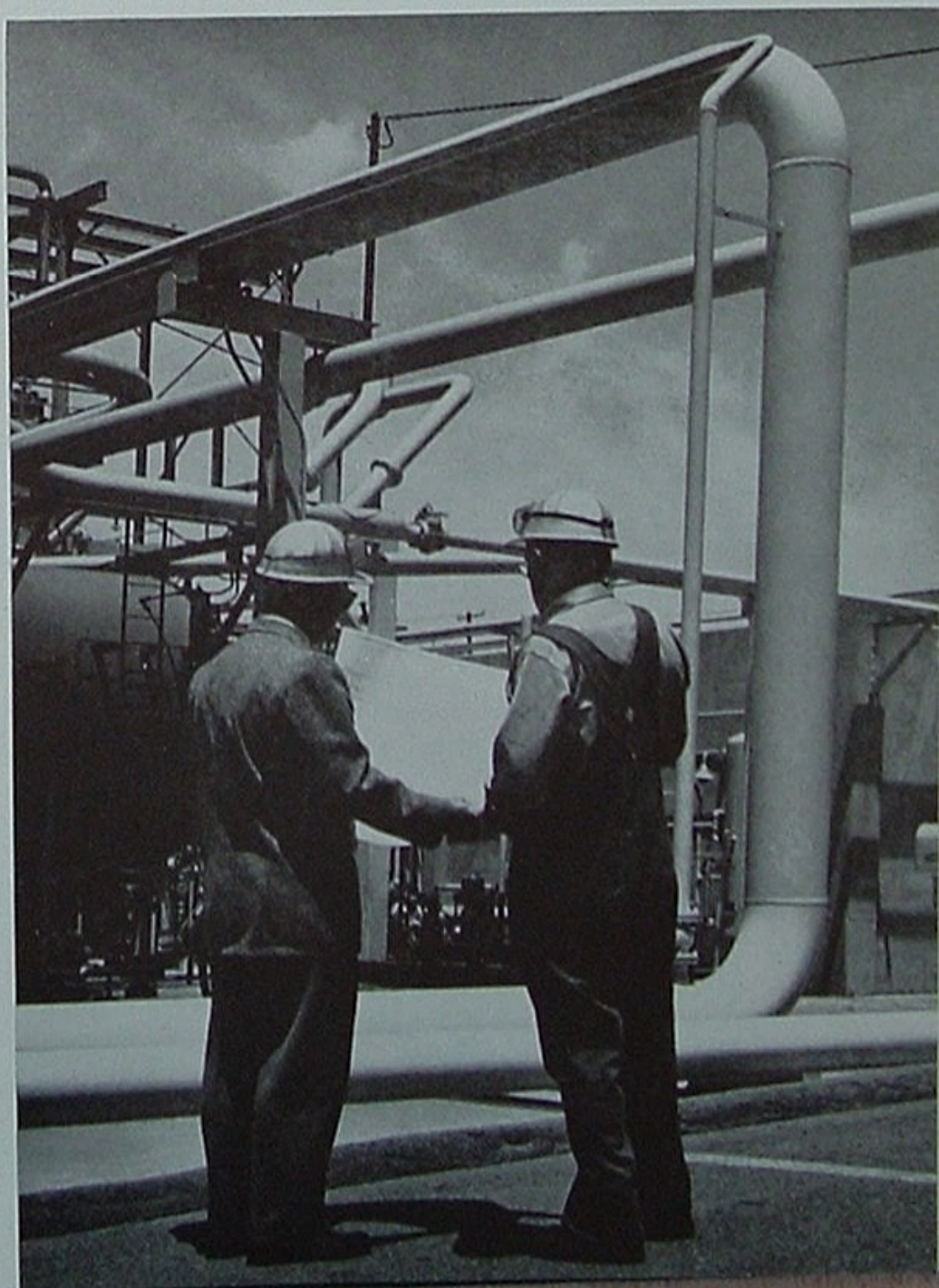
Through these stainless steel portals, of course, will pass nothing but the *Finest*!

/THE END



Radiographs taken of each weld tell Supervisor J. T. Patrick, right, and Metallurgical Engineer George Moller whether there are any welding imperfections between the sections of pipe.

In studying the Duo-Sol Unit layout, Oleum people were aware of costs. Stainless steel piping is "Royal" in more ways than one; it costs more per pound than a king's limousine.





"THE ANNUAL APPRECIATION DINNER" was initiated by Company dealers of the Las Vegas area in 1960 and was successfully repeated this year. The "appreciation" is directed toward Minute Men who man the pumps. To every dealer employee who pumps a million gallons of "76" fuels (it takes about 10 years), the dealers award a handsome "Million Gallon Man" plaque. Among the hosts at this year's formal (uniforms required) dinner were, from left, L. M. Evans, Jimmy Smith, C. S. Palmer, Stanley Karas, T. C. Martin, Robert Campbell, Tex Miller of Wilco, Ben Stevenson of Firestone, Cecil Worthen, Clinton Sharer and Howard Daviess.

from Nick Norton



T. O. MACKEY, chief auditor — Field and Transportation, became president of the Los Angeles Chapter of the Institute of Internal Auditors on May 17th. This professional organization has 52 chapters in the U. S. and Canada and 16 in countries abroad. With 297 members, the Los Angeles Chapter represents nearly all segments of business activity.

from W. W. Phillips



L. B. HOUGHTON, Company Treasurer, was elected vice president of Credit Research Foundation at its annual meeting in Denver. Simultaneously, he was made a Budget & Finance Committee member of the National Association of Credit Management. Adding some degree of physical prowess to these achievements, he recently joined Golfdom's Hole-in-One Club — not once but twice within 10 days. Seems to do things on the double!

from Ruth Bryson

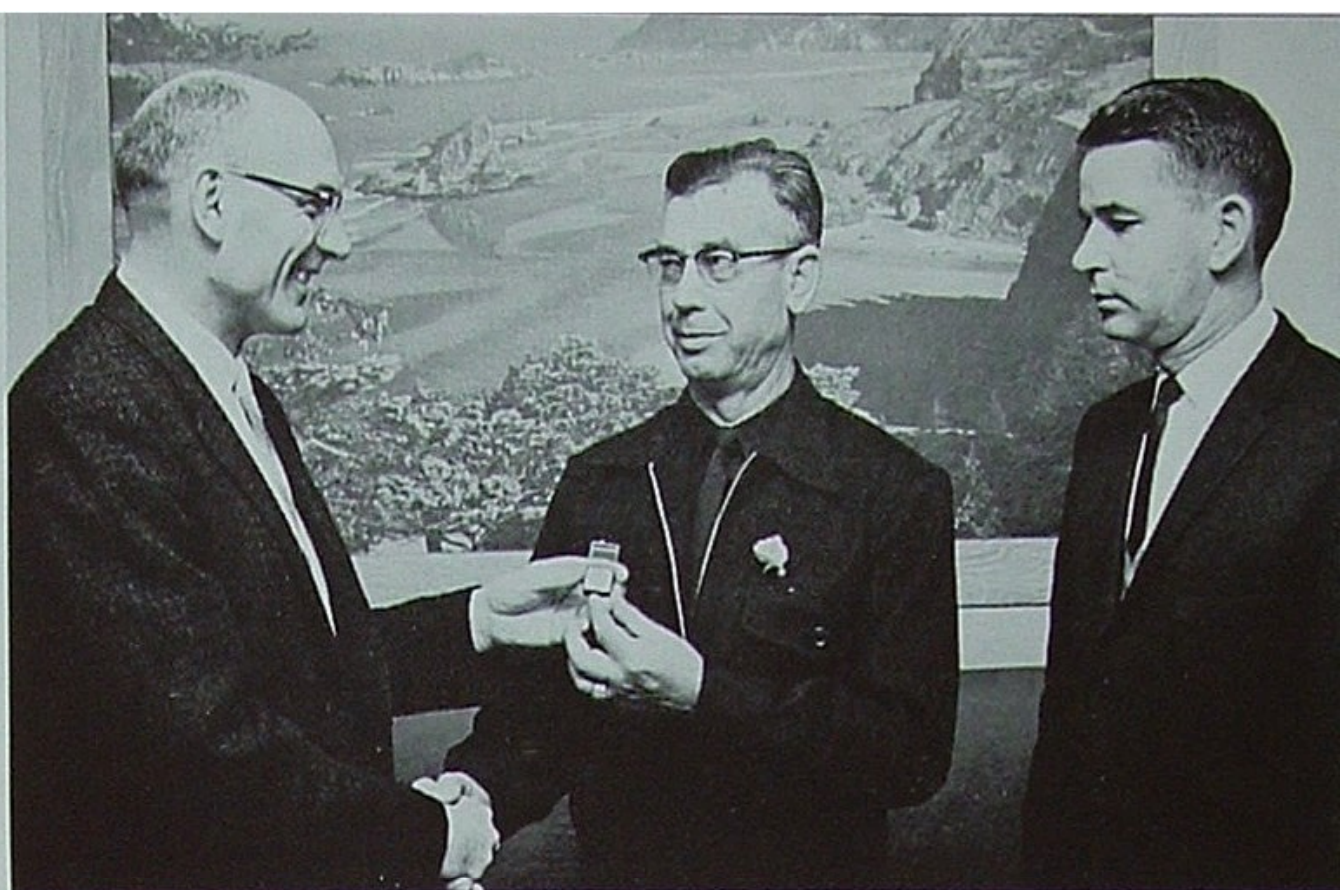
CONNIE BENDER AND JENELL RANDLE of our Sacramento office "manned" an attractive booth at this year's Sierra Logging Conference. Besides turning on their personal charm, the girls presented coin banks, perfume cards and key cases to their visitors. Also, to lucky Mr. N. G. Nightingale of Oroville, they awarded a valuable door prize—one full barrel of our T5X Motor Oil. The conference attracted lumbermen from all areas of the West.

from James F. Boland





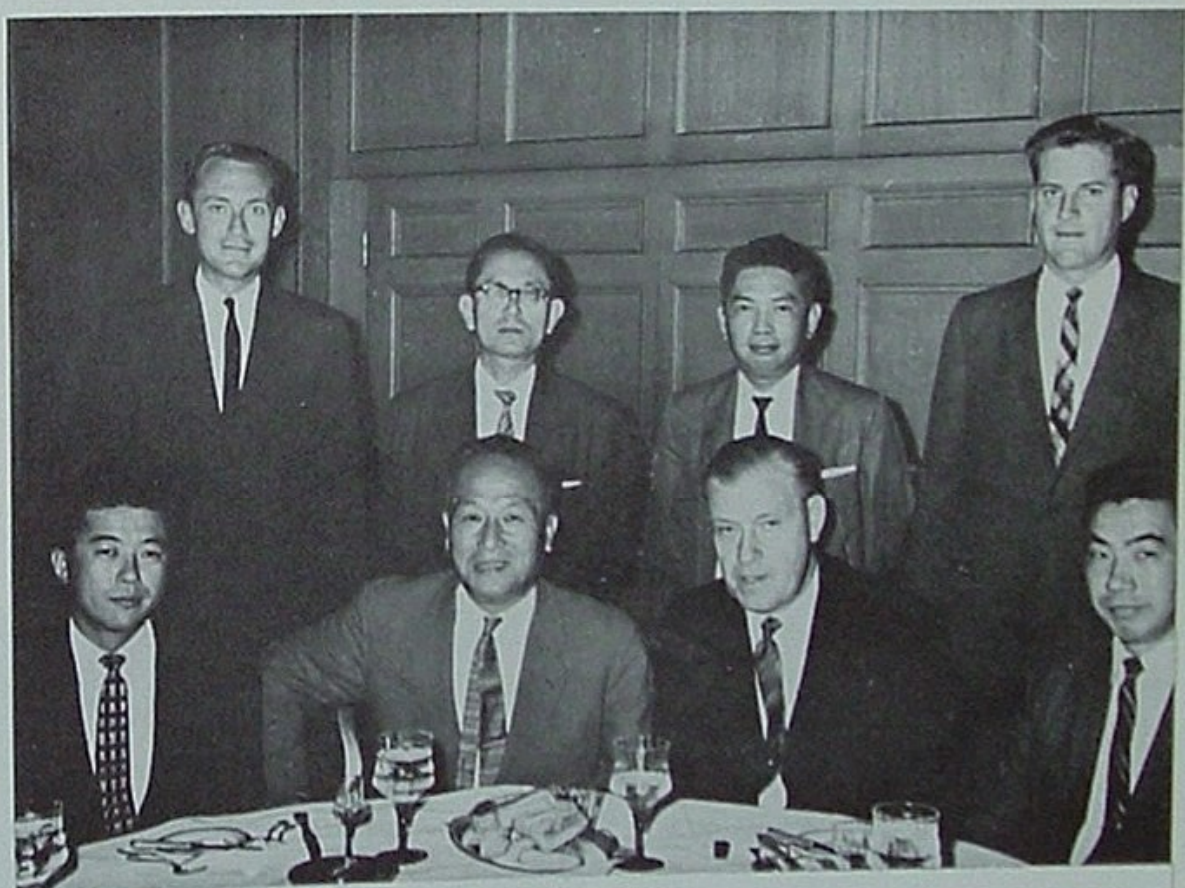
in focus



C. D. HOPFIELD, center, tank-truck salesman at Portland, was one of 13 terminal employees recently honored for safe driving. His Safe Driver Award shows 13 years without a chargeable accident, while the group as a whole has chalked up 80 pleasant, accident-free years. The awards were presented by Terminal Superintendent R. L. Cairney, left, and Personnel Manager J. E. Frier.

from J. W. White

COMMANDER STEPHEN CROSBY, JR. is now the Naval Reserve title of this Union Oiler in our refining bulk supply group, Home Office. Steve took up sailing at the age of 5 in Balboa Bay, served in the Navy during World War II, was with a Navy Air Night Fighter Squadron during the Korean Emergency, and has remained on battle alert with the Naval Reserve ever since. In recently being elevated to Commander, he was one of four officers in his four-state district and one of 39 in the nation to be selected from 643 reservists.



GOVERNOR G. SATO, seated second from left, of the Osaka Prefecture, Japan, was the honored guest of Maruzen and Union Oil Companies at a recent luncheon in Los Angeles. Among those present were, from left (standing), Union Oiler J. A. Scott, Minister of Foreign Affairs S. Sakata, S. Okubo of Maruzen, Union Oiler R. F. Koch; (seated) Sales Manager S. Wada of Maruzen, the Governor, Union Oiler F. K. Cadwell, and Y. Kawamoto of the U. S. State Department.

from John A. Scott



THE SCIENCE CLASS of Westlake Girls School chose our Los Angeles Refinery as their place to go and see, following a long winter of textbooks. They considered hard hats not a bit old-fashioned and found the floor of our Unifiner-Platformer Units clean enough to sit down on. Now they know all about oil.

from Jim Hawthorne



SHIRLEY DORSETT, daughter of Sales Manager O. D. Dorsett, Phoenix, has been awarded an Arizona Congress of Parents and Teachers Association scholarship. The Scottsdale High senior graduated 13th in her class and will attend Arizona State University this fall to earn a teacher's degree.

from D. R. Jessup

BARRY NYMAN, son of Consignee E. A. Nyman, Walla Walla, Washington, has been awarded an \$1800 USPHS scholarship for graduate study in clinical psychology at the University of Washington. Barry attended high school in Tacoma and served four years in the Coast Guard. He plans to enter the teaching field at the college level after obtaining his doctorate.

from W. I. Martin



DIVISION MANAGER W. I. MARTIN of Seattle spoke to 70 Desk & Derrick Club members at their 4th Annual Northwest Seminar on May 27th. With the aid of visual cast he described oil exploratory efforts in Alaska since 1901. At the speaker's table were Club President Peg Munger, left, and Union Oiler Peg Flanigan, who was general chairman of the well received program. The tempting platter, foreground, contains a huge Alaskan crab, compliments of our Company consignee in Sitka.

from Carole Judkins

EMPLOYEES

August, 1961

35 YEARS

WILLIAM A. APAKA.....Marketing—Hawaii Div.
E. E. CARTWRIGHT.....Oleum Refinery
JOHN F. CONDON, JR.....Research—Brea
MICHAEL COX.....Oleum Refinery
WM. S. EGGLESTON.....Field—Pacific Coast
OTTO N. GILLINGHAM.....Field—Pacific Coast
FRANK C. HANSEN.....Comp. Acctg.—H.O.
CHARLES H. MILLER.....Industrial Relations
ROBERT W. NEWELL.....Mktg.—Cal. So. Cstl. Div.
LEROY OZENBERGER.....Oleum Refinery
CHARLES S. PERKINS.....Purchasing—H.O.
ELWYN J. SMITH.....Pipeline—Northern Div.
ROBERT J. TANNER.....Research—Brea
ARTHUR WALLER.....Los Angeles Refinery
W. R. WILLIAMSON.....Comp. Acctg.—S. F.
ROBERT T. WILLIS.....Oleum Refinery
HARRY L. WILSON.....Los Angeles Refinery
GLENN C. WOOD.....Pipeline—Northern Div.

30 YEARS

WEBSTER A. GIBSON.....Mktg.—Cal. So. Cstl. Div.

25 YEARS

BURDETTE R. FOSTER.....Expl. & Prod.—H.O.
JOHN R. FRASER.....Expl. & Prod.—H.O.
HOMER J. LAW.....Industrial Relations
GLEN G. PARKER.....Mktg.—Cal. So. Cstl. Div.
FRANK J. SCHLEIBAUM.....Los Angeles Refinery
EDWARD O. WALTERS.....Field—Pacific Coast

20 YEARS

DALE L. BABCOCK.....Oleum Refinery
WILLIAM E. COX.....Oleum Refinery
EUGENE H. IRWIN.....Los Angeles Refinery
NATHAN J. KING.....Mktg.—Cal. So. Cstl. Div.
HAROLD M. MIDDLETON.....Mktg.—Oregon Div.
JOHN B. MILLER.....Mktg.—Cal. So. Cstl. Div.
ALFRED E. PIMENTEL.....Field—Pacific Coast
ROSS E. WRIGHT.....Los Angeles Refinery

15 YEARS

K. W. ANDREWS.....Mktg.—Cal. No. Cstl. Div.
SAMUEL BARRACLOUGH.....Los Angeles Refinery
RAYMOND H. BEAL.....Field—Pacific Coast
EARL O. CHETWOOD.....Mktg.—Cal. So. Cstl. Div.
CHARLES R. COLLINS.....Comp. Acctg.—H.O.
ROBERT G. DARIES.....Field—Pacific Coast
DON E. EVERT.....Field—Pacific Coast
GENEVIEVE F. HOWARD.....Comp. Acctg.—H.O.
ARTHUR L. JACOBS.....Pipeline—Northern Div.
EDWARD J. MOLLOY, JR.....Oleum Refinery
E. MULHOLLAND.....Mktg.—Cal. So. Cstl. Div.
ROBERT NEIBERGER.....Pipeline—Southern Div.
JAMES E. SMITH.....Santa Maria Refinery
THOMAS M. WATANABE.....Mktg.—Hawaii Div.
RICHARD L. WEBER.....Central Division

10 YEARS

GERALD M. ALSAGER.....Glacier Division
RAYMOND CHOATE.....Gulf Division
JOHN E. CROFTON.....Oleum Refinery
JAMES F. CROSS.....Los Angeles Refinery
JOHN J. DEBENEDETTI.....Field—Foreign
CLIFFORD W. DUNHAM.....Field—Pacific Coast
ROLLO C. FRITZ.....Comp. Acctg.—H.O.
NED E. GOUTIERREZ.....Gulf Division
BRYAN M. HARRAH.....Oleum Refinery
LEONARD G. HATLEY.....Orcutt Refinery
RICHARD P. JENNINGS.....Oleum Refinery
JAMES E. JOHNSON.....Field—Pacific Coast
ANNA L. LANNIN.....Expl.—Pacific Coast
CHARLES MACHO.....Los Angeles Refinery
J. R. MOOREFIELD, JR.....Pipeline—Santa Maria
HUBERT E. MOTES.....Los Angeles Refinery
CARL NETTER.....Los Angeles Refinery
ANDREW OKRUSKO.....Exploration—H.O.

SERVICE

BIRTHDAY



JOSEPH E. PALMA.....Oleum Refinery
ROBERT F. RYAN.....Mktg.—Northwest Div.
LEONARD L. SAMPLES.....Los Angeles Refinery
WALTER C. SANDERS.....Field—Gulf Division
WILBUR L. SANDERSON.....Los Angeles Refinery
GLENN E. THOMPSON.....Field—Pacific Coast
SELMA S. TONEY.....Field—Pacific Coast
A. S. WESTERVELD.....Secretary's—H.O.

CONSIGNEES - DISTRIBUTORS

August, 1961

35 YEARS

GAYLORD JACKSON.....Seaside, Oregon
HERMAN B. ROMER.....Sedro Woolley, Wash.
TOM R. YOUNG.....Lynden, Washington

25 YEARS

T. G. COVINGTON.....Escondido, California

20 YEARS

J. L. BROUGHTON.....Balboa, California

15 YEARS

H. H. DIEKMANN.....Bodega Bay, California
STAN HILLARD.....Santa Cruz, California
C. E. MAIB & I. A. GUIBERGIA.....Sonoma, Calif.
WM. MORGAN.....Brawley, California
E. C. RATHE.....San Francisco, California
W. R. WAINRIGHT.....Prineville, Oregon
GEORGE W. WHARTON.....Woodland, California
AUGUST WINTERS
dba FLOYD GROCERY.....Fresno, California

5 YEARS

IRVIN M. MacLEOD.....Sonoma, California

DEALERS

August, 1961

25 YEARS

T. R. McKEEN.....Republic, Washington

20 YEARS

C. De La FUENTA.....Lemoore, California
A. D. MANCHESTER.....Longview, Washington
HAROLD PINNELL.....Santa Ana, California

15 YEARS

J. D. & P. J. COLEMAN.....Klamath Falls, Oregon
JOHN MALME.....Pasadena, California
R. J. SCHEYER.....Puyallup, Washington

RAYMOND H. SCHLOTTMAN.....Beaverton, Oregon
CHARLES TANDY.....Wellpinit, Washington
J. W. TULLY & C. A. BURROW.....Spokane, Wash.

10 YEARS

CENTRAL MERCHANTILE.....Concho, Arizona
J. H. EMBRY.....Vista, California
JAMES HEARD.....San Pedro, California
WILLIAM LIEBENTRITT & A. J. LOBEY.....Vancouver
GEORGE T. MICHEL.....Los Angeles, California
NICK'S GARAGE.....Hilo, Hawaii
LEE WILLOUGHBY.....Los Angeles, California

5 YEARS

THOMAS E. BABB.....Seattle, Washington
HUGH E. BELLINGER.....Salem, Oregon
J. BRUNER.....Lakeview, Oregon
CASCADE GROCERY.....Sedro Woolley, Wash.
LYNDELL COLLINS.....Costa Mesa, California
EDWARD'S SERVICE.....San Diego, California
TED EVANS.....Bellflower, California
HOMESTEAD GROCERY.....Oakland, Oregon
CHAS. R. JOHNSON.....Lemon Grove, California
J. M. LANIER.....Los Angeles, California
ED LEIBLEIN.....Mt. Hood, Oregon
JAS. W. McCONVILLE.....Seattle, Washington
JACK MORTON.....Palmdale, California
OLIN'S SERVICE.....Lebanon, Oregon
ORRIN OSTROM.....Woodburn, Oregon
EARL PIDCOCK.....Medford, Oregon
H. R. RAMSEY.....Wilmington, California
JOHN RASMUSSEN.....Los Angeles, California
ELWIN SHAEFFER.....Kingman, Arizona
B. C. TALLMAN.....John Day, Oregon
JAMES THORNTON.....Lakewood, California

RETIREMENTS

August 1, 1961

Service Date

CLEO A. CALORI.....
Oleum Refinery.....August 12, 1926

THOMAS S. COULSON.....
Marketing—Oregon Div.....Feb. 16, 1925

IDUS F. EVANS.....
Marketing—Distribution.....Feb. 1, 1929

EDISON A. HUMPHREY.....
Oleum Refinery.....Sept. 4, 1923

ALICE KROEGER.....
Marketing—Compt.....Sept. 15, 1921

RALPH A. OPENSHAW.....
Northern Field.....Nov. 15, 1921

AGNES K. SNODGRASS.....
Compt.—H.O.....Sept. 20, 1939

IN MEMORIAM

Retirees:

HERBERT W. NICKERSON.....
Field—Coast Div.....July 1, 1961

JACOB A. SHUEY.....
Los Angeles Refinery.....June 19, 1961

Employees:

RAYMOND W. HUDSON.....
Comptroller's—H.O.....June 22, 1961

IRA D. MILLER.....
Oleum Refinery.....June 20, 1961

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



Think Deep

...to solve
the mysteries
of the sea

Global Marine Exploration—one of Union Oil's newest subsidiaries—typifies thinking which breaks the stereotype.

It began as a company specializing in drilling into the ocean floor for new sources of oil. Today, Global's portfolio of underwater projects reads like Jules Verne, 1961.

Global has already been successful not only in drilling efficiently in very deep water, but in developing an improved closed-circuit underwater television system.

Currently, the company is exploring other underwater problems in the fields of nuclear energy, rockets, radar—is also taking part in Project Mohole. The objective: to help answer questions about the moon's surface by drilling through the earth's crust from the ocean floor.

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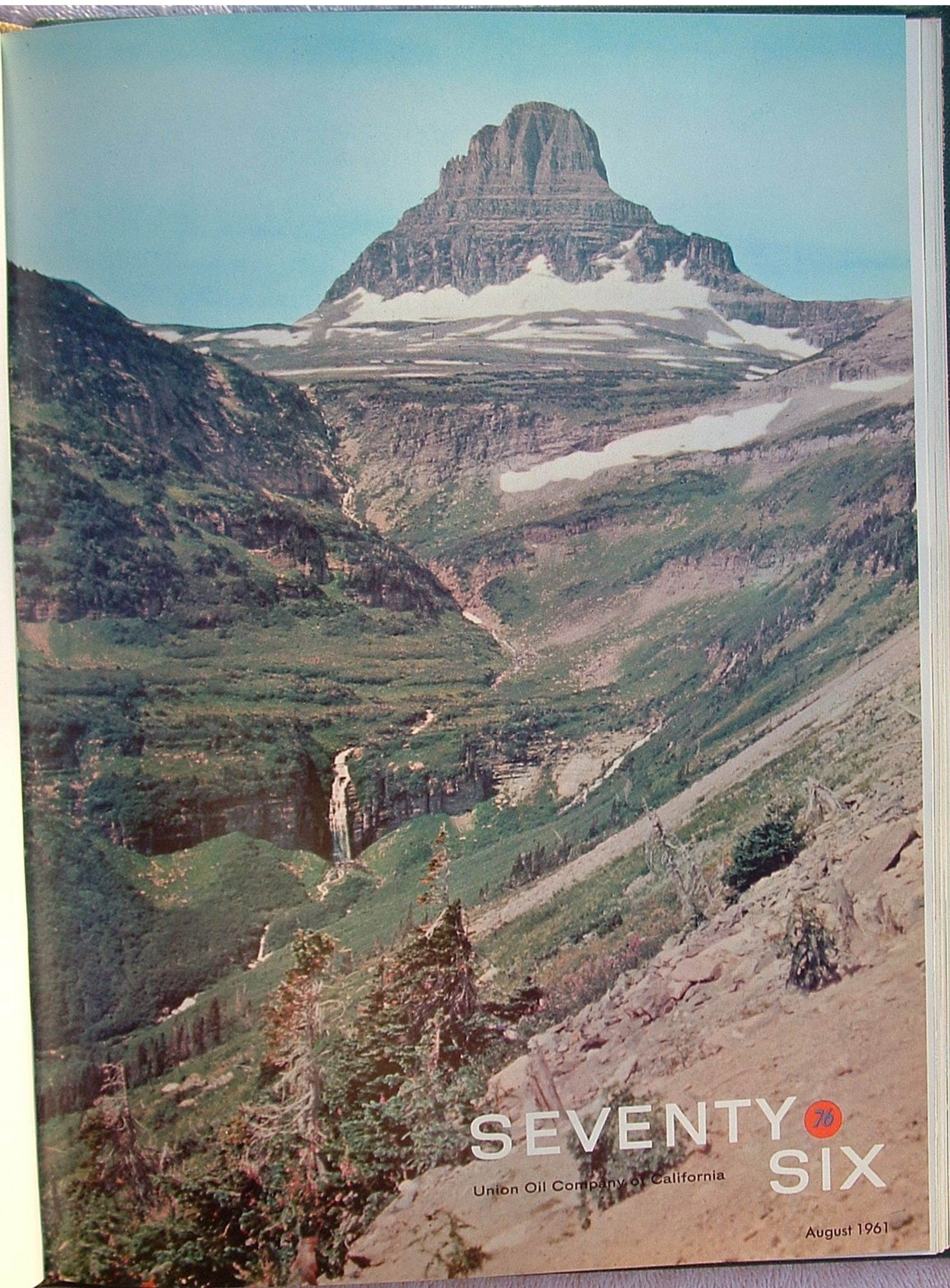
Our growth is unlimited so long as we continue to "think deep" to find better ways of doing things.

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

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August 1961