

don't need premium-priced gasoline any more!

4¢ SAVING

on every gallon may be waiting for you right at this pump!



Try the West's highest-octane regular

If your car is among the 4 out of 5° which will give knock-free premium performance on Union's New 7600, you can save up to 4 cents a gallon over premium-priced gasolines?

Try a tankful today at your Minute Man station—the sign of the 76, where you know you always get The Finest.

Powered like a premium priced like a regular

★H your car is the 1 in 5 which needs an ultra-high octane premium fuel, go with Union's new Boyal 76, the West's most powerful premium. Both new Union gasolines contain exclusive additive NR76, to clean your carburetor chemically, and reduce engine maintenance measurably.

SEVENTY®

Volume 3, Number 5

MAY 1959

THE COVER: Though our Santa Maria Refinery sits alone among picturesque Pacific Coast sand dunes, it is dedicated to keeping sea breezes as fresh as it linds them. For the story of a successful refinery battle against smog, please turn to Page 4.

In This Issue

The Ill-Conceived	
Severance Tax	3
For Fresh Air, Refineries!	4
"Men, We're Not Equipped For This!"	8
Over The Donner Summit	10
New 7600 Leads The Regulars	14
Business Highlights	16
Charlie's Rock Buggy	18
Something To Think About	20
The Harder They Fall!	22
Minute Man Maternity Service	24
In Focus	25
Service Statistics	26
Harriet Hunter	28

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

EDITORIAL BOARD

Jerry Luboviski and Earl M. Welty.

the ILL-CONCEIVED SEVERANCE TAX

By L. D. LAWRENCE Union Oil Tax Attorney

CALIFORNIA ASSEMBLY BILL No. 1174 has been proposed to increase the tax revenues of this State. The bill would impose a tax on every person and organization producing and "severing" oil or gas from under the earth or waters of California. Hence, the name "severance tax." The proposed rate of the tax is 2% of the value of such oil and gas produced. The tax would not apply to oil and gas produced outside California.

Now why should anyone in California object to this tax when other oil states such as Texas, Louisiana and Oklahoma have had a severance tax for many years?

The answer is, simply, that in those other states no property tax at all or only a very insignificant one is imposed on oil and gas in the ground. The property tax in California therefore presently supplies the same revenue and represents a tax burden on oil and gas at least equal to that now imposed by the severance tax in those other states.

Total Tax

Total Tax The opposite table sets out a State per Barrel 22.60¢ comparison of tax yields on each bar-Texas rel of oil and gas-equivalent in all Oklahoma 14.52¢ 21.33¢ Louisiana four states from both types of taxes 22.00¢ California in 1958:

This table is based upon the property taxes imposed upon Union Oil Company's producing oil and gas properties. From published studies and reports, there is ample evidence that the Company's tax burden, as shown above, is representative of that borne by other oil producers in the State. And the 1958 California figure of 22¢ per barrel represents a tax burden of almost twice that paid by the Company and other oil producers in 1954.

Thus, if the proposed severance tax were enacted, the tax burden on California oil production would be increased approximately 25%, to almost 28¢ per barrel – an amount far in excess of the taxes levied on oil and gas by any of the other major oil producing states.

The consequences of this inequitable tax proposal would be damaging to California industry and far-reaching in their effects:

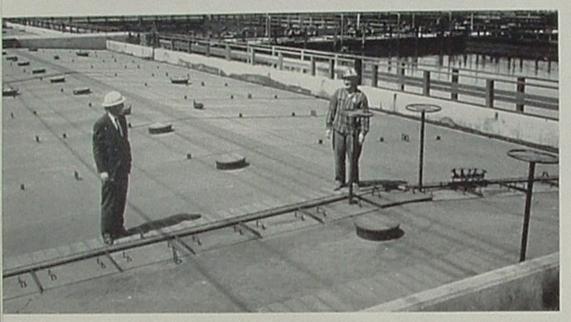
(1) The tax would oblige the many high-cost producers, whose 20,000 "stripper" wells represent 37% of all California wells and accounted for 61,000,000 barrels of oil in 1957, to shut down their marginal wells. The resulting decline of California production, with its attendant loss of taxes as income and property tax revenues decrease, would operate to increase the tax burden of all other California taxpayers.

(2) Quite apart from the above direct and immediate results, the increased production costs imposed by the tax would discourage further exploration and development in California and in this additional way accelerate the constantly increasing trend of crude oil and gas imports from foreign countries and other states with lower finding and producing costs, which presently account for over 55% of the natural gas consumed and almost 25% of the crude oil refined in the State.

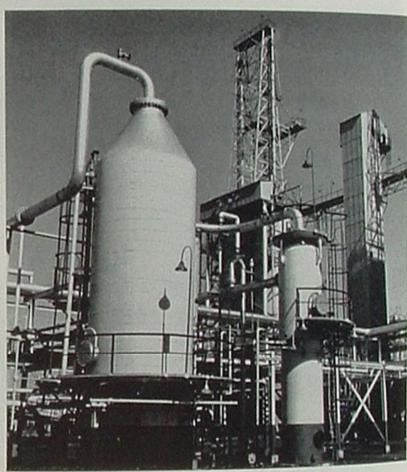
(3) Curtailment of this basic industry would be followed continued on page 17

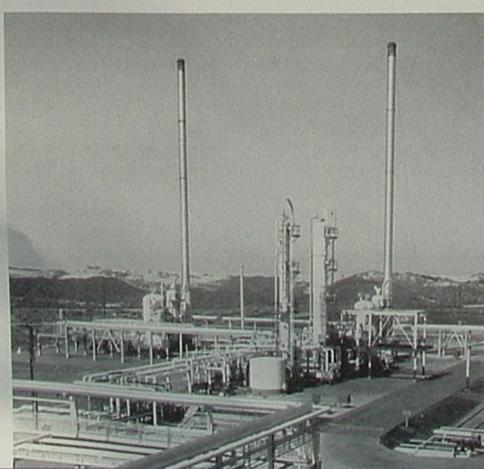
Don Probst of Oleum describes functions of a "water seal" used in refineries to prevent air pollution. Water under pressure around the pump shaft is an effective seal against gas leaks.

for fresh air, refineries!



At Los Angeles Refinery, waste water emerging from refining units enters a sump that is roofed, permitting the capture and collection of any petroleum vapors picked up by the water in circulation.





Our Santa Maria Refinery is a model of exceptionally clean coking. For example, the downward curving pipe (above), instead of venting pollutants to the atmosphere, carries them to a pair of sulfur plants (in photo at left). The latter do an excellent job of "scrubbing" the waste material and pay for part of their operation by recovering small quantities of elemental sulfur.

SMOG is indeed a dirty word!

In a metropolitan area the size of Los Angeles, consider the immeasurable tons of dust that are being stirred up constantly by millions of wheels in transportation and industry. Add an occasional dust storm from the desert, a brush fire at the city's edge, a forest fire in the mountains. Mix well the products of combustion or gaseous discharges from millions of furnace vents and fireplaces, industrial plants and public utilities, office buildings and private homes. Blend with the exhausts of several million motor vehicles. Pour the mixture into a mountain-sided container; clamp on an *inversion layer* of warm air for a lid; let the mixture simmer in bright sunlight for a few hours — and you have a concoction that nobody likes — smog!

Even before the California State Legislature provided for Air Pollution Control Districts in 1947 the petroleum industry had gone to work:

At our Los Angeles Refinery, for example, one of the first things Union Oil did was to build a sulfur-recovery plant. Sulfur compounds in varying amounts are found in practically all crude oils. During the refining process some are converted to hydrogen sulfide. The substance burns readily and is quite satisfactory as a refinery fuel, but Air Pollution authorities object to the stack gases resulting from its combustion. So fuel gas containing sulfur compounds is treated in facilities which absorb hydrogen sulfide and then convert it to elemental sulfur which is sold to local chemical plants. These facilities at Los Angeles Refinery cost \$2,300,000. The sulfur pays for only a fraction of the sulfur plant's maintenance and operating costs, but hydrogen sulfide disposal through burning is no longer a nuisance.

Also at the outset of Air Pollution Control, Los Angeles Refinery installed an electrostatic precipitator on our Fluid Catalytic Cracking Unit. Here some catalyst dust fines, resulting from regeneration of the catalyst, were escaping into the atmosphere. The precipitator effectively ended this source of pollution.

Rule 56 of the Air Pollution Control regulates the manner in which large quantities of volatile petroleum distillates, such as gasolines, may be stored. To comply, Union Oil has spent \$7,000,000 in Los Angeles County alone during the past 10 years. Most of the money has gone into the construction of additional floating roofs for large storage tanks. This principle of construction allows the roof of a tank to rise and fall with the level of liquid in the tank. There is no breathing out of petroleum vapors when the tank is filled or breathing in of air when the liquid level drops.

Another device besides the floating roof for keeping petroleum vapors out of the atmosphere is the vapor recovery system. Here large pipelines lead from exhaling rigid-type containers to a central vessel where the vapors can be drawn and collected; repressuring lines carry dry gas back to inhaling containers as their liquid levels drop. This recovery system requires a compressor, absorption tower, pumps, instruments, vessels, heating and cooling equipment. Several are in use on Union Oil properties.

Related to storage losses of vapors are those that used to occur during the loading of our gasoline transports. Formerly, gasoline-rich vapors inside the trucks were vented to the atmosphere. Now they are collected in vapor recovery devices at Los Angeles Refinery and Rosecrans Terminal and in all Los Angeles County marketing stations where the volume loaded exceeds 20,000 gallons a day.

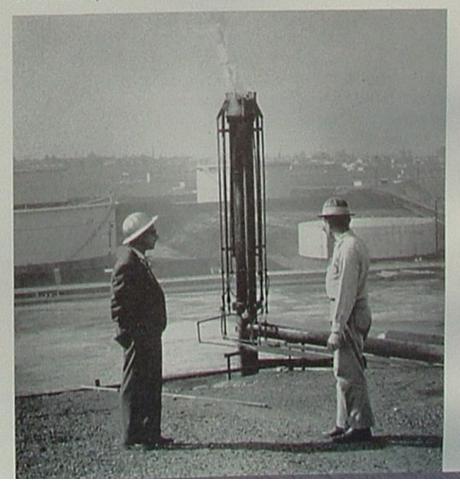
In numerous other ways the petroleum industry has gone all-out to be a good neighbor and citizen and to cooperate with Air Pollution authorities or do even more than the rules demand:

An ordinance forbidding the burning of certain sulfurbearing fuel oils in Los Angeles Basin during the summer months of expected highest smog intensity is being observed by refineries and other industrial users. Moreover, we are participating in a voluntary "operation fuel switch" program wherein a switch is made from fuel oil to natural gas whenever the Control District predicts unfavorable smog conditions.

Thousands of minor improvements, such as the installation of special pump packing and water seals, have been engineered into refining equipment to prevent the smallest leaks. Incinerators have been installed to burn odorous gases and oil droplets out of the relatively small

continued

The "blowdown stack" at Oleum releases only a trace of exhaust from the huge refining units it serves. Even this small volume of waste gas is "flared" at the outlet to prevent smog. Refinery men are constantly on alert to guard against offending the neighbors.



For Fresh Air, Refineries! -continued

refinery waste finally vented to the atmosphere. Fuels and equipment are under constant inspection, by men and instruments, to guard against emissions due to malfunction or accident. Inquiries from near or distant neighbors are promptly answered. The public press is always invited, oftentimes urged, to visit our plants and make personal inspections. We don't like smog either!

What has been said for Los Angeles Refinery applies also to our other refining and loading installations:

Santa Maria Refinery (pictured on THE COVER of this magazine) was built in an isolated area of sand dunes. It is a coking plant, one which transforms heavy crude oil from the Santa Maria area into gas oil and unfinished gasoline for pipeline shipment to Oleum Refinery. A residual product, coke, is sold to Collier Carbon & Chemical Corporation. Two sulfur plants built at this location provide ample capacity during peak operations and assure sulfur product control even if one of the units is shut down. All other plant sources of odors and possible hydrocarbons emission are carefully controlled. And for the first time in a coking operation, a method was found to collect gases during steam-out of the large coking drums and dispose of them by burning. Thus a refining operation, noted for its tough vapor emission challenges throughout the petroleum industry, became a model of excellent air-conditioning near Santa Maria.

Oleum Refinery is doing a similarly outstanding job in safeguarding the famous fresh air of San Francisco Bay area. A sulfur plant, floating-roof storage, vapor recovery systems, and many other emission controls have been installed here, and all refinery personnel are alert

to preventing air pollution.

To say that the West Coast petroleum industry has completely eliminated its contribuion to the smog problem would of course be an overstatement. Even as this report is being written, quite a difference of opinion is being expressed over whether olefin hydrocarbons contained in gasolines have any significant thing to do with adding to the amount of smog issuing from motor exhausts. Whatever answer the experts arrive at, you may be assured our sensitive and sensible refinery people will continue to work in the best interests of the community. Beyond olefins there almost certainly will arise other real or imaginary obstacles to be overcome.

Meanwhile we may take satisfaction from studies started two years ago by the Air Pollution Control District of Los Angeles County, the U. S. Public Health Service, the Department of Public Health of the State of California, and Western Oil and Gas Association:

Their report states that pollutants emitted into the atmosphere from all refineries in Los Angeles County have been reduced by 85%.

The joint report concludes, "At the present time the petroleum refineries in Los Angeles County have the lowest emissions to the atmosphere of any segment of the industry in the country because of control programs."

Here are the major steps taken and particexpenditures m

Floating-Roof Tanks

Truck-Loading Vapor Recovery

Sulfur Dioxide Abatement

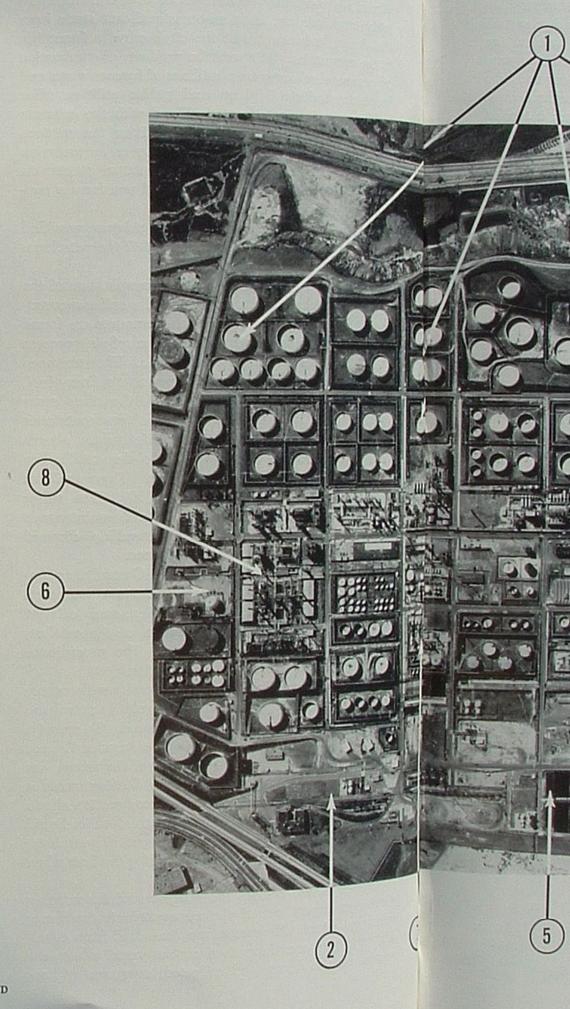
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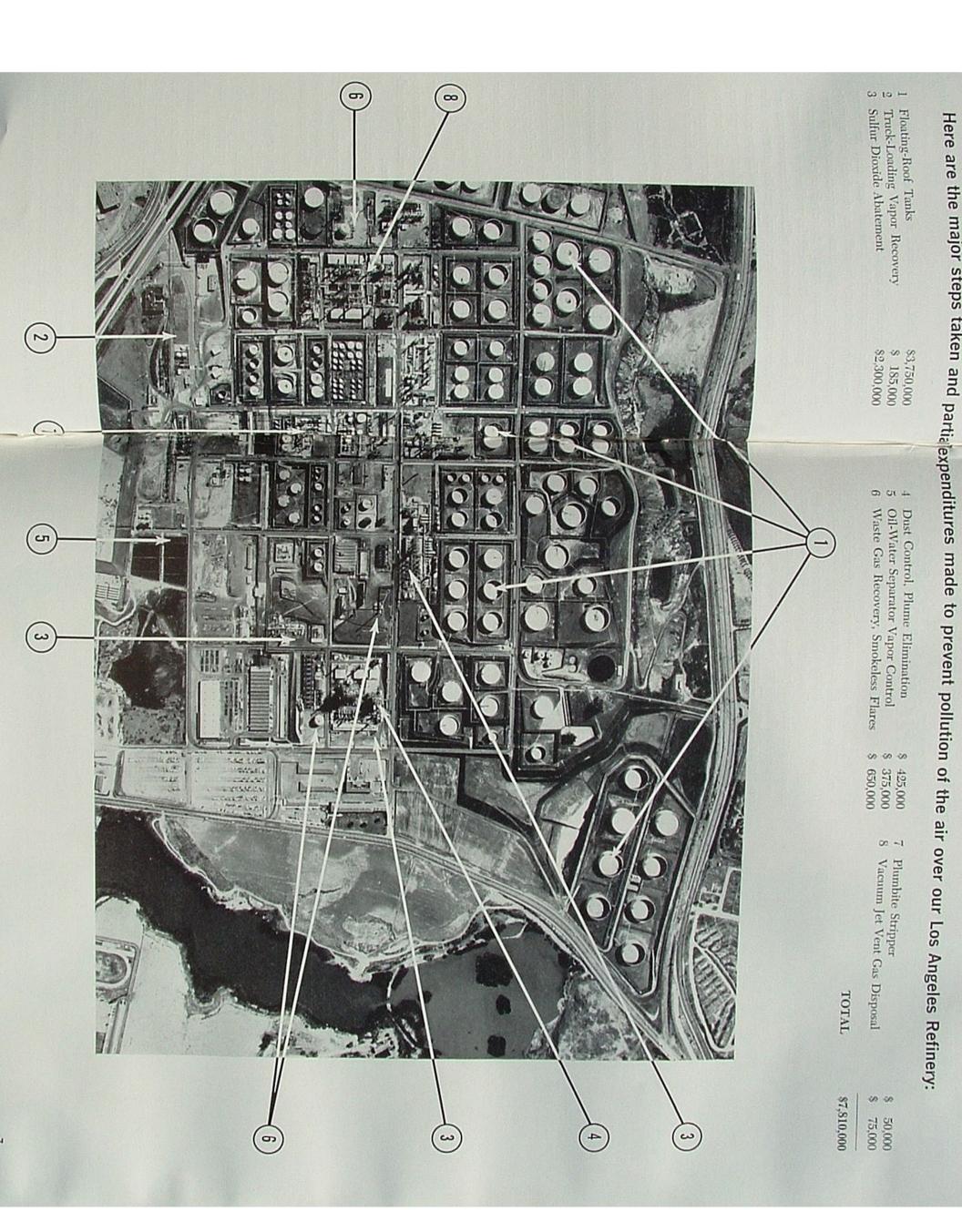
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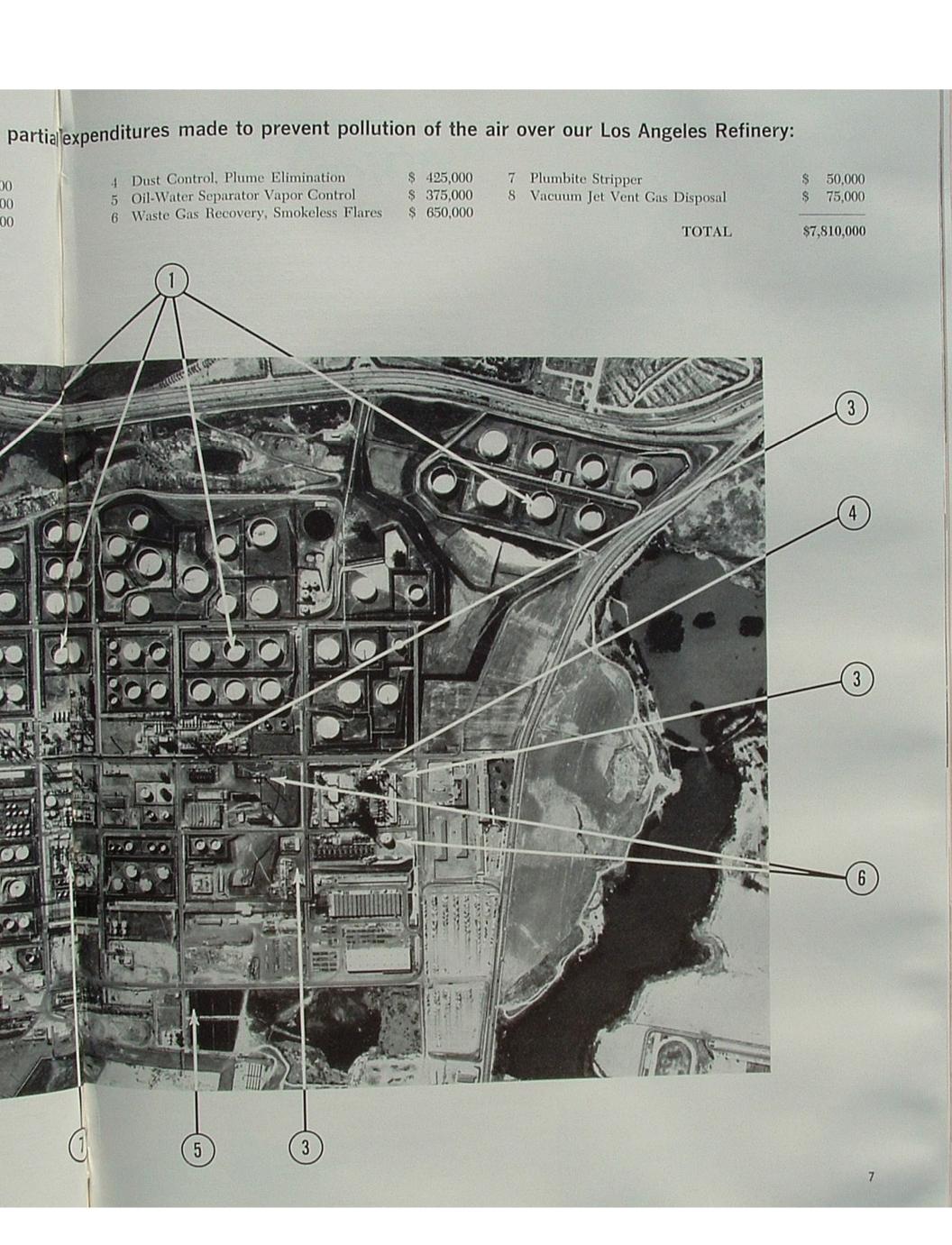
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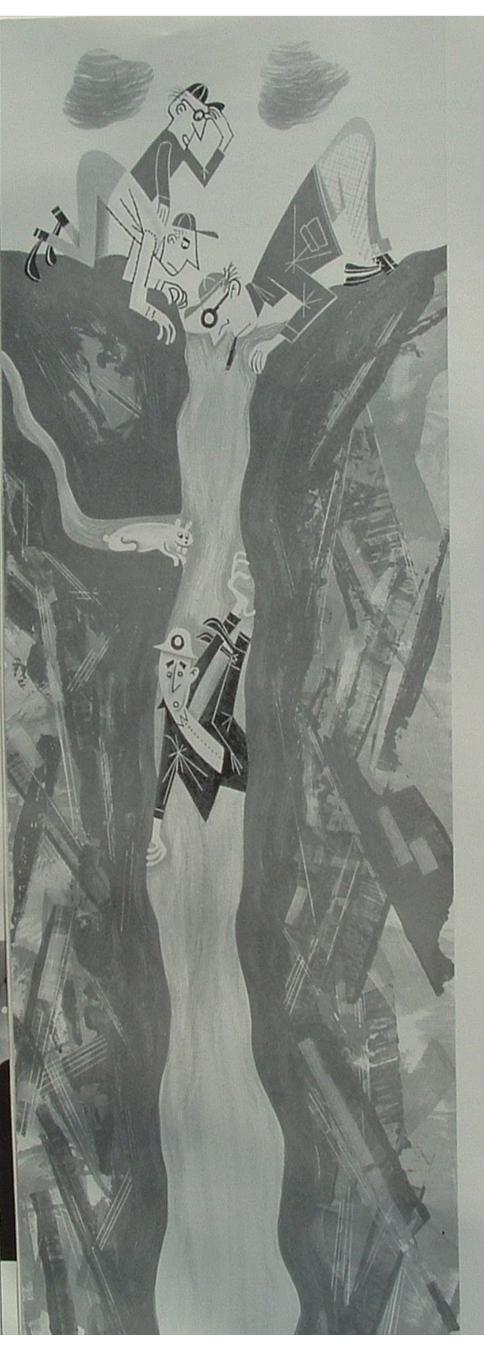
Oil-Water

Waste Ga









Spelunker: - not a caveman but one who makes a hobby exploring

"Men, we're not equ

By Bob Jennings, Landman

That first trip to Cottonwood Cave was a memorable one. The cave is on National Forest land, about 35 miles due west of Carlsbad Caverns, and at an elevation of 6,950 feet in the Guadalupe Reef. It is open to anyone who will not unlawfully destroy the formations and who is willing to drive over New Mexico's roughest road. Sam Snyder's 1951 Chevrolet had us worried; it tended to over-heat on dark Lookout Mountain and had a spare tire that no one could inflate let alone change.

I received the nickname of Lark on that first trip for arising at dawn and reciting the lines, "The lark is up to meet the sun, the bee is on the wind, etc." while I gently awoke my fellows by tossing pebbles on their tousled heads. Also, Sam, Malcolm Brenneman and Dave Grimes complained bitterly about my boiling all the eggs in the coffee water. I did it for their protection, having read that more people die from skillets than bullets. It is understandable that Dave, a geologist, might want to cut my coffee with the water; but Malcolm, a landman, should have better manners. At any rate, I have never been invited to cook again.

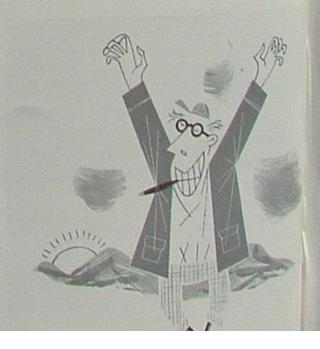
When we viewed a 45-degree incline descending to the bottom of Cottonwood Cave, there was an alarmed cry of "Men, we are not equipped for this!" It did look like an awful long way down, but the party making that classic statement wishes to this day that he had either dropped into the bottomless pit or kept his mouth shut.

Having fully explored Cottonwood the first trip in, we went in search of Black Cave. All we found, after miles of walking, were some old goat bones, no artifacts.

Our second trip was to explore Hidden Cave. The party consisted of Sam, Malcolm, Grant Adkins and myself, plus two geologists, Frank Constant and Coyle Singleterry. Dave was in training with the reserves.

Again, without mentioning any names, one of our party had to be talked into descending 15 feet of rope into the main part of the cave. Coming out, however, he

The "Lark"



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proved to be a muscular lad who could make it up the rope with ease.

A heavyweight in the party, on the other hand, was just about to forego the climb in favor of being pulled out manually by the others. "Wait 'til they hear about this back at the office," someone yelled. The heavyweight immediately joined us hand-over-hand. He insists his hunting knife slipped and stabbed him from behind.

The third trip was to hunt up Black Cave. Sam, Malcolm and I were joined by Paul Miley, a Humble Oil geophysicist. We searched all day for Black Cave without success; Malcolm skinned a shin pretty badly; Paul killed a rattlesnake; and the Lark pooped out, nicely within reach of the beer.

Largely to console Paul a native of Louisiana who somewhat doubted both caves and spelunkers, we reentered Cottonwood Cave on this trip. With the contempt bred of familiarity, we weren't careful, didn't make proper provision for light, violated the rules of safe spelunking, and were foolhardy and over-confident.

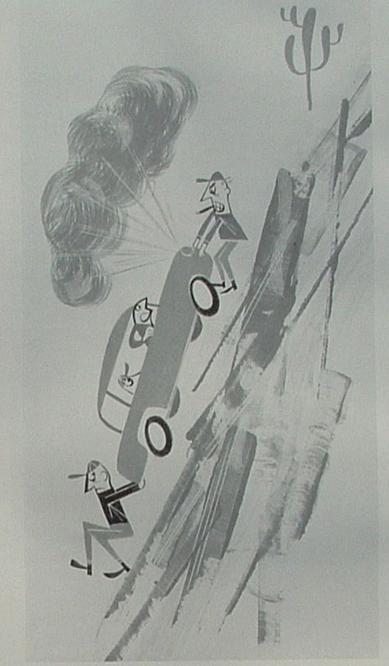
As a result, Paul and I got lost. We were in a slanted room with crevices, channels and tunnels going in every direction. We were rats in a maze and we tried every tunnel but the right one.

I went to the top of the slanted room, crawled through a chimney-like passage, and found myself in a new cave! It is the spelunker's fondest dream to find an unexplored cave. But at the moment I had no taste for it. For having gotten lost, I was mad at myself and feeling mighty sorry for the widow and three children being left behind. There were moments of panic and others of calm meditation. It was a lesson I shall never forget. But just as we had blundered into getting lost, Paul and I blundered into finding the right way out. Malcolm and Sam seemed a little chagrined.

Before the day was out, some more spelunkers from Carlsbad came into Cottonwood. We took them back to see the new portion of the cave—this time according to the rules of safe spelunking. Three of us went in, and I cannot describe the beauty of what we saw.

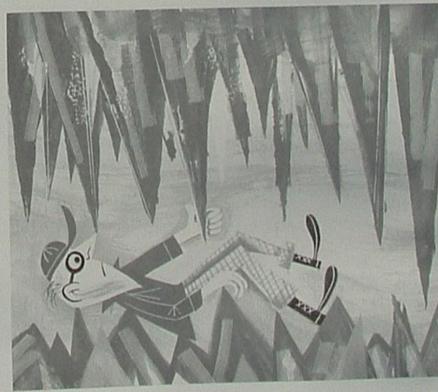
Sam, Malcolm, Paul and I made our fourth exploration trip into Cottonwood's New Cave last September. We spent six hours walking and looking—were overwhelmed by the cave's scenic beauty—and discovered that there are scores of recesses yet to be explored.

Having approached the status of veterans now, we carry a 48-hour supply of light, mark trail, and advise our families we'll drink nothing stronger than cave juice (cave water). If perchance the Rangers are ever called to our rescue, we may return to other sports enjoyed by Union Oilers in the West Texas Division—such as "Varmint" calling, fishing, tennis, golf or stone polishing.



Sam Snyder's 1951 Chevrolet had us worried; it tended to over-heat on dark Lookout Mountain.

It is the spelunker's fondest dream to find an unexplored cave. But at the moment I had no taste for it,



Art impressions by Pete Jacobsen

It was on February 25 that we joined Transport Driver Stan Smithem to deliver a truck-and-trailer of gasoline over Donner Summit. He was an early bird—checking in at the Sacramento plant promptly at 5 a.m.—checking out with a full load 15 minutes later—and putting the city behind us an hour before the morning rush.

The next three hours were a motion picture of scenic and climatic changes. Busy, fully-cultivated Sacramento Valley gave way to rolling foothills and scattered towns. Towns in turn diminished to roadside lodges and a few mountain cabins. Farms and fields, semi-green even in winter, faded with each thousand feet of altitude. Patches of snow began to appear under the trees and in windrows alongside Highway 40. Finally, as we reached

the summit, the crest of an immense mountain chain gave evidence of why it had been aptly named Sierra Nevada. Except for blue, partially frozen Donner Lake at our feet and a scattering of hardy evergreens, the entire mountain system was snow-covered. The only evident change that has taken place here in a thousand years is the tortuous highway and its steady stream of vehicles.

To Stan Smithem, we presently suspected, Donner Pass is an old road yet a new adventure daily. He and another Union Oil driver make about 15 round trips a month over the summit in winter and 40 trips a month during summer. They've memorized every bend in the road and the gear required for every incline. But no

An old road yet a new adventure daily...





two trips have ever been the same.

"The thing you can't depend on at Donner," Stan explained, "is the weather. I've seen a clear sky like this one today turn in 30 minutes to a blizzard. The road's dry now, but coming back we might be following a snow plow. I'd say the air's a nice balmy 50 degrees today; last week it was 20 below zero. We figure on a round trip to Truckee taking about 10 hours, but nobody would worry much if we didn't get back for three days. It used to be the road was closed every winter; now highway crews, with tractors and plows, go to work night or day at the first sign of a fresh storm. It isn't very often that a truck or car with chains can't get through."

continued

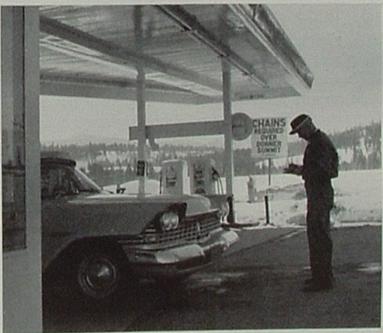
er the Donner Summit

Partially frozen Donner Lake and the Sierra Nevadas appear unchanged from a century ago, except for the tortuous highway and its steady stream of cars.





A statue immortalizes the Donner Party, nearly half of whose members perished here in 1847, imprisoned by 20 feet of snow.



Dealer Walter Klehn today supplies "76" products, cleans glass, installs chains for hundreds of Westerners who regularly cross the summit. His service station is located where pioneers probed deep snow for dead cattle.

Transport Driver Stan Smithem, left, keeps Walt's underground storage filled winter and summer with gasoline. Their services have helped to transform a no-man's-land into one of America's foremost winter recreation areas.

Donner Summit-continued

Beyond the summit and close to the edge of Donner Lake was Stan's delivery destination—a Type 140 service station offering "Minute Man Service." Dealer Walter Klehn was on duty. To our question about the location of history's Donner Party tragedy in 1847, he answered:

"Well, some of them probably waded through the snow right where we're standing—looking for the carcasses of frozen oxen and mules. Most of their wagons and shelters were across the flat several hundred yards, buried under about 20 feet of snow. It must have been a tough winter—more like the one we had a year ago—a lot worse than this one."

Tough indeed, we recalled. For it was here that 87 California-bound immigrants encountered the season's first snowfall on October 28, 1846. Unable to get their wagons and livestock over the last remaining barrier of rock to Donner Summit, they waited for the storm to subside. Instead, one storm followed another. Each day found them more hopelessly entrapped, lacking in clothing and shelter for such an ordeal, and desperately short of food. When finally rescued late in February, 1847, by relief parties from Sacramento and San Francisco, they numbered only 48 survivors. Rescuers wept as they moved over Donner Summit in 1847 in sight of the early West's worst tragedy.

"How is business?" we asked Walter Klehn as he finished serving a Sacramento-bound customer.

"Very good for this time of year," he answered. "It was even better last weekend. I believe half of California came through here to see Squaw Valley—that's where they're holding the Winter Olympics in 1960, y'know. It's only 10 miles from here. Ever see the place?"

We hadn't. But as Stan turned the truck-and-trailer back toward Sacramento, we followed a caravan of skiers up the Truckee-Lake Tahoe highway. At about the 10-mile mark, most of the sportsmen turned right into what is rapidly becoming one of the world's foremost winter resorts.

Squaw Valley, an immense coliseum carved by Nature in the Sierra Nevadas, was teeming with action. Hundreds of workmen were busy on roads, houses and sports accommodations. Several chairlifts carried brightly costumed skiers up to the mountain rim for their thrilling slalom to the valley floor. Speed skaters tried out the glassy surface of a brand-new outdoor racing rink. From off a steep hillside jumpers from Canada, Europe and the United States vied with each other to set a new jump record—near the 300-foot mark. Hundreds of others watched the champions, smiled at the beginners, or sat on a sun-drenched dining terrace consuming meals and refreshments.

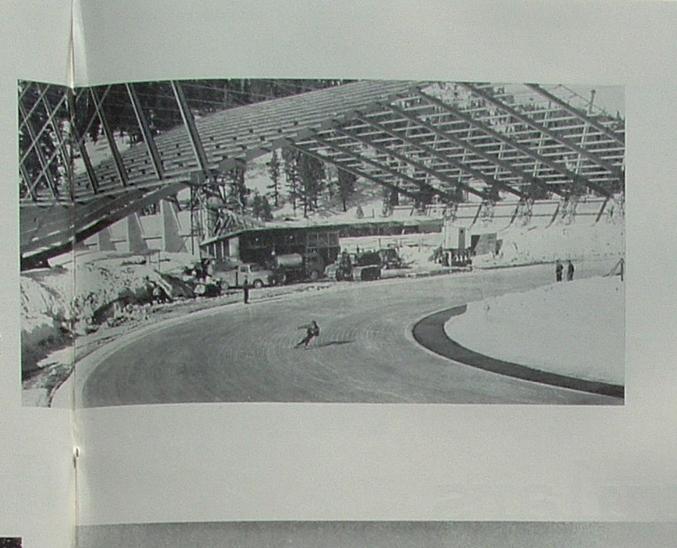
Indeed most of us who travel over Donner Summit today in winter weather do so with little of the hardship or terror that reigned here a century ago. Our lot is made easy by transport drivers, service station operators, highway crews, petroleum, electricity and the thousand other services and products that spell modern America. We work and play today where another generation could not survive.

/THE END

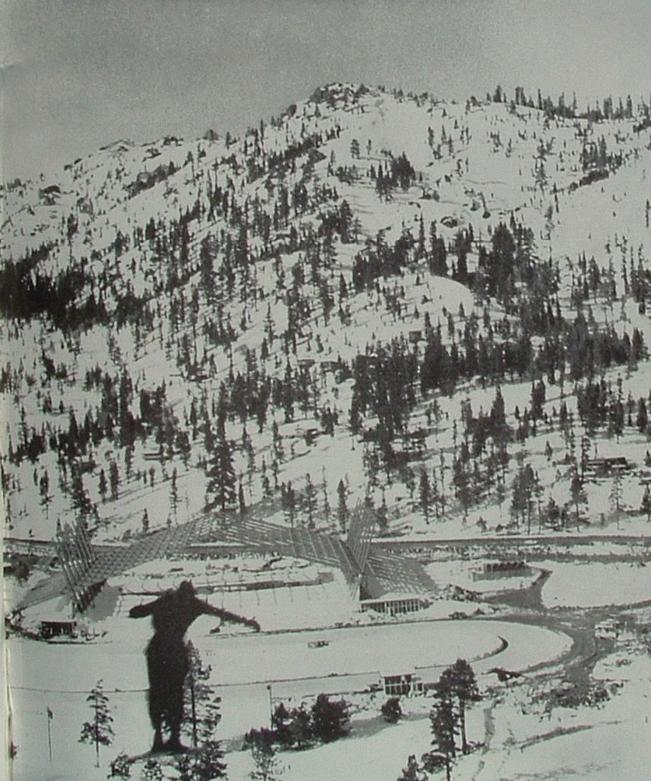
As workmen rush a staunch new winter-sports arena toward completion, speed skaters condition themselves on the finest outdoor racing rink ever built,



At Squaw Valley, 10 miles from Donner Lake, skiers from Europe, Canada and U. S. train for 1960 Olympics.



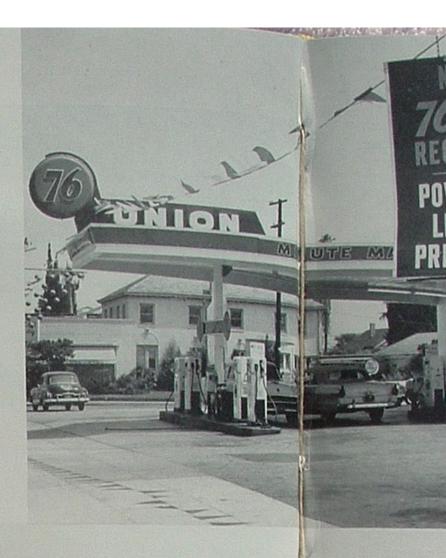




An athlete, at left, flashing at more than a mile a minute from the Squaw Valley jumping platform—and spectators watching him soar through some 90 meters of space — attest to the changes wrought here in a single century. We work and play where others could not survive.

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NEW 7600 leads the regulars



At right, Dr Research and fire to demoi of the compou guards against rumble in m

At extreme righ eral Sales Mar dahl of Direc the gospel of "c and vigorous : stepping stone:

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Union Oil Cent

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AVE YOU RECENTLY driven along one of America's 60-mile-speed-limit freeways in a high-horsepower car? Worrying a little about the high cost of living and taxes? Observing a car of perhaps 1932 vintage also maintaining the 60-mile pace behind you while a little sports job eases past you on the left?

And did you wonder to yourself whether it might not be just common sense to get along, at the same speed, on less horsepower, using regular gasoline, and saving enough in the bargain to pay for a good fishing trip?

A lot of American people are thinking along just such lines. Some of this year's most significant marketing trends are away from high, unusable horsepower and toward economical transportation. Buyers are shopping for good merchandise at the lowest price - in our service stations, a high-quality gasoline at the price they can afford to pay.

Union Oil doesn't shape the public trend; we merely try to anticipate it. That is why the Company is placing so much research, manufacturing, marketing and advertising emphasis on regular gasoline. Certainly highpowered cars have millions of admirers - will continue to be a prominent factor in the market - and will continue to fill up with Royal 76, one of the finest gasolines ever blended. But new 7600, we believe, will be endorsed and bought by that increasingly large tide of motorists who are joining the economy trend.

New 7600 Gasoline, announced and on the market on March 27, is a most extraordinary regular:

Raised several octane numbers in anti-knock quality, it surpasses all competitive regulars on the West Coast

and now meets the octane requirements of an additional 2,700,000 cars in this area. Now, four out of every five cars on the road can hum with a gasoline that is powered like a premium and priced like a regular.

Famous Union Oil qualities of quick starting - faster warm up - dependable power - responsive pick-up clean burning - climatic blending - are being carefully guarded to make the product uniformly excellent under all driving conditions.

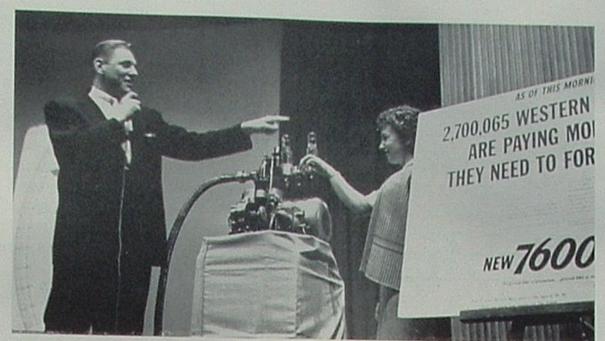
And something new has been added: New 7600, like Royal 76, contains NR 76, a gasoline additive developed by Union's Research Department. It eliminates the carburetor deposits which cause stalling, rough idling, and require frequent carburetor "boil outs" or idling adjustments. Through detergent action, NR 76 prevents exhaust fumes and other contaminants from forming deposits on throttle blades and other sensitive carburetor parts. This means better engine performance, longer engine life, reduced expense for maintenance and repairs.

New 7600 is the proud descendant of other illustrious gasoline pioneers in Union Oil history. Union Ethyl led the introduction of tetraethyl lead to West Coast gasoline in 1926. In 1932, "New Union 76 Gasoline - Finest antiknock non-premium Fuel ever offered!" led the industry in a series of gasoline improvements achieved through refining and blending advancements. Royal 76, in more recent years, has maintained consistent leadership among the most popular premium fuels.

Now New 7600, with an octane rating equivalent to that of the premium we marketed five years ago, is leading a quality advance among the regulars.

THE END





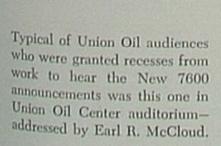
New 7600 was announced and described to Union Oil people at a series of meetings scheduled by the Direct Sales Department. Above, Ken Freburg of the Ethyl Corporation, assisted by Barbara Fife of Data Processing, subjects the gasoline to a knock-rating test.

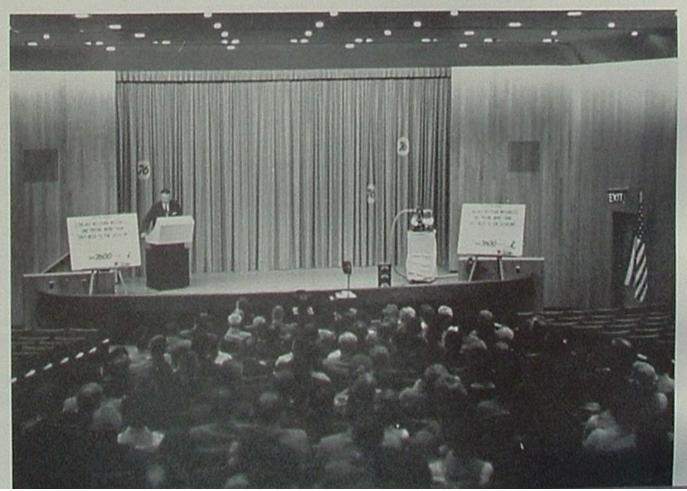
At right, Dr. Ray Mattson of Research and Ken Freburg use fire to demonstrate how one of the compounds used in 7600 guards against pre-ignition and numble in modern engines.

At extreme right, Assistant General Sales Manager A. R. Ousdahl of Direct Sales preaches the gospel of "Quality, economy and vigorous salesmanship" as stepping stones to the success of this product.









Business Highlights of the Month

INDUSTRIAL RELATIONS We're slippin' - at home.

The reduction of off-duty accidents presents a challenging problem to all employees. Last year, one out of 25 Company employees sustained an off-duty injury that resulted in lost time. This is over four times as many disabling accidents as occurred on the job.

Concerted safety efforts by all departments have reduced the frequency of on-duty injuries from 20.8 per million manhours worked in 1943 to a frequency of 5.6 in 1958 — or a reduction of approximately 285 lost-time injuries a year.

The same attention to off-job accidents could significantly reduce their number. Training material for use in preventing off-job injuries is being assembled and distributed to all departments. Individual plans are also being set up departmentally to stress this program.

from N. T. Ugrin

EXPLORATION At the ends of two continents.

In Alaska, the three geophysical crews that were assigned to work through Arctic winter conditions will be augmented by two geological field parties as soon as ground conditions permit. A pilot road already has been cut to the proposed location of our first exploratory well to be drilled this summer north of Kasilof and south of the Kenai River's mouth on the Kenai Peninsula. All of our operations in this area are being conducted jointly with the Ohio Oil Company, who share the venture with Union Oil in an equal partnership.

Two exploratory wells in Guatemala, in which the Company has a working interest, have been spudded by our partners. One, located on the Chinjá Anticline, is projected to 15,000 feet. In Limón Province, Costa Rica,

all construction work on an access road, camp site and air strip is practically completed preparatory to drilling a test on the Porvenir Anticline. Equipment is being moved in by the drilling contractor.

In Argentina, our geophysical crews have been hampered by difficult drilling conditions. Additional personnel will be used in order to run extra tours and speed up the reconnaissance work necessary to locating our first exploratory well there.

Other Union Oil Exploration personnel are in Cuba, Venezuela and Peru making extensive studies of geological data and watching the trend of political events.

from Sam Grinsfelder

PRODUCTION Using LPG for bait!

The Company continues to search aggressively for new methods of stimulating oil recovery from producing fields. Recent studies, supplemented by laboratory work at our Research Center, have indicated that oil recovery under certain reservoir conditions may be increased greatly by a process called miscible-phase flooding. This process consists of injecting liquefied petroleum gas into a reservoir and then driving it through oil sands by the injection of gas. The gas also serves the purpose of maintaining reservoir pressure at a high level.

Oil sands in the Polvadero Field, a unitized project operated by Union Oil in the Coalinga area, Fresno County, California, appear to be particularly adaptable to miscible-phase flooding. Accordingly, a full-scale flooding was initiated in this field. Approximately 750,000 barrels of LPG will be injected in the initial phase, to be followed by injection of approximately 15½ million MCF of gas over a period of eight or nine years. Since the injected LPG is miscible — that is, mixes with the reservoir oil and gas — it is anticipated that a very significant volume of additional oil over and above the primary recovery oil will be produced within this period. We also expect to recover a major part of the injected LPG and gas by the time the program is completed.

from Dudley Tower

MANUFACTURING New asphalt units on stream.

The new supplemental asphalt production and blending facilities at Oleum Refinery are now in operation. Key additions are two new blending units used for producing liquid asphalt of the MC (medium curing) and SC (slow curing) types. The units will blend asphalt and solvent to produce the desired grade of product. Each has a capacity of 350 gallons per minute, or a truck load in 20 minutes. The blenders will produce liquid asphalt directly to tank trucks within an accuracy of well under 1% required component blend.

Union Premium Paving asphalts are tank blended, by using a jet-nozzle tank mixer, which utilizes the velocity of the product being pumped into the mixing tank. These improved asphalt facilities are designed to reduce operating costs and to supply various grades of asphalt to our customers with minimum delay. The improve-

ments are part of Union Oil's program to increase its sale of asphaltic products.

The Oleum Asphalt Plant completes a chain of four Union Oil plants supplying asphalt to California, Oregon, Washington, Arizona and Nevada.

from J. W. Towler

MARKETING Oil is also where you sell it!

During March, A. C. Stewart and F. K. Cadwell visited the headquarters and other offices of Maruzen Oil Company, Ltd., in Japan, and the offices of our distributor, Theo. H. Davies & Company, Far East Ltd., in Manila, Philippines. Operators of Japanese flag steamships were also contacted during this business development trip.

A new program designed to further expand sales of lubricating oils and greases to car dealers is being inaugurated in Eastern Continental Territory.

Wendell, Idaho, is the latest addition to our list of marketing stations. Nolan G. Cooper, consignee, assures us of complete product distribution throughout Gooding County, Idaho, which formerly was only partially supplied by our Twin Falls marketing station.

Residents and boat owners throughout Southern California, many of whom have patronized our marine station at Santa Barbara during the past 30 years, will be pleased to learn that the station has now been completely rebuilt. Royal 76 has been added to the product line the float has been relocated to afford easier ingress and new pumping equipment assures the customer fastest service.

Our Portland Division has been supplying a majority of the contractors engaged in building Lloyd Center, Portland's \$3 million shopping center, one of the largest ever built. Prime contractors who have favored us with their purchases include, Donald M. Drake, J. Max Kiney Company, and Henry M. Mason Company.

A forum on Lubrication of Internal Combustion Engines, recently conducted at the Newport-Washington Consolidated High School by Industrial Sales Engineer Jim Bassett of Spokane, attracted members of Future Farmers of America, the Manual Arts Class, and many officials from state, county and education departments. The forum was so well received that state school officials have asked for a repetition at other schools.

from Roy Linden

TRANSPORTATION & SUPPLY Controlled imports.

Effective March 1, 1959, importation of crude oil and unfinished oils was placed under mandatory federal control. Allocations are based on a sliding percentage scale of each company's 1958 refinery imput, graduated so as to favor the smaller refiners. Union Oil Company's initial allocation for the period ending June 30 is 17,380 barrels per day for our West Coast refineries and 400 barrels per day for our Cut Bank Refinery. Imports of unfinished oils are limited to 10% of the total allocation. Finished products also were placed under mandatory control effective April 1, with allocations based on 1957 imports. Because we imported no finished products during 1957, we received no allocation.

The SS LAKE PALOURDE, the latest of three Barracuda-class supertankers being constructed for Company service by Newport News Shipbuilding and Dry Dock Company, was launched on March 16 at Newport News, Virginia. Delivery to us, under time charter, is scheduled for May 29.

Orders for two new 4,000-gallon aircraft fueling trucks have been placed, and two other trucks of similar service design are being rebuilt from existing units. All will be used to service Western Airlines' new turboprop planes at four major western airports. The trucks will prominently display Union Oil's name and colors in conjunction with those of Western Airlines.

from E. L. Hiatt

RESEARCH If it ain't one ping, it's another!

Pre-ignition, or more correctly, "surface ignition," usually recognized by that irksome and potentially costly "ping" sometimes heard in a hard-working engine, has become increasingly prevalent with the advent of very high compression ratio, high octane requirement, higher speed, and hotter-running engines in use today. Recently, a more serious malady, known as "rumble" has been observed. The word "rumble" is used to describe a condition of severe pre-ignition that subjects the engine to overheating and extreme pressures that can cause actual engine damage.

Union's new Royal 76 gasoline now contains a phosphorous-based additive selected for its ability to provide freedom from knock and from possible inconvenience and repair expense caused by pre-ignition damage. This research project has already reached its ultimate goal the customers' gas tanks.

from Fred L. Hartley

Severance Tax-continued from page 3

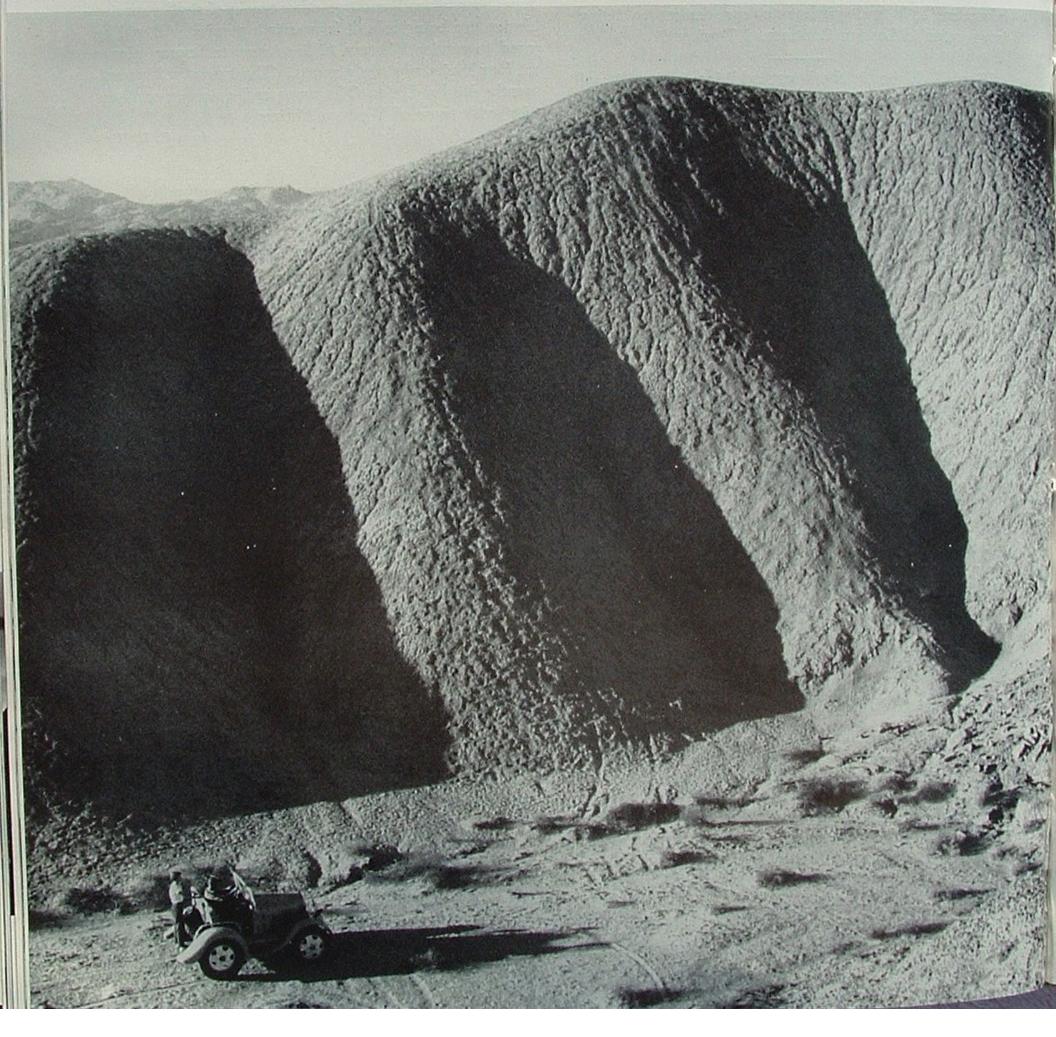
inevitably by retrenchment in allied businesses and industries. Further decline of California oil production would hurt domestic oil producers and property owners first-then hundreds of services, suppliers and craftsmen who aid the oil industry-then thousands of employees, all to the benefit of producers of oil and gas in other states and foreign countries.

One is tempted to observe that the only good feature about this proposed severance tax is that it is aptly named. It would "sever" the People of this State from a major source of income, employment and wealth they would otherwise continue to enjoy.

/THE END

Charlie's rock buggy

Mountains that would discourage even a donkey are no obstacle to the Lavertys; with their "rock buggy" they tackle any terrain.





A typical weekend finds the Lavertys in a remote mountain enclosure, sleeping under the stars, eating flapjacks at sunup, getting ready for buggy ride.



Charlie's home-made contraption, with truck gears and 10-ply tires, boasts everything except riding comfort. Over rocks, Mrs. Laverty declines a seat in favor of "knee-action".

CHARLIE LAVERTY, Union Oil consignee, his wife, Toots, and their dog-shadow, Blackie, live in Boulevard, California, just six miles from the Mexican border. The town belies its name, being so tiny that it hasn't yet earned the description of a wide spot in the road. But round about is a lovely valley, guarded by the Laguna and Coyote mountains. The Lavertys make a living by running a Union Oil marketing station in nearby Jacumba. They supply petroleum products to a number of small towns and any desert enterprise within reach.

One thing the Lavertys like about Boulevard is that it's right in the middle of gem country. The mountains are rich in semi-precious rock. The only catch is you have to know a raw gem when you see one and you have to travel over some of the roughest terrain in America to reach unexploited rock deposits. Much of it is inaccessible even to an Army four-wheel-drive Jeep.

However, Charlie is a resourceful man. He took a Model A roadster frame—cut it to 73 inches in length — equipped it with a 1932 truck rear end, a four-speed truck transmission, a 1929 Model A engine — put oversize eight and tenply tires on the wheels — and came out with undoubtedly the only "rock buggy" of its kind in America. Later, at the dictates of law and fashion, he added license plates, lights, fenders, paint, radio and cigarette lighter —none of which luxuries is worth its salt once you leave the beaten path.

A typical weekend finds the Lavertys sleeping out somewhere near the end of the last wagon ruts in a remote mountain enclosure. At sunup, they're eating flapjacks, bacon and coffee. An hour later they're flying at five miles per hour over hills, brush, rocks and quicksand seldom, if ever before, conquered by man or beast. With uncanny instinct, Blackie alternates between riding and running, usually leaving the vehicle a split second before calamity seems about to strike.

These three waste very little time in rock hunting. After years of buggy exploration they know where most of the good rock is to be found. Long before nightfall they're back at camp with a half-dozen interesting specimens.

Unlike most rock hounds, Charlie and Toots disdain the cutting and polishing chore. Instead, they've surrounded their home with a stone wall, a section of which includes "76" gems set in light native marble. Their fire-place, decorative arches and a water tank now under construction are also semi-precious stone. Undoubtedly the Laverty fence evokes as many happy memories as any gems the world has ever known.



Semi-precious stone found by this couple near Mexican border eventually becomes a part of their unique home at Boulevard, California. Their "76" fence, below, is composed of gems set in native marble.





are having more taken away from them than given to them.)

"That a government deficit is still a tax and will show up as a tax of inflation included in consumer prices.

"That business represents the many and not the few. That business is simply a highly creative clearing-house where customers, savers, workers, suppliers and others, as citizens, come together voluntarily as contributor-claimants and, with the aid of good ideas and specialized facilities, are able to do more for each other than they would or could if left to work separately with only their personal resources. That business thus cannot voluntarily, or under force, reward any one of its contributor-claimants with more or less than is fairly coming to him and still long survive to provide attractive values and jobs.

"That so-called taxes on business are almost entirely taxes on consumers, because they are costs like wages and materials. That these taxes either cut progress and jobs or raise prices and the cost of living.

"That increased Federal spending, even when matched by increased taxes directly on individuals, can still be inflationary.

"That so-called transfer payments soon exhaust the possibilities of 'robbing Peter to pay Paul' and wind up largely robbing Paul to pay Paul after much loss, disappointment and disillusionment for Paul as a result of the shrinkage in his funds during the round trip.

"That free government goes down the drain by the log-rolling and inflation route when localities or individuals all try to have their representatives bring more home from government than those localities or individuals paid to government.

"That government credit cannot stand creeping inflation—once enough people come to think they should resort to a flight from money because they have ceased to believe inflation is going to be corrected.

"That price and other controls cannot cure inflation without choking the business and economic system to death. That the only way not to have inflation come out the price end is not to let it get in the cost end.

"The enemies of freedom have, for a hundred years, openly admitted that inflation is their most potent weapon in destroying representative government. They could hardly wish for faster progress toward what they want than is being made here. . .

"The most welcome news we can give our public servants is that we know the danger—do not want the disaster to happen—and, in contrast, already have enough economic understanding, enough moral determination and enough political sophistication to support our representatives in the sound and sensible *something-for-some-thing course* that will protect and enhance our economic well-being and our freedom."

Statement by Lemuel R. Boulware Vice President General Electric Company Via Manion Forum Network January 4, 1959

Socialism Failed Again

"Early in the 1900's the Doukhobors migrated to western Canada and established what they called the Christian Community of Universal Brotherhood, Ltd. The colony once had an estimated worth of \$7 million, which included sawmills, a jam factory, a brick-making plant and hundreds of communal villages farming over 19,000 irrigated acres.

"Today, a feature article in The Wall Street Journal points out, the land has deteriorated. Wood irrigation pipe has rotted away. Water-starved apple, pear and other orchards on thousands of acres have withered. The Doukhobors have burned their former jam factory and even many of their own homes. John J. Verigin, grandson of Peter the Lordly Verigin, who led the Doukhobors to British Columbia, declares: "The community theory of taking out according to the family's needs and putting in according to ability did not work. Some put in more than others. This bred individualism."

"The robbing-of-Peter-to-pay-Paul theory of economics which is advocated by the big government planners should be scorned by every American. The communal idea of work and property in the guise of confiscatory taxation and Federal assumption of local and individual responsibility will destroy incentive and with it the dynamic character of this country."

From The Tax Digest January 1959

Graduated or Expelled?

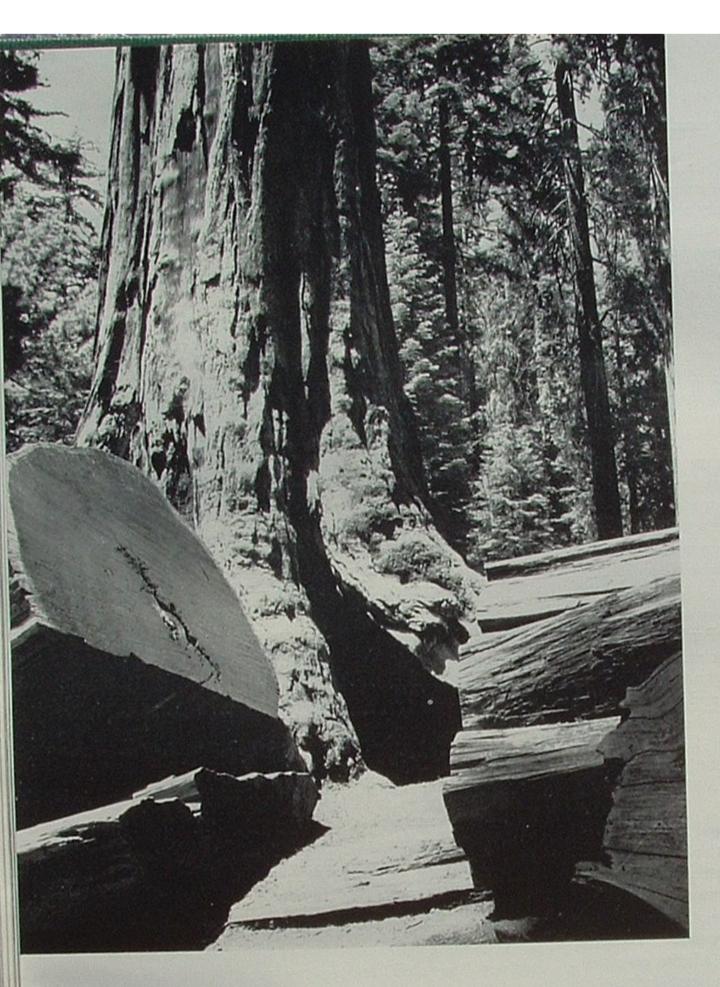
"The average man works $2\frac{1}{2}$ hours of each 8-hour day just to pay his taxes—putting out far more effort for that than he does for his family's food, housing or clothing. At this rate, almost $\frac{1}{3}$ of his working time belongs to the government, for he must work five days a week for a little more than three days' pay.

"That the confiscatory rates of the graduated income tax penalize success and destroy incentive and initiative is obvious. Americans have now replaced the British as the most tax-ridden people on earth. For years our representatives have only made token gestures for economy and tax reform—and big government continues to grow.

"By now it is evident that this tax and spend mania is beyond all possibility of reform or control. The only thing left to do is to eliminate it. And do not think it can't be done.

"California Congressman James B. Utt has already introduced the 'Proposed 23rd Amendment' in the new Congress. The passage of this measure would amend the Constitution to abolish the personal income tax and compel the Federal government to discontinue business in competition with its own citizens."

Statement by John A. Gustafson Printed in the Los Angeles Times February 9, 1959





The taller the Redwoods Grow

the harder they fall

From W. A. Spence, Industrial Sales Engineer, Eureka, California

You've traveled no doubt through many of the Redwood groves preserved in a chain of coastal parks stretching from the Oregon border south to Monterey, California. But did you ever think of the problems involved when one of these giants is felled on private timber holdings?

Actually the spectacular trees — those over 1,000 years old and towering above their neighbors — are not the bonanzas you might expect to the timber industry. The old trees have nearly stopped growing. Many contain sections that have been ravaged or hollowed by storms and fires of their ancient past. And when felled, the tall ones can generate a lot of destruction both to

themselves and the younger growth in their path.

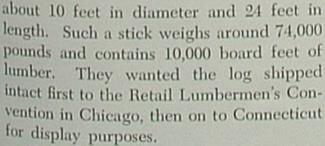
So it is good timber-conservation practice to fell the big ones first. By that means also more moisture and sunlight are made available to the fast-growing young Redwoods — good seed is scattered for natural reforestation — and from out of old stumps grow many healthy young sprouts.

Arcata Redwood Company, good customers of Union Oil in northern California, thought you might be interested in seeing how your products outdo the feats of fabled Paul Bunyan. So, they invited us to witness the filling of an unusual order. A retail lumber firm in Connecticut had asked for a Redwood log measuring



Great skill was required in making the undercut of this 11-foot diameter Redwood so that the tree would fall precisely on a pre-determined line, causing little damage to neighboring trees.





Our pictures, made with the help of the California Redwood Association, tell the story much better than we can. Suffice it to say, the order was filled!

/THE END

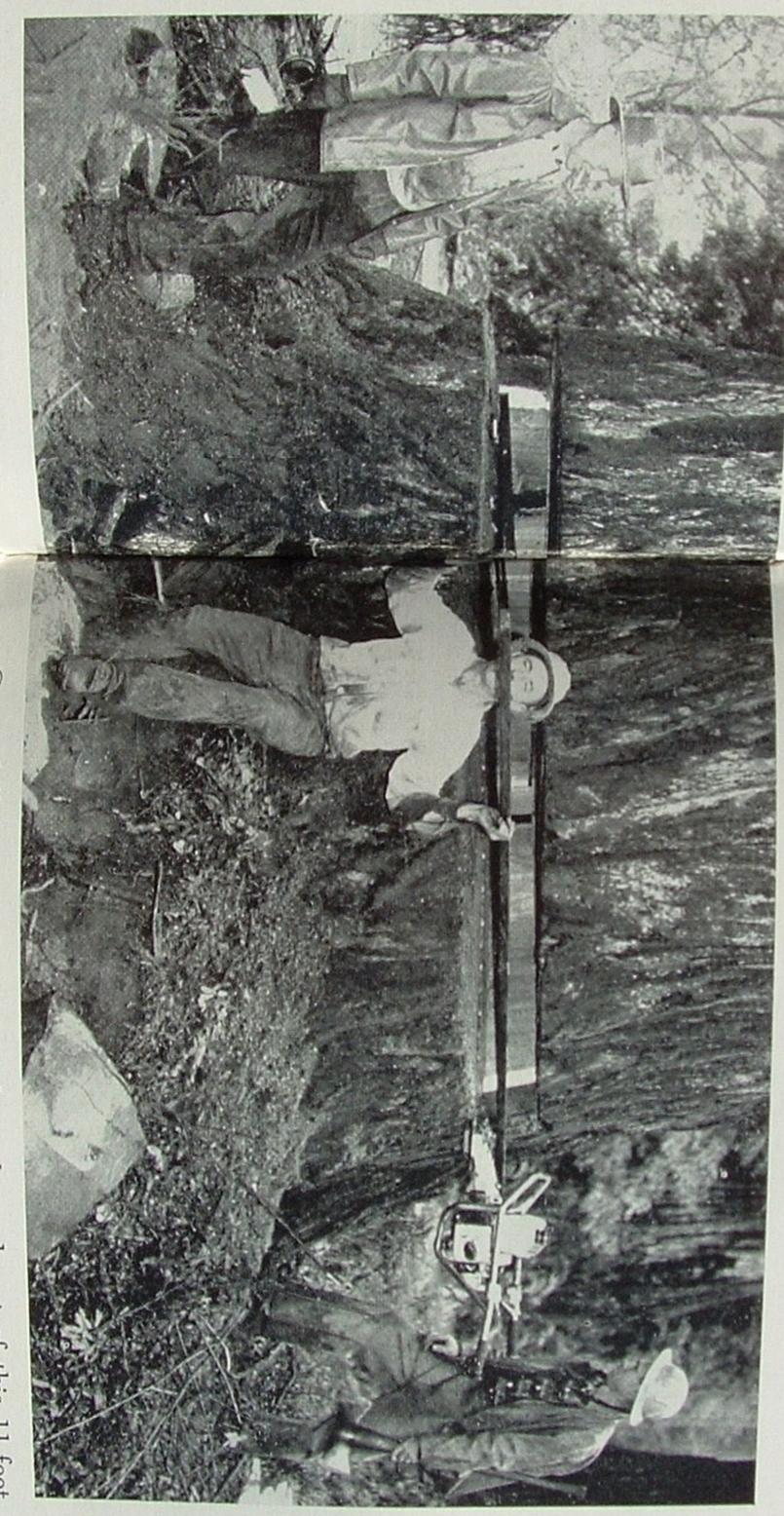


Bucking of the fallen giant into 24-foot lengths was done with a gasoline-powered chain-saw, nine-foot bar.

A crawler-arch, pulled by tractor, lifted one end of the big stick and dragged it to a logging road.

Logging Superintendent Harry Wier, left, and Trucker Henry Costa start the big log on its transcontinental journey, first to lumbermen's convention in Chicago, then to Connecticut display.





Great skill was required in making the undercut or this in a diameter Redwood so that the tree would fall precisely on a pre-determined line, causing little damage to neighboring trees. the undercut of this 11-foot



The cast of this real Hollywood drama are, from left, Deputy Sheriff Charles Seibert, Minute Man Walter Willkomm, Dealer Bob Brundage and Deputy Sheriff George Pederson. A doll subbed for baby.

Minute Man Maternity Service!

A t midnight, Minute Man Walter Willkomm was just in the act of switching off the pump-island lights at our 8490 Santa Monica Boulevard station in Hollywood. Then, as often happens, a car rolled in.

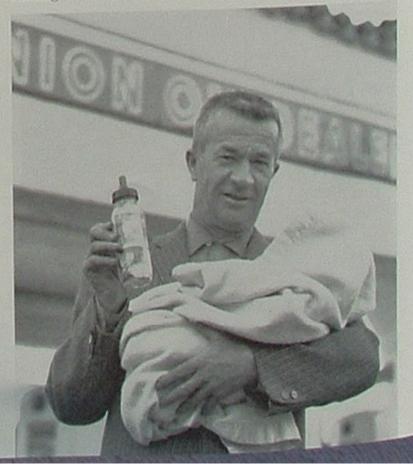
This customer was different. He didn't want gas, oil, water, air, windshield service, or directions to Hollywood and Vine. All he wanted was the sheriff — here — and very *pronto*. Would Walt please put in an emergency call? Real fast!

The sheriff's office hedged a little when Walt relayed the unusual request. The man on the phone wanted to know why. Walt said, "Hold on a minute," and ran back to the customer, now frantically pacing up and down and on the verge of collapse. One glance inside the car gave Walt a clue. To the sheriff's office he presently announced, "I believe one of our customers is giving birth to a baby — right here on the station lot!"

Deputy sheriffs, being trained for such emergencies, soon had the situation well in hand — mother and child both doing fine in the hospital — and dad calmed down to worrying only about the bill.

Thus might have ended the story. But Dealer Bob Brundage, who leases this and several other service stations under the "76" target sign, is a mighty proud, though unofficial, godfather. A few days later he invited the officers back and passed out free cigars. Walt smilingly displayed in his arms — not the pump-island pride — but a reasonable facsimile thereof. It was a touching event even for Hollywood.

/THE END



What's

on the

pump

island?

new





M. W. ADCOCK of Los Angeles Refinery's Engineering Department has designed a new type of orifice flange which improves the safety of metering installations and permits a more compact instrument piping arrangement. The new design with a flanged side connection on each orifice flange is suitable for horizontal meter runs in process piping and eliminates the troublesome side holes formerly required. Several of the new orifice fittings have been installed at LAR. Others being manufactured by a large company promise to gain wide acceptance in the industry.

from S. D. Reiner

FRESNO DIVISION Retail salesmen topped all Company competitors in lube oil sales during 1958, thereby winning the handsome Triton Trophy offered as team prize. In attendance at an early-1959 meeting where the trophy was presented were (standing, from left) J. G. English, J. O. January, D. Colville, G. E. Newton, D. Fergus, L. E. Russell, B. H. Matson, E. C. Smith, P. W. Smith, F. M. Schlegel; (scated) J. E. Campbell, A. E. Mealiffe, W. S. Christopher, C. C. Petray, E. J. Brusher and F. J. Wilson.



WAXCO, a Junior Achievement company sponsored by Union Oil people in Los Angeles, chose the Union Oil Center cafeteria building for a March 26th sale of their beautiful wax-candle products. Vice President Harold Sanders was one of their first customers. Behind Mr. Sanders were Ted Proudfoot and Bob Lamb, two Company men who have been very active in pushing Junior Achievement programs.



our canadian division people in Calgary, Alberta, have been given the "Community Chest Red Cross Award for Outstanding Citizenship" for having been among the top company contributors during the 1958 fund-raising campaign. Receiving the award from Executive Director Stan Ward, left, of the Community Chest is Union Oil Personnel Representative R. H. Clark.





McKALES CORPORATION, headquartered at Seattle, have now completed 37 years as retail distributors of Union Oil products through their excellent chain of service stations. Presenting the 37-year award pin to Mrs. Anna McKale, vice president, is our Executive Representative W. I. Martin. Pleased witnesses of the presenta-tion were, from left, McKales' J. Q. Ronald, Union Oiler J. H. McGee, McKales' President George F. Herrman, Vice President Clyde McKale and Vice President R. E. Graf, Jr.



FIRST ROUND WINNERS of the Winter Bowling competition at Laurel, Montana, were from left, Mrs. C. A. Biffle, Mrs. Howard Freeman, Mrs. Alex Henry, Miss Betty Lou Berland, Mrs. Joe Backman and Mrs. Charles Rolison - a team sponsored by Union Oil Dealer J. E. DeFrance (also smiling).

from R. G. Chandler



SOCIETY OF PETROLEUM ENGINEERS OF AIME

Fidelity Union Building + Kiverside 8-5071 + Dallas), Tenas

March 16, 1959

Messrs. Reese H. Taylor, Chairman of the Board A. C. Rubel, President Union Oil Company of California Union Oil Center Los Angeles, California

Gentlemen:

I take the liberty of writing you jointly to express appreciation on behalf of the Society and Institute for Basil Kantzer's service in 1958 as President of the Society of Petroleum Engineers. Your company has made a substantial contribution to the petroleum industry and the petroleum engineering profession through Basil in this capacity. The Society was particularly fortunate in having him as President in 1958 because we were affected by economic conditions in much the same way as other business organizations, and his keen intellect and ability made his leadership particularly effective under these circumstances. We came out of the year in fairly good shape, and Basil's work and interest contributed much to this end

Basil's executive talents are by no means new to you, but while writing I should like to express my admiration for them. His unique ability to probe directly to the heart of a problem and develop a sound solution was particularly apparent to me in everything we undertook. By the same token he had a very clear understanding of the Society's operations and the problems I face as Secretary. His sympathetic and helpful counsel meant a great deal to me personally.

I know that many members would wish to join me in this expression of thanks to the Union Oil Company of California for the fine leadership of Basil as President and the contribution of your company through him.

> Sincerely, signed/Joe B. Alford

AT THE 20TH HOLE, a control room of the Catalytic Cracking Department, Los Angeles Refinery, Martin Olson (second from left) was handed the golfing championship trophy and congratulations by Superintendent Frank Van Acker, while Al Tucker (second from right) garnered the slightly lesser runner-up honors from George S. Baumgartner. Waiting to get back at 'em next year were, from left, Ed Messinger, Archie Bruce, Hollis Blakesley



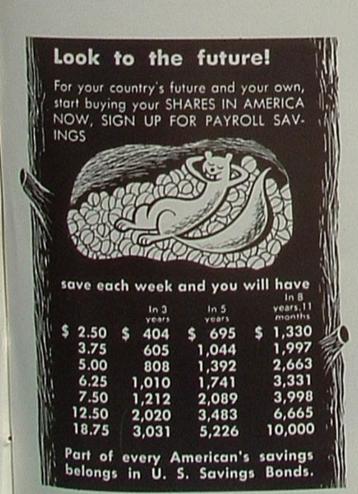
RETIREMENTS

May 1959 Service Date ANDRIJA J. VUJACICH Oleum Refinery September 6, 1943 April 1959 PATRICK BARRETT Natural Gas & Gasoline April 5, 1923 VIVIAN C. KETELS Treasury Department August 12, 1924 ROBERT D. ROBERTS Treasury Department August 20, 1917 JOHN J. SHANAHAN February 14, 1922 Southern Division Field RICHARD D. SMITH Executive Representative May 1, 1931 Great Falls, Montana HERMAN R. TERNQUIST November 16, 1943 South, Div. Automobile

IN MEMORIAM

Retirees:

WALTER V. SMITH Northern Division Pipeline February 25, 1959 BENNETT A. STAUFFACHER Los Angeles Refinery March 2, 1959 LOUISE HILBERT March 5, 1959 Marketing Department EDWIN WALLACE CHERRY March 22, 1959 Los Angeles Refinery ALFRED B. JACK March 24, 1959 Credit - Sacramento EDWARD L. BRUNOT April 3, 1959 Southern Division Field WILLIAM A. SHEPHERD April 6, 1959 Los Angeles Refinery



SERVICE BIRTHDAY **AWARDS**

EMPLOYEES

May 1959

40		

Reg. Distribution
So. Div. Field
Oleum Refinery
No. Div. Pipeline
Reg. Distribution
So. Div. Field
reasury-Oregon
eld-Home Office
telHome Office

	50. DIV. I	
WILLIAM S. NEW	TON, JRTreasury-Ore	gon
ANDREW F. NIEM	ANN Field-Home C	office
STARR A. TITUS	Ind. Rel.—Home C	ffice
25 YEARS		
HUGH S. BAIMBR	IDGE So. Reg Distribu	ution
ALVIN BIXLER	Los Angeles Refi	inery
IVAN W COFFM	AN No. Div. Pip	eline
IOHN P DAVIS	Research Departs	ment
SAM M. DYER	So. Div.	Field
AIRERT FIGONE	Cen, Reg. Distrib	ution
LAMEC W ELAN	IGAN So. DIV.	riela
ADTHUD E HAM	RIIN Los Angeles Ref	inery
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WILLIAM WALDREN	Oleum Refinery
OR VEADS	
FRED M. ANDERSON Pro	
WILLIAM CHRISTIANSEN	hasing-L. A. Warehouse
EDWARD R. HAGEMAN, JR	Research Department
FRED L. HARTLEY	Cen. Reg. Distribution
HAROLD S. MARTIN	No. Reg. Distribution
15 YEARS	Cen. Reg. Distribution

FRED L. HARILET	Cen. Reg. Distribution
HAROLD S. MARTIN	No. Reg. Distribution
WEARE	
Control of the Contro	No Peg. Distribution
GORDON E. BRUCE	So. Div. Pipeline
THOMAS R. JONES	Research Department

DANIEL McGOLDRICK	Los Angeles Refinery
WINFIELD McWILLIAMS	
PAUL G. NAHIN	Research Department
WILLIAM R. ORVIS	No. Div. Pipeline
MILDRED W. REDMOND	Purchasing-Seattle
HORACE J. SIMON	Field-Louisiana
LUELLA M. STICKLER	
10 YEARS	

TO TEAKS	
FRANCIS L. BANNER	Comptroller's-San Francisco
MARIE I. BRECKENRIDGE	Comptroller's
ANNIE G. CLANTON	Exploration—Bakerfield
ROBERT L. JAMES	Comptroller's
WILLIAM KARLAK	No. Div. Pipeline
DOUGLAS B. LEITCH	Exploration—Canada
JACK R. MORTENSON	Oleum Refinery
WILLIAM F. ORR	Direct Sales-Pasadena
THEROLD R. RAMSEY	No. Div. Pipeline
MILDRED SCHOCHER	.Comptroller's-San Francisco
	Exploration-Louisiana
	Exploration-W. Texas

DEALERS

AF	ori	9	5	9
HOUSE IN				

10 YEARS			
D. DORSHEIM	ERLos	Angeles,	California
5 YEARS			
E. C. DAILEY		Perris,	California
P S LONG		Needles	California

D. WAMSLEY.....Los Angeles, California

Glendale, California

W. H. WOLFE

May 1959		
30 YEARS		
STEPHEN DONAHUE	Watsonville,	California
25 YEARS		
		A 115 11

J. P. BOWEN	North Hollywood, Californi
LEE MONTY GARAGE	San Francisco, Californi
10 YEARS	
ALDO S MADIO B BO	Oakland Californi

ALDO & MAKIO B. BOTTO	
Y. HARSTON	Los Angeles, California
HOEHN MOTOR COMPANY	Burlington, Washington
LEO R. IKEDA	Los Altos, California
JORDAN MOTORS	Grangeville, Idaho
MARION S. KITCHEL	Ukiah, California
JESS KLASEY CHEVROLET CO	MPANYMorton, Wash.
SANDY RYERSON	Avon, Montana
FDWARD L. SPARKS	Sacramento, California
J. O. STRICKLAND	Santa Cruz, California
HOWARD & BOB THORPE	Los Angeles, California
5 YEARS	
JILANO	

Los Angeles, California C. BAILEY.Fresno, California DRITSAS & SON. Kings Beach, California HENRY E. GALL. Redwood City, California ROBERT GALLAGHER. HALLOWELL CHEVROLET COMPANY Clovis, Calif. FRED W. HARRIS & Bremerton, Washington

GALE I FORCE	Bremerton, Washington	
E D KNIFFIN	South Pasadena,	California
HILLIS LIREDMAN	Los Angeles,	California
A H MEYN IR	Encino,	California
GEORGE POOKE	Fawnskin,	Camornia
GORMAN E. ROSE	Martinez,	California
CLARCITATE A P		
HAAKON P SATER	San Leandro,	California
EADL V SHEPER	Alturas,	California

	Alturas, California
EARL K. SHERER	The state of the s
CHARLES SPELTS	Sacramento, California
CONICIONIEES	

	3 - DISTRIBUTORS
May 1959	
J. C. SCOTT	Linden, Californi
P. H. ENOCHS	Madera, Californi Baker, Orego
20 YEARS	Culver City, Californi Id Beach & Port Orford, Orego
10 YEARS	Electric City, Washington

Harriet Hunter

A San Francisco designer asks how we spent the money

Harriet Hunter is one of nearly 67,000 people who own shares in Union Oil.

This accounts for her natural curiosity about what we did with the \$412,592,000 our customers paid us during our 68th year. (This does not include the \$79,917,-000 we collected for Uncle Sam as fuel

\$309,965,000-or 75.1 %-we spent with more than 17,000 companies and individuals with whom we do business.

\$16,703,000-or 4 %-went to over 1000 tax collectors. This, of course, was in addition to the fuel taxes above.

\$60,925,000-or 14.8 %-we paid to our workers and their families as wages and benefits.

This left \$24,999,000-or 6.1 %. We paid just under half of this-\$10,495,000 -as cash dividends to Harriet Hunter and our other share holders for furnishing the money that made the business possible.

\$14,504,000 of the net profit - or 3.5 % of our customers' dollars-were reinvested in expansion and modernization to better serve our customers.

Union Oil was founded in 1890 by a few men who pooled their personal savings. Today Harriet Hunter and others pool their savings in this and similar companies.

By combining money and employees' talents we achieve together what we never could alone: the highest standard of living the world has yet seen.

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



Union Oil Company of CALIFORNIA TO

