



"CONSTANT
CHALLENGE"

"On Tour"

On Tour



FEBRUARY 1950
VOL. 12, NO. 2

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T. D. Collett Editor
R. C. Hagen Asst. Editor

ON TOUR is published monthly by Union Oil Company of California for the purpose of keeping Union Oil people informed regarding their company's plans and operations. Reader participation is invited. Address communications to ON TOUR, 617 West 7th Street, Los Angeles 14, California.

Top Honors



Your Company was nationally honored during 1949. From Freedoms Foundation, Inc., of Valley Forge came the impressive medal above "for outstanding achievement in bringing about a better understanding of the American way of life." The Forbes award pays highest tribute to our Annual Report published in 1949.

Annual Report Citation

presented to

Union Oil Company of California

by

Forbes Magazine of Business

for publishing during 1949

One of the Fifteen Most Highly Rated Annual Reports

Forbes Editors score corporate annual reports from the viewpoint of the intelligent investor seeking to evaluate a company's worth and assess its prospects.

The editors believe the ideal report should tell a story about people (management and employees), their activities (financial, manufacturing, sales), their problems (outside factors affecting the company), and their progress (earnings or losses).

Reports are scored on three counts:

1. Presentation-attractive, easy to read, pictorially dramatized, etc?
2. Financial Data-dollars and cents results translated into understandable terms; how money came in and went out; who got what and why?
3. General Information - complete data on operations included; does material help reader understand company and its functions; are problems and prospects sufficiently highlighted?

A mark of 60 is fair, 70 good, 80 or over very good. Final score is weighted.

From among the hundreds scored by Forbes editors during 1949 this company's Annual Report ranked with the 15 best.



B. C. Forbes
B. C. FORBES
PUBLISHER



Photo by Fairchild Aerial Survey

SMOG has become a familiar word in the American language. But its nature is not too well understood even by the millions of urban and suburban citizens who breathe the substance daily. It is generally supposed that smog, as the name implies, is a mixture of smoke and fog. But scientists tell us that many varieties of smog, especially the types under discussion in Los Angeles, are never associated with fog. In fact, some of the worst smogs occur during periods of low humidity. These are produced by complex mixtures of gases and microscopic particles of dust, metals, crystals and liquid droplets.

Smoke is not altogether a modern or post-war menace to society. Many industrial centers have suffered severe atmospheric pollution for decades, and every city whose atmosphere is not being cleansed constantly by strong winds or rains endures an impure supply of air in some degree. Even as early as 1845 a witness, in making his diary description of a temporary emigrant camp in the Midwest, wrote that the pall of smoke from a thousand camp fires nearly clouded the sun. These same pioneers often avoided Indian trouble by detouring valleys or clearings from which smoke of questionable origin issued. Undoubtedly smog is as old as civilization.

The oldest residents and records testify that even the sun-bathed Pacific Coast has rarely been entirely free from mists or haze, caused by such materials as dust, salt, pollen and fibers. Explorer Cabrillo's name for San Pedro, California, when he first observed the area in 1542 was the Bay of Smokes. But those former conditions were hardly comparable to today's heavy blankets of smog, which settle over our larger cities, reducing visibility to a few blocks, offending cleanliness, and in some cases causing physical distress. The condition has grown worse throughout the years and is serious enough to deserve wide public attention.

The petroleum industry became interested in the control of smoke and fumes about 20 years ago, somewhat prior to public awareness of the approaching storm. Petroleum scientists, whose habits of alertness possibly grew out of seeing to it that no oil entered public water supplies, were prompt to notice increases of air pollution. They correctly predicted a worsening of these conditions in proportion to the growth of population and industry. And they anticipated the day of judgment when all persons and industries would be obliged to guard against air pollution in smog-susceptible regions.

However, early studies convinced the oil men they

were dealing with an extremely complicated subject. Accurate data were difficult to acquire. Techniques and equipment to analyze the atmosphere were scarce or non-existent. Few oil men had the special training and facilities to promote research of the desired quality. Then the war intervened, during which time population and industry multiplied beyond all previous estimates in the West. Smog conditions became proportionately worse.

Finally in 1947 efforts were renewed. The Western Oil and Gas Association, representing 180 California oil companies, attacked the problem on a cooperative basis. They appointed a Committee on Smoke and Fumes, naming W. L. Stewart, Jr., of Union Oil as chairman. This committee in turn engaged the Stanford Research Institute, one of the best qualified research organizations in the West, to make a thoroughly scientific analysis of smog conditions, particularly in the Los Angeles area, and to report their findings.

In addition to this half-million-dollar undertaking, the cooperating oil companies had spent 10 million dollars (up till now) trying to eliminate every possible source of air pollution from refineries in and about Los Angeles.

Meanwhile public consciousness of the smog nuisance mounted almost to hysteria, resulting in many incorrect conclusions. Public officials and local committees began demanding extreme abatement measures such as shutting down all heavy industry, especially refineries, whenever the smog reached annoying intensities. Everyone had a private opinion as to where the smog originated and how it could be eliminated.

Ironically, oil refineries eventually became one of the principal scapegoats of public indignation. Someone decided, without investigating the facts, that sulfur dioxide caused most of the haze and was responsible for eye and throat irritations reported by many people during the worst smog attacks. Since sulfur dioxide is a by-product and to some extent a waste product of refinery operations, this theory found many avid publishers and readers. One very significant fact was either ignored or not known, namely, that sulfur dioxide is also a waste product from every fuel-consuming home, office building, plant, factory, ship, locomotive and motor vehicle in the community.

On November 30, Western Oil and Gas Association, through their president and spokesman Reese H. Taylor, attempted to put all guess-work on the problem in its proper place. Mr. Taylor revealed publicly what the oil industry had done and spent since 1947 to prevent air pollution. He challenged the critics and public to examine scientific facts about smog before passing judgment on any industry. And in conclusion he said, "When the rest of the community has done as much as

the oil industry, maybe we can begin to eliminate smog."

Certainly there is no better place for a fact-finding investigation to start than at home. If we, as petroleum people, know some of the basic scientific facts about smog, we can be a helpful influence in correcting wrong opinions and encouraging clear thinking. With such an objective in mind, ON TOUR is pleased to reprint here several findings of the Stanford Research Institute as published in their 1949 report:

(Quotation)

What contaminants in the Los Angeles air produce smog?

The Los Angeles smog is produced by a complex mixture of more than 40 contaminants found regularly or periodically in the air, and at least seven others which have been found occasionally.

The contaminants include gases such as ammonia, aldehydes, sulfur dioxide, sulfur trioxide; oxides of nitrogen, gaseous hydrocarbons and ozone; liquids such as oil droplets, nitric acid droplets and sulfuric acid droplets; and solid materials (present as fine particles) including calcium, sodium, aluminum and silicon compounds; magnesium, titanium, lead, iron, potassium and barium compounds; traces of copper, manganese, nickel, zinc, lithium, barium, strontium, silver, boron, vanadium, tin, chromium, zirconium, bismuth and cobalt compounds; also various fibers, pollen, carbon particles and tarry organic material.

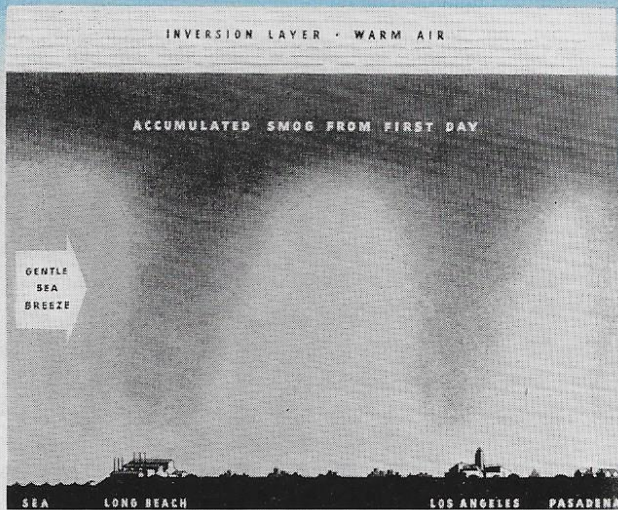
Traces of others may also be present, but these are the principal substances that cause the smog.

How does smog form?

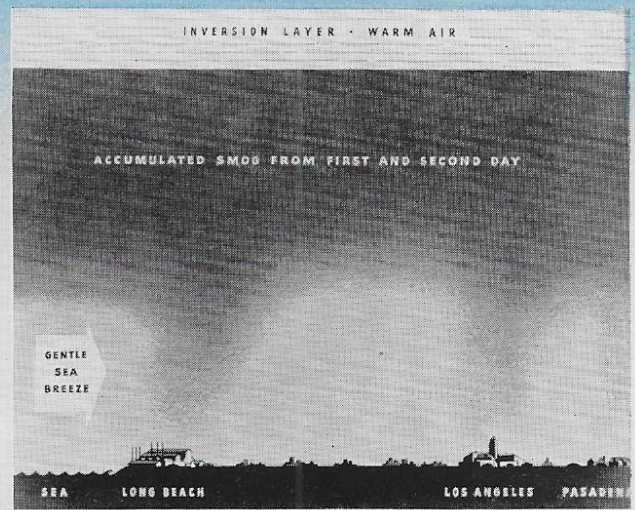
Though contaminants are always in the air, smog occurs only periodically. It is more frequent and more intense in the late summer and early autumn than in winter or spring. It almost never occurs at night or in cloudy weather.

The conditions necessary to the formation of smog are now understood. It does not occur until atmospheric conditions are such as to favor it. Three sets of air phenomena work together to produce it.

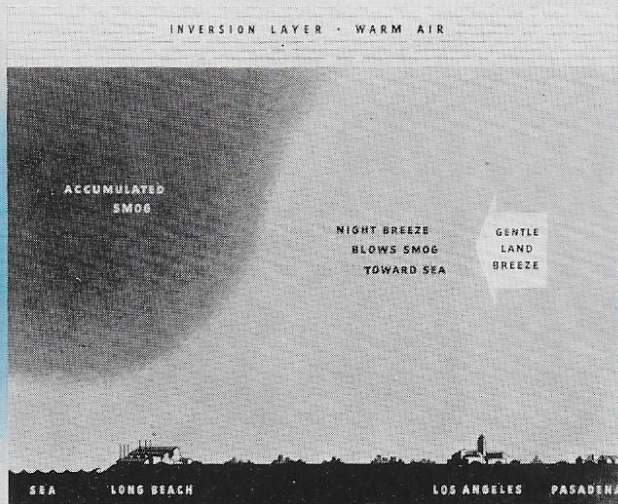
The first is the frequent presence over Los Angeles of a warm stratum of air known as the Pacific inversion layer, which is part of a gigantic atmospheric swirl extending westward as far as the Hawaiian Islands. It acts as a huge invisible lid over the Los Angeles area. Smoke, fumes, dust and gases originating anywhere in the basin are carried upward by surface air currents to the base of the inversion layer, where they accumulate, building up a reservoir of materials that can later produce smog. The Pacific inversion layer rises and lowers like a huge deck in response to meteorological conditions affecting it. Smog is more likely to be noticed when the layer is low.



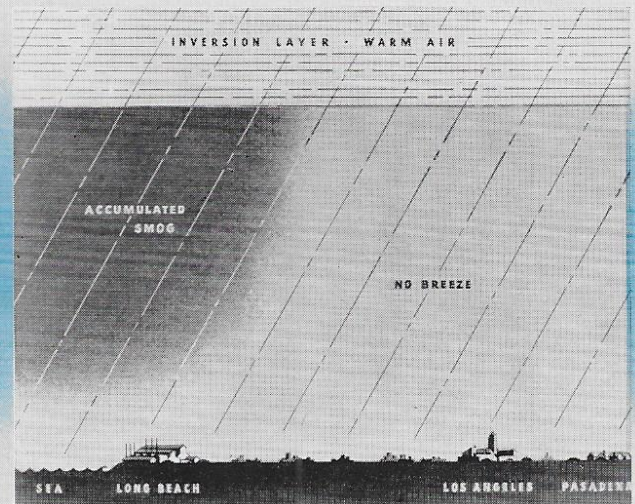
The Pacific inversion layer acts as a huge, invisible lid over the Los Angeles area, trapping smoke, fumes, dust and gases that arise anywhere in the basin.



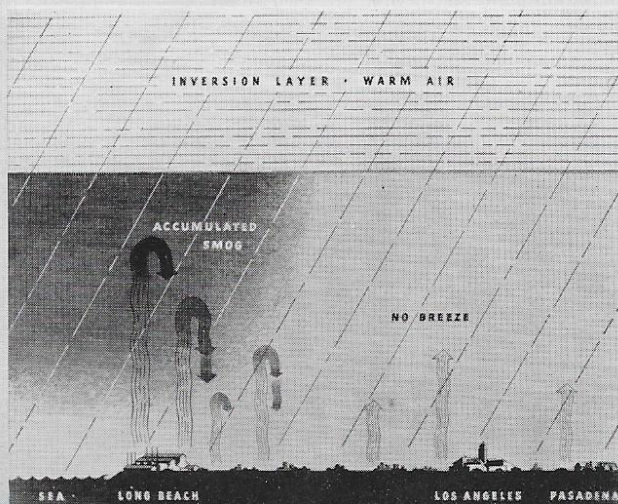
During the first, second and subsequent days of a typical smog sequence, more and more contaminants rise to be trapped under the inversion layer.



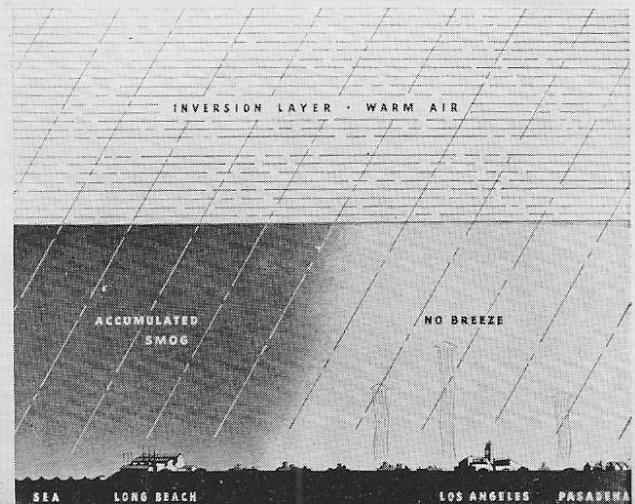
As the breezes reverse the evening of the second day, the heavy accumulation of two days' trapped contaminants moves toward the ocean.



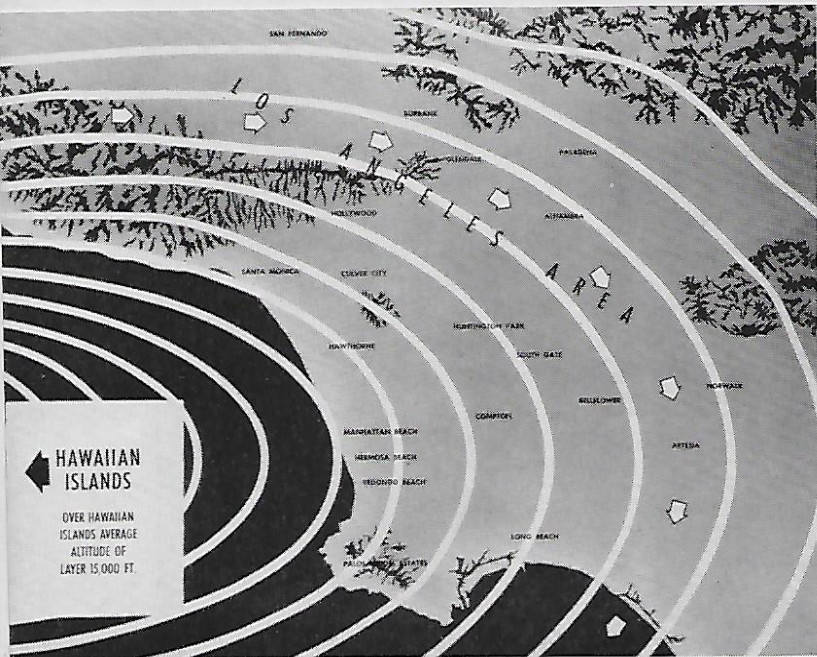
Next morning, when the sun's rays heat the earth, the lowest layers of air become warm and rise. An up-and-down turbulence of the air results.



Cooler air from above comes down to replace the warmer rising air. The descending air brings smog materials with it and these are widely mixed by turbulence.



Finally, the well-churned mixture of smog and air is blown by prevailing daytime breezes from the ocean eastward to Pasadena, Glendale and the mountains.



The Pacific inversion layer extends as far west as the Hawaiian Islands. Its base may remain for days at a time at altitudes of between 600 and 1,000 feet.

The second set of air phenomena is turbulent up-and-down currents of air occurring as the ground is heated during the morning hours by sunlight. When the sun's rays heat the earth, the adjacent layers of air become warm and rise. Cooler air from above comes down to take its place, bringing smog materials with it. This vertical turbulence increases as the sun's intensity grows during the morning. Contaminants that have accumulated at the base of the inversion layer during the preceding hours or days are transported down to street level, and widely mixed through the air.

Surface breezes, the third factor, move the newly-formed smog clouds across the area. Breezes in the Los Angeles basin normally blow toward the ocean at night and toward the land in the daytime, reversing shortly after sunrise and sunset. On smog days the reversal at first may add to the turbulence caused by the vertical thermal currents. Then, as it grows stronger, the landward breeze pushes the intensifying smog clouds across Los Angeles, where smog is usually first observed, and carries them toward Pasadena, Glendale and the mountain canyons in the east.

These atmospheric activities follow known meteorological laws. As a result it has been possible to develop an objective measure of each day's smog intensity (the Smog Index), which has proved highly valuable in the smog research program, and an accurate forecasting method which can predict smog as much as three days in advance.

What causes reduction in visibility?

The haziness produced by the smog has been proved to result from small solid particles and liquid droplets—particulate matter—in the air. In the size range from 0.2 micron to 10 microns, the atmosphere in Los Angeles

may contain from 30 million to 600 million particles per square foot. Gases have been shown to have little or nothing to do with reduction in visibility.

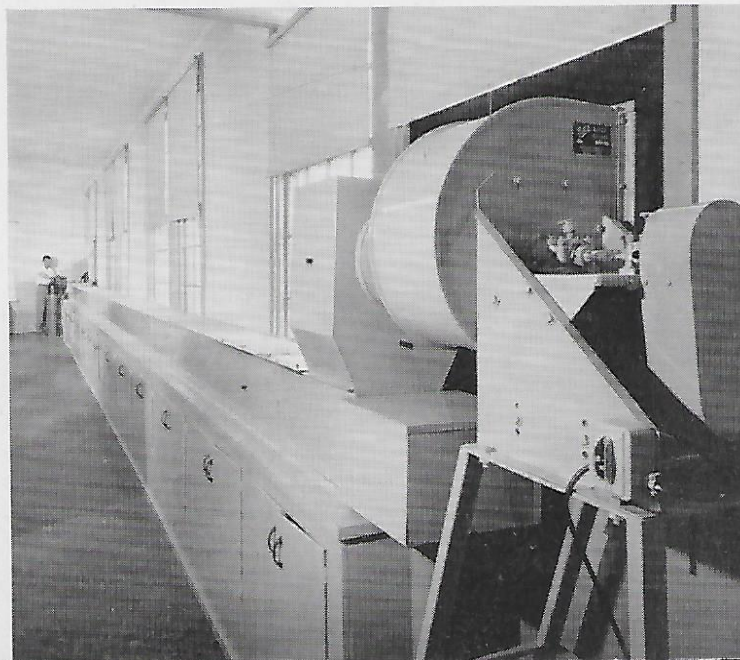
Los Angeles would have many days of haze even if there were no people living in the area. The natural occurrence of so-called tropical haze is a well-known fact, substantiated by old photographs, the recollections of long-time residents, and observations of its occurrence elsewhere along the Pacific Coast in regions where there are no industrial sources of air contamination. The natural haze is believed to be caused by dust, pollen, fibers, salt and other materials of earth, ocean, plant and animal origin.

In Los Angeles the natural haziness is considerably increased by particles and droplets of industrial, vehicular, combustion and other human origin.

In all, five types of particulate matter have been found, the amounts of which vary markedly from time to time, producing a corresponding variation in their effects on visibility:

1. *Carbon and metal particles.* These are black, opaque particles occurring in clumps or aggregates. They are responsible for from 10 to 50 per cent of the decrease in visibility.
2. *Transparent, light-scattering crystals.* These water-insoluble particles, including aluminum oxides and silica, account for from 10 to 30 per cent of the decrease in visibility.
3. *Small, water-soluble and oil-soluble particles and oil droplets.* Effect on visibility is not known, but believed to be small.
4. *Substances capable of forming moisture droplets in the air.* The principal one is sulfur trioxide, which forms droplets of sulfuric acid on contact with atmospheric moisture. This group of substances accounts for from 5 to 20 per cent of the decrease in visibility.

Atmospheric visibility is measured at the Stanford Research Institute's air pollution control laboratory with this "transmissometer." It gauges various contaminants.



5. *Large soluble crystals.* Sulfates, nitrates and chlorides. They account for from zero to 80 per cent of the decrease in visibility.

It has been demonstrated that the effect of these particles on visibility depends on the size of the particles as well as on the materials of which they are composed. Particles with diameters approximating 0.3 to 0.4 micron have the maximum light-scattering power and produce the largest effect on visibility. On days when visibility is especially low, a large percentage of the particles are of this size range. Such particles are small enough to remain in the air for long periods.

What causes eye irritation?

It has long been thought that the eye irritation from smog was produced by some one substance; and from time to time various atmospheric constituents have been singled out and given the blame for it. The best evidence now is that no single material produces the eye irritation; it results from a number of contaminants working together.

At least nine substances capable of causing eye irritation have been identified in the Los Angeles air. Although no one of them is present in sufficient quantity to produce eye irritation of itself, all nine substances in combination have been shown by Smog Chamber tests to cause definite eye irritation, even when present in the quantities found in the Los Angeles atmosphere. Among the substances in the Los Angeles air which—either singly or in combination with others—may cause eye irritation when present in sufficient amounts, are formaldehyde, ammonia, sulfur dioxide, sulfur trioxide, nitrogen oxides, acrolein, ozone, carbon particles and oil.

The possibility must not be ruled out that other substances as yet undiscovered in the air, may also contribute to the eye irritation. Various mechanical and physical effects, such as motion of the air or the intensity of sunlight, may also be as yet undetermined factors.

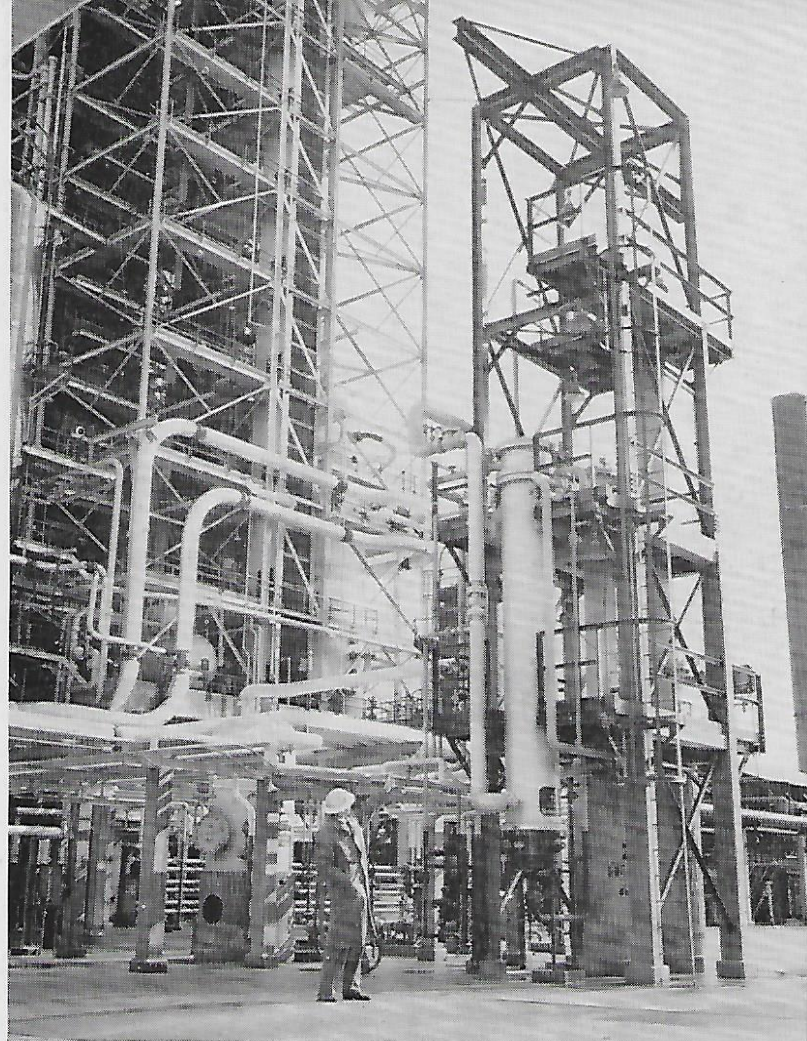
Where do the contaminants come from?

Evidence obtained so far suggests that the contaminants have their origin in a wide variety of sources. Silicates, fibers, salt, pollen and some others are of natural origin, though possibly present in greater quantity because of artificial stirring by traffic. Contaminants such as carbon, oil, lead, zinc, copper, sulfates and metal particles result from industrial processes, automobile and truck exhausts, and combustion.

Research is in progress to determine the principal processes and activities that are producing contaminating materials, and to gain an idea of their approximate contributions to the smog.

(End of Quotation)

A study of the entire report made by Stanford Research Institute leads us to the following conclusions:



Photo, courtesy Times-Mirror

This hydrogen sulfide reabsorber is the final stage of a \$670,000 hydrogen sulfide recovery system built at Los Angeles Refinery. It scrubs refinery fuel gas, thus preventing release to the air of sulfur dioxide.

Petroleum Industry research to determine what smog is and where it comes from is already more than 80 per cent complete.

Contaminants found in the air are numerous and varied; they originate from many sources, natural as well as industrial and non-industrial.

The meteorological or weather conditions in a given region determine to a large extent the severity of smog and the magnitude of any measures that must be taken to prevent it.

The policing of one industry or one location in such an area as Los Angeles would have little effect on atmospheric pollution over the entire area. Most probably the desired degree of correction can come about only when every individual citizen is as conscience smitten by his own backyard incinerator or oil-burning jallop as he is critical of factory smoke and diesel truck exhausts.

The petroleum industry is spending millions in order to be the first to meet new industrial standards of house-keeping necessitated by our unique weather phenomena.

World's Largest Yule Tree

ANY city that is thinking seriously of taking the Christmas tree championship away from Bellingham, Washington, will now have to look high and wide even to find a tree big enough. For on December 10th there arose in the heart of this proud community a tree towering 152½ feet above pavement. It was the world's tallest Christmas tree, being 18½ feet taller than the 1948 champion, also a product of Bellingham's forests and civic pride.

The giant beacon of good tidings was a Douglas fir, with a trunk diameter of 54 inches at its base, and contained an estimated 2,500 board feet of lumber. Judging from a count of its rings, the tree was about 132 years old. It grew to its colorful destiny on the Sumas Plains, some 35 miles from its Christmas resurrection site.

Felling of the great tree was no small or commonplace operation. To protect its massive branches, the fir had to be lowered gently after a gasoline-powered chain-saw had whipped through its trunk. This operation required a crane, several heavy trucks, a half-buried tractor to steady the descent, a moving tractor to pay out the lowering line, and a neighboring fir of great strength to serve as spar tree. Needless to say, the official tree-cutting crew were men of long experience in the woods.

The transportation job of 35 miles was handled by two big logging trucks traveling in tandem, 100 feet apart. The driver of the rear truck, working in a dense



Above, this Douglas fir, the largest Christmas tree on record, did not grow up on the main thoroughfare of Bellingham, Washington, but at the ripe old age of 132 years was transported some 35 miles from Sumas Plains.

Right, the arrival of the fallen giant at Bellingham on December 9th, with Santa himself aboard, was an occasion of speculation. No one then knew the tree's height.





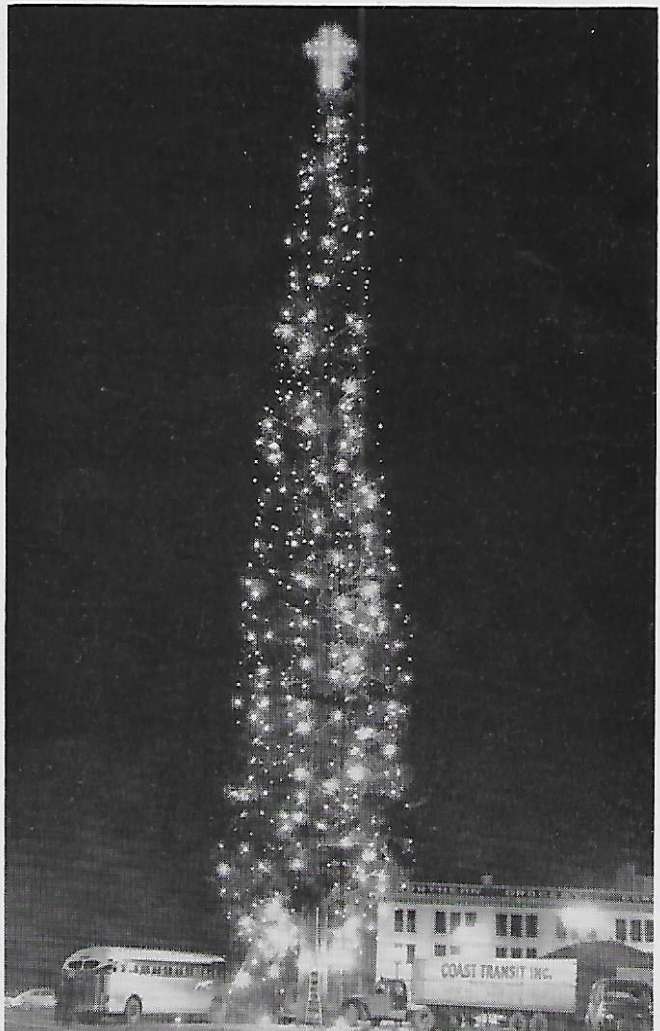
To raise the tree required 14 trucks, 2 cranes, a crew of experienced lumberjacks and at least a thousand sidewalk superintendents. Rigging and raising consumed 9

hours. Driver Frank Aubel, above, who drove the second of two logging trucks used in transporting the fir, had to rely on the front driver for phoned instructions.

enclosure of branches, had to make his starts, stops and turns entirely through the eyes of the forward driver. They coordinated their efforts through intercommunication telephones. Power and telephone lines had to be cut and lowered along the route in several instances. Every sharp turn and curve, of which there were many, presented intricate feats of maneuvering that rivaled Gulliver's travels in Lilliput. In a few places the roadway had to be widened.

The finished tree, with its ten-foot cross and more than a thousand colored electric lights, stood an official 152 ½ feet high, the loftiest symbol of cheer in history.

Erection of the tree on Railroad Avenue in Bellingham required 14 trucks and 2 cranes with 60-foot booms. Everybody in town turned out to function as sidewalk superintendents. Decorators spent approximately two days and nights crowning the fir with a 10-foot cross and stringing more than a thousand colored electric lights through its branches. As the finished product was being light-tested, movie cameras recorded for posterity and us less fortunate outsiders a sight unequalled elsewhere or heretofore in the world.



Credit for the planning goes to Bellingham's enterprising Jaycees. Cranes and other heavy equipment were furnished by C. V. Wilder Company. Ludtke Trucking Company handled the transportation job. Prominent among many other participating companies were Puget Sound Pulp and Lumber and Puget Sound Power and Light.

If you suspect that Union Oil products had anything to do with powering and lubricating the achievement, you're 100 per cent right!

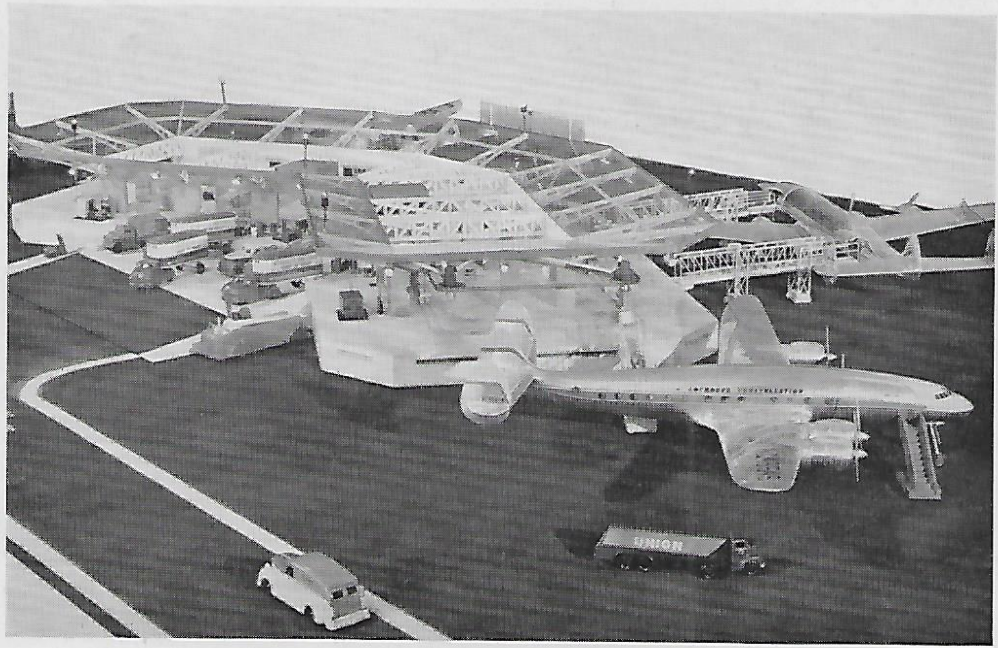
from Gudrun Larsen



Introducing

As the Company embarked upon 1950 and our 60th anniversary of public service, there was constructive evidence on many a corner that the future will outshine the past. On this page we present a handsome new service station opened at Christmas time at the corner of Crenshaw and Santa Barbara Streets in Hollywood. It occupies the heart of an ultra-modern shopping center in one of the Southwest's most attractive residential suburbs. Above, displaying optimism on opening night were (L-R) R. H. Rockwell, district sales manager; E. Kendell, Jr., retail representative; E. Leimert, owner of service station site; H. D. McCarthy, assistant territory manager.





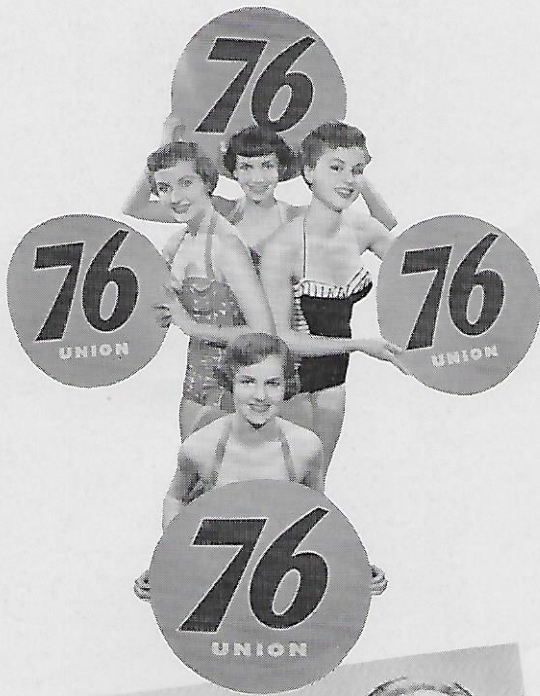
The Future

Expected soon to emerge from this table model to an airport reality is Lockheed's conception of an air freight terminal. The model, complete with the newest and best of everything, including a pair of Union Oil transports, is attracting wide and enthusiastic interest in the West.



Never to be outdone, the Pacific Northwest has come forward with something new both in stations and openings. Above, the modernizing and reopening of this station in Roseburg, Oregon, attracted a daily KRNR "Man of the Street" radio broadcast. Above at right, is Tacoma's new Lakewood Center Service Station, a colonial styled unit considered to be the Northwest's best. Right, service-minded hosts at the Lakewood center opening on December 3 were (L-R) Fred Broetje, Leonard Hill, Donald Eichler, Earl Nyberg, Ernie Eichler and Frank Kerth.

60th Anniv



As you will recall from previous announcements, we have been making plans to celebrate the Company's 60th anniversary during 1950. The main feature of the celebration will be the "60th Anniversary Show," which will open February 25th and tour the following 29 cities in our marketing territory:

	<i>February</i>	San Francisco	21
Santa Paula	25	Sacramento	22
Santa Maria	27	Reno	23
Santa Barbara	28	Marysville	24
	<i>March</i>	Medford	25
Riverside	1	Salem	27
Los Angeles	2, 3, 4	Portland	28
Long Beach	6, 7	Tacoma	29
Anaheim	8	Seattle	30, 31
San Diego	9		<i>April</i>
Phoenix	11	Yakima	1
Pasadena	14	Walla Walla	3
Bakersfield	15	Spokane	4
Fresno	16	Great Falls	6
San Jose	17	Billings	7
Oakland	19, 20	Butte	8

Since this show is primarily for the entertainment of Union Oil employees and their families and Union

Some of the world-famous acts and entertainers to appear (from upper left) The Minute Maids, The Song Brokers, The Nonchalants, The Minute Maids again and the Morgan Dancers, The Three Swifts, and our movie, "



60th Anniversary Show

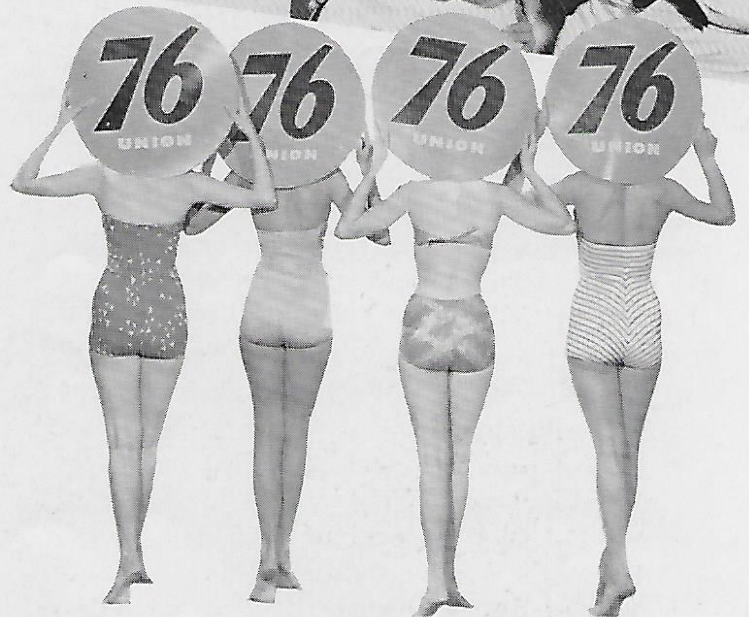
Oil dealers and their families, every effort is being made to present a top quality production.

The show falls into two parts: a 30-minute technicolor motion picture, "Constant Challenge," and an hour-and-a-half stage show. The stage show is being produced under the direction of the William Morris Agency, Inc., which is the oldest and largest theatrical agency in the country. The cast will be made up of more than 40 professional entertainers, including some of the nation's best known specialty acts. Costumes and scenery are being specially designed; new songs are being written, to produce a revue comparable to the best theatrical productions.

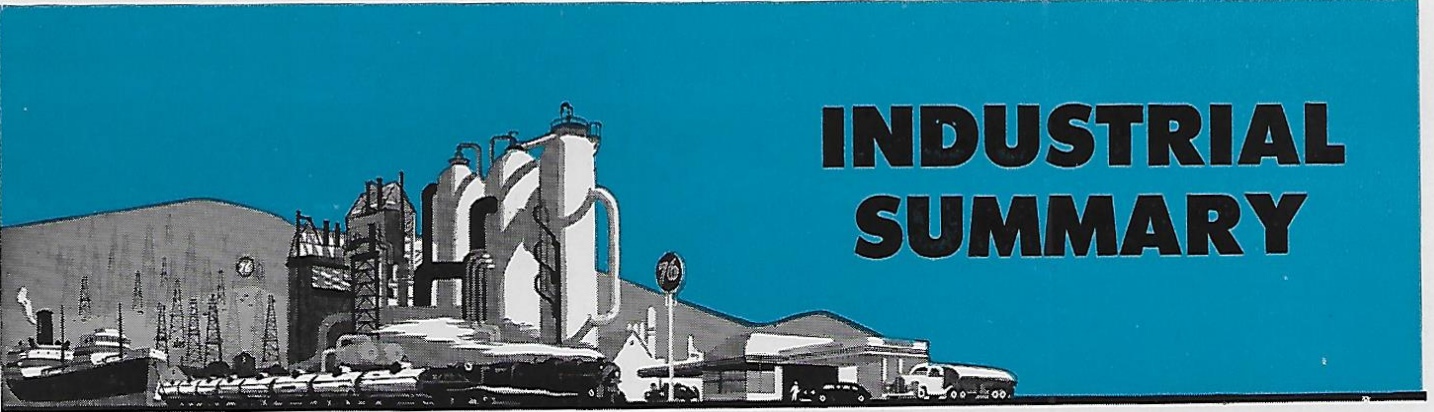
We have secured the best possible theatres. In some cities it will be necessary for the show to play two or three evenings to accommodate the anticipated audience.

We feel this is a show all Union Oil people will enjoy. Plans are being made to distribute the tickets in a manner permitting everyone to see the show where he desires. Further announcements are being sent to employees' homes and for posting on Company bulletin boards. It is hoped that our people will enter into the spirit of the occasion with the greatest enthusiasm. For it is a Union Oil show for Union Oil people.

Part of the "60th Anniversary Show" are (counter-clockwise) Corrah Minevitch's Harmonica Rascals, Shaw and Lee, Gil Main, and The Rudells. Also on the program are "The Stuart Constant Challenge." Come early and enjoy a great show.



The End



INDUSTRIAL SUMMARY

SOME FACTS ON INCOME TAX

Following are some excerpts from a recent Treasury Department analysis of 1947 income tax statistics:

1. Over 55 million individuals file tax returns, but 13.5 million—one out of every four—pay no taxes.
2. Ninety per cent are from those earning a gross income under \$4,500.
3. A single earning bracket, \$3,000 to \$3,500, includes 10 per cent of the taxpayers; one of every six taxpayers is in the \$3,000-to-\$4,000 group.
4. Over half (52.7 per cent) of Uncle Sam's take from individual income taxes comes from those earning \$6,000 or less per year.

Incidentally, it is interesting to note that if the total annual income earned by the people in this country who make over \$500 per month was completely redistributed, it would amount to less than \$15 per month per American.

A FEW FACTORS IN THE PRICE OF GASOLINE

An analysis of the cost of gasoline in the Los Angeles area reveals some interesting facts with which the public, for the most part, is unfamiliar.

Generally, the customer in the Los Angeles area pays about 24.5 cents per gallon for housebrand gasoline. The price the refining company receives for it is about 11.5 cents per gallon. The difference is accounted for as follows:

1. About 2 cents per gallon goes to the independent wholesale distributor.
2. From 4 cents to 5 cents per gallon goes to the independent retail dealer.
3. The Federal gasoline tax takes 1.5 cents per gallon.
4. The State gasoline tax takes 4.5 cents per gallon.

The 11.5 cents per gallon received by the refining company is not all available to that company for pay-rolls, purchase of raw materials, operating expenses, and so on. For our economists estimate that approximately 5 cents out of this 11.5 cents must go to pay additional taxes. So, actually the company receives between 6 cents and 7 cents per gallon, and with this amount it must explore, drill, produce, transport and refine a product that will run today's automobile.

I thought this information might be of use to you the next time the "high price" of gasoline is under discussion.

from Reese H. Taylor

● **FIELD** Three very interesting wildcat wells are being started in California. One, Mission-Adrian 1, is to establish an extension of the Aliso Canyon Field in Los Angeles County. The second is Richardson 77X-7, a wildcat on the Gould Hills Prospect north of Cymric Area in Kern County. Fraser 88-14 the third wildcat, is north of production in the Ventura Avenue Field.

In West Texas, at the time of the Los Nietos purchase, the Los Nietos Company had three drilling wells. These were located in three different fields, two of which were new areas for our operations. In recent weeks, all three wells have been completed as producing wells.

Even though our Rocky Mountain operations have been hampered greatly by cold weather, we have continued to build up our production with good completions in the Fiddler Creek Field in Wyoming. The latest completion was State 3, which had an initial production of 372 barrels per day. Limited pipe line outlets in this area have temporarily caused a curtailment of production. The Rocky Mountain Division headquarters have been moved from Laramie, Wyoming, to Denver, Colorado, the new address being 1631 Glenarm Place, Paramount Building, Denver, 2, Colorado.

from Sam Grinsfelder

● **MARKETING**

For the year 1949 Union Oil Company's total demand on all petroleum products, including Company consumption, showed an increase of nearly 8 per cent over 1948, while the industry total declined approximately 3 per cent. Dollar value of total product sales in 1949 was substantially the same as in 1948. During the year the ratio of 7600 gasoline to 76 was roughly 40 to 60, which is in line with the over-all industry pattern.

Purchase of the Los Nietos properties included some 78 service station locations, some of which are unimproved. All of the going stations have been dispensing competitive products. We expect to convert a number of these units to our standard of operation, but some are at locations already being served adequately by our stations, and others do not meet our standards. One of these units, at the corner of Olympic and Figueroa, Los Angeles, has been taken over by Union Oil and promises to be an important addition to the Company's chain of retail outlets from the standpoint of sales volume and advertising value. Extensive parking facilities are maintained in connection with this unit.

Union Automatic Transmission Fluid is now available at Company service stations. This product complies in every respect with General Motors Corporation's requirements and is not only approved by them but carries a qualification number of the Armour Research Foundation. A sound-slide film has been prepared to acquaint dealers with the proper method of servicing cars with this new product. The subject is also covered

in the Minute Man Service Manual now being printed.
from Roy Linden

● **MANUFACTURING**

Oleum's new lubricating oil plants, namely, the Duo-Sol Plant, Dewaxing Plant and the Clay Fractionating Plant, are operating satisfactorily. Lubricating oil and greases are now being produced with the new oils.

The Company has been awarded a contract to supply 1,600,000 barrels of fuel to the Navy during the first half of 1950.

A new monel and nickel lined caustic regeneration tower has been installed at the Unisol Gasoline Treating Plant at Los Angeles Refinery, which should end the troublesome corrosion difficulties experienced in the past.

A new \$250,000 barrel reconditioning plant is now in operation at Oleum. In this plant the returned barrels are repaired, shaped, and thoroughly cleaned inside and outside before being painted. The capacity of the plant is 600 barrels every eight hours. This plant and the new barrel filling and handling facilities insure that Union Oil products will be sold in clean and attractive containers.

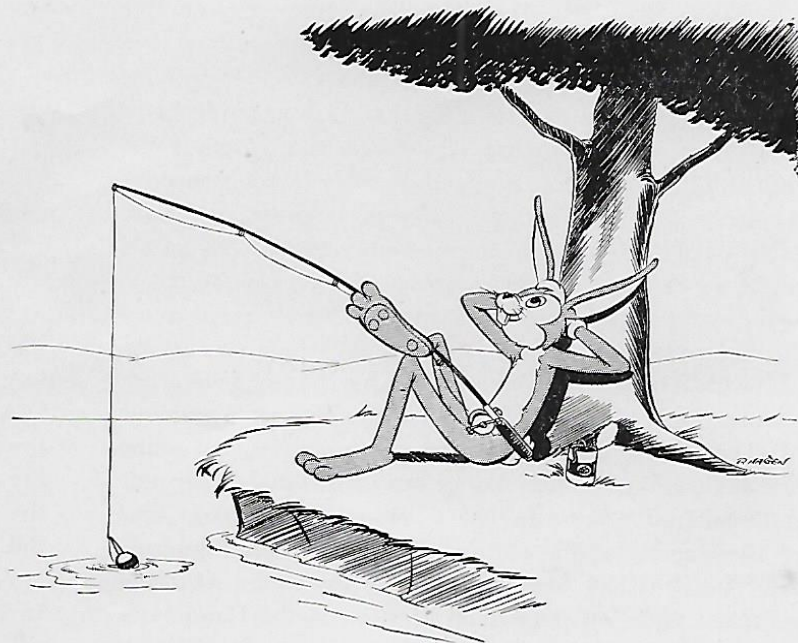
Enlargement and modernization of the office building at Oleum has approximately doubled the office space. The old Oleum dormitory, with which many memories are associated, has been demolished.

from K. E. Kingman

This new blow-down stack was photographed recently while being hoisted erect in the Unit 70 area at Oleum Refinery. The main reason for this type of installation is to provide a safe place, during some such emergency as the breaking of a furnace tube, for diverting the flow of hot oil being processed. Within the blow-down unit the hot oil is either permitted to burn harmlessly or is cooled by steam to normal storage temperatures and reprocessed.



The Pursuit of Happiness



A FOUR WEEKS' VACATION

Here's good news—especially if you have or expect someday to have 25 years of Union Oil service.

Management has announced that, effective January 1, 1950, the Company's vacation policy is liberalized. In edible words, it means that every eligible, full-time employee, except some personnel covered by labor agreements, is to receive a four-weeks' vacation annually, commencing with his 25th anniversary of service.

Furthermore, employees will be permitted to take their first three-weeks' or first four-weeks' vacation anytime during the calendar year of their eligibility, not, as in the past, only after the first of the year following their service date anniversary. For example, if an employee came to work on December 1, 1935, he would not have to wait until after January 1, 1951, for his first three-weeks' vacation, but would be permitted to take it after January 1, 1950.

The Company's Vacation Policy, although written in much more precise language, contains about the following meaning:

Your first annual two weeks' vacation with pay is forthcoming after you have been a regular, full-time employee for at least one year. The Company insists on your taking it and you may not receive pay in lieu of a vacation.

Neither are vacations cumulative. In other words, you can't save this year's vacation and expect to take

a double one next year. If a holiday occurs during your vacation, that's just your hard luck, brother. No additional time off will be granted.

A new employee is eligible for his first vacation of two weeks one year after coming to work, provided he has lost no work time. His second vacation may not be taken until one year after the eligibility date for his first vacation. But his third and subsequent vacations may be taken on or after January 1 of each year.

Your annual vacation of three weeks can be taken anytime after January 1 of the year in which your 15th anniversary of service falls.

Your annual vacation of four weeks can be taken anytime after January 1 of the year in which your 25th anniversary of service falls.

Every reasonable effort will be made to schedule vacations when employees want them; however, the Company must retain some voice in arranging schedules in order to keep the business operating efficiently.

Vacation rates of pay are determined in three ways:

1. Daily-rate employees are paid on the basis of all time actually worked at various jobs during the preceding calendar year.
2. Service Station employees are paid on the basis of their base pay, plus commissions, during the preceding calendar month.
3. Other monthly-rate employees receive vacation pay at their existing monthly salary rates.

ADDITIONAL UNEMPLOYMENT BENEFITS

To be insured in the event they are kept away from work because of a disability, over 99 per cent of Company employees in California elected in December, 1948, to be insured under a voluntary Occidental Life Insurance Company plan rather than under the State plan. As a result they have enjoyed greater benefits at half the cost of the State's plan.

The State law was amended, effective January 1, providing an additional benefit, worth up to \$8 a day for a maximum of 12 days, in the event a disabled employee is hospitalized.



It has now been announced that the benefit added to the State plan has been matched under the Occidental Life Insurance Company plan at no increase in the cost to you. You still pay only one-half of one per cent of the first \$3,000 earned yearly. The State plan would cost you a full one per cent.

FEDERAL OLD-AGE IS COSTLIER BUT NOT MORE COMFORTABLE

Effective January 1, 1950, deductions for Federal Old-Age Benefits increased from 1 per cent to 1½ per cent on the first \$3,000 of your taxable earnings. The Company's contribution to these benefits was also increased to 1½ per cent in conformity with the Federal Social Security Law. No additional benefits are guaranteed for the extra deduction, but Congress may consider improvements during forthcoming sessions.

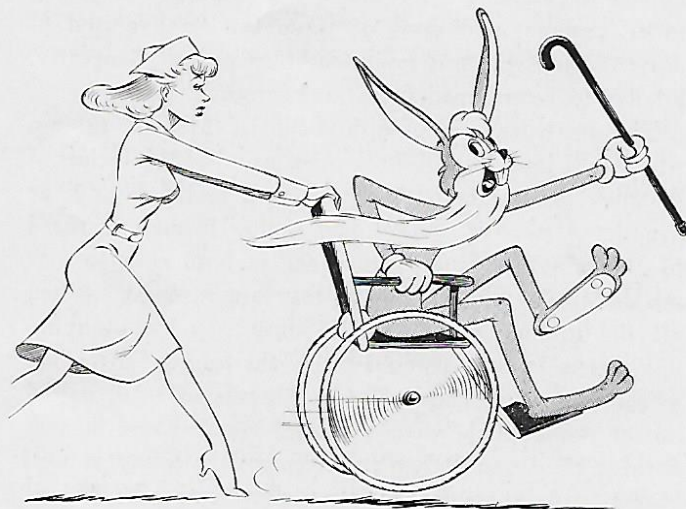
Are you aware of what payments you're entitled to under this Federal Old-Age and Survivors Insurance program? If not, bear with us a minute longer.

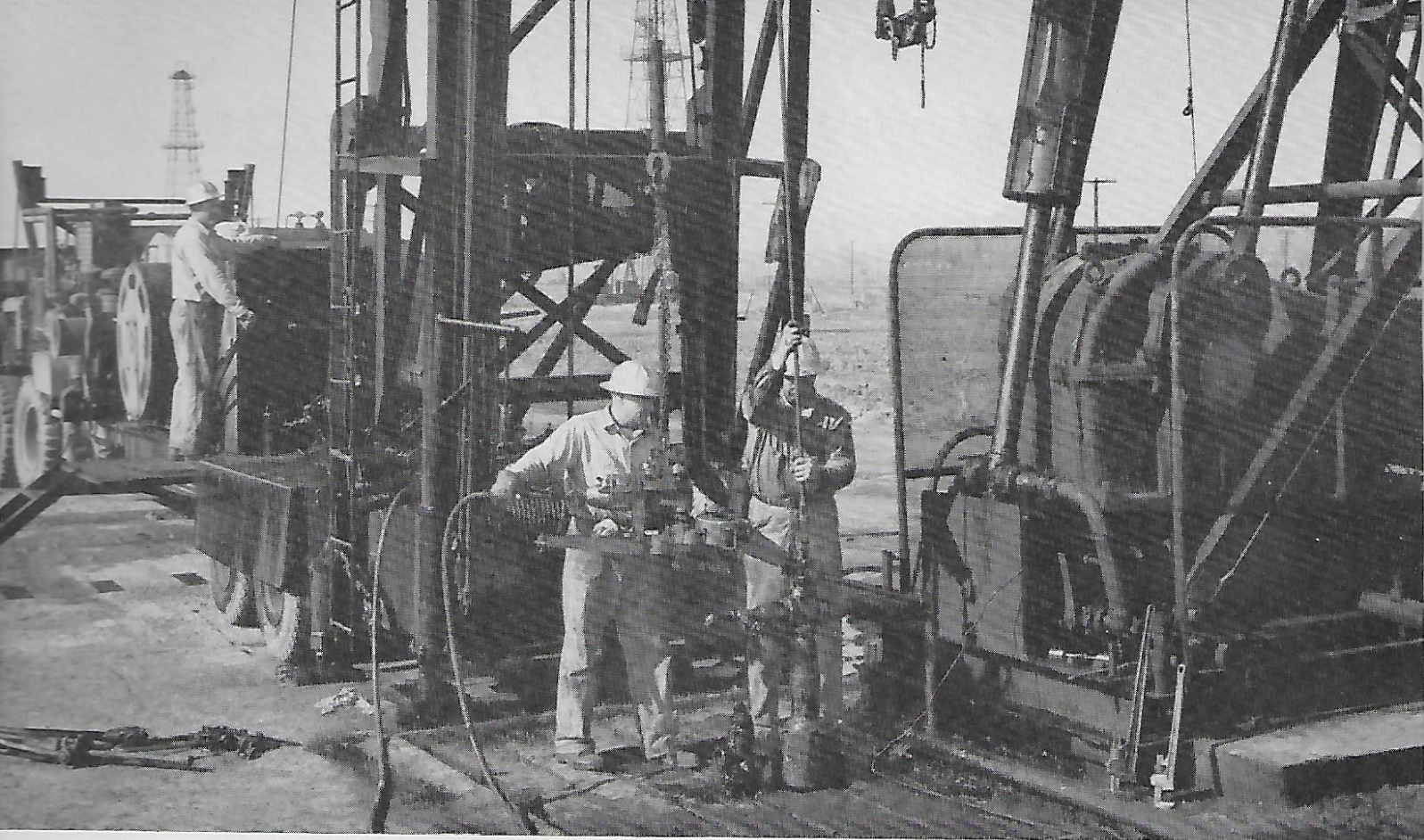
For the 3 per cent of your annual wages up to \$3,000, paid half by you and half by the Company, you are given "Credit Units" by the Social Security Administration. Fifty dollars or more earned in a calendar quarter gives you one credit unit. If you have credit for half the units between 1937 and the time you reach 65 or die, you are insured; or when you have 40 such units you are insured for life. In death cases a more liberal formula is used where necessary.

The following are eligible for monthly payments:

1. An insured worker who is 65 years of age or over, plus an added amount for his wife if she is 65 or over.
2. The widow of a deceased insured worker if she is 65 or over.
3. The widow of a deceased insured worker, regardless of her age, if she has children under 18 in her care.
4. The children under 18 of a deceased insured worker.
5. The dependent parents, 65 or over, of a deceased insured worker who leaves no widow or child under 18.
6. A lump-sum burial expense payment is made when there is no one eligible to receive monthly benefits.

A concluding tip: Be sure your Payroll Department has your correct social security number, and proof of birth date such as a birth certificate. And check with the Social Security Administration at least once every three years to verify that your account is properly credited.





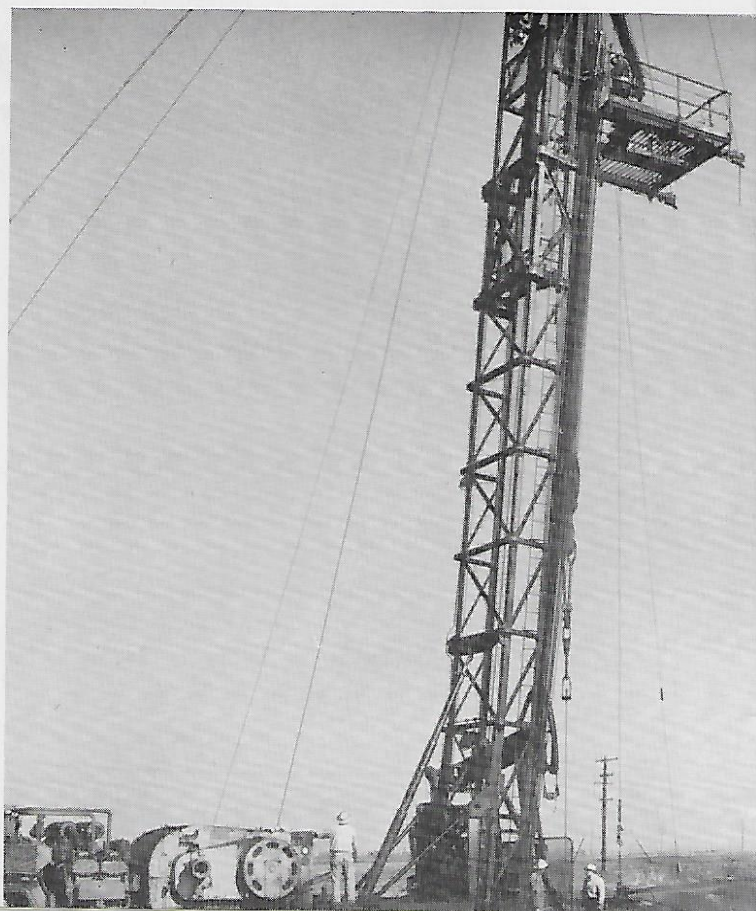
Well Pullers

MOST folks who would give their right arm to own an oil well don't realize the amount of attention and coaxing needed to make such a property earn its keep. It is too often supposed that, once a well begins producing, all the owner has to do is install a meter at the well head before sitting down to count his fortune.

Actually, only a small percentage of the earth's producing oil wells are flowing wells, commonly referred to as gushers, and most of these can be expected to cease flowing within a few months or years. Generally, oil has to be pumped from underground.

The facilities for pumping consist first of tubing, which is a long line of steel pipe, usually 2½ inches in diameter, and extends down the well to the bottom or producing zone of sand. The tubing is manufactured in about 30-foot lengths, threaded at both ends to permit connecting the lengths as they are lowered. When all the tubing is installed, a long, slender pumping mechanism is next lowered inside the tubing. Attached to this pump are many 30-foot lengths of steel, called sucker rods, which, when threaded together end to end, form a rigid connecting rod between the pump at well bottom and its source of power above ground. A pol-

(L-R) Head well puller (E. L. Gooley) operates the hoist as lead well puller (Ben Hemmerling) prepares to connect ends of sucker rods held by third well puller (M. Omohundro). Air driven tongs replace hand tools.



ished rod forms the connecting link between the uppermost length of sucker rod and a surface pumping unit, whose slow up-and-down motion is a familiar sight in nearly every oil field. These units are expertly counter-balanced to offset the weight of sucker rods and minimize the lift imposed upon an engine at each stroke.

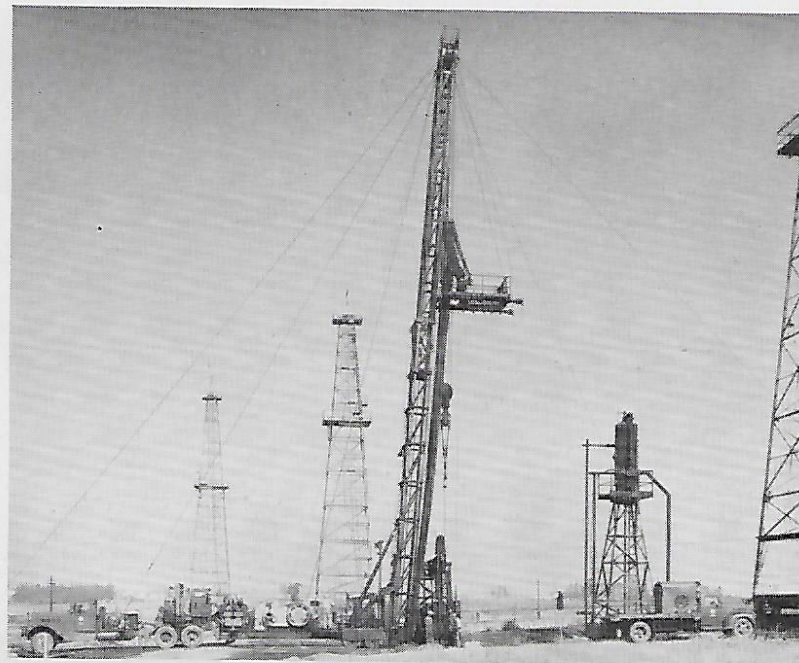
Most oil wells produce large amounts of salt water and other corrosive compounds along with each barrel of oil. Also in many cases fine particles of sand accompany the oil on its journey through the pump and up the tubing. The resulting corrosion and abrasion raise havoc with pumps and in extreme cases even eat away the sucker rods and tubing.

Although some wells have been known to go months or perhaps years without servicing or repairs, many require regular and frequent attention. New wells have been known to "sand up" to a halt within several days or even a few hours. Some of our old producers in one or two areas have required a new pump as often as twice a week. In many fields probably one month is about the time that an average oil well will produce its quota of oil between servicings.

That is why the oil industry offers a steady job to well pullers.

The newest in well-pulling equipment is the portable hoist shown in the accompanying pictures at work in our Dominguez Field. It is called upon to lift immense

Fourth member of the well-pulling team (N. I. Taber) works 60-feet up, attaching or detaching elevators as the sucker rods are moved out of or into the well hole.

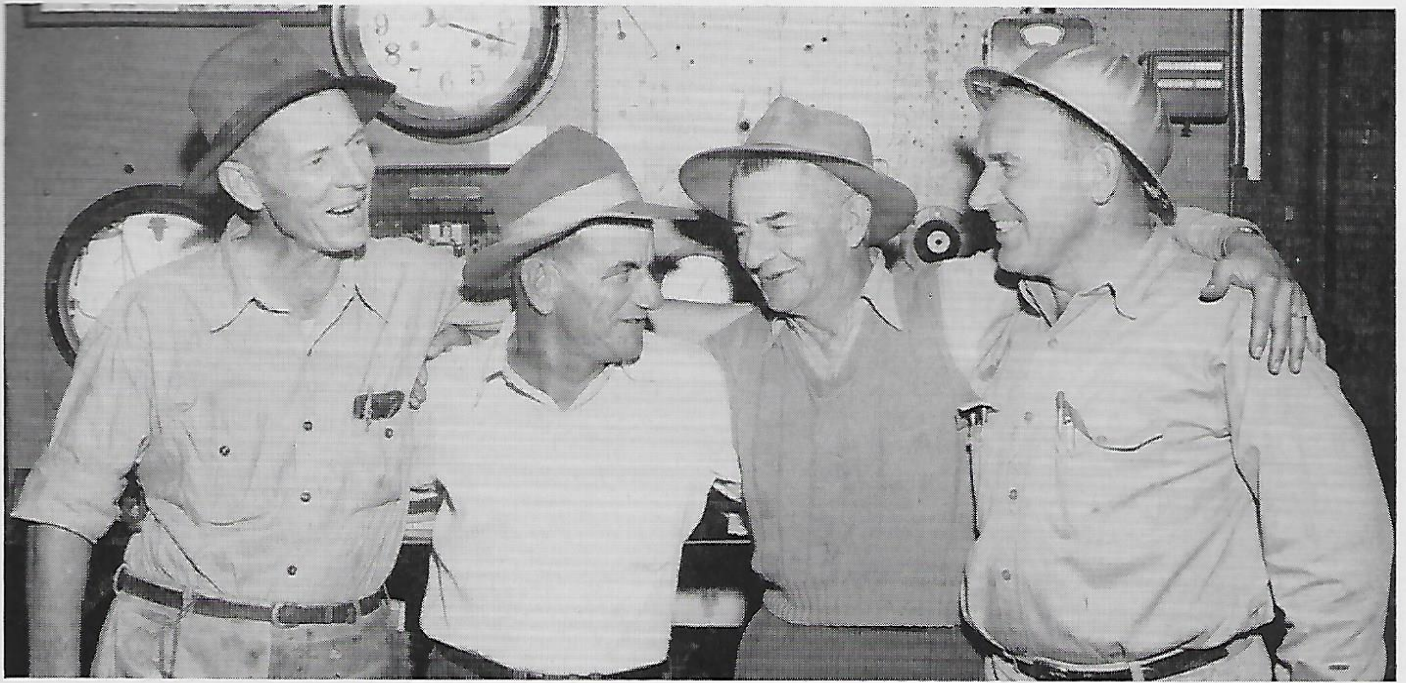


Portable hoists of this kind are capable of servicing numerous wells and are an important reason for the disappearance of permanent derricks from many fields.

weights as thousands of feet of sucker rods or tubing are brought out of a well and stacked in 60-foot sections. Equipped with air-driven tongs, it quickly connects or disconnects two sections of rod or tubing, a laborious "rod-wrenching" job that was formerly done by hand. It lowers and lifts the bailer when sand is removed from a well. Its telescoping derrick and truck-mounted engines can be moved and set up at a different location in an hour or two. Largely because of such portable units, yesterday's forests of oil derricks are disappearing.

Of course it takes skillful men to operate this equipment and achieve good results. In charge of the four-man crew is a "head well puller", who generally operates the hoist. The "lead well puller" usually works on the "run around" some 60 feet up the derrick, attaching or detaching the elevators as sucker rods or tubing are lowered into or lifted out of the hole. Handling the air-driven tongs at the well head are the two remaining well pullers, who normally have ambitions someday to run the hoist. All four men work with the coordination of a good backfield. On the occasion of ON TOUR'S visit, they changed a pump at a depth of 6,000 feet in approximately five hours.

It is only because of such efficiency, human as well as mechanical, throughout the industry, that oil companies can find, produce, transport and manufacture their products for an ex-tax realization of seven cents or less per gallon. Even distilled water sells for more.



(L-R) Treaters Harry Moore and Jimmy Sartori, Treating Foreman Chuck Carlile and Utilities Foreman Everett Smith recall with evident pleasure the day in 1926 when they comprised the first Edeleanu Plant crew.

Iron Men of Oleum

The Edeleanu Plant employed a sulfur dioxide continuous-treating process and replaced a single-batch, acid-treating method. But steady progress in refining calls for today's abandonment of this German-designed plant.



WHEN Oleum's Edeleanu Solvent Treating Plant was shutdown for final abandonment in October, many refinery employees were still on the job to give an eyewitness account of the plant's original installation in 1926. In fact, four members of the plant's first operating crew have proved themselves to be more durable than the structure of brick and steel. This quartette of iron-men is identified in the above picture.

The Edeleanu Plant, built under German patents and under the supervision of German personnel, was designed to process water-white kerosene at zero temperature. It followed this type of operation until 1930, when it was converted to lubricating oil operations. Aristo and, later, Triton motor oils were solvent treated at the unit until 1938, when the Phenol Plant was erected and a completely new process was established. From then until the recent abandonment the Edeleanu Plant continued to be useful for the solvent treating of Aristo motor oils and spray oil stock. Its doom was sealed by the recent completion of our newest and most modern lubricating oil processing facilities at Oleum.

The witnesses above relate that construction work on the Edeleanu Plant, under German supervision, was slow by comparison with American methods. But all agree that German precision and exactitude of detail were very impressive.

Impressive also, to our way of thinking, are the loyalties and accomplishments of these and many other Union Oilers who can look back upon a quarter-century or more of uninterrupted Company service.

from Bud Fitzgerald

Head Office Opens A New Coffee Shop

ON NOVEMBER 14, Head Office employees initiated their new eighth floor coffee shop. Formerly a similar dispensary on the second floor had assuaged that mid-morning and mid-afternoon yearning for a hot cup. But either the growing custom or the growing customers finally forced the move to larger and more centrally-located headquarters. As results, waiting in line for service is a thing of the past and elevator traffic during rush hours has been reduced to manageable proportions.

The new coffee shop boasts a facing of stainless steel throughout its serving counters, steam tables and pantry. The dining room seats 150 imbibers at a time and, with approximately 900 potential employee customers in the building, is at present accommodating about 1,500 servings a day.

Coffee and other beverages are available daily between the hours of 8:15 a.m. and 3:30 p.m. A noon luncheon, including two or more hot entrees, is served between 11:15 and 1:15.

All foods are prepared outside the building by a contracting firm of caterers. During the first two months they have attracted a thoroughly pleased clientele.

In making these and similar facilities elsewhere available to employees, the Company asks only that every Union Oiler adhere politely to the ten-minute time limit for coffee so that normal working efficiency will not be impaired.

Since we haven't space to introduce all Union Oilers on this page individually, may we speak of them generally? Head Office people are gourmets supreme



The ladies showed no kitchen-shyness on opening day and were first to sample free donuts and coffee . . .



And, judging from appearances in this 1950 conception of an employee coffee shop, U. S. white-collar people enjoy working conditions undreamed of "over there".



Union Oilers



ALL-OUT WAR ON POLIO

Those of us who spare only a coin or two during the annual March of Dimes, must doff our hats to Miss Robin Nicholson of Stockton. This little 2½-year-old lady has marched into campaign headquarters the past two years to be, not only one of the youngest donors on record, but one of the most generous. Both times she has donated her entire piggy-bank capital—a Triton bank full of hard-earned pennies—to this worthy cause that is striving to win the war against polio.

Miss Robin is the daughter of Robert Nicholson, a Union Oil salesman at Stockton. In the picture at left she is shown offering bank and all to Judge Robert P. Sullivan, March of Dimes leader at Stockton.

MULE TRAIN

Except for a piece of contradicting evidence in the background, the picture below might have passed for something taken back in the “coal-oil” era of 1908 or before.

Actually, the well-maintained old tank-wagon did keep many a wick burning round about the turn of this century. But the hosses and mustachioed mule skinnars are a bit less antique. Lift the bulging wallet of the gentleman at left and you will find you have robbed

none other than Red Goldsmith, the present resident manager at El Monte. Serving as counter-balance is Vic Threadgold, marketing station clerk, but no relation despite the 14-carat names.

According to their own modest confession, their entry in the El Monte Community Fair and Pioneer Days Parade, witnessed by 20,000 people, was the hit of the show. The other boys at the plant followed the procession everywhere with brooms and shovels.



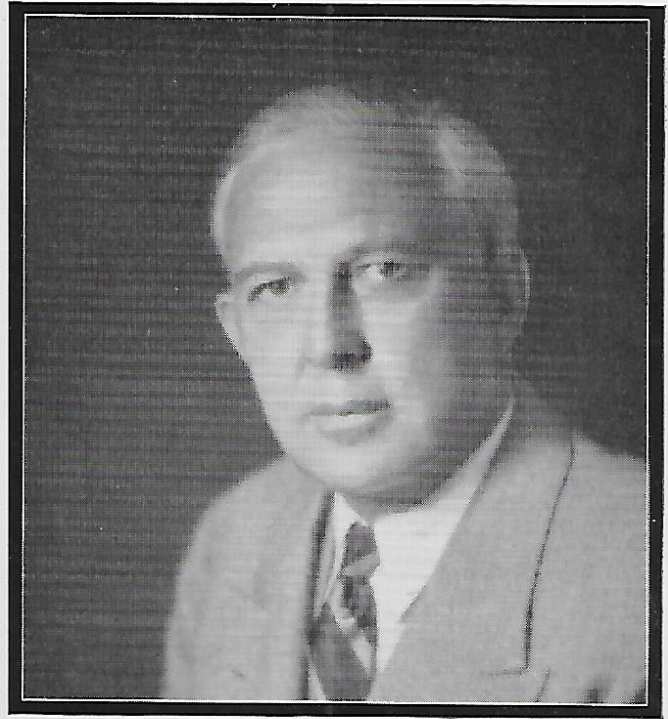
CHIEF MEDICAL DIRECTOR DIES

Many people within and outside the Company were shocked to learn of Dr. Wayland A. Morrison's sudden death on January 5th. He passed away after an illness of only several hours.

Dr. Morrison had served as chief medical director for Union Oil Company since February 15, 1939. Prior to that time he had served in a similar capacity for the Santa Fe Railway Company and at one time was chief surgeon of the Santa Fe Hospital in Los Angeles.

The doctor, born in Los Angeles on January 15, 1888, was a graduate of Stanford University and of Harvard Medical School. He attained the rank of major in the U. S. Medical Corps during World War I and was a commander in the U. S. Naval Reserve.

Being a man of many activities and interests, he had served as a director in several corporations, a trustee of University of Southern California, and a member of numerous business clubs and fraternal organizations. He is survived by his widow, one daughter and four sons.



Dr. Wayland A. Morrison



SERVICE BIRTHDAY AWARDS

JANUARY, 1950

Thirty-Five Years

Bryant, Thomas W., Oleum Ref. Mfg.
Stats, Luby G., Oleum Refinery Mfg.
Stevens, Elmer C., Northwest Territory

Thirty Years

Barjas, Fred P., Southwest Territory
Drake, Ronald R., Northwest Territory
McEwen, Grover, L. A. Refinery Mfg.
Robinson, J. Howard, H. O. Pipe Line
Russell, Wayne E., So. Div. Field

Twenty-Five Years

Barcenas, Juan, Oleum Cafeteria
Francis, Herbert A., Maltha Ref. Mfg.

Mowatt, Stanley T., Central America
Richards, Cecil F., Oleum Refinery Mfg.
Wissler, Stanley G., H. O. Exploration

Twenty Years

Brown, Charles B., Southwest Territory
Clark, Harold G., Oleum Refinery Mfg.
Colby, Harvey T., No. Div. Pipe Line
Henderson, Lucille H., Central Territory
Hopfield, Clarence D., Northwest Terr.
Ludwig, O. Louis, L. A. Refinery Mfg.
McGowan, James F., H. O. Wage &
Salary Adm.
Sanford, Joseph F., Southwest Territory
Wunderlich, John C., Oleum Ref. Mfg.

Sherwood, Bertha, L. A. Refinery Mfg.

Fifteen Years

Carter, George D., Southwest Territory
Churchill, Jane, Research-Wilmington
McGrory, Chas. G., So. Div. Field
Onorato, Salazar E., Central Territory
Penny, Leo V., Southwest Territory
Rath, Robert H., Honolulu District
Redman, John J., Valley Div. Field
Smith, Ruth Lucille, Northwest Territory

Ten Years

Bolen, Harry A., Jr., Oleum Ref. Mfg.
Cowie, Jack S., Southwest Territory
Norton, Nicholas M., Gulf Div.-La.

FEBRUARY, 1950

Thirty Years

Critton, Lloyd V., So. Div. Field
Humphrey, Chas. C., Central Territory
Proctor, Riley C., H. O. Comptroller's
Thompson, Howard V., So. Div. Field
Richardson, Allen R., Southwest Territory

Twenty-Five Years

Coulson, Thomas S., No. Division Auto.
Lorimore, Max, H. O. Comptroller's
Gooley, Edgar L., So. Div. Field
McCulloch, Wm. H., Southwest Territory
Sanders, Hubbard H., No. Div. Pipe Line
Schinnerer, Edward F., Oleum Ref. Mfg.

Wilder, Gove R., Southwest Territory

Twenty Years

Campbell, Chas. L., Northwest Territory
Canet, Lawrence A., Oleum Refinery Mfg.
Foster, Wm. A., No. Div. Pipe Line
Heyes, Thomas, H. O. Comptroller's
Lund, Leo W., Northwest Territory
Otto, George E., Southwest Territory

Fifteen Years

Fuller, Chas. M., Oleum Refinery Mfg.
Jamison, Ward, Central Territory
Keppel, Frank, Southwest Territory
Rawson, Edward C., Northwest Territory

Schlegel, Forrest M., Southwest Territory

Ten Years

Cresswell, Wm. D., L. A. Refinery Mfg.
Howard, Everett A., L. A. Refinery Mfg.
Lammerman, Frank N., L. A. Ref. Mfg.
Mevert, Robt. W., L. A. Refinery Mfg.
Monroe, Floyd C., L. A. Refinery Mfg.
Munson, Chas. O., L. A. Refinery Mfg.
Parsons, Emmett H., L. A. Refinery Mfg.
Peck, Wenzel, Marine-Wilmington
Rogers, Raymond A.,
Research-Wilmington
Suttles, James E., Texas Gulf Div.



Our Rose Parade Entry

Winner of the second highest award in its class of commercial floats, the Company's entry in Pasadena's 1950 Rose Parade paid tribute to several legendary characters of America's heritage, among them, Paul Bunyan and his ox, left, and Pecos Bill, right.



The floral heroes of our American folklore were animated and drew the applause of a sidewalk and television audience numbering millions. The figures at left represent Ichabod Crane and the Headless Horseman; center is Johnny Appleseed. At right are movie men taking pictures of the event for use in the Company's annual report.

