



SEPTEMBER 1950

"On Tour"

On Tour



VOL. 12, NO. 9
SEPTEMBER 1950

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ON TOUR accords photographic acknowledgement in this issue to Will Connell, Rod Daley and M. E. Lacy, Whitefish, Montana.

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Lean Mixture

THE old carburetor *chestnut* cropped up again the other day and it couldn't have been tossed at a better guy than Joe.

Said Joe's seat companion on the homeward bound trolley: "I see here in the TIMES where the government's going to lower the boom on those oil companies. It's about time! Never had any use for 'em anyhow since they bought up that carburetor—y'know, the one that gives your car over a hundred miles to the gallon. They just handed the inventor a wad of bills, locked his carburetor in the company safe, and kept their mouths shut. Pretty smart, these reactionary capitalists!"

At the sound of the word *reactionary*, Joe seemed to wake up. "Say, how did the oil companies find out about that carburetor first? If I ever invent one, I'm gonna head straight for the patent office, and then look me up a coupla auto manufacturers."

"Don't know how they did it, but it's a fact. The inventor lives right up there in Oakland, back of my sister's place. Hasn't had to turn a hand for 20 years."

"You mean you know this carburetor genius?"

"I don't exactly know him, but my sister lives right next . . ."

"Mind tellin' me your sister's name and address?" Joe interrupted.

"Why? What's your plans?"

"Listen, Bud, for four years I handled a gas hose on some of those bases out'n the Pacific. Didn't learn much about carburetors, but I did learn plenty about gasoline. At first we didn't have enough of it. Then, when the tankers started gettin' through on schedule, we couldn't get airplanes big enough and powerful enough to carry the fuel load. We had every *big hat* in the business rakin' his brains figurin' how to get just one more mile or two to the gallon. Doolittle had to ditch a whole fleet of bombers in China—outa gas. Hundreds of our planes didn't quite make it back to the landing strips and carriers—outa gas. What I'm curious to know, Bud, is just what oil company has that carburetor hidin' in their safe? And who's this inventor that didn't turn a hand all during the war?"

Joe got no answer because the inventor, his carburetor and the conspiring oil company were all products of someone's imagination. They were part of the phony literature being revived to discredit our American way of life. And Joe winked when the cornered rabble-rouser got off at the next trolley stop—prematurely.

Logging Ball



"Whitie" Fields, left, a supervisor on the clearing job, introduces John Peterson, Union Oil lubrication engineer, to Wixson's and Trisdale's logging ball.

GOVERNMENT engineers must have blinked in astonishment when they opened the bids of Wixson and Trisdale. For not only were the bids of these two contractors \$2,000,000 under the next lowest competitive figures but they were far under the Bureau of Reclamation's own estimate of what such a job should cost.

Contracts were to be let for clearing 27,000 acres of densely forested land, comprising the reservoir site of Montana's new Hungry Horse Dam. It was one of the toughest clearing jobs ever undertaken. Trees, many with trunks over four feet in diameter, covered nearly every square yard of an area 34 miles long and up to 3½ miles wide. They concealed swamps, streams and river banks. Most were rooted in steep hillsides. Yet every tree, living and dead, had to be cut down and removed before water could be stored in the reservoir.

Bureau engineers contacted the two bidders to see if there was some mistake. No, the two contractors of

Redding, California, men who had handled big jobs before, knew what they were talking about. They were gambling on a new method of *snagging* timber. If it didn't work, they'd go flat broke. If it did work, they were going to *clean up* in more ways than one on Hungry Horse reservoir.

The new technique proposed by Wixson and Trisdale began to take shape in San Francisco. Here work was started on their order for five steel balls, each to be eight feet in diameter, to be made of ¾-inch boiler-plate, and to weigh nearly 4½ tons. A six-inch steel shaft, mounted in timken roller bearings, was to provide each sphere with an axis on which to revolve. Some 10 gallons of oil sealed inside was to serve as a lubricant for shaft and bearings.



Trees of all sizes are uprooted and felled as the logging ball, hooked by cable to a team of tractors, rolls like a Juggernaut through forests of Hungry Horse Reservoir.

The steel ball's special functions are to carry taut cables over old logging stumps and give tractors a four-foot high leverage on big trees to facilitate this uprooting technique.

In Redding, where fabrication of the balls was completed, some folks refused to associate such devices with logging operations and explored their *flying saucer* potentialities instead. But work proceeded and the strange new instruments of deforestation finally started by truck toward Montana.

Today, visitors to the Hungry Horse reservoir witness an incredible sight. Generally they see only the great steel sphere rolling forward on its mission of destruction. On both sides of it in a swath several hundred feet wide, trees of all sizes bend to some invisible force and come crashing down—nearly every one of them uprooted. The ball leaps forward over fallen trunks and branches—pauses now and then to measure new victims—then lunges toward anything left standing. At least, so it appears to spectators.

However, actually the logging ball is neither self-sufficient nor mysterious. To each end of its axle is attached a length of stout cable. Follow these cables, stretching out several hundred feet in opposite directions, and you eventually reach two heavy, winch-equipped tractors. It is this team of tractors, working along parallel courses several hundred feet apart, that provides power enough to uproot a forest. If a forward pull on the cable is not enough, both tractors are backed against a large stump and their winches set in motion. By this relentless means, even the largest trees and densest clumps are uprooted.

The ball? Yes, it serves an important purpose. The forest is studded with many old logging stumps, some of which would foul a low-dragging cable. The ball overcomes such obstacles by helping to hold the taut cable some four feet above ground. At this height on

This partially "snagged" area along the South Fork of Flathead River is typical of the entire job, extending upriver for 34 miles and spreading up to 3½ miles wide in places.



standing trees, the cable also provides tractors with better leverage in the uprooting operation.

Wixson and Trisdale made a \$2,000,000 gamble on a new *snagging* idea and have won. Their first contract was finished far ahead of schedule. They then formed two companies, J. H. Trisdale, Inc., and Wixson & Crowe, Inc., each of which bid successfully on an additional 7,000-acre clearing job.

The worth of this new method increased as the operators gained in experience. "Ball" teams soon were able to *snag* even the steepest hillsides and began averaging 100 acres per eight-hour shift with two tractors and one logging ball. In one instance, a two-man team felled 200 acres of timber in four hours. Government engineers agree that land-clearing techniques have undergone a major revolution.

Timber Raking

Some two or three weeks after being *snagged*, uprooted trees are raked into great piles and set afire under the watchful supervision of forest rangers. The raking job, a tremendous project in itself, inspired another piece of new and interesting equipment.

Seeing the need for more weight and power to bulldoze the larger trees, John Trisdale asked his mechanics for something twice as big as their largest tractors. The outcome was a twin-tractor, two Caterpillar D8's joined side by side like Siamese twins. The mechanical pachyderm, equipped with a rake 21 feet wide and driven by one operator, has been equal to the heaviest duty. Several manufacturers have been excited by its performance.

A Twin-tractor rake, rigged by John Trisdale's mechanics, bulldozes the fallen trees and all debris into immense stacks, which burn readily after three weeks of drying.



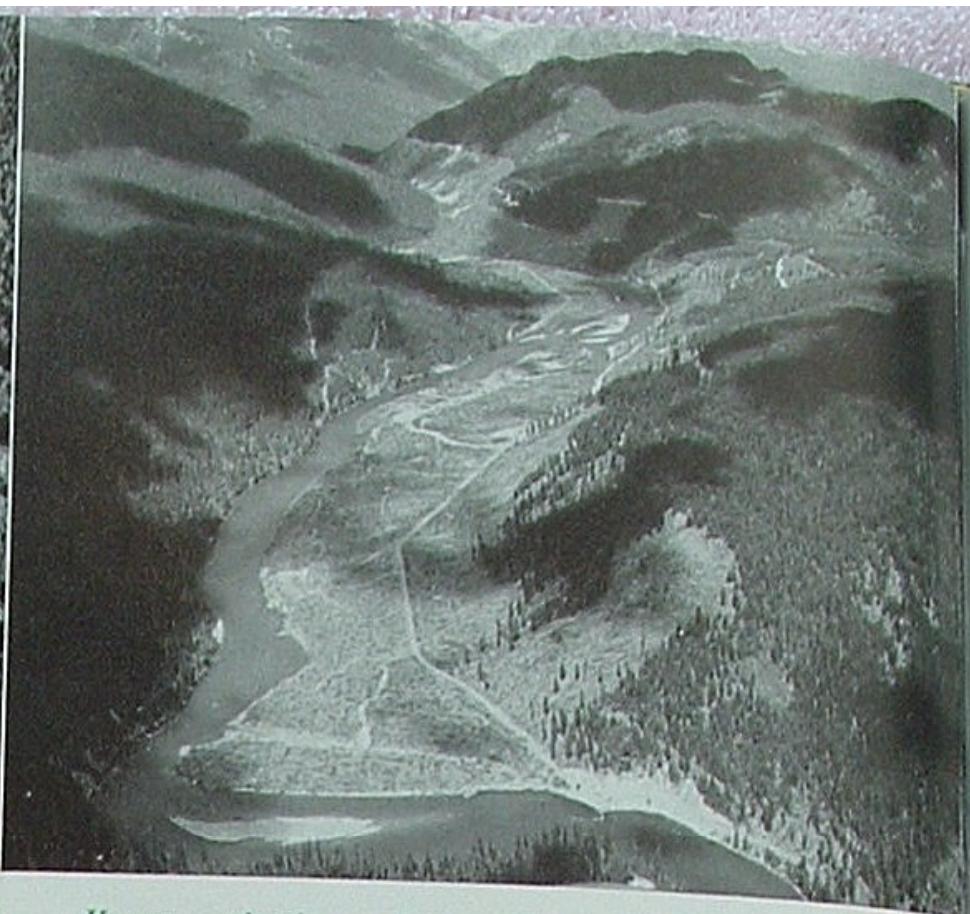
In the relentless tug of war between trees and tractors, a wire rope sometimes snaps. It is repaired on the spot with wedge and hammer by men who know their cable splicing.

With snagging, raking and burning nearly completed, the earth is clean except for stumps from former logging operations. These will cause no harm and will remain.





The reservoir area of Hungry Horse Dam looked forbidding to land-clearing contractors as they flew over it in 1948 and envisaged the enormous tree-cutting job that lay ahead.



However, thanks to their Yankee ingenuity, the low bidders were far ahead of clearing schedule within one year after the revolutionary "ball" technique had started rolling.

Today, reservoir preparation, which was expected to lag behind, is setting the construction pace. As a result, water storage will commence during the spring run-off of 1952.

Hungry Horse Dam

When completed—probably in 1953—Hungry Horse Dam will be the world's fourth largest. Its 2,900,000 cubic yards of concrete will be exceeded only by Hoover Dam's 3,245,612, Shasta Dam's 6,541,000 and Grand Coulee Dam's 10,585,000 cubic yards. Rising to a height of 564 feet, it will be the world's third highest, Hoover being 726 feet and Shasta 602 feet high.

The dam owes its interesting name to a team of horses that strayed away and nearly perished there in deep snow during the winter of 1900-1901.

Hungry Horse reservoir will contain 3,500,000 acre feet of water, or about 7,500 gallons for every American citizen. Rich timberland, bordering the 35 square miles of lake, contains well over a billion board feet

Aggregate for the dam's 2,900,000 cubic yards of concrete is trucked from five miles away to this screening plant. Belt conveyors then move gravel and sand to mixing plant.



of marketable lumber and will be opened to logging and sawmill operations. Elk and deer abound in the area and excellent fishing will attract thousands of sportsmen.

But the Government's principal justifications for this project, which will cost \$108,000,000 exclusive of irrigation facilities, have to do with flood control and power.

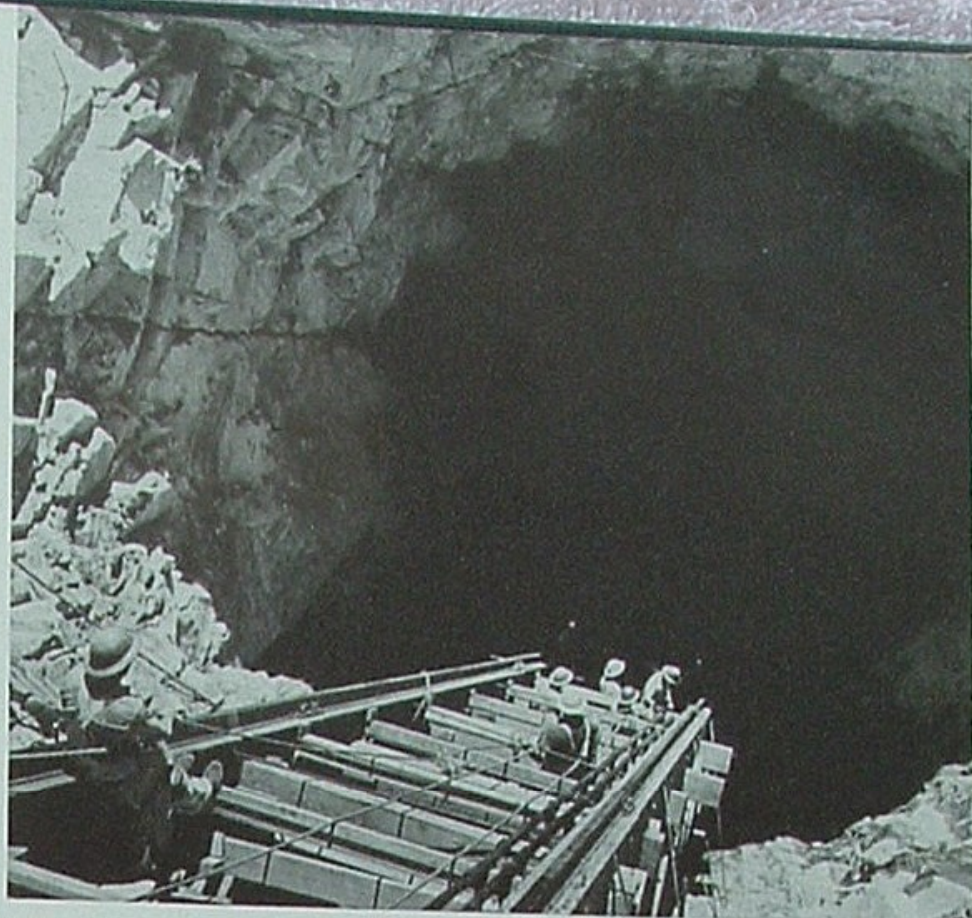
South Fork of the Flathead River is a swift, crystal-clear stream whose waters eventually enter the Columbia River. During seasons of heavy run-off, up to 2,000,000 acre feet of the reservoir's storage capacity will be filled to reduce the river's rate of discharge. It is estimated that floods will thereby be eliminated from Flathead Valley, and flood crests threatening cities as far distant as Portland can be reduced by about five per cent, or nine inches.

The electric power generating capacity of four generators to be installed amounts to 285,000 kilowatts. In addition, the release during winter months of water stored in Hungry Horse reservoir during summer run-offs is expected to increase the generating capacity of down-stream power plants by more than 800,000 kilowatts.

The General-Shea-Morrison Company are handling major construction work on the dam. They have had to divert the South Fork through a tunnel 1,180 feet long by 36 feet in diameter. During record floods of the past season, this tunnel was taxed to within inches of its maximum load, and for several anxious days the temporary coffer dam was endangered.

Of special interest to Union Oil people is the fact that Company products are at work here. All reservoir clearing equipment is fueled with our Diesol and gasolines. Many carloads of Oleum-made lubricants have kept the job rolling. And our Form Oils are giving the surfaces of Hungry Horse Dam their smooth and enduring appearance.

Concrete issues from the mixers at 400 cubic yards per hour; enters the diesel-powered hopper cars, foreground, and is lowered to the damsite in cable supported buckets.



A nearly vertical railway aids workmen who are digging and concrete-lining the 1,125-foot spillway. It can handle finished reservoir's overflow at 4,500 cubic feet a second.



Above, left to right, Union Oil customer Dale Levi of Lee Construction Company discusses oil deliveries to his land-clearing equipment with Union Oilers George Wamsley, division representative, and Hubert Bell, consignee at Kalispell. Below, driver Paul Morton loads with Diesol prior to serving timber snagging "cats" and other equipment.





Quitting time at Head Office comes daily at four-thirty, but many Union Oilers then start their job of selling.

A COMPANY, any company, is best described as a number of people working together for a common purpose. That's what the dictionary says. Union Oil Company, then, is 7,000 people working together to produce and sell a quality line of petroleum products.

If you want to carry the dictionary definition back to the original meaning of the word *company*, we're people who work together—for bread.

That bread we work for comes from one source: sales. Instead of bread, we can call it our wages, our future, our security. Whatever we call it, that bread comes from the money we—Union Oil Company—get for the

Your Company is dependent for most of its revenue on sales by the gallon and quart made through service stations.

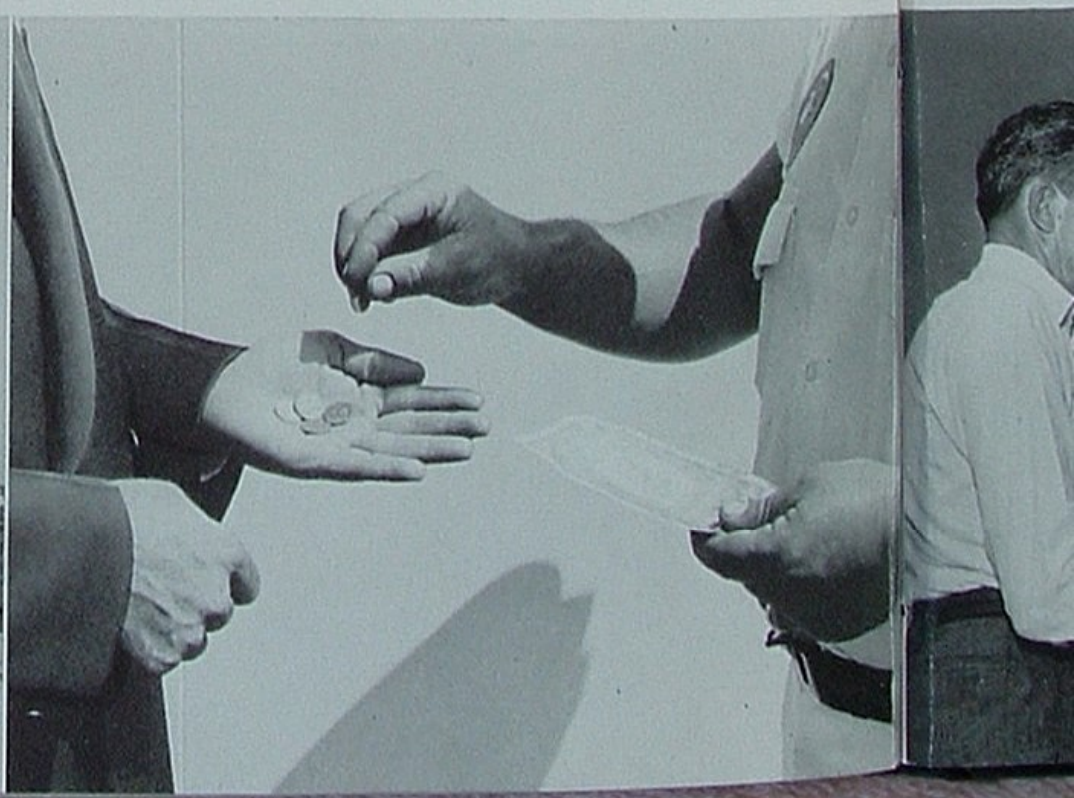
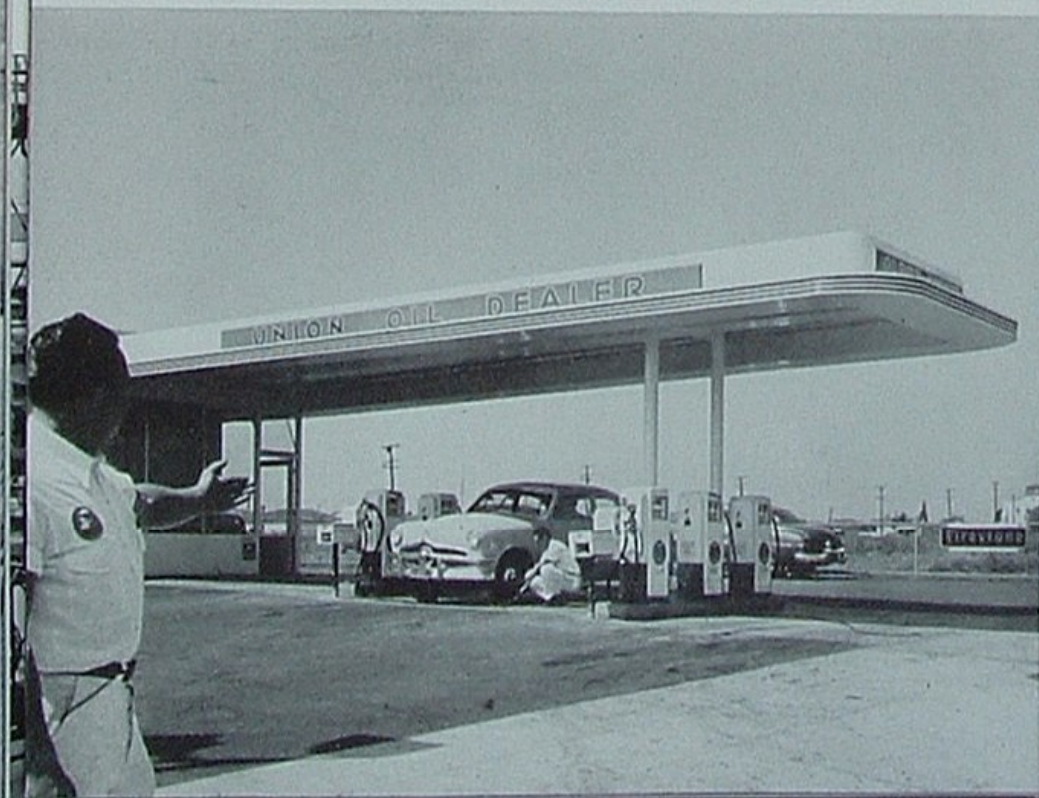
products we sell, for products sold in a rough and competitive market. If you don't think it's a rough and competitive market, ask your Union Oil Dealer or one of the men in an employee-operated station!

A great part of the Company's sales are made through service stations. Those stations pump nearly three-quarters of our domestic gasoline—a dollar's worth, 10 gallons, 15 gallons at a time. Half of all the lubricating oils we make goes into cars quart by quart. Every purchase is important—our purchases and those of our friends, for example.

Our own purchases can be taken for granted. Union

Fourteen cents out of every Union Oil sales dollar comes back to us in wages. Who else could offer that discount?

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Oilers—7,000 of us—are the largest single customer group the Company has. Rightly so. Wouldn't it be a sad reflection on our aims, our tools, our skills, our workmanship, our product claims, our future—if Union Oilers were to deal elsewhere?

Besides—remember?—our sales are our bread. Fourteen cents out of every Union Oil sales dollar comes back to us in wages. Where else could we get any such 14 per cent discount on petroleum purchases?

But how about our friends' purchases?

Together, we produce or buy the raw materials; together, we make them into useful products; and together,

Word of mouth is the most powerful form of advertising—it carries weight with customers, neighbors and friends.



A neighborly recommendation from men who operate our refineries is a most valuable form of sales testimonial.

we—7,000 of us—should sell them. It adds up. Word of mouth is the most powerful form of advertising. Our word, as petroleum workers, experts, carries weight with our friends. In a business where every five-gallon purchase counts, that word is valuable to you—if expressed. Don't hesitate to say it!

Be proud to recommend your own products. You have reason to be proud. We make the finest gasolines, oils and greases sold in the West. You can back 7600 and 76, Triton and Royal Triton against any competitive brand. They'll back your words by their performance.

Be proud to recommend your own stations. Union

Wearers of the service pin, Union Oilers—7,000 of us—are the largest single customer group the Company has.





Every day it happens somewhere: An attractive lady has car trouble and appeals to Union Oilers for help

Oil Company is generally conceded to have one of the best groups of employee and dealer operated stations in the country. The standards they have set for service, cleanliness, and for courteous treatment make them worthy of your recommendation.

Be proud to offer a Union Oil Credit Card. The Credit Card is a convenience. It guarantees its holder quality products, merchandise, service—at Union Oil stations or wherever he drives throughout the country. Remember, a Credit Card customer is your steadiest and most profitable customer.

"Maybe, Miss, it would run a little better on gasoline," suggested someone on examining the dry gas tank . . .



Says she, "I was sailing along just as smooth as silk when suddenly the motor stopped. I can't understand it." . . .

Be proud to sell Union Oil Company. It's your Company. When you influence a person to buy at a Union Oil station, to take out a Credit Card, or to open a commercial account, you're working for yourself, your job, your future, your own security.

The energy of 7,000 people moving toward a common objective amounts to a very powerful force. If every one of us would constantly *sell* Union Oil Company in our thousands of daily sales contacts, we could easily become one of the most effective sales forces in America.

And none of us should ever lack bread!

. . . All ends happily a few minutes later when refinery men demonstrate their own version of a big sales push.



Seattle Office Expands

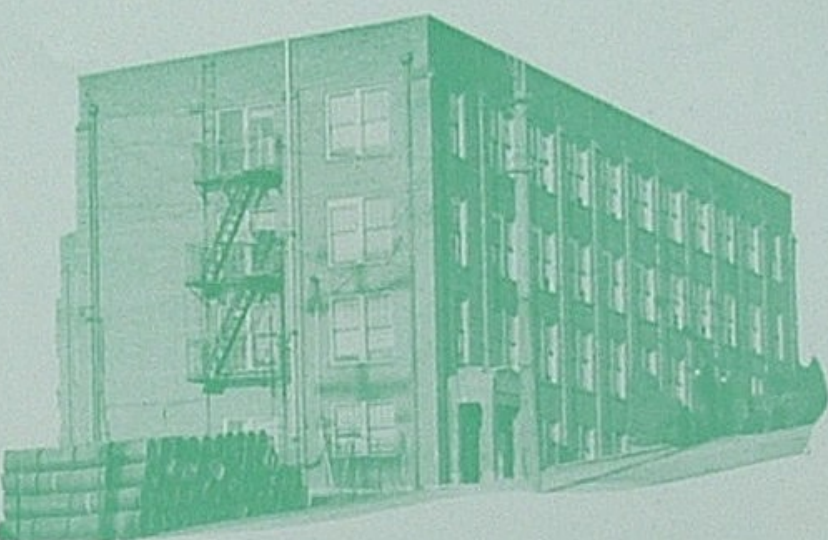


By Gudrun M. Larsen

NORTHWEST TERRITORY is very proud of its recently remodeled office headquarters, which now boasts a spacious new wing and interior decoration of the most modern design.

The new wing, consisting of two floors, is built of reinforced concrete with brick facing. Rooms have been soundproofed through use of accoustical tile on ceilings and asphalt tile on floors. Slim-line fluorescent

The former bird-cage type of reception desk was making its last curtain-call as this photograph was taken.

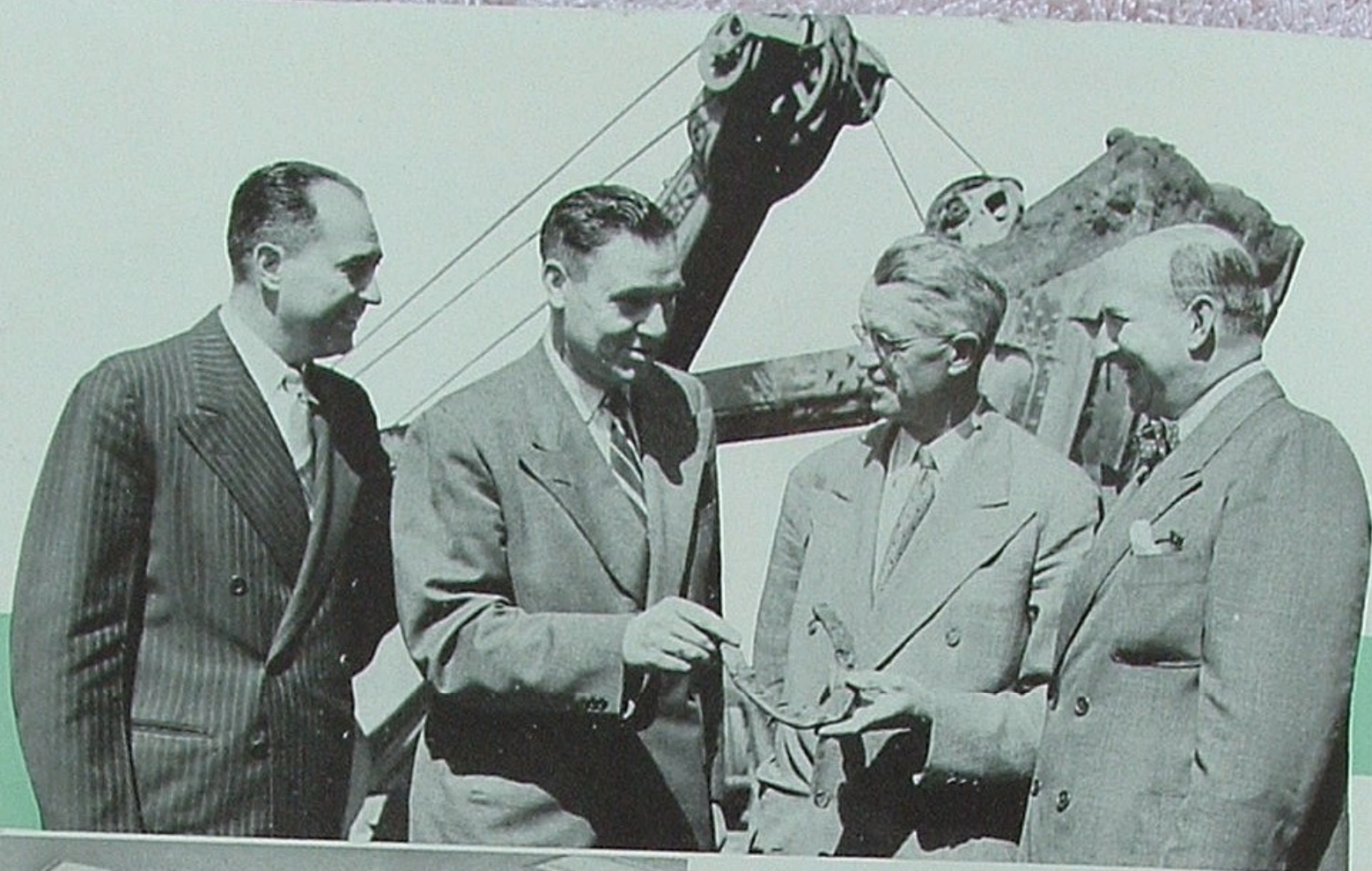


lighting from recessed fixture provides daylight quality illumination round the clock. Offices are furnished with grey metal desks, cabinets—and even waste baskets to match.

Simultaneously, the building's older portion underwent a thorough change and rejuvenation. Customers and visitors are now welcomed at a circular reception counter amid murals of Northwest scenes—a great im-

Northwest Territory's new reception lobby in Seattle is certain to please visitors and stimulate our pride.





L-R—R. S. Bond., F. K. Cadwell, B. F. Turnbull and L. J. Dowell turned up a lucky relic of tank wagon days at the ground-breaking event.



The guest lounge, above, was only a blueprint when R. S. Bond, Erling Olsen and T. A. Swanson, below, made their staircase analysis of remodeling plans.

provement over the "bird-cage" reception of former days. While awaiting their appointments, the visitors rest on wine-leather upholstered seating facilities, surrounded by home-like walls and draperies.

Several small offices on the main floor were moved to provide a conference room. Here in Bank-of-England type walnut chairs and across a solid walnut conference table, sales managers will plan ways and means of continuing the Company's Northwest expansion.

New coffee shop.





New bookkeeping department



New addressograph department

A new auditorium on the top floor will accommodate meetings of approximately 75 persons.

Because the Seattle office is somewhat removed from a convenient restaurant area, provision was made for a new office coffee shop and lunchroom. Its serving facilities and new red plastic chairs are thoroughly appetizing. And, of course, the culinary talents of Mrs. Edith Stensen were carefully preserved throughout the change and incorporated in the new setting.

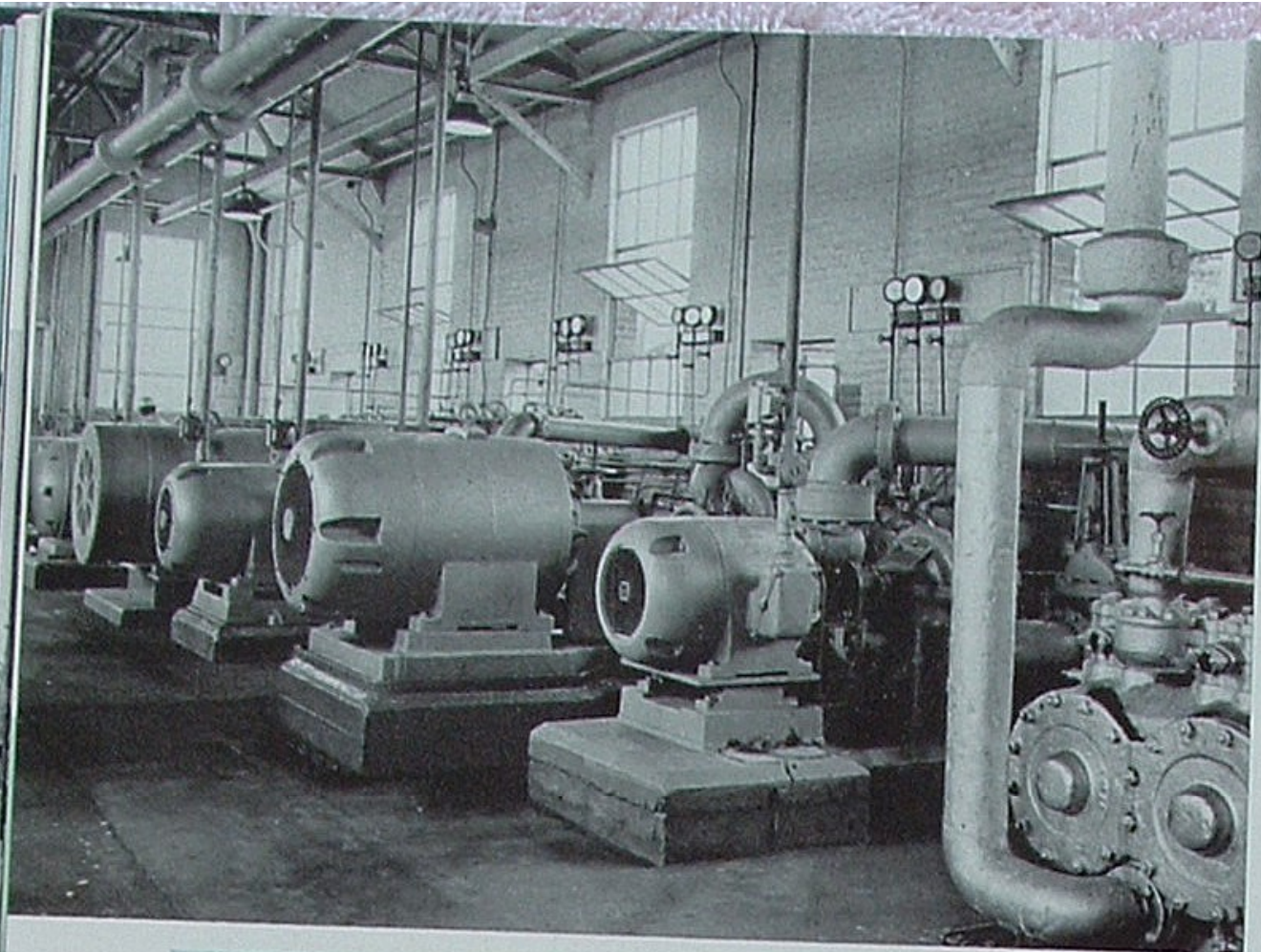
Wall paint of a soft green hue, white ceilings and pale green venetian blinds have provided the building's interior with eye appeal.

Architects who drew plans for the new wing were Bain, Overturf, Turner and Associates. B. F. Turnbull Company were the general contractors, and L. J. Dowell Company sub-contracted the excavating. Credit for remodeling plans, including design of the new lobby, goes to Union Oiler Erling Olson of our Construction Department.

To Company employees spending their vacations on playgrounds of the great Northwest, Seattle Union Oilers extend an open-house invitation. Come up and see us sometime!

Seen initiating the new conference room are Northwest Territory's management group, now headed by A. D. Gass.





29. Pumps are the transportation heart of a refinery. They move incoming crude from fields and terminals into waiting storage tanks. They start crude through its first refining steps and pump resulting products into other storage vessels. They move streams of oil from one refining unit to another. They are equipped to handle oil of every kind—crude and refined, hot and cold—slowly and at high speed. If an electric power failure stops the electric pumps, there is steam-driven equipment on hand to take over. Through Los Angeles Refinery pumps, left, some 170,000 barrels of oil pass each day.

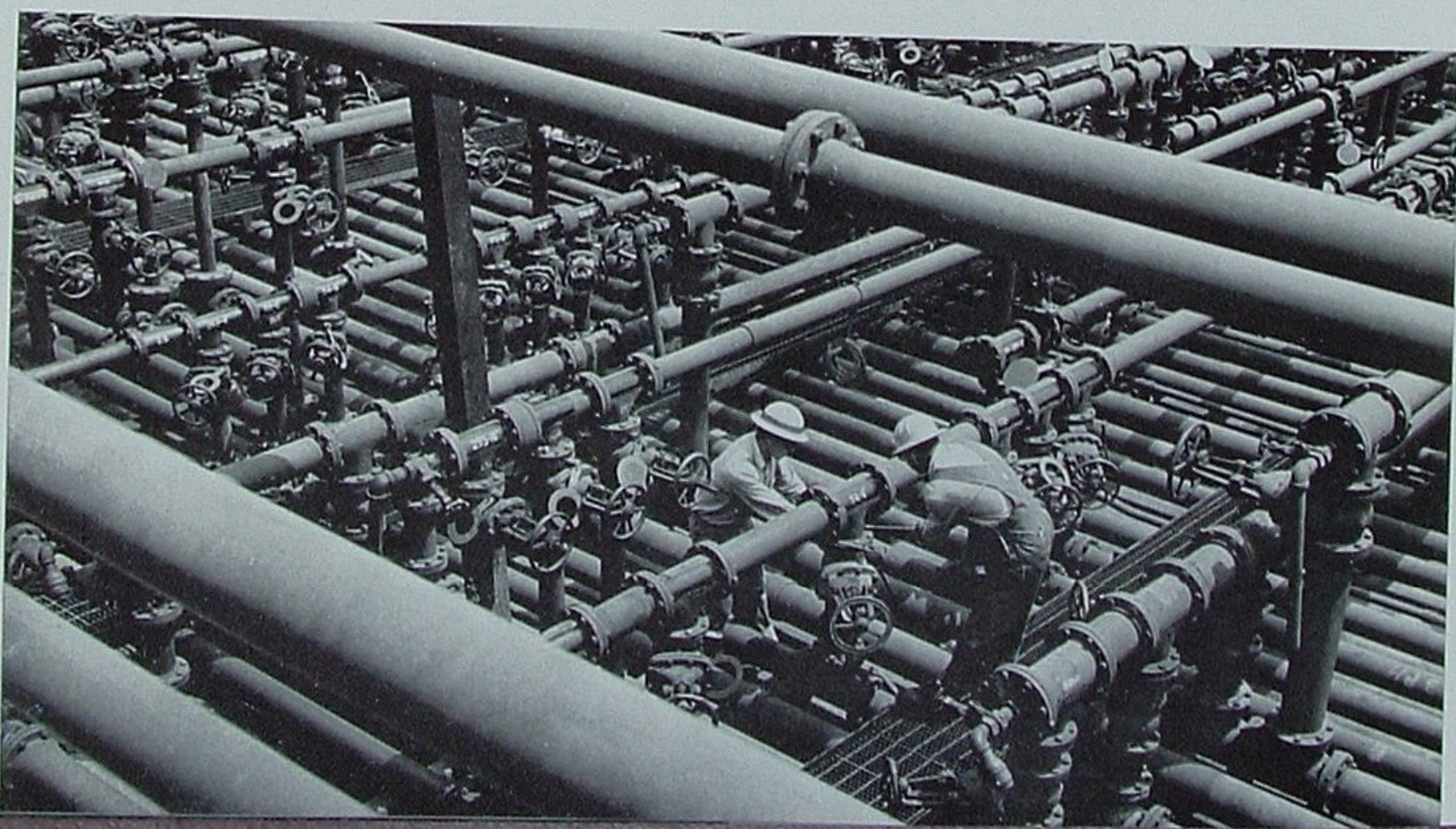
"76" Views of Refining

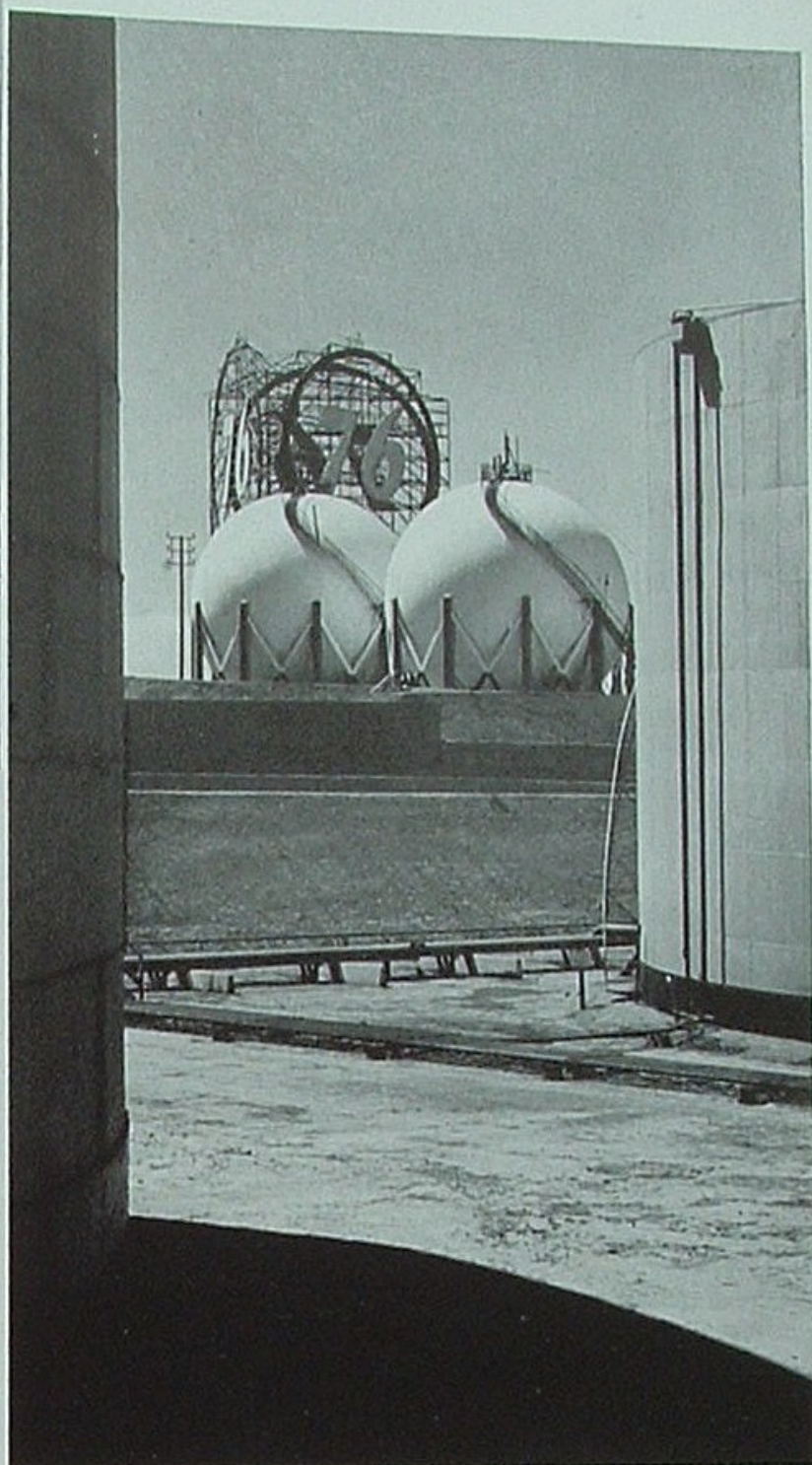
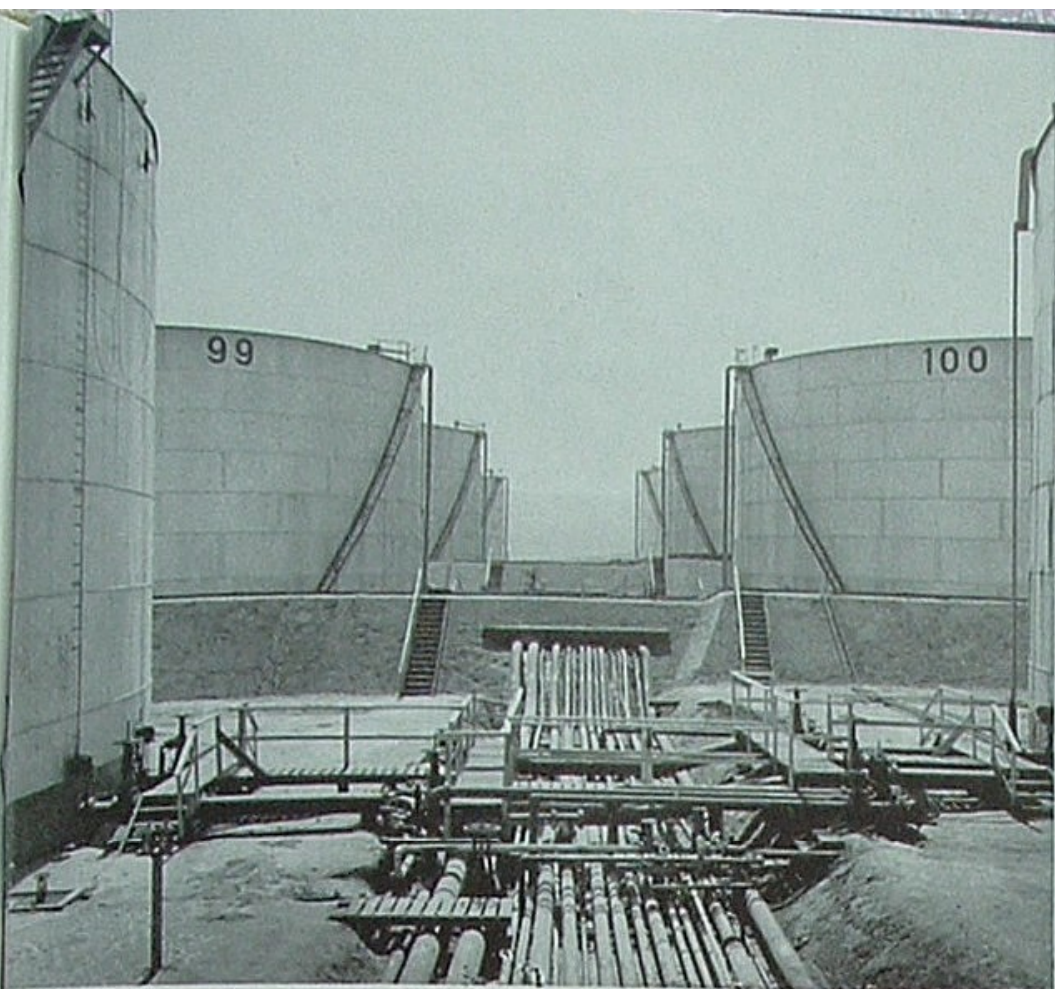
30. Pipe Line Manifolds,

shown below in the pump house area of Los Angeles Refinery, are a sort of switchyard in which streams of oil can be routed through any system of lines within plant bounds. Approximately 650 miles of pipe have been installed in this one refinery to provide a complete oil transportation service. Operation of these manifolds involves the control of more than 1,800 valves. To avoid stock mixtures, spills and other costly mistakes requires

that operators completely master the intricate pipe line system and use extraordinary care in directing oil traffic.

Because the best valves do not provide faultless control over oils being pumped at widely varying temperatures and pressures, every branch opening in the manifold system is provided with a metal *ring* and *blank*. When securely bolted in place between pipe flanges, the *ring* serves as an open doorway, or the installed *blank* effectively closes a passage and diverts the oil some other way.





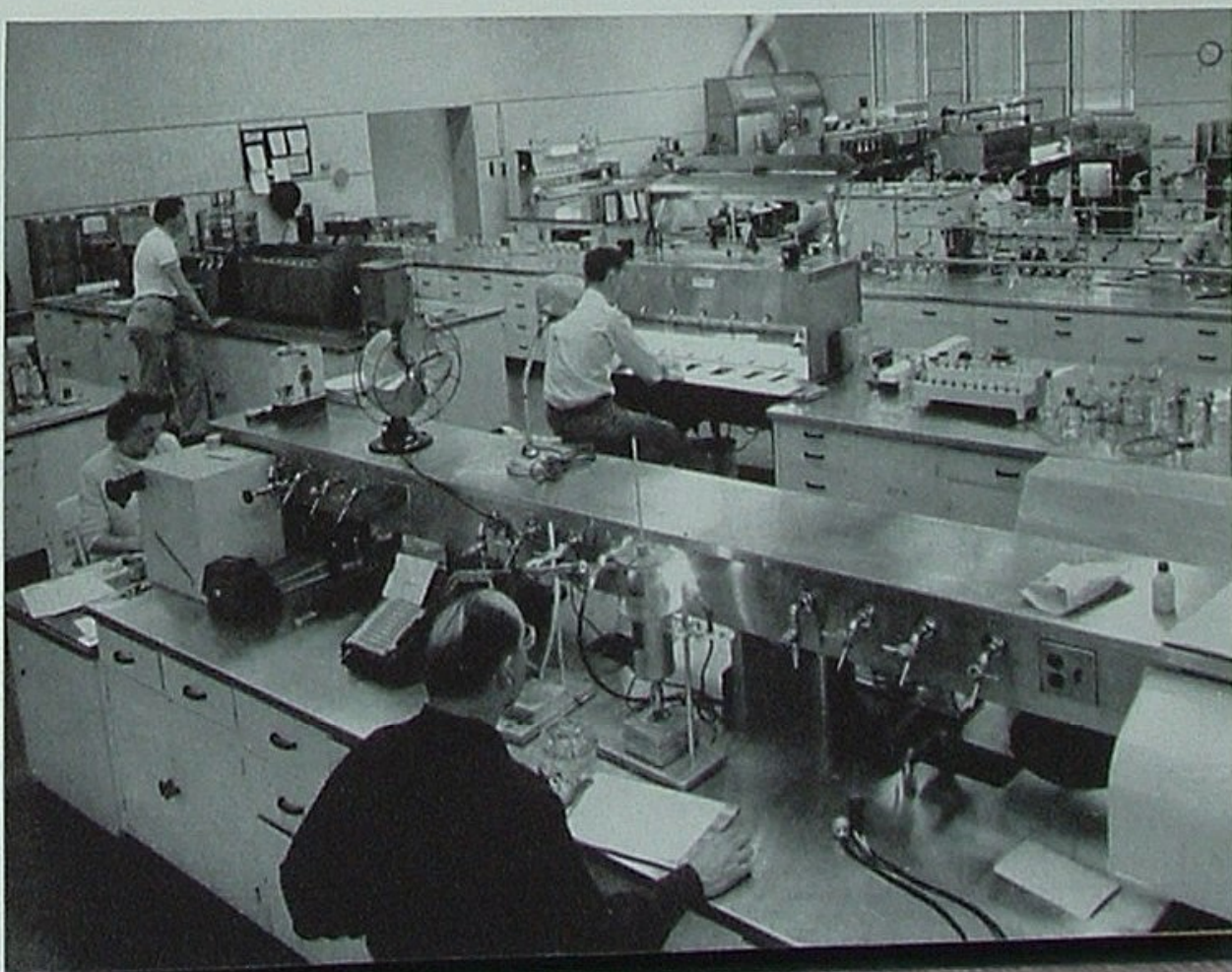
31. Storage Tanks, such as those above and at right, accommodate the refinery's incoming crude oil, receive partially refined products as they emerge from processing units, and hold finished products pending their shipment to market.

Each of the spherical tanks shown will hold up to 2,500 barrels of natural gasoline or other volatile products for which they are designed. But the commoner flat-topped vessels, which usually dominate a refinery storage block, have capacities ranging from 1,000 to 135,000 barrels each. There are more than 300 such tanks at Los Angeles Refinery with a total capacity of about 6,000,000 barrels.

32. Analysis is a fundamental requirement before any tank of crude is ready to be refined.

Samples taken from several levels in a tank are sent to the control laboratory, right. Here, by means of test equipment not unlike miniature refineries, the oil is carefully examined and measured. Chemists determine precisely what percentage of gasoline, gas oil and residuum it contains. They test for the presence of such foreign substances as sulfur and nitrogen bearing compounds.

In this way it is pre-determined how the crude can be refined to best advantage and what volume of finished products it will yield.

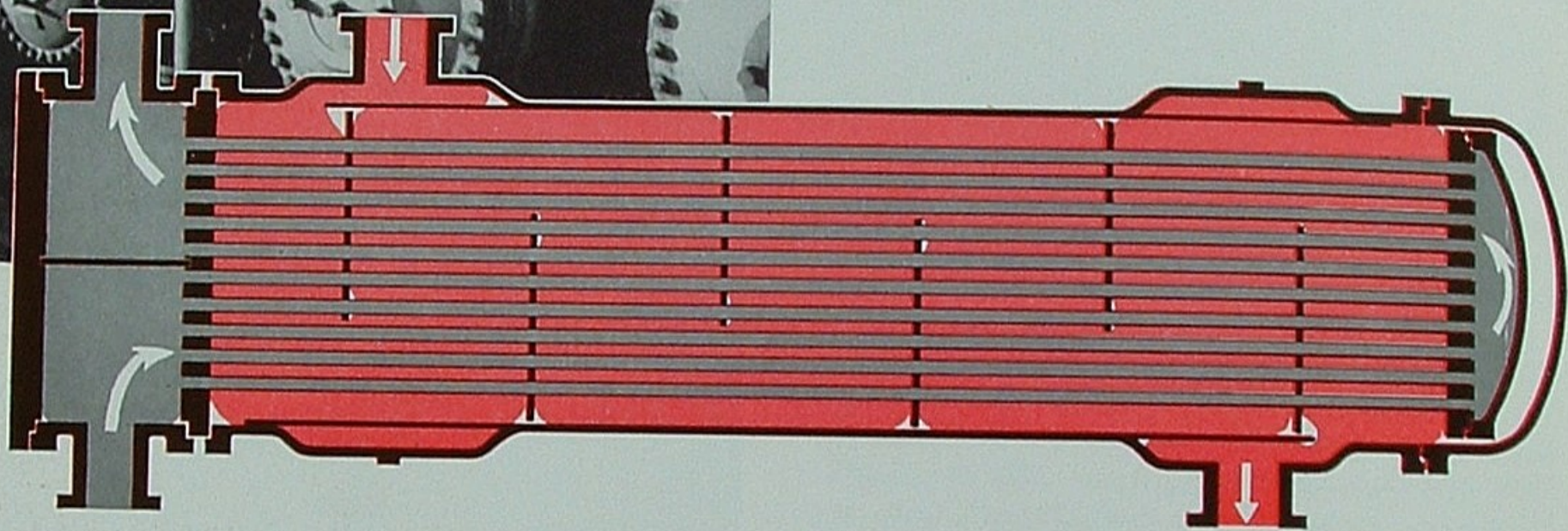


33. Heat Exchangers

Heat is the most important tool of the refiner, and, being costly to generate, it is conserved by an ingenious method.

Accompanying illustrations show a block of heat exchangers as they appear in operation and a cross-sectional drawing of how one performs. Crude oil, enroute to processing units, often passes first through a series of heat exchangers. Here it circulates inside bundles of hot piping. The piping derives its heat from a stream of hot oils and gases that circulate around the pipe bundle on their way out of a refining unit.

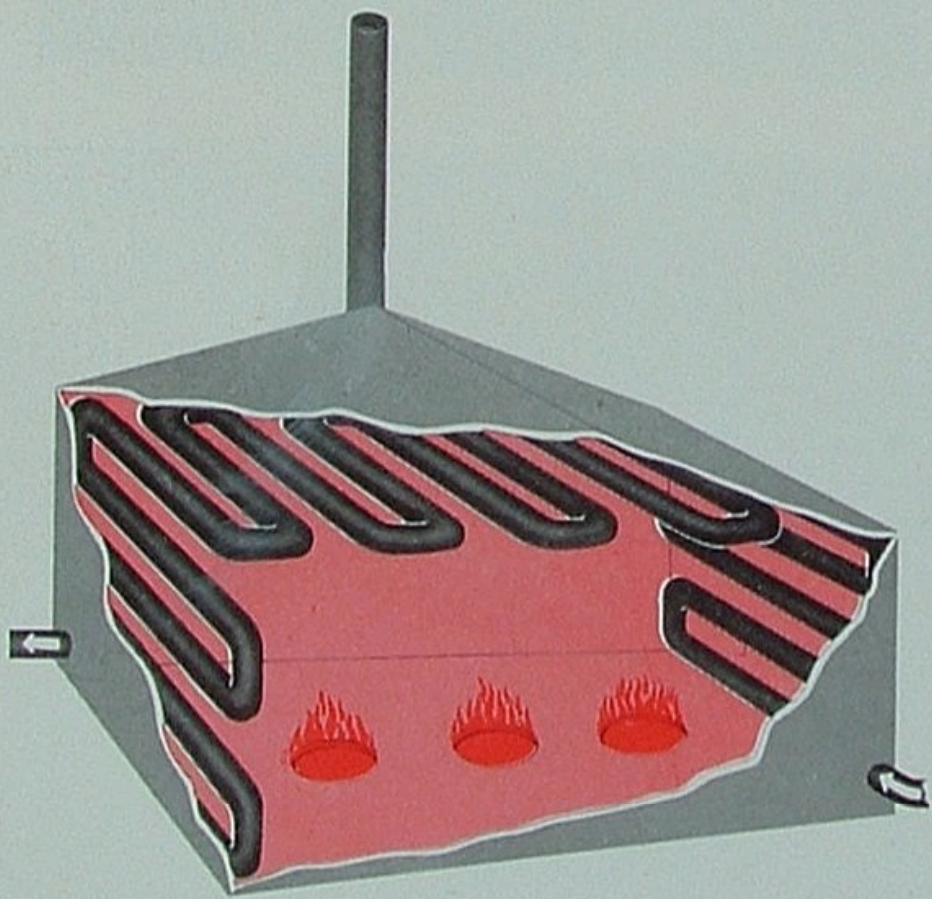
In this manner a two-fold economy is effected. Oil passing unit-ward through a block of heat exchangers absorbs what would otherwise be wasted heat. At the same time it helps to cool gases and oils that need to be condensed or reduced in temperature before going to storage.



34. Fired Heaters

using petroleum gases, fuel oil or in some instances coke for fuel, are the initial source of heat used in refining processes. At left is a drawing illustrating the manner in which crude oil, after being partially heated in heat exchangers, is circulated through coils of pipe in a heater and brought up to the desired refining temperature.

Such installations operate at a wide variety of temperatures and pressures. Normally, crude oil, as it starts through the refinery, is heated only enough to drive off the lighter gases absorbed in it and cause some of the liquid hydrocarbons to vaporize. In successive steps the remaining liquids are heated to the increasingly higher temperatures needed to make them vaporize. Oil flows through such heaters in a steady stream, governed rigidly by temperature control instruments.



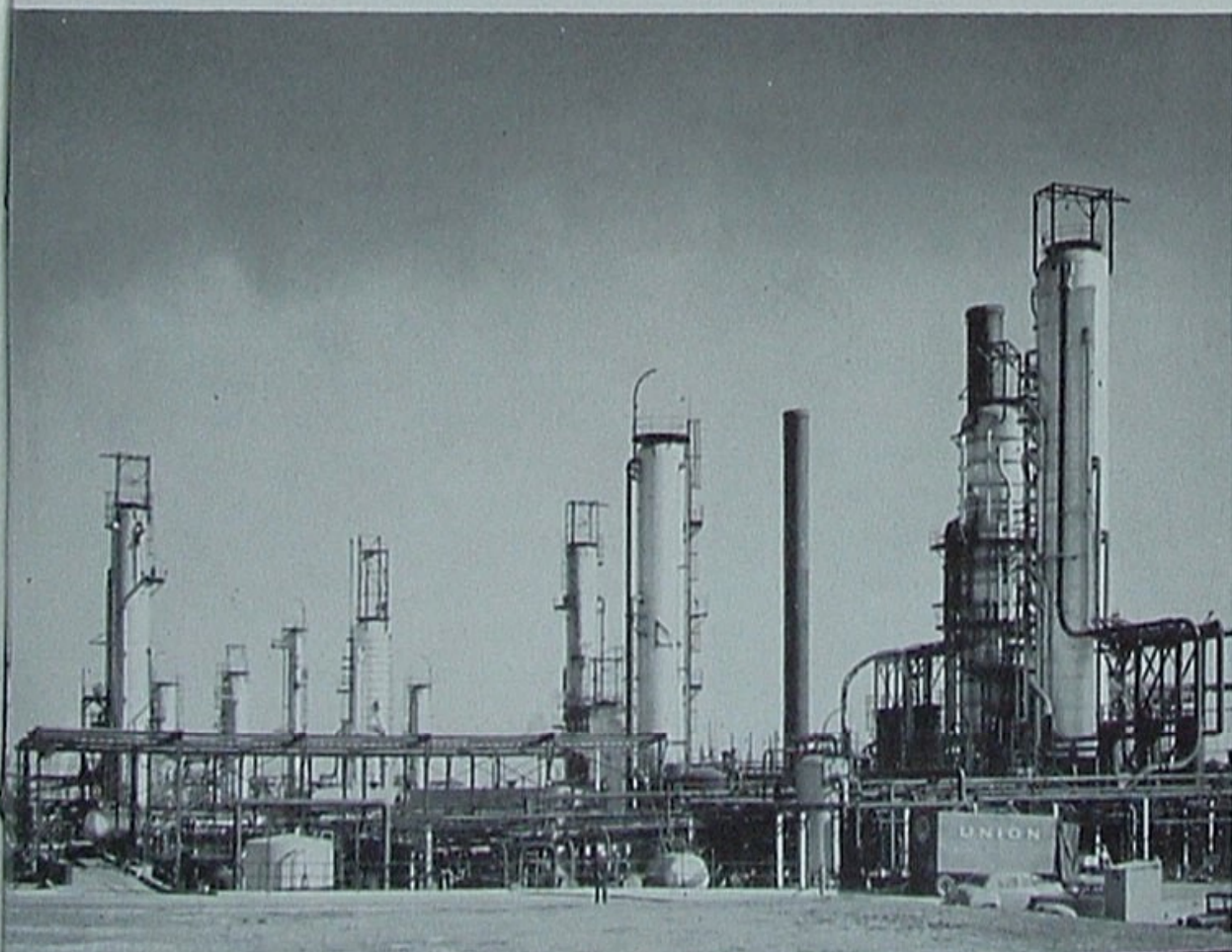
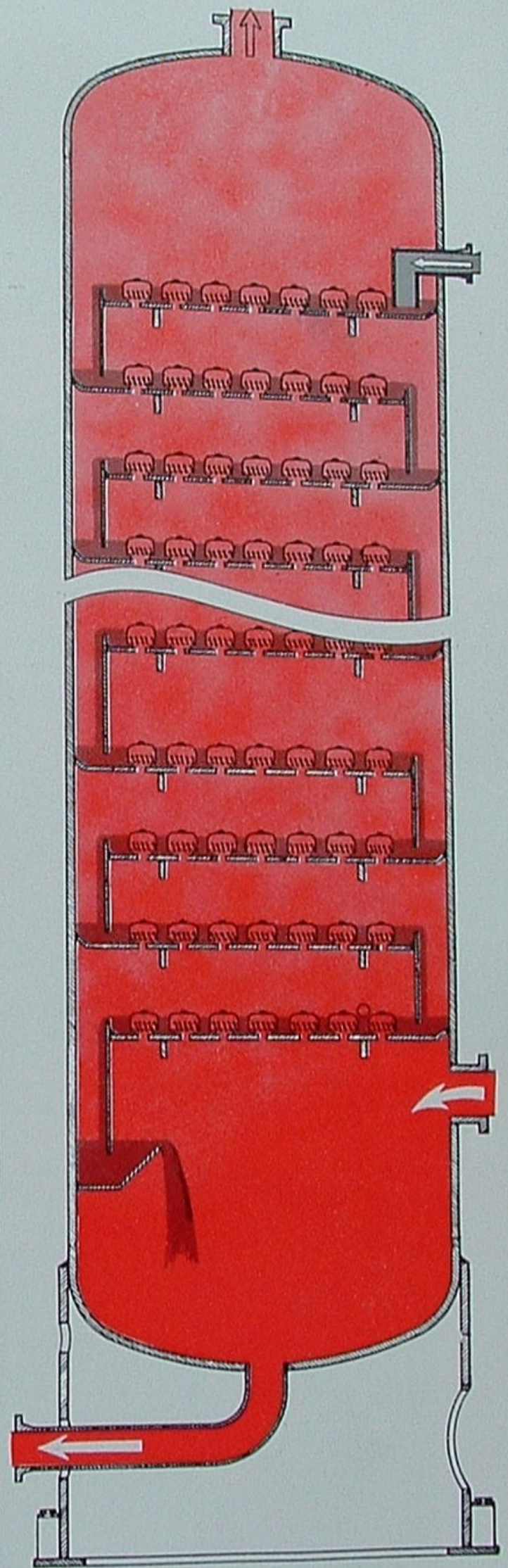
35. Distillation Columns

are so numerous and important in refinery operations that, as was done with heat exchangers and fired heaters, we had better pause to examine the inside of one.

Our cross-sectional drawing shows heated oil entering a simplified distillation column through a pipe line opening, lower right. Heavy liquids flow downward into this vessel and are steadily drawn off through the bottom outlet. Other heated hydrocarbons *flash* or rise escape through the open slots of numerous *bubblecaps* mounted on overhead trays. These vapors find upward escape through the open slots of numerous *bubblecaps* mounted on overhead trays. However, in escaping, the vapors are obliged to bubble through shallow accumulations of oils that have condensed and filled the trays to overflowing. This has a cooling effect on the vapors, causing the various hydrocarbon components to condense on the trays in the order of their heaviness or boiling range. Principally, only the gaseous and lightest liquid hydrocarbons bubble upward through all trays and continue out through the column's top exits.

Liquid entering the column just above the uppermost tray is called *reflux*. It consists of gasoline vapors that have passed out the top exit, been cooled to liquid form and returned. Reflux assures a cool and adequate liquid accumulation on the top tray. Thereby any unwelcome heavy vapors that have persisted in following the lighter hydrocarbons are condensed and returned to their proper condensation levels.

Frequently, distillation columns are equipped with side exits to remove various liquids as they condense at different heights in the column. These liquids, called *side-cuts*, constitute refined or partially refined products. They range from gasolines near the top downward through solvents, kerosene and numerous fuel and lubricating oils.



"SMOKEY"



Canine Reserve

By Gudrun Larsen

"SMOKEY" is not what might be called a gentle dog. In fact, to anybody except employees who ventured on Company premises at Edmonds, Washington, during World War II, he was downright vicious. But that's why we gave him a job—the job of guarding Edmonds Terminal against saboteurs.

Because he served his country and his company so well, "Smokey" wasn't discharged at the war's end in 1945. Union Oilers of the Northwest sort of placed him on a bone pension and held him in the Canine Reserves. To keep busy between long naps in the sun, he has become unofficial receptionist toward all tankships that visit the port.

"Smokey" can almost prophesy the coming of a Union Oil tanker. As one heaves into view a long distance off, he is always found waiting for it far out on the dock. Sitting patiently until the last mooring rope is taut, he then heads straight for the gangplank. Most visitors aboard turn toward the bridge. Not "Smokey." He doesn't waste a single step in finding the shortest route to the galley. There invariably he is greeted by a friendly "Why, hello 'Smokey'!" and is promptly regaled with canine delicacies.

Today it begins to appear that the retention of "Smokey" was a doggoned good idea. Kindness has taken away some of his innate viciousness. But he still stands a watch now and then and will make a swell "top kick" for the next pup private that comes along.



Above, Captain Peterman is high on Smokey's list of preferred visitors whenever the OLEUM docks at Edmonds.



While King Bailey, terminal superintendent, and Guy Vanier, engineer, concern themselves with unloading operations, Smokey keeps a weather eye on the galley.



● MARKETING

For the purpose of improving sales and service at all retail units where Company products are sold, retail representatives will be brought into Head Office for a series of meetings. The first of these will be held the week beginning September 11. Four representatives from each Territory and one from Glacier Division will attend the meeting. The first two days will be taken up with a refresher course for the purpose of reviewing and clarifying responsibilities of a retail representative. The next two or three days will be spent in presenting to the group a sales promotional program and equipping them with useful suggestions for dealers under their supervision. A sound-slide film, "The Man Behind the Wheel," will be featured at this meeting. A new group of retail representatives will be brought into Head Office every two or three months for similar training and sales promotional guidance.

Considerable money and sales effort were spent by Union Oil in introducing our New 76 Gasoline. A review of the first full month's sales showed increases in output which fully confirmed the claims made for this improved gasoline and justified our expenditures of money and effort in making and advertising the product. All employees were sent a leaflet entitled, "The What . . . Why . . . How . . . When . . . of New 76 Gasoline." This marked a new venture in acquainting employees with major product improvements.

In connection with our Eastern motor oil sales program, arrangements have been made to run television spot commercials in Kansas City, St. Paul, Minneapolis, New Orleans and San Antonio areas. There will be six commercials a week in each city for 26 weeks. Decision to enlarge television coverage resulted from response to televised commercials in the Chicago and New York areas. At this writing there are 725 dealers handling our motor oils in the Eastern and middle-West areas.

from Roy Linden

● MANUFACTURING

The refining branch of the petroleum industry in this country observed its 100th anniversary in July. The large number and complexity of products obtained from petroleum today as compared with early days of the industry—when crude oil was distilled principally to obtain kerosene, and nearly all by-products were thrown away—shows the tremendous technological advances made both in petroleum and other industries.

Los Angeles Refinery has exceeded 500,000 man-hours without a lost-time accident and is now aiming at a 1,000,000 man-hours Safety record.

The completion of two new spherical tanks south of Unit 91 at Los Angeles Refinery has added 5,000 barrels to the casinghead storage capacity there. Total storage capacity of 6,000,000 barrels at this refinery compares with Oleum's 4,000,000 barrels and Maltha's 220,000 barrels of tank capacity.

from K. E. Kingman

● PURCHASING

A sudden turn for the worse in foreign situations has produced sharp repercussions in various markets, directly affecting all phases of Company operations. While there has been some hysteria buying and hoarding by individuals, Purchasing has reiterated to all of our regular suppliers that the Company's basic policy of buying only for currently normal operating needs has not changed.

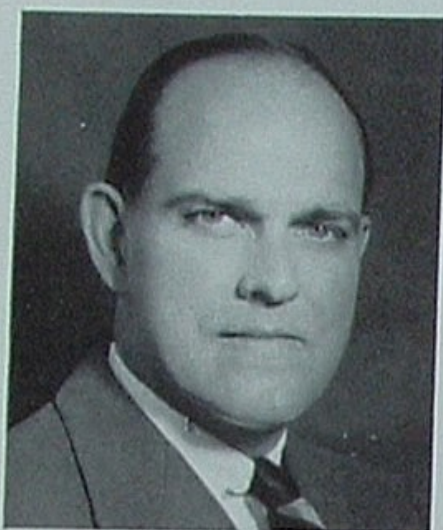
Response to this announcement has been gratifying. Industry in general is maintaining the position that all reasonable needs of customers can be met as required. Replies have indicated that the building up of excessive inventories is being discouraged to the extent of declining orders where hoarding is evident.

Short of all-out war, the enormous industrial capacity of this country can take care of both civilian and military needs. The surest way to bring on Government controls would be to force up price by indiscriminate buy-

ing. Purchasing representatives are maintaining close contacts with markets, and any changes in the supply picture will be relayed immediately to departments concerned.

from E. H. Weaver

● **FIELD** Our exploration activities in the Rocky Mountain Division are being curtailed for the present. A decrease in personnel there is being offset by a corresponding augmentation of staff in the West Texas Division exploration group. The principal changes of personnel are as follows:



E. R. ATWILL

E. P. Tallant, manager of Field Operations, Rocky Mountain Division, with headquarters in Denver, Colorado, will handle, in addition to his present duties, the administrative duties previously handled by Atwill.

All exploration matters of the Rocky Mountain Division will be handled by Horace N. Goodell, division geologist, with headquarters in Denver. He will report to Lon D. Cartwright, Jr., chief geologist.



E. P. TALLANT

from Sam Grinsfelder

● **PIPE LINE** In cooperation with Research, the Pipe Line Department has for the past two years been studying the possibility of using crude-oil-burning diesel engines for motive power at pump stations. Several engine manufacturers have also conducted tests on the use of typical San Joaquin Valley heavy crude oil as fuel.

As a result, three such diesel engines and modern pumps have been ordered for Antelope Station in Kern County, which will be completely modernized. These

will replace present steam equipment, some of which has been in service since 1909. The new plant will require only one-fourth the amount of fuel used in present steam equipment.

Ground was broken in August for a new office building at Santa Fe Springs to provide space for the Automotive, Purchasing and Pipe Line Departments. It will be located on the northwest corner of Los Nietos and Santa Fe Springs roads.

from Ronald D. Gibbs

● PROMOTIONS



W. I. MARTIN

On the same date, M. E. Nichols realized an important promotion when he was named district sales manager at Tacoma, replacing Martin. Nichols, who joined the Company in 1934, had most recently served as district representative at Phoenix, Arizona.



M. E. NICHOLS

OPPORTUNITY

University of California, through its University Extension, is offering five courses in engineering and geological approaches to the petroleum industry, namely, Introduction to Petroleum Engineering, Petroleum Map Drafting, Petroleum Refinery Equipment and Processes, Petroleum Engineering, and Petroleum Geology.

Classes will be held one evening each week, beginning September 11, at 1027 Wilshire Boulevard, Los Angeles. Many other courses in engineering, mathematics, physics, chemistry, etc., are also available to members of the petroleum industry through night classes and correspondence.



Fuel for Alaskan Skyways

By Art Assink

SUMMER seasons are extremely short in Alaska, but summer days come close to being 24 hours long. As a result, Seattle's Boeing Field does a roaring summer business. Alaskan construction and fishing activities depend heavily on non-scheduled airlines to transport workers and freight. So, the rule at this growing field has become, "Make hay while the Midnight Sun shines."

We're proud as punch here in the Northwest of the contribution Union Oil products are making to northern skyways. At the present time we supply aviation gasolines and lubricating oils to every non-scheduled airline operating on Boeing Field. In addition, these airlines are serviced by Union Oil dealers in Alaska. Among the airlines operators who patronize our new airport unit, opened in April of this year, are Morrison-Knudsen Construction Company, Air Transport Associates, Arnold Air Service, Arctic Pacific Airlines, Trans-Alaska Airlines, Pacific Alaska Air Express, Golden North Airlines, Consolidated Airlines, New England Airlines and Totem Air Service.



L-R—Art Assink is aviation representative and Jim Wakefield is resident manager for Union Oil, Seattle. With them are Jack Wales of Pacific Airmotive Corporation and Al Weyer, operator of airport service unit.

Bill Nelson, president of Airflight, Inc., points out to Assink and Wakefield some of the isolated areas he will visit during a contract flying mission to Alaska.

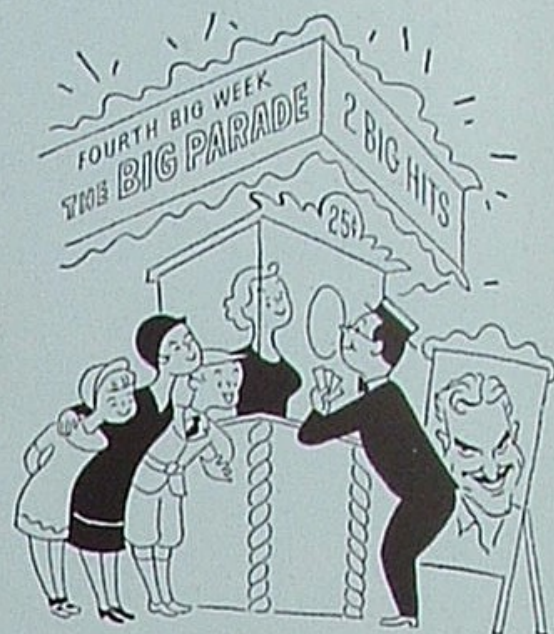




Gone are the days when a dollar bought 2 dinners...



3 lbs. of sirloin...



4 seats at the movies.

What's Left of the "Good Old Days"

QUITE a number of us can remember 25 years or more ago when 75 to 100 dollars a month looked like a pretty good starting salary—when you could buy a hair-cut for four bits, a shine for a dime, and have enough left out of a dollar to buy the best lunch in town. You could buy a small mansion for \$5,000, a pair of good shoes for \$5, and anything from soup to nuts for 5 cents.

Those were the good old days—the days of Babe Ruth, of Jack Dempsey, of Calvin Coolidge—nights when the "Charleston" was first in vogue and moonshine poured down during fair weather and foul.

"They're gone forever!" most of us youthful feeling middle-agers of 50 lament.

But, say, there's one item on the old commodity and pleasure list that's kept right on playing ball! Remember when you used to lift up the front seat of a Model T and funnel in five gallons of white gas? It wasn't very good gas, either. On a cold winter morning you'd have to fill the radiator with hot water, pour two quarts of boiling water on the carburetor, jack up one of the hind wheels, and crank your fool head off to get things started.

Well, the point we ought to remember is that today's really good, quick-starting gasoline costs no more, *before taxes*, than we paid way back in 1925. That's practically all that's left of the good old days.



But thanks to progress in the oil industry...



today you have far better gasolines...



priced no higher than 25 years ago.



PRIDE OF POTRERO Though one of the Company's oldest marketing terminals, San Francisco's Potrero plant has kept in step with progress and, after more than 40 years, is still equal to supplying the Union Oil products needs of a vastly enlarged metropolitan area. The above family portrait, with every man from trainee to district sales manager properly attired to do business, typifies the fine *esprit de corps* existing here. These Union Oilers are, from left to right: Front row—McLachlan,

Corsiggia, Craddock, Young, Franklin, Retherford, Nichols, Kendree, Carrington, Waters, McGregor, Johnson, Leonard, Lazear, Comsia, Eisenzopf, Young, Barker: Second row—Sheets, Stevens, Cornelius, Jamieson, Gibbons, Kockos, Riedel, McDonald, Samuelson, Newhoff, Jr., Znamens, Harper, Sammon, McCaffrey, Stewart, Clark, Norgaard, Donovan, Luke, Wilky, Collins: Third row—Fountain, Shabel, Huovinen, Hendrix, Lempp.



SERVICE BIRTHDAY AWARDS

SEPTEMBER, 1950

Thirty-Five Years

Tune, Lee A., Central Territory

Thirty Years

Keithley, Stephen, No. Div. Pipe Line
Paes, Jose A., Oleum Refinery Mfg.
Schmidt, Arthur, No. Div. Pipe Line

Twenty-Five Years

Anderson, Stanley H., H. O. Comp.
Billington, Lester A., So. Div. Auto.
Daniel, Ray E., L. A. Refinery Mfg.
Dock, Frances L., H. O. Traffic
Gale, Ray W., L. A. Refinery Mfg.
Hostetter, Homer H., Southwest Territory
Knoll, Mary A., H. O. Comptroller's
Lowrey, Harold W., Oleum Refinery Mfg.
Stockton, Lester L., No. Div. Pipe Line

Talley, Denman E., Valley Div. Field
Truesdale, Clarence, No. Div. Pipe Line
Wanless, Marion L., Oleum Refin. Mfg.

Twenty Years

Arriaga, Manuel R., Oleum Refin. Mfg.
Hohu, Clarence K., Honolulu District
Stinson, Earl C., Oleum Refinery Mfg.

Fifteen Years

Gantz, Darwin I., L. A. Refinery Mfg.
Graham, Jack F., Research-Wilmington
Gray, Frank T., Southwest Territory
Gross, Charles R., Southwest Territory
Lee, Harvey W., H. O. Exploration
McGregor, Wallace W., Central Terr.
Moore, Marie, H. O. Pipe Line
Morton, Carl D., L. A. Refinery Mfg.

Perry, Richard E., Southwest Territory
Richina, Lawrence, Maltha Refinery
Robison, Charles W., L. A. Refinery Mfg.
Smith, Jack, L. A. Refinery Mfg.
Tincher, Floyd, Exp. Pacific Coast Area.
Ugalde, Robustiano, L. A. Refinery-Cafe.
Verran, Richard C., Oleum Refinery Mfg.
Ward, Ernest Louis, Purchas.-San Fran.

Ten Years

Albright, John W., L. A. Refinery Mfg.
Behnke, Richard V., Southwest Terr.
Grandey, Loren F., L. A. Refinery Mfg.
Hull, Malcolm N., L. A. Refinery Mfg.
King, John D., Marine-Wilmington
Lueth, Paul F., Jr., Oleum Refin. Mfg.
Mead Earle F., Southwest Territory
Rentzel, Russel R., L. A. Refinery Mfg.

Know why 4 Americans in 5 aren't farmers?



1. Before people can write books or make shoes or build houses or teach school, they have to eat. In 1780 it took 10 Americans on farms to raise enough food to feed themselves and 1 other. Consequently only 1 American in 11 was able to quit farming and specialize full time in some other useful occupation.



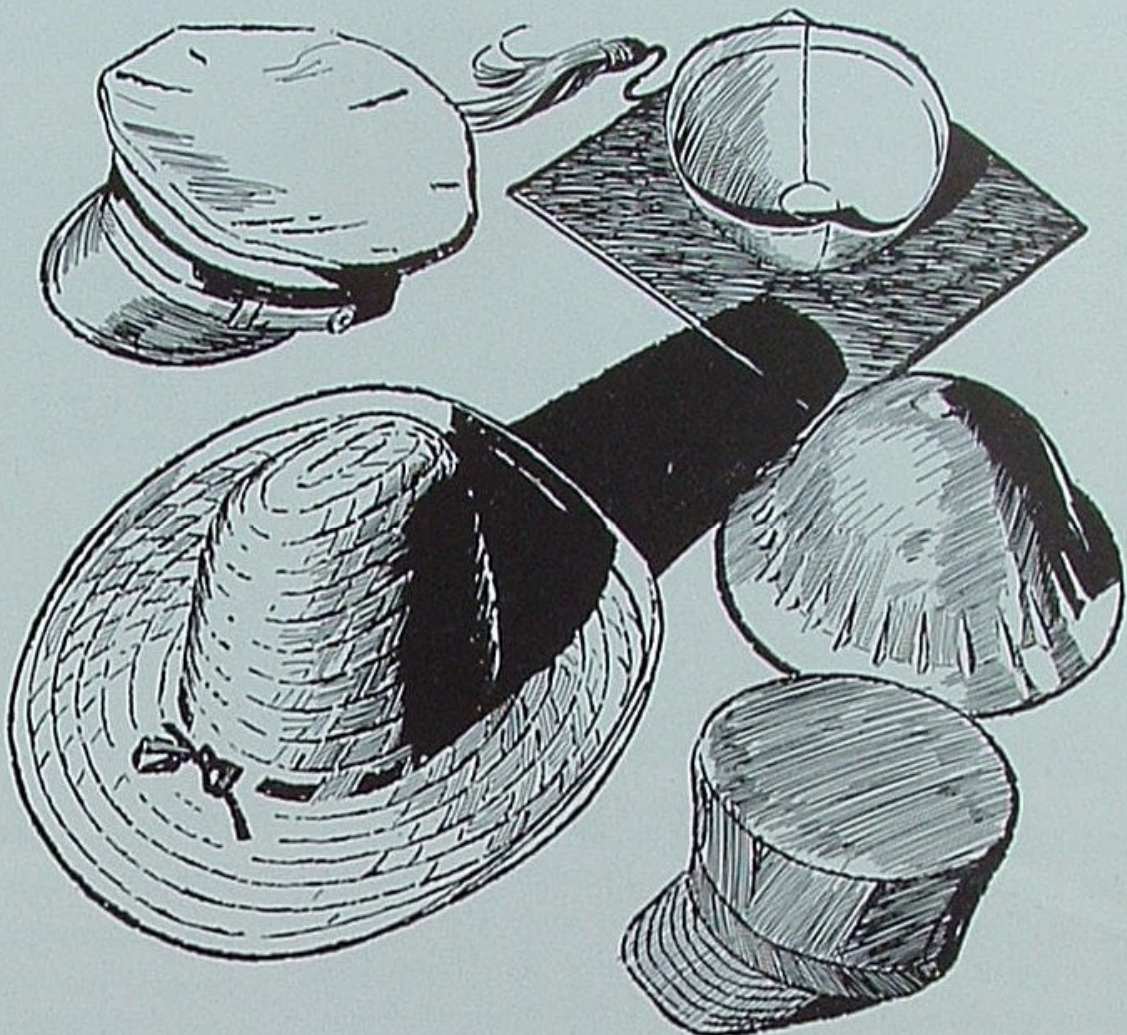
2. Today, 10 American farmers can raise enough to feed themselves and 40 others. So 4 people in 5 are free to specialize in other useful occupations that raise the whole nation's standard of living and productivity. The secret is mechanized farming—with gasoline and Diesel-powered equipment.



3. For example, one of Union Oil's customers in Creston, Washington—Mr. J. L. Thayer—has been raising wheat in that area since 1925. 25 years ago it took 26 horses and 4 men to operate this acreage. Today he does the job with mechanized equipment and 2 men. Petroleum-powered equipment has *doubled* his productivity.

% OF PEOPLE NEEDED ON FARMS TO FEED POPULATION	
United States ..	1 in 5 ████████
Europe	2 in 5 ████████
China	4 in 5 ████████
World average ..	3 in 5 ████████

4. If mechanized farming in a country and the development of its oil industry are directly related—as the figures above would seem to indicate—how do we account for America's amazing progress in oil? People used to think we were peculiarly blessed by nature with petroleum deposits. But geologists now know that less than 1/8 of the world's areas favorable in oil-bearing sands lie within the borders of the U. S.



5. The truth is, we have *found* and *developed* more of the oil that nature gave us. Under our free, competitive economy, 8,267 *individual* oil companies in this country have had the *incentive* and the *opportunity* to find and develop it. This hasn't been true in the rest of the world where the oil industries, for the most part, have operated under what amounts to government or private monopolies.



6. Because so many companies are competing for the farmer's business, we at Union Oil have been breaking our necks for years to bring him more and better products at lower cost. And every other company in the country has been doing the same. As a result, American agriculture has become mechanized at a pace that far surpasses the rest of the world, and our standard of living has risen right along with it.

UNION OIL COMPANY OF CALIFORNIA

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This series, sponsored by the people of Union Oil Company, is dedicated to a discussion of how and why American business functions. We hope you'll feel free to send in any suggestions or criticisms you have to offer. Write: The President, Union Oil Company, Union Oil Building, Los Angeles 17, Calif.