



SEVENTY SIX

SEPTEMBER 1965

Can we be 76% good samaritans ?



If you had \$100 in your pocket, would you spare 50 cents of it—just one-half of one per cent—for a worthy charitable cause? Fifty cents to help buy braces for a crippled child? Fifty cents to help send a homeless orphan to summer camp? Fifty cents to help buy a few meals for the victims of a hurricane? Fifty cents to help medical scientists track down one of society's worst killers—cancer? Fifty cents to help brighten the final year of life for a child-victim of leukemia?

For each \$100 you earn, would you give 50 cents on a continuing basis throughout the year?

Of course you would. You're human—and that means you're charitable. You're an American—and that means you're one of the most generous human beings on earth. You're a Union Oiler—and that means you're a responsible citizen in your community.

The trouble is: Most of life's hard-luck problems and victims are hidden indoors—in hospitals, in sanitariums, in laboratories, in orphanages. We seldom see them. Out of sight, out of mind. In this great country of ours it's easy to be lulled into the false notion that all's well in the neighborhood; no help is needed.

But that's where the AID-United Givers of Los Angeles, the Crusade of Mercy in Chicago, the San Francisco Bay Area United Crusade and all the other regional fund-raising organizations come in. They seek out the deserving needy; they determine how much will

be required to keep humanity's old institution of begging off the community streets; and in one fund-raising campaign annually they put the responsibility where it belongs—in the hands of all Americans who are employed, well and self-sufficient.

How much should we give? One formula for donors, based on extensive research, is that each employed person should give 12 minutes pay each week (one-half of one percent, or 50 cents per \$100 of earnings) on a continuing basis throughout the year. If every employed person would do so, the charitable health and welfare burden of America would be supported adequately.

Soon, in many areas, annual welfare pledge cards will be made available to Union Oil employees from Alaska to Florida. The amounts suggested for pledging may vary from region to region: Let your conscience be your guide.

How about this idea? Shouldn't everyone contribute at least a little bit? And during this — our 75th anniversary and on into our 76th year — wouldn't it be a fine achievement if 76 per cent or more of our employees signed up as one-half-of-one-percent Good Samaritans?

Really, it wouldn't take lot of extra money or effort. Just a half-dollar out of every \$100 we earn. To an orphaned child, the price of an admission ticket to life. Why don't you fill out the sheet and sign it? ⁷⁶



This is a symbol of Union Oil Company of California. The trademark, 76, also symbolizes the American freedoms won in 1776 that make possible this nation's industrial development and abundance. SEVENTY-SIX magazine mirrors industrial freedom through the thoughts, skills, accomplishments and appreciations of Union Oil people. We invite your participation in an exchange of ideas and information. Address: Editor, Seventy-Six, Union Oil Center, Los Angeles, California 90017

SEVENTY SIX

UNION OIL COMPANY OF CALIFORNIA

VOLUME 9 NUMBER 7

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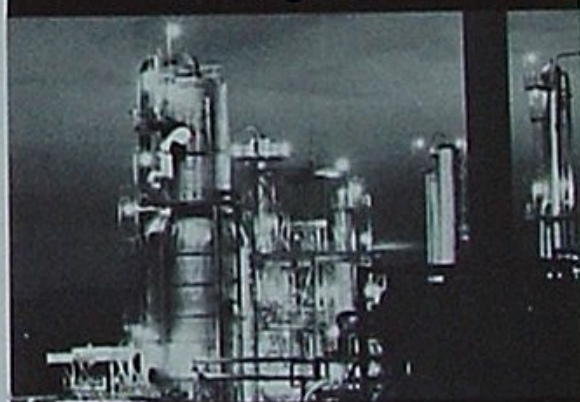
Cover by Bob Thompson



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Hoover Dam Revisited, P-20



Arizona Rain Makers:

THE CASA GRANDE COTTON GROWERS

Pima cotton makes fine clothing, and Union lubricants help provide the water to raise this firm, long-staple product. If you are wearing a shirt or dress made of Pima cotton, you probably are well aware of its quality, its durability, its strength. The odds are, though, you probably aren't aware of the contributions we at Union Oil have made to help produce this cotton. Here's the story.

Around the cotton growing center of Casa Grande, the farmers have a saying: "Arizona grows where the water flows." Historically, this is true. As far back as 700 A.D. the Ho-Ho-Kam Indians (means the ancient ones) found it necessary to build irrigation ditches to flood the Casa Grande Valley for growing crops. The irrigation-minded Ho-Ho-Kams mysteriously disappeared in about the ninth century, and for nearly a millenium the lands lay untouched by the hoe.

When the early white settlers moved into the central Arizona Territory in the 1870's, they employed the old Ho-Ho-Kam gradients to lay out new irrigation canals. These waterway systems have been further improved and today the Casa Grande Valley is blossoming with harvests.

Pima cotton, developed as a cross between native American and Egyptian varieties, thrived in the hot, irrigated valley between Tucson and Phoenix. In the early days of cotton farming in Pima and Pinal counties, water was pumped from the 100 foot level. Relatively small natural gas engines powered centrifugal pumps that easily handled the task. About this time, Frank Adams

left our Phoenix office where he had been an industrial sales engineer to take over as "76" consignee in Casa Grande. His business potential was growing at this time — the late Forties.

Cotton came to be king in and around Casa Grande (to the east copper is dominant), and by 1957 production had increased so much that a garment manufacturing plant was built near Casa Grande, adding new prosperity to the valley.

Suddenly, troubles began. The water table dropped. Down it plunged, about 10 feet a year, and soon it became necessary to draw from the 300 foot level. Farmers found they had to employ larger gas engines to power their water pumps.

By this time the cotton farming complex around Casa Grande had grown to some 300,000 acres, with one water pump for about every 50 acres of cotton. During the seven-month-long irrigation season, the big engines churned about 3,000 gallons of water a minute, 24 hours a day, seven days a week. When the wells got down to 500 feet deep, some of the big engines were in the 5,000 cubic inch class, and many farmers discovered they had invested up to \$40,000 in drilling, re-drilling, casing, engines, pumps, pipelines and ditching — \$40,000 for each pump installation.

As the water table continued to drop down each year, the big engines were called on to put forth extra effort to lift the water. In time, the strain began to tell, despite

continued

Rain Makers *continued*



Frank Adams: He found the trouble.



Dick Piatt: He knew what to do.

the best men and lubricants could do. A camshaft might go out here. Somewhere else, an engine would begin to run hot and spew oil. That the engines continued to run at all was a sterling tribute to their durability.

The breakdowns here and there weren't a calamity, but they were serious enough to warrant concern. And there's where Frank Adams, our consignee at Casa Grande, comes in.

Adams, like any successful consignee who is building up his business, is the kind of man who spends a lot of time with his customers. As for the farmers, they were literally an army of experimenters with just one idea to go on: When an engine failed, some thing or some product was at fault. But in the hot, dusty Arizona cotton fields, that "some thing" could be any of a hundred things. The farmers' urgent need was to find answers — and quickly. Replacing a camshaft on a big engine could run into an \$800 item of expense.

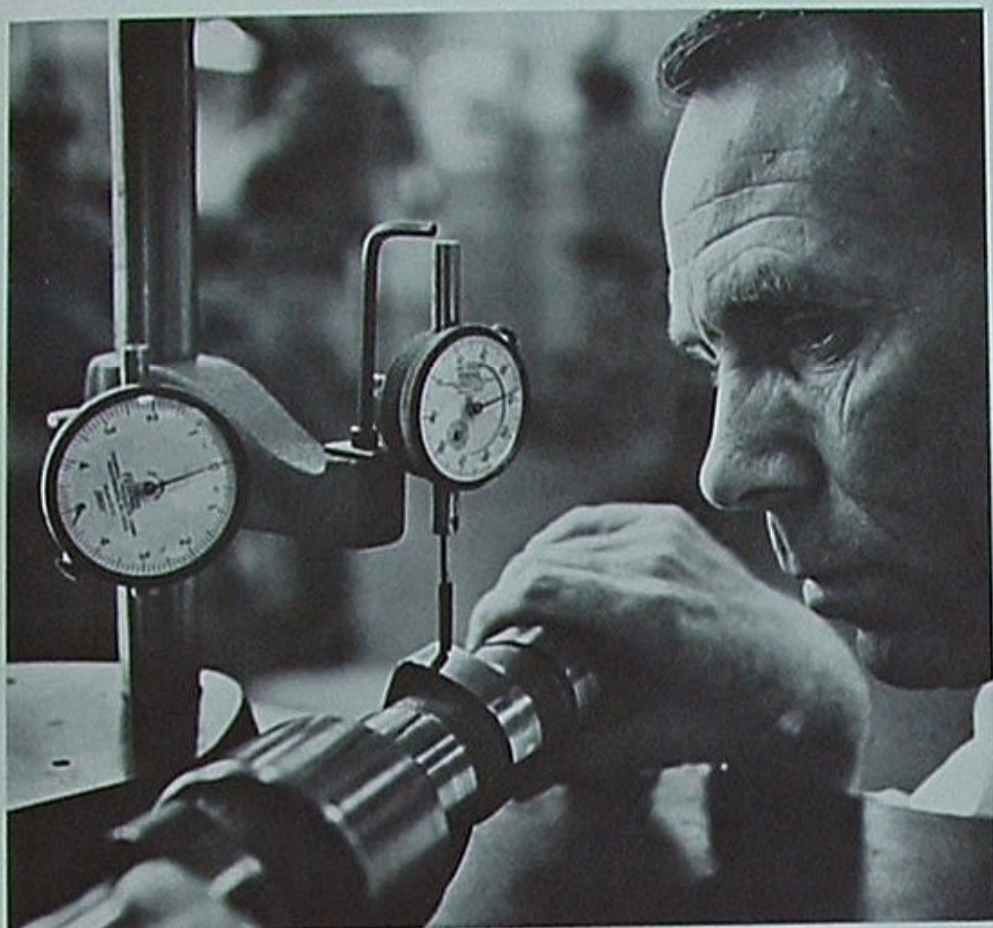
Frank Adams knows oil and machinery pretty well; after all, he's been associated with Union Oil for going on 30 years. To his credit, he is also the kind of man who will frankly admit that he can't be an expert in every field. He knows when to call in technical help.

The first man Frank would get in touch with was

Dick Piatt, commercial sales engineer from Phoenix, the headquarters for our Southwest Mountain Division. Finding Dick usually wasn't difficult; he, too, spends much of his time in the field talking with cotton farmers, learning their problems and thinking up ways to help them. Most folks in Arizona who know Dick say that if there is something about a drop of oil or a spoonful of grease that he doesn't know, he can quickly find out. In effect, Dick is the liaison man between the front-line operation of Frank Adams and the scientific skills at our Research Center in Brea, California.

One example of the way Frank Adams and Dick Piatt work together occurred two or three years ago. Word came that a farmer's pump engine had broken down. Adams's customers had a reputation for smooth-running engines, and this particular farmer's engines had been purring on Union lubricants for nearly a decade. But 10 days earlier, he had switched to another brand of oil. Suddenly: camshaft damage.

After switching brands, the cotton farmer was feeling sheepish about being a straying customer, but he was a longtime friend of Frank's, so he called on the Union Oiler for help and advice. Right away, Frank got in touch with Dick Piatt, who borrowed the camshaft and for-



Ken Woods: He had the answer.

warded it to our Research Department at Brea, where the troublesome piece soon came under the scrutiny of Ken Woods.

For Ken Woods this was an opportunity; his look at the part confirmed a problem he had been studying for some time. The upshot was that Woods suggested a new lube oil, one compounded specifically for natural gas engines working at overload conditions in hot, dusty desert areas. Next, he flew to Arizona to include this engine in his tests of the new oil. It not only worked far better than the competitor's oil, but it also outperformed Union's previous lubricant, itself a fine product. As a result, Union Oil Company today compounds an engine oil specifically tailored to the needs of a Casa Grande irrigation farmer.

As for Frank Adams, his stock in the Casa Grande Valley shot up even farther. Over the years he had developed the reputation for being a good salesman. Now, two arms of the company had backed him to the hilt and solved one of the big mechanical problems that had vexed his customers. Thanks to groundwork by Adams and the superior product he was able to offer, sales boomed. Today if you drive west of Casa Grande along U.S. 80, you will see a new Union Oil marketing sta-



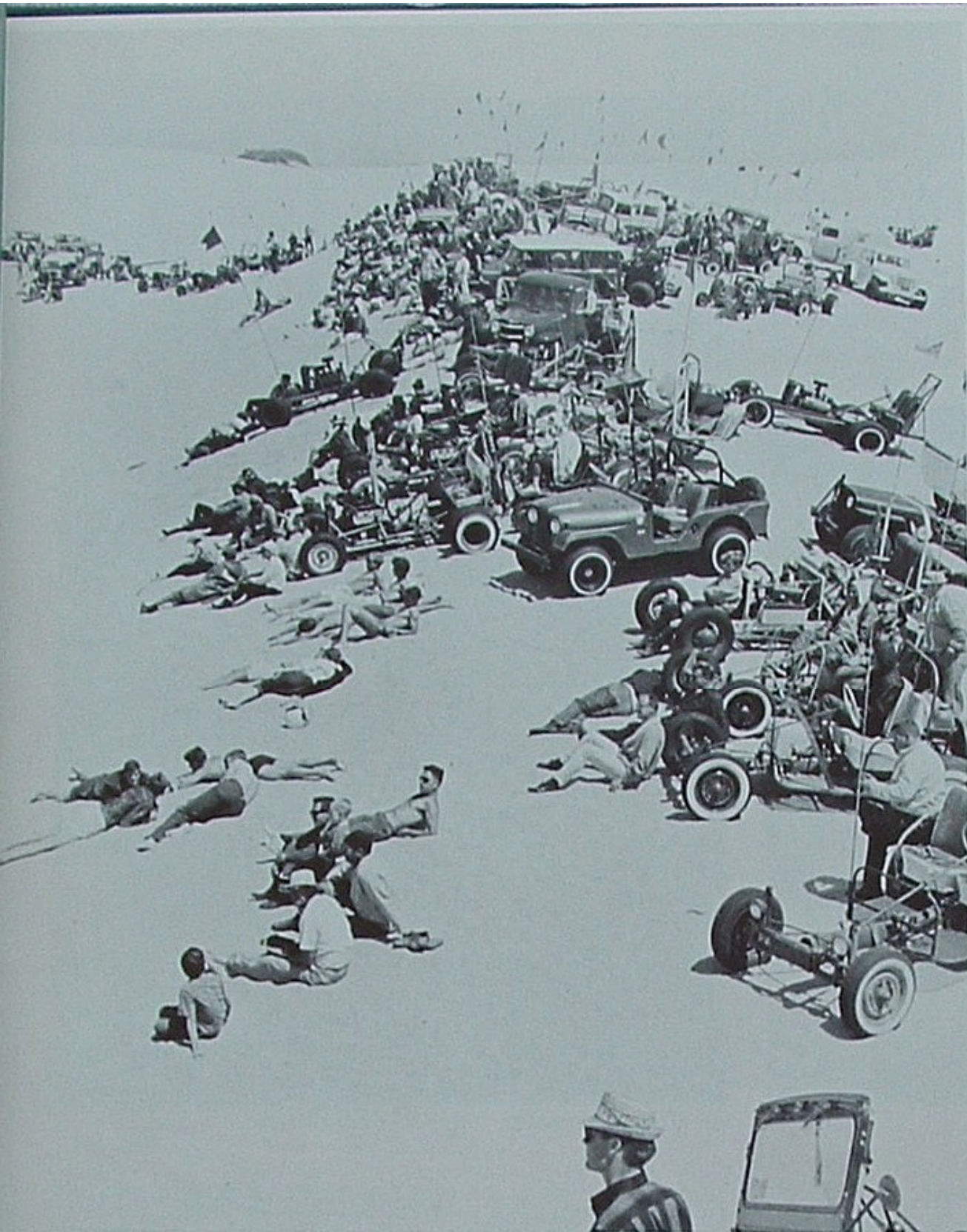
An Arizona rainmaker: cotton for Casa Grande.

tion. The sign says it is Frank Adams's. Based on lube oil volume, it is one of the biggest operations in the entire Union consignee system: Each of the big natural gas engines in the Casa Grande Valley will gobble up nearly 125 gallons a month (gallons, not quarts) of lubricating oil.

Next time you put on that shirt or dress made of high quality Pima cotton, think about Frank Adams of Casa Grande, Dick Piatt of Phoenix, Ken Woods of Brea, and remember how the sales and technical people got together to help make this year's cotton harvest a good one. It's teamwork of the *finest* sort. 76

Consignee Frank Adams is finding himself busier than ever these days. Since the accompanying article was written, the U.S. Air Force has started a pilot training program at the Casa Grande Airport, not far from Adams' bulk plant.

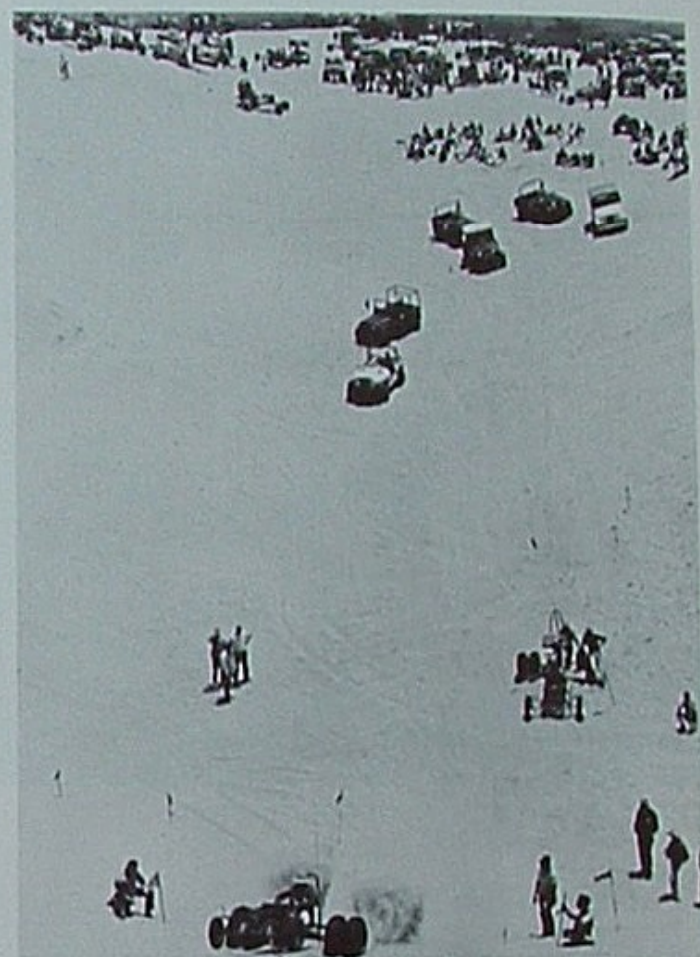
"Union gasolines and motor oils are used exclusively in this operation," according to Reg Brenchley, division sales manager for the Southwest Mountain Division.



About 5,000 were expected to turn out for the State Jeep Meet on Labor Day weekend.



One of the winners at the Fourth of July dune buggy get-together was Rod Shumway (right) of Colton, California. Union Oil dealer Port McGowne of nearby Grover City donated trophy.



Dune climbing is a favorite sport.



Not a Saharan safari, but buggy enthusiasts converging on sand dunes near Union's Santa Maria Refinery.

Sand for Free

Dune Buggy Riders Enjoy Beach Fun on Union Oil Lands

By TOM VALENTINE • Photos by the author

DUNE BUGGY RIDERS are a special breed of sportsmen. During the winter, buggy enthusiasts spend their weekends in the back yard converting an old car into a unique, wide-wheeled, fenderless vehicle called a dune buggy. Other beach buffs may choose to renovate a Jeep for sand driving, for no two of this breed sees eye to eye.

When summer comes the owners of these beach vehicles converge on convenient western coastal sand dunes to participate in dune-buggy fun — a sport that combines the excitement of surf-boarding, motorcycle hill-climbing and drag racing in the relative safety of four-wheel auto-sports on soft sand.

One of the favorite retreats for buggy enthusiasts today is the expanse of sand on property owned by Union Oil Company at Santa Maria Refinery. Riders and spectators gather from miles around to play on the wind-swept dunes, dig famous Pismo clams and camp out on the dunes at night. Name plates on the dune buggies identify owners from all over California. Other vehicles, riding on trailers, bear license plates from Oregon, Nevada and Arizona.

Every year during the Fourth of July and Labor Day weekends, dune buggy owners meet at the Santa Maria dunelands for a weekend of games and competition. This

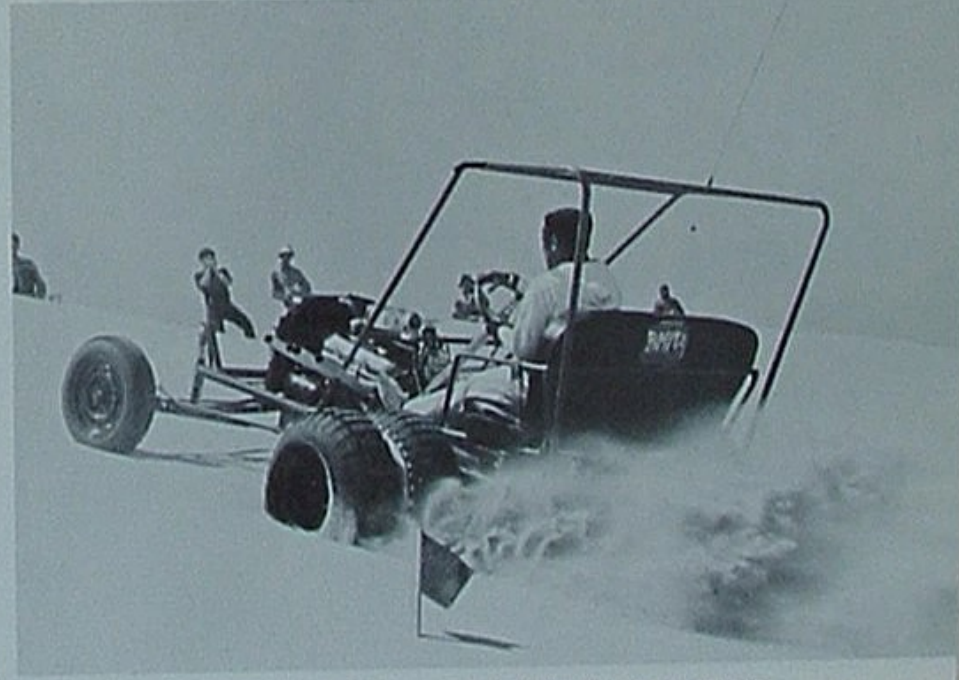
year's Independence Day get-together saw about 450 beach buggies and Jeeps compete in sand racing, hill climbing and obstacle course runs. An estimated 2,500 spectators lined the hills to watch. On Labor Day weekends, when the State Jeep Meet is held, the crowds often swell to the 5,000 mark.

Holiday competition is only part of the dune buggy fun. Year around, buggies and Jeeps are free to play on the dunes. They shoot the saucers (sheer circular faces of the dunes) and play follow-the-leader to test their driving skills and pit their novel mechanical innovations against one another.

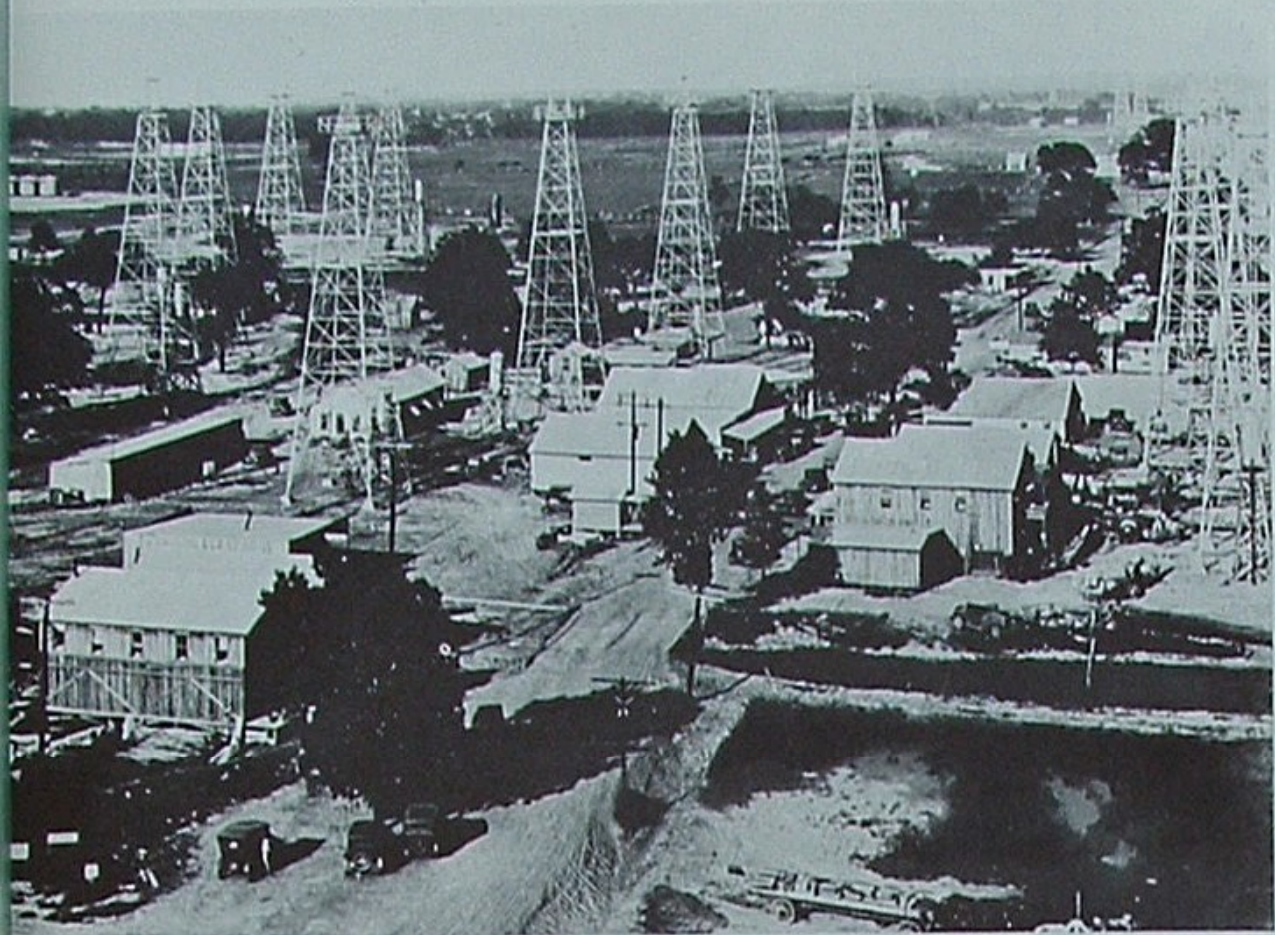
The grandest part of all is... it's free!

For nearly 15 years, Union Oil has permitted dune riders to use the sandy property, without charge or incident. (As a result, many of the buggy owners are loyal Union Oil customers.) In turn, local dune buggy and four-wheel drive organizations — such as Oceano Dune Riders, Santa Maria Sand Bugs and Santa Maria Four Wheelers — keep the dunes free of litter and enforce their own safety regulations. They patrol the area, "red flag" any danger spots and mark main travel routes. When traffic gets heavy, Santa Maria Refinery provides used oil drums as trash barrels.

Here in a picture report are some examples of why dune buggy enthusiasts are so sold on the sport. 76



Good fun for driver and spectator alike are the dune climbs; owners may spend all winter tooling up their vehicles for outings.



The Van field produced a "quiet boom" for Pure. Van was first unitized oil field.



Orthoflow fluid cracking unit at Smith's Bluff Refinery, Nederland, Texas.

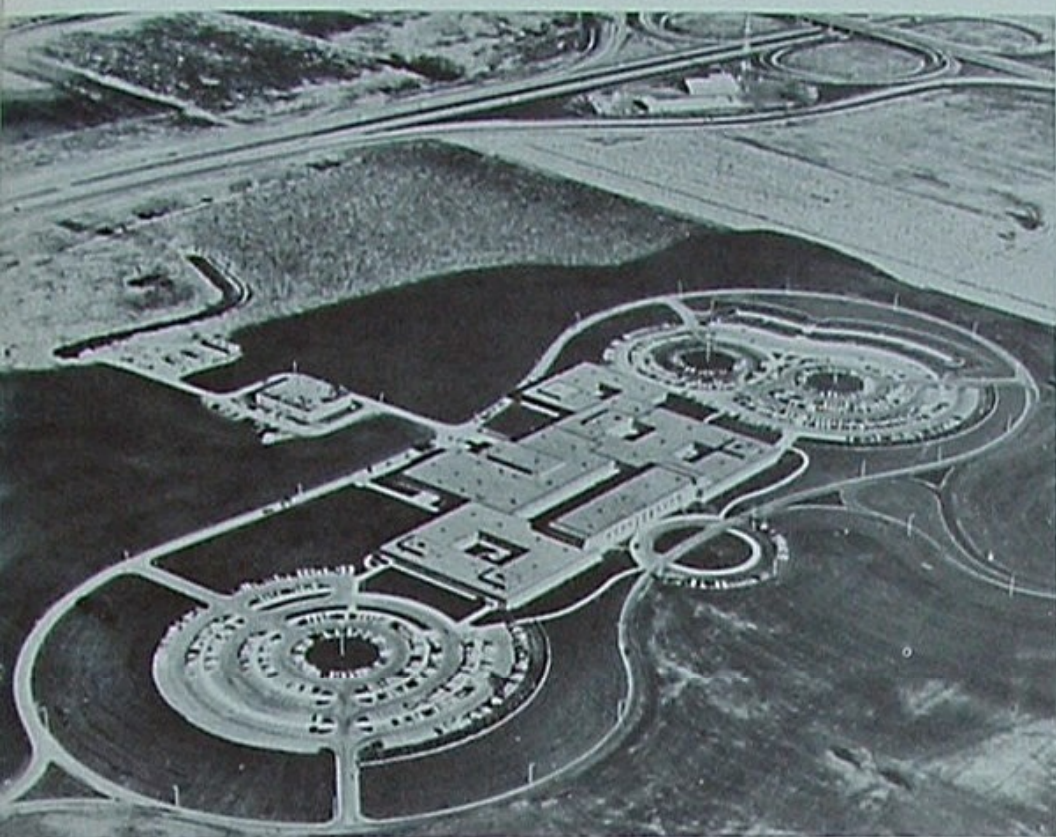
Purely Factual

A look at the



Oil Division

*Pure Brings to the Merger
a Strong
Central-Eastern Position*



Aerial view of Pure Division headquarters, Palatine, Illinois.



275 TruckStop units bear Pure Oil label in East-Central U.S.

PALATINE, ILLINOIS

TO GET ACQUAINTED with our new division, the Pure Oil Division of Union Oil Company, let's go back to 1914 when the Ohio Cities Gas Company was incorporated. Purpose of the company was to supply and distribute natural gas to several Ohio municipalities. Shortly after the company was founded, management acquired some gas leases in West Virginia to assure a continuing supply of the product.

THE CABIN CREEK INCIDENT: *Catalyst for Change*

On December 18 of that year, Ohio Cities Gas encountered a brief and adventurous incident that changed the very nature of the company's future. On that day Robert W. McIlvain, who later became vice president for production, was supervising the drilling of a natural gas well, Williams Coal No. 1, at Cabin Creek, one of the West Virginia leases.

Apparently not much hope was held for the wildcat, for at the same moment that McIlvain was drilling, Beman G. Dawes, founder and first president of Ohio Cities Gas, was in New York negotiating the sale of some properties — including the Williams Coal lease. Dawes had no way of knowing it, but on that night of December 18 the well blew in, spouting a plume of oil and gas over the derrick crown.

It looked like there was no way of notifying Dawes either. Cabin Creek was in typical wildcat country — there wasn't a telephone for 20 miles. McIlvain was a determined man, though, and he trudged through miles of mud and brush to the junction of Cabin Creek and the Kanawha River, where he sent a telegram to New

York. Not trusting to the wire, he caught a freight train to the outskirts of Charleston, West Virginia, walked into town and at three o'clock in the morning put through an emergency call to New York.

Much to McIlvain's relief (and the future success of what later was to become The Pure Oil Company), Dawes had not completed the sale. And thanks to McIlvain's long "hoot and holler" from West Virginia, all thoughts of selling were dismissed. Cabin Creek developed into a major field and over the years it has produced more than 20 million barrels of oil.

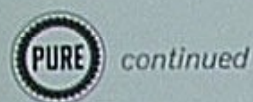
Thus, having the oil business thrust upon it, Ohio Cities Gas Company soon found its liquid assets mushrooming far beyond the immediate potentials of natural gas. But one field doth not an oil company make. The Ohio men, therefore, decided to branch out and put their eggs into several baskets.

Lacking immediate oil-field prospects, they began buying widely scattered producing and refining properties. These included the Southwestern Petroleum Company, Ardmore Refining Company, International Refining Company, The Pure Oil Company of New Jersey (then the largest independent in the U.S.A., and the company from which the name Pure comes), Cornplanter Refining Company of Pennsylvania, Moore Oil Company of Ohio, Pure Oil Company of South Dakota (there were 11 different Pure Oil companies then), Oklahoma Producing and Refining Corporation of America, and Humphreys Oil Company of Texas. The expansion led to such a widespread enterprise, devoted to all facets of the oil business, that in 1920 the corporate name was changed to The Pure Oil Company.

continued



Pure Division marketers have joined service stations with restaurants and motels.



EXPLORATION AND PRODUCTION: The Quiet Boom

Due partly to the manpower and material shortages of World War I (more than 2,000 Pure Oilers were on military leave), Pure Oil did little exploration work during its first decade. But after the war's end, and when drilling interest began pointing south, a team of the company's geologists headed for Texas. That was in 1925.

This exploration crew, pioneering new geophysical techniques, liked what they found under the little cotton-patch town of Van in East Texas. Officials of Pure, by then headquartered in Chicago, approved the leasing of 17,000 acres. Core drilling started early in 1929. On October 14, just two weeks before the stock exchange panic that precipitated the depression, Jarman No. 1 began flowing high-grade paraffinic crude oil.

Van field produced what Pure Oilers liked to refer to as the "quiet boom." The inevitable rush to the scene soon quieted. Landowners and competing companies quickly agreed to unitization. Pure Oil, which held 76 per cent of the acreage, was named operator. It was the industry's first unit plan of operation.

Quietly, over the years, Van field has produced 187 million barrels of oil; it is still producing at a rate of more than four million barrels annually. A 210-mile-long pipeline carries the oil to the Smith's Bluff Refinery at Nederland, Texas. From this Gulf Coast shipping port, refined products move by pipeline, river barge, and tankship throughout the south-central portion of the Pure Oil Division's marketing territory.

Turning back to 1921, Pure drillers made an orderly search in the nearly oil-dry states of Michigan and Illinois. By 1935, Michigan ranked fifth among the states in daily production per well, and by 1940 Pure's deep drilling in Illinois had made that state the company's No. 1 in pro-

duction. Crude oil output in both states has declined sharply since then, and as Pure Oil entered the Union family in July of this year, its No. 1 state was Texas.

Following drilling successes in Texas, Oklahoma, the Louisiana marshes and elsewhere, Pure joined Superior Oil Company in drilling the first well in the Gulf of Mexico's offshore tidelands. This joint venture resulted in the Creole field in 1938. War and governmental disputes over tidelands ownership slowed offshore development until a settlement was reached in 1953.

Today Pure brings to the merger with Union Oil leases in six tideland areas of the Gulf, including the Eugene Island and Rollover gas fields. Pure also brings a 35 per cent interest in the Ship Shoal Block 208 field in the Gulf, which, added to Union's 51 $\frac{2}{3}$ per cent holdings, gives us an 86 $\frac{2}{3}$ per cent ownership in this rich, offshore field. Allowable production there is about 9,000 barrels a day.

In the last two years, Pure's most interesting discoveries have been the Gomez gas field in Pecos County, Texas, and another good gas field at Red Hills, New Mexico.

Abroad, Pure has found success in Canada and Venezuela. In Saskatchewan province, Pure has been producing 2 $\frac{1}{2}$ million barrels of oil a year. Nearly as rewarding is a 28,000 acre joint-venture concession in Lake Maracaibo, Venezuela, where Pure's share of the production has amounted to 1 $\frac{3}{4}$ million barrels annually.

Pure's oil hunters have been active, too, in Central America, Africa and the Mideast.

In 1964, Pure's total production from 4,316 wells amounted to 31 million barrels of crude oil and natural gas liquids, and 117 million cubic feet of natural gas.

REFINING AND TRANSPORTATION: Making and Moving Products

Largely through its early acquisition of established oil companies, Pure has owned in its 50 year history a total of 12 refineries. Most of these outlived their usefulness

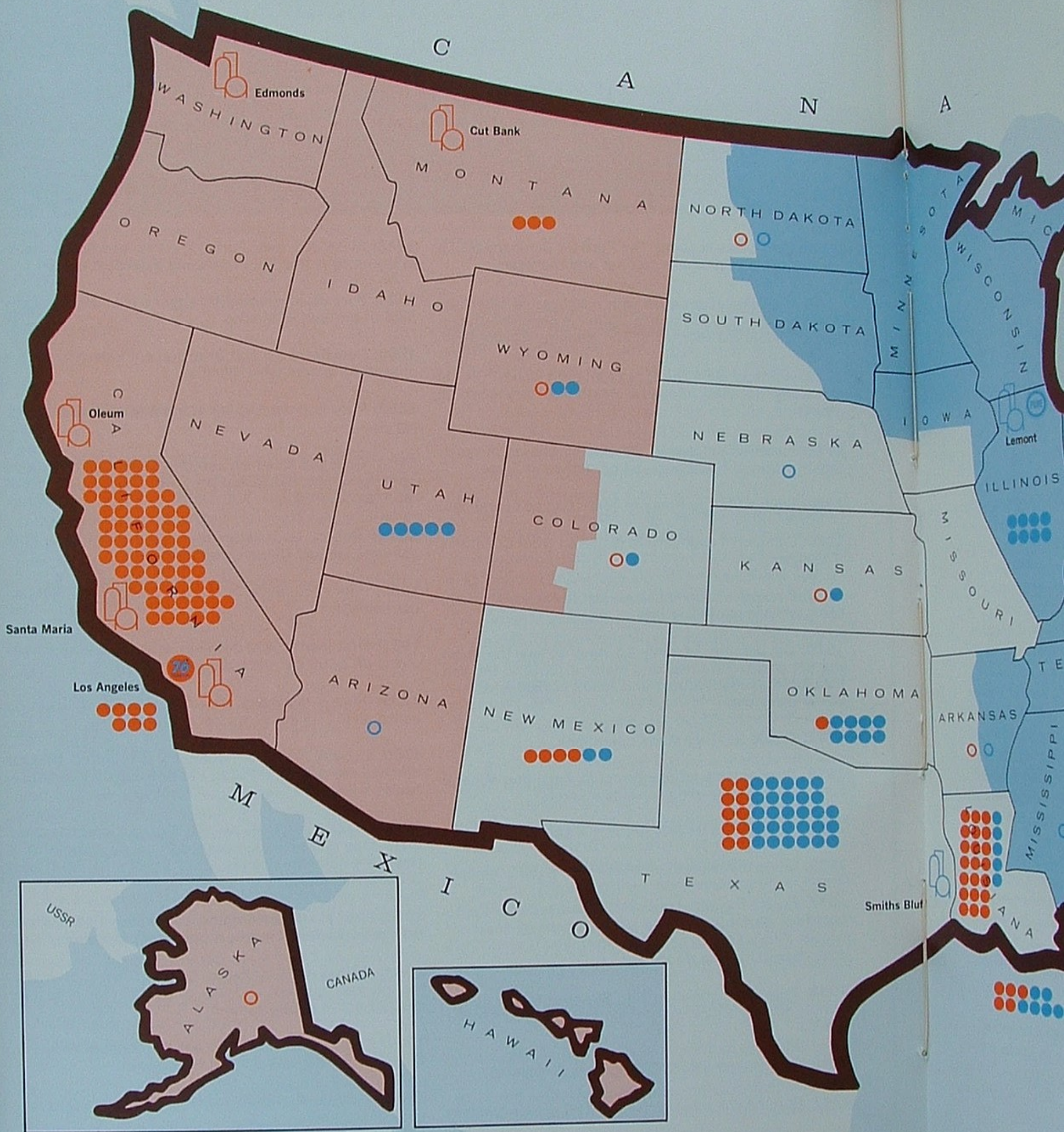
continued on page 14

HIGHLIGHTS IN THE HISTORY OF THE PURE OIL COMPANY



- 1914:** On April 9, the Columbus Production Company is incorporated, and on April 21 the name is changed to Ohio Cities Gas Company. On December 18, the company discovers oil at Cabin Creek, West Virginia.
- 1916:** Construction is begun on a 2,500-barrel-a-day refinery at Cabin Creek. Company buys oil and gas leases and two refineries in Oklahoma for \$8.4 million.
- 1917:** Ohio Cities acquires The Pure Oil Company (N.J.), an independent producer, refiner and marketer.
- 1919:** Expansion continues with purchase of Moore Oil Refining Company, Ohio. Acquisition is begun of properties of Oklahoma Producing and Refining Corporation.
- 1920:** Name of Ohio Cities is changed to The Pure Oil Company. In Ohio, the new Heath Refinery goes on stream.
- 1921:** Pure Oil Company (S. Dak.) is purchased. Acquisition is begun of Humphreys oil properties in Texas.
- 1924:** Smiths Bluff Refinery in Texas begins operations.
- 1926:** Company headquarters is moved from Columbus to Chicago.
- 1928:** Pure buys substantial interest in Hickok Oil Company, an Ohio marketing firm.
- 1929:** On October 14, only 15 days before the stock market crash, Pure makes a major discovery, the Van field in Texas. Subsequent unitization of field is conservation milestone.
- 1931:** Toledo Refinery starts operations.
- 1932:** Pure obtains large interest in American Mineral Spirits Company, leading solvents marketer.
- 1934:** Pure suffers its only net loss — \$885,000.
- 1935:** Company makes comeback, earns \$8.1 million.
- 1937:** Pure's Bunyan Travis No. 1 comes in for 2,643 barrels a day, touching off an oil boom in southern Illinois. Pure's English cottage type station is company's distinctive marketing trademark.
- 1938:** Pure, in association with Superior Oil, brings in world's first offshore well in the Creole field, Gulf of Mexico.
- 1940:** Cumberland field in Oklahoma is discovered.
- 1942:** Pure begins manufacture of 100-octane aviation gasoline, toluene and bases for synthetic rubber.
- 1943:** Pure and four other oil companies design and build Neches Butane Products Company plant for production of butadiene, a synthetic rubber base.
- 1945:** Pure emerges from war with 110,000-barrel-day refining capacity.
- 1948:** At 14,309 feet, Pure's West Poison Spider No. 1 in Wyoming is brought in as world's deepest oil well.
- 1949:** Pure discovers prolific Eugene Island natural gas field in the Gulf of Mexico.
- 1950:** New Research and Development Laboratories are opened at Crystal Lake, Illinois.
- 1952:** Pure buys remaining interest in Hickok Oil Company.
- 1953:** Gasoline sales exceed one billion gallons. Company launches TruckStop program. Adena field, Colorado, discovered.
- 1954:** Robert L. Milligan is elected president. Pure acquires Lemont (Illinois) Refinery.
- 1955:** Pure acquires W. H. Barber Company, a midwest marketing firm.
- 1957:** First jointly owned well in Venezuela produces at a rate of 2,400 barrels a day.
- 1959:** Pure's discovery well in Lisbon field, Utah, is hailed as the nation's "wildcat of the year."
- 1960:** Woodley Petroleum Company is acquired. General office is moved from Chicago to new building in suburban Palatine.
- 1961:** Firebird gasolines are introduced. Company takes major step into petrochemicals with construction of BTX (benzene-toluene-xylene) units at Smiths Bluff and Lemont Refineries.
- 1962:** First TOURest complex, combining a service station, restaurant and motel, is opened at Ashtabula, Ohio.
- 1963:** Gomez well in Pecos County, Texas, is major natural gas discovery, and also, at 20,750 feet, is world's deepest active producing well.
- 1964:** Pure makes natural gas and condensate discovery at Red Hills field, Lea County, New Mexico.
- 1965:** Pure Oil Company merges into Union Oil Company of California.

UNION OIL'S Producing & Marketing Areas



UNION OIL'S Producing & Marketing Areas (INCLUDING THE PURE OIL DIVISION)



LEGEND

- OIL PRODUCTION (1000 bbl. day)
- OIL PRODUCTION (100,000 bbl. day)
- MARKETING AREAS
- REFINERIES

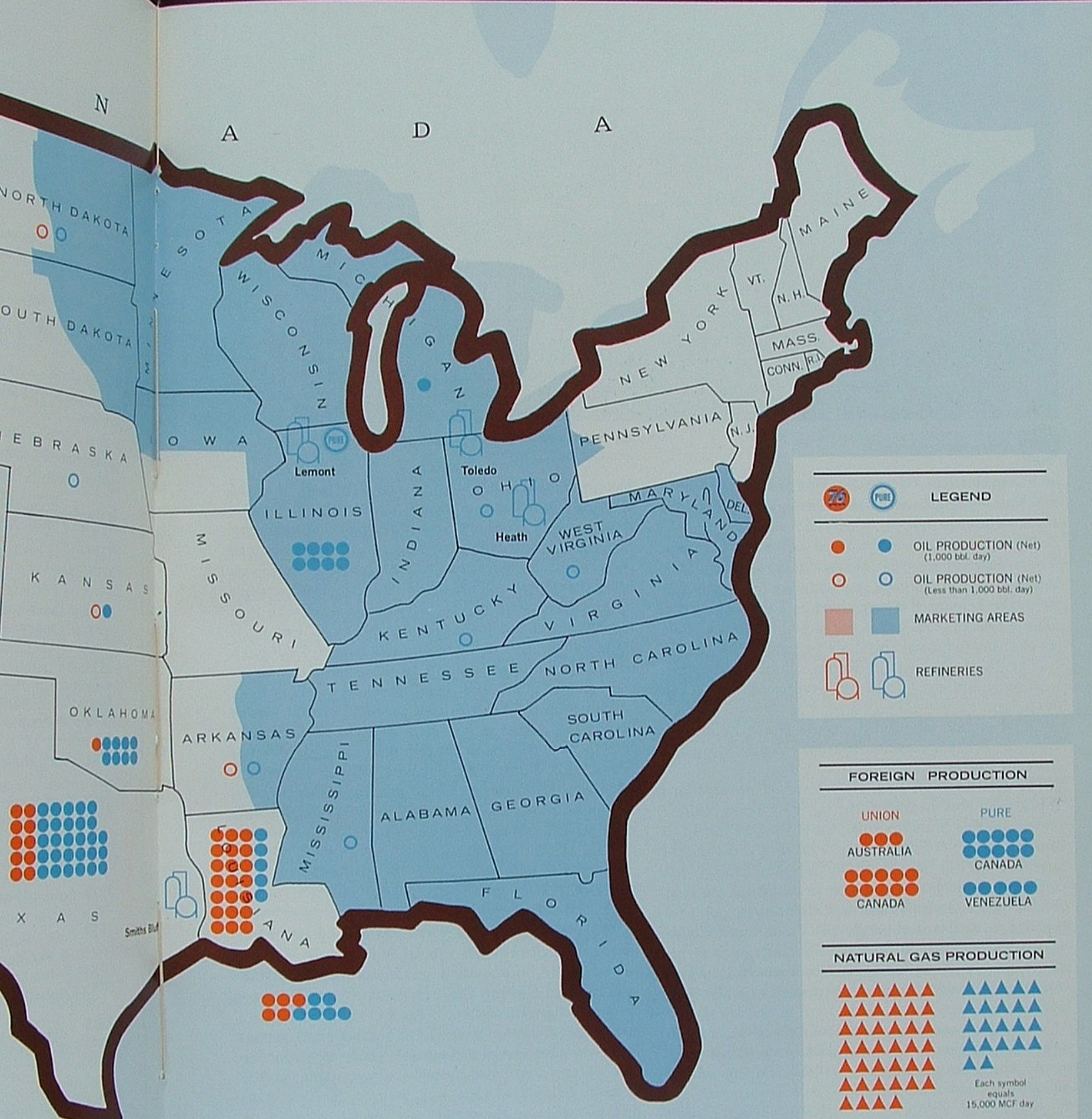
FOREIGN PRODUCTION

- UNION**
 - AUSTRALIA
 - CANADA
- PURE**
 - CANADA
 - VENEZUELA

NATURAL GAS PRODUCTION

- Each symbol represents 15,000 Mcf per day
- Each symbol represents 15,000 Mcf per day

Marketing Areas (INCLUDING THE PURE OIL DIVISION)



LEGEND

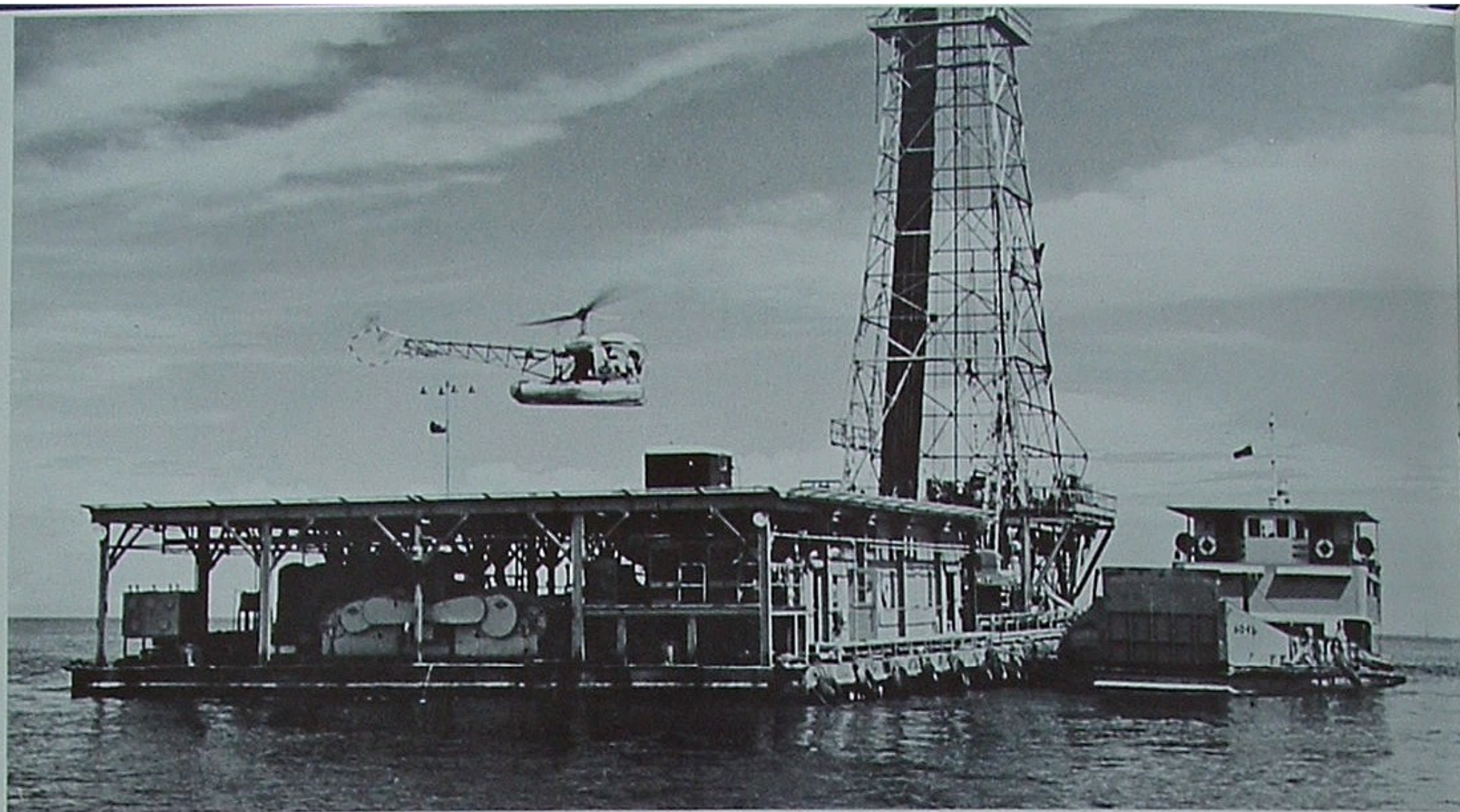
-
- OIL PRODUCTION (Net) (1,000 bbl. day)
- OIL PRODUCTION (Net) (Less than 1,000 bbl. day)
- MARKETING AREAS
- REFINERIES

FOREIGN PRODUCTION

UNION	PURE
AUSTRALIA	CANADA
CANADA	VENEZUELA

NATURAL GAS PRODUCTION

	Each symbol equals 15,000 MCF day



Helicopter lands geologist-engineer team at Lake Maracaibo, Venezuela.

PURE continued from page 10

and were closed, and today the Pure Oil Division operates four refineries with a total throughput capacity of 195,000 barrels a day.

The Lemont Refinery is situated southwest of Chicago. It was acquired in 1954 and has a capacity of 53,000 barrels a day. In addition to customary refining equipment, the Lemont Refinery contains a BTX (benzene-toluene-xylene) unit, source of the building blocks from which many industrial chemicals are made.

The Toledo Refinery in Toledo, Ohio, on Lake Erie, went on stream in 1931 and has a capacity of 30,000 barrels a day.

West of Columbus, Ohio, is the Heath Refinery at Newark; it has a capacity of 24,000 barrels a day and went on stream in 1920.

The Smith's Bluff Refinery is situated at Nederland, Texas, near Port Arthur in the big East Texas refining center. Smith's Bluff went on stream in 1924 and has a capacity of 88,500 barrels a day — making it the second largest refinery in the Union Oil Company today. It has a BTX unit and produces Purelube motor oil. As mentioned earlier, Smith's Bluff is a distribution point for pipeline, coastal tanker, barge, tank car and tank trucks.

Moreover, Pure Oil brings to our merger a 37 per cent stock interest in the Great Northern Oil Company which operates a 62,300-barrel-a-day refinery near St. Paul, Minnesota.

Another newcomer to the Union Oil ranks as a result of the July merger is the American Mineral Spirits Company, which has gained national leadership in solvent sales.

If you have looked on the map on pages 12-13, you

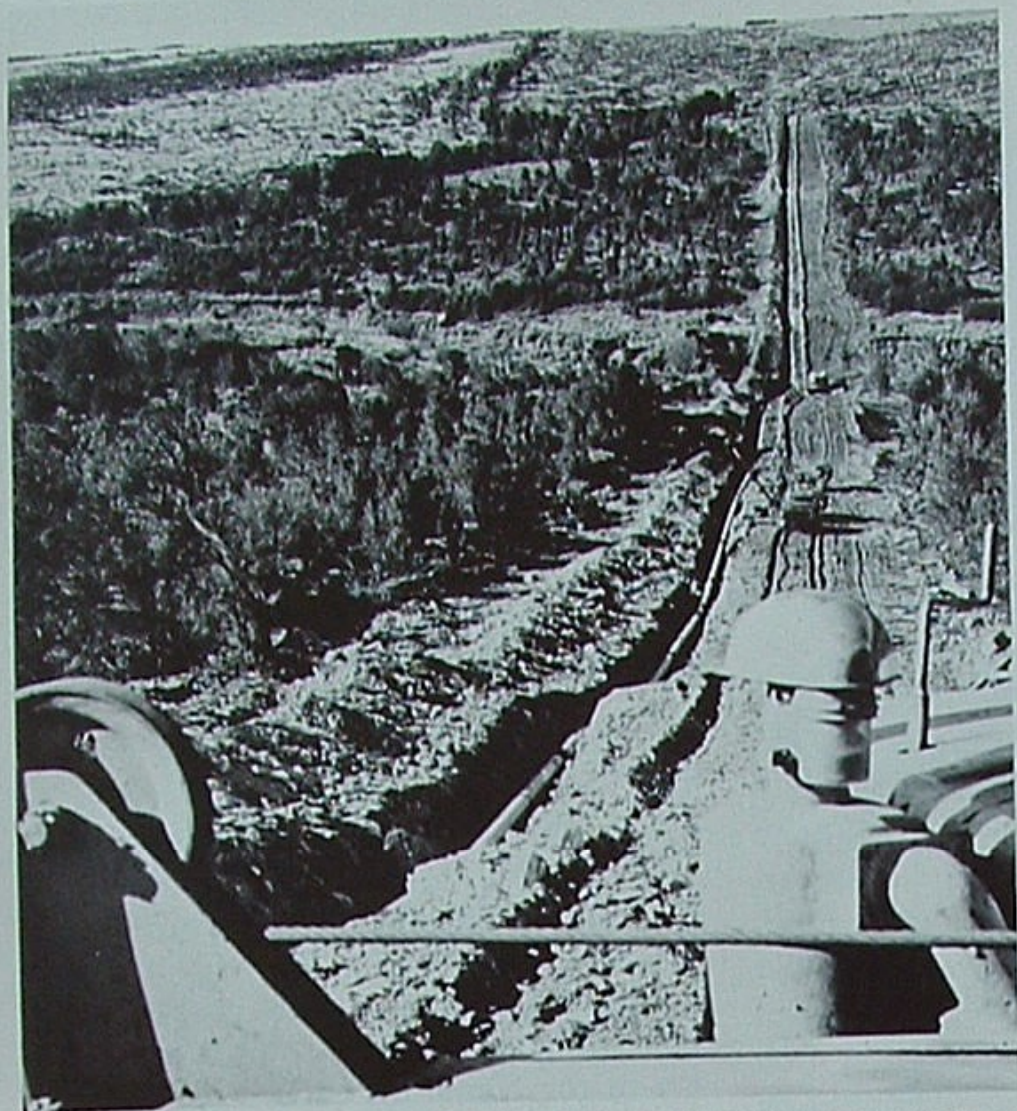
have seen that the Pure Oil Division markets in 25 states (23 are shown on the map, but there are several truck stops in Texas and Louisiana.) To handle the flow of crude oils and refined products, Pure has established an owner-interest in nearly 18,000 miles of pipelines. More than 7,200 miles of crude oil pipelines serve fields in the United States and Canada, linking them with Pure Oil Division refineries in Illinois, Ohio and Texas.

More than half the output of refined petroleum products from the four Pure Oil Division refineries moves through 10,600 miles of refined products pipelines to 34 terminals in the heart of southeast and central United States. Two coastal tankers carry 20 per cent of the gasoline and oils to nine ocean terminals along the Gulf of Mexico and the Atlantic seaboard. Another 12 per cent of the output moves to market via seven barges towed up the Mississippi and Ohio Rivers to 12 inland marine terminals. The balance, about 13 per cent, moves to market on tank car and truck.

MARKETING: *Firebird Gasoline, TruckStops, TOURest Stops*

Ohio Cities Gas Company's first three years of marketing were entrusted to subsidiary companies. In 1917, the company built its first service station and a small bulk plant in Dayton, Ohio. By 1918, the service station system had grown to three.

The acquisition of Pure Oil of South Dakota in 1921, however, gave our new division a claim to distinction. South Dakota Pure had opened a service station in Minneapolis in 1908 — what well may be the first actual drive-in station in the world.



Pipeline in S.E. Utah; Pure has nearly 18,000 miles of pipelines.



One of seven river barges used to transport fuel.

From these beginnings, Pure service stations spread rapidly across the country. It was nearly a national network, but Pure's management learned that transportation costs were eroding profits. Unless the retail outlets could be linked to refineries by low-cost pipeline or water transport, it was going to cost money to sell gasoline. As a result, Pure sold 325 service stations and bulk plants in New England, New York and New Jersey.

Today the Pure Division of Union Oil has 12,900 retail outlets in 25 states. Many are the crisply clean "cottage type" units that have continued in popularity since the mid-1940's.

When the interstate freeway project was inaugurated a decade ago, Pure decided the trucking business would be a good market for the future. Accordingly, the company launched a TruckStop building program. The Pure Division now leads the industry in truck stops: special stations where complete service is available to truckers. There are 275 major TruckStops in operation today bearing the Pure banner, and sites have been acquired for many more. Each has repair facilities, overnight accommodations for truckers, a restaurant and parking space in addition to numerous pump islands for gasoline and diesel fuel.

For motorists, there are TOURest Stops, complexes combining a Pure Oil service station, a Travelodge motel and an Aunt Jemima restaurant in one convenient location on the interstate highway system.

Leading products of the Pure Oil Division are Firebird gasolines with Tritane additives, Golden Grease, High HP Purelube, Pure Pride and Pure Butyl tires,

Citation Motor oil and, most recently, Pure Super Diesel fuel. All types of advertising media, including Red Grange's football forecasts, are used to aid the sales program.

General headquarters for the Pure Division, Union Oil Company, are located at Palatine, Illinois, about 25 miles northwest of Chicago. Built in 1960, the headquarters building can accommodate 1,500 employees.

The Pure Research Center is located at Crystal Lake, Illinois, about 20 miles northwest of Palatine. This department has made many contributions to better petroleum techniques and products. Some of its "laboratories on wheels," in fact, have been entered in the Indianapolis Memorial 500.

Briefly, this is a roundup of Pure Oil, effective at the merger into Union Oil Company. For a more graphic comparison of what producing and marketing assets the Pure Oil Division brings to Union Oil Company, we invite you to study the map on pages 12-13.

Pure's production is depicted by blue dots; Union's by orange dots. Each solid dot represents 1,000 barrels a day of crude oil. The hollow dots indicate fewer than 1,000 barrels a day of crude oil production. Natural gas production was too widely scattered to display on the map, so it is shown by orange and blue triangles in a box at the lower right. Each natural gas triangle represents 15 million cubic feet a day of natural gas production, widely accepted as roughly the equivalent of 1,000 barrels of crude oil. It is interesting to note that Union Oil Company is now the leading producer of natural gas in Louisiana. 78

BUSINESS HIGHLIGHTS

13,000 POUND GAS WELL

Ever hear of a natural gas well with 13,000 pounds per square inch pressure? We've got one in Louisiana in North Freshwater Bayou, a gas field in Vermilion parish that has been making news lately.

The well is Union-Louisiana Furs, Inc., No. F-9, and it was completed in June at 17,700 feet with an initial daily test production of 6.4 million cubic feet of gas and 96 barrels of condensate. The pressure rating on the Christmas tree is 13,000 pounds — which would have scared the boots off any gas man a few years ago.

North Freshwater Bayou is making news in other ways too. We have signed a contract with Texas Gas Transmission Corporation covering the sale of gas from this deep-zone discovery in North Freshwater Bayou. (Louisiana Furs F-9 was the first producing well from the zone.)

Texas Gas will install a 36-mile long pipeline to North Freshwater Bayou to handle the production. First gas should be delivered in November or December, with an initial delivery rate of 6 million cubic feet a day, increasing to 30 million feet within five years.

ULTRASONIC TESTING

Five years ago, engineers at Los Angeles Refinery investigated a non-destructive testing device employing ultrasonic sound that had been developed in the aircraft industry.

It occurred to people in the Engineering-Inspection Department that the ultrasonic device might be useful as a metal thickness measuring tool. If accurate measurements could be made without the trouble of shutting down a refinery unit, it would represent a significant breakthrough in inspection techniques. Also, metal temperatures had been a limiting factor. Previous inspection equipment couldn't be operated at temperatures over 150 degrees F. The ultrasonic device showed promise of permitting inspections of equipment as hot as 1,000 degrees F.

With this incentive, refinery inspection personnel got together with suppliers to develop techniques and adapt existing equipment to the new task. It worked, and as a result the ultrasonic technique today is a successful trouble shooter at Los Angeles Refinery.

The ultrasonic device was so successful, in fact, that the refinery decided to buy a tester for routine requirements, depending on contractors for peak requirements only and for less frequently used tests.

Los Angeles Refinery's ultrasonic testing equipment is installed in a van truck, enabling personnel to provide inspection of equipment while it is on stream. Refinery process units can be inspected for flaws, integrity of welds in walls up to 10 inches thick, either hot or cold while on stream.

ALASKA GAS WELLS READY

In May we reported the company would "rent" natural gas from our Kenai field to the operator of the giant Swanson River oil field in Alaska.

The gas will be delivered at rates up to 100 million cubic feet a day for use in a pressure maintenance project at Swanson. The energy of the natural gas will help maintain pressure in the field as crude oil is produced.

When Swanson is depleted some years from now, Union and its partner in the Kenai unit will have the right to withdraw the gas from the Swanson field for their own purposes: hence, the term "gas for rent."

During July three gas wells were completed in the Kenai unit, meaning we have completed our six-well drilling program. The rental arrangement goes into effect early next year with the completion of a 42-mile long pipeline from Kenai to Swanson.

THE 1965 SPARKLE CORPS

For the seventh consecutive year, Union Oil Company's select Sparkle Girls have been making their summer-long rounds of "76" service stations in the West.

Their purpose is to give dealers a woman's impression of their house-keeping, and motivate Minute Men to brighten up their stations for vacation travelers. On the basis of the Sparkle Girls' ratings, the 16 top dealers are awarded prizes daily.

Over the years, the girls have benefited Union Oil in two ways: Their presence has been a reminder to dealers of the travel season and the value of a clean station and courteous attitude. Moreover, the girls have given Union Oil a means of dramatizing the company's quality service in advertising on radio and TV.

GOOD NEWS FROM MONTANA

We report good news from our Glacier Division, where two recent oil well completions in a new pool on the northeast edge of the old Cut Bank field have virtually doubled the company's Montana production.

The first well, Union Government No. 466-3, came in at an initial rate of 1,650 barrels a day and is currently producing at about 1,450 barrels a day, while No. 466-4 averaged more than 900 barrels a day during its first week of production. These wells offset a recent discovery by another operator and are located in the Darling area of Toole County, east of Glacier National Park.

OLEUM HOSTS TEACHERS

Each year the Western Oil & Gas Association sponsors a week-long workshop program for secondary school teachers to acquaint them with the petroleum industry.

The teachers study exploration, production, refining, distribution, marketing, research and personnel.

Late in June, 50 high school teachers from Contra Costa, Alameda and Marin Counties visited Oleum Refinery for the refining phase of the workshop. The teachers not only toured the refinery and process units, but also witnessed fire fighting demonstrations, saw films on refining operations and air and water pollution control and attended lectures on training and supervision.

This is the fourth consecutive year that Oleum has handled the refining phase of the teacher workshop program.

continued on page 24



Donald B. Lourie



Robert L. Milligan

2 Directors Join Union Oil Board

TWO MEN WERE added to the Union Oil Company board of directors in July when The Pure Oil Company was merged into Union Oil of California.

They are Donald B. Lourie and Robert L. Milligan. Lourie is chairman of the board and chief executive officer of the Quaker Oats Company with headquarters in Chicago. Milligan was president of Pure and now is president of the Pure Oil Division.

Both men began their business careers in 1922. Lourie joined Quaker Oats on July 13 of that year as a statistics clerk in the Accounting Department. He progressed through a series of sales and advertising assignments until, in 1942, he was elected vice president for sales. Shortly after World War II ended, he was elected executive vice president, and was named to the president's position in 1947.

In 1953, he turned to government service, accepting appointment as undersecretary of state for administration, Washington, D.C., a position he held until May of 1954 when he was re-elected president of Quaker Oats Company. He became chief executive officer in 1956 and chairman of the board in 1962.

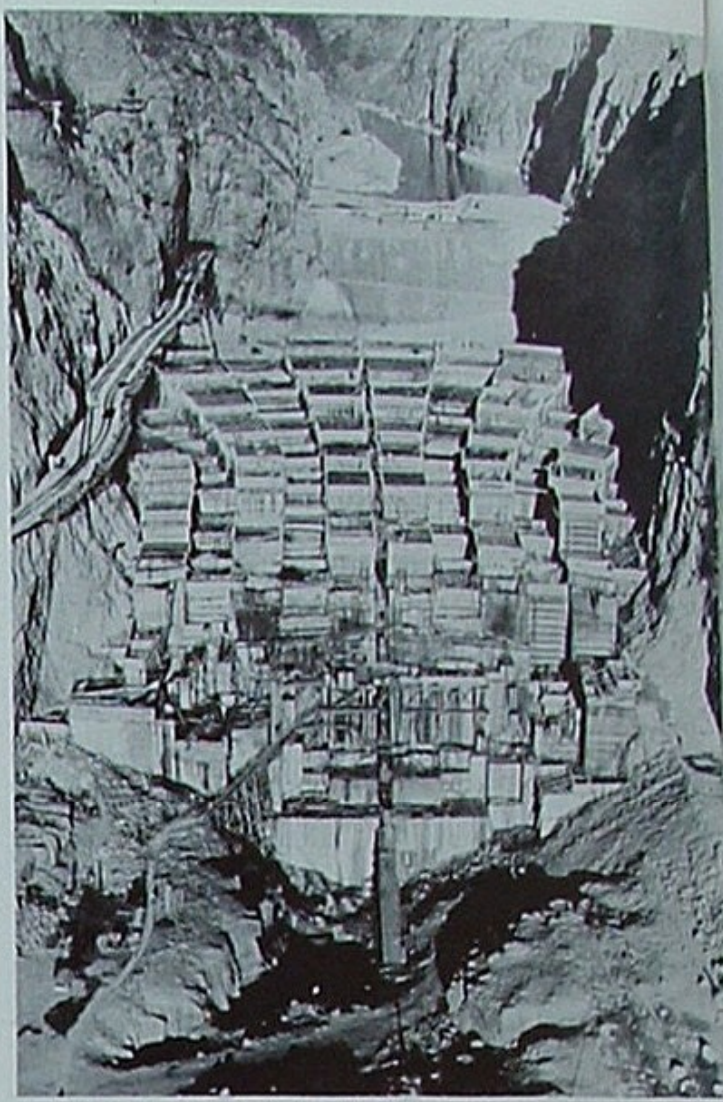
Lourie is active in the business community. He is a director of the Northern Trust Company, the Illinois Central Railroad, International Paper Company and International Harvester Company.

The same year Lourie joined Quaker Oats, Milligan began his business career with the Fairbanks Company at Springfield, Ohio, where he progressed to vice president and general manager. In 1929 he joined The Pure Oil Company as assistant to the treasurer. Four years later he was elected assistant secretary-treasurer. In 1947 he was elected vice president and treasurer, a position he held until 1951 when he was elected executive vice president. The year 1954 brought his election to the presidency, and in 1960 he became chief executive officer.

Milligan also is active in the business community, as a director of Amsted Industries, Montgomery Ward and Continental Illinois National Bank. He is a trustee of the Illinois Institute of Technology and Ohio Wesleyan University. He is a director of the American Petroleum Institute and a member of the National Petroleum Council.



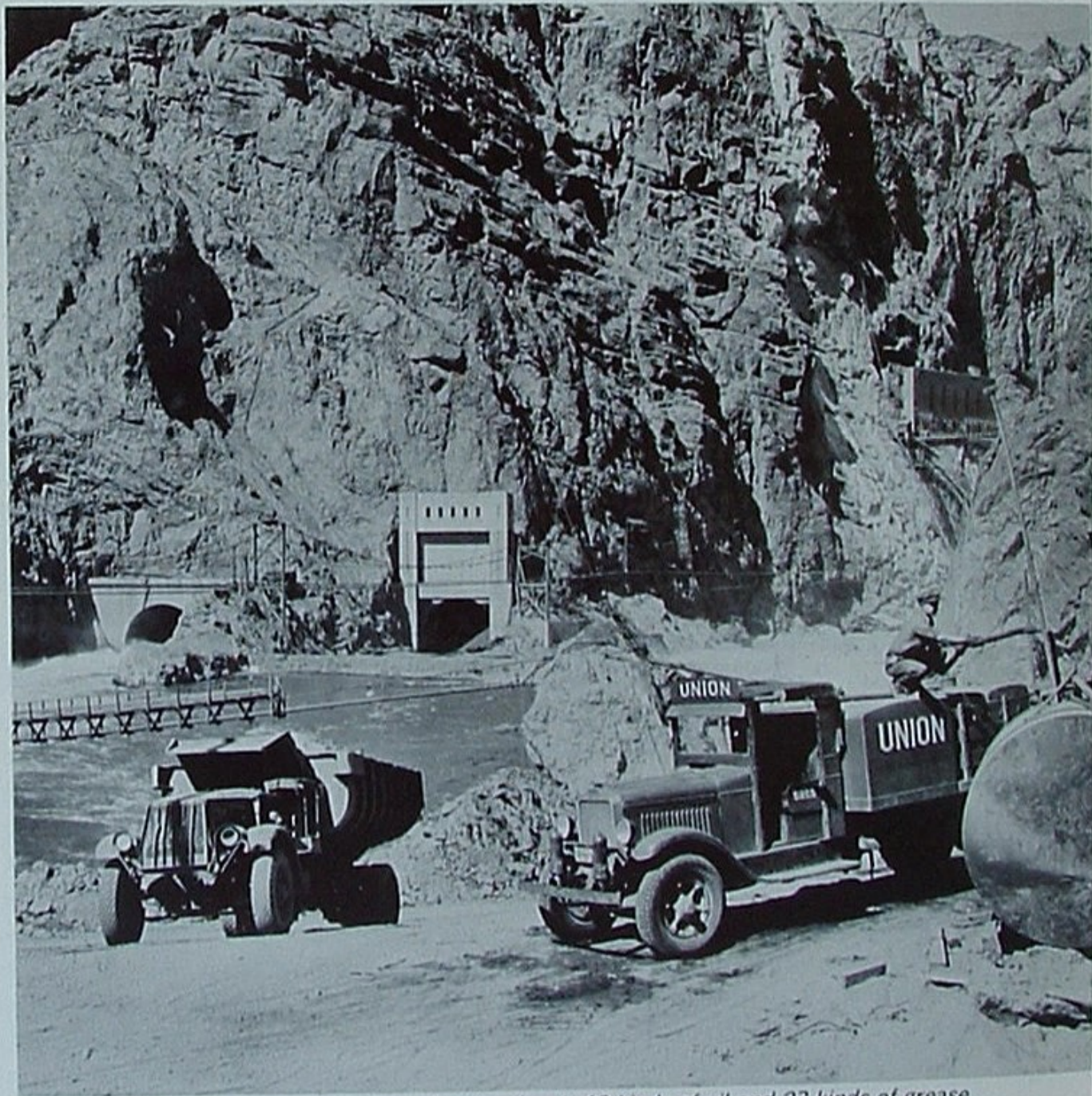
It all began here on April 20, 1931, in the Colorado River's Black Canyon.



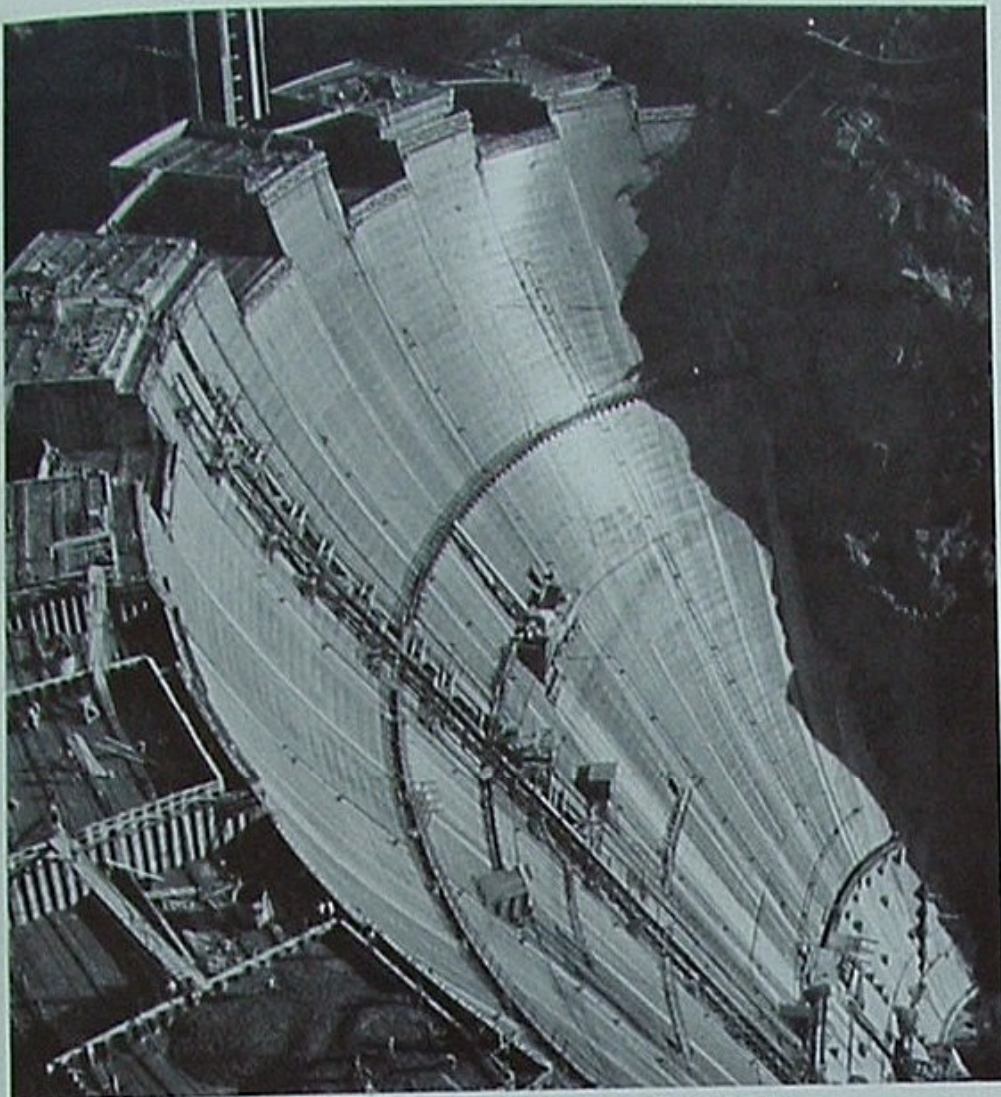
In 1933 the base took solid shape.



Los Angeles got its first electrical power from the dam in 1936.



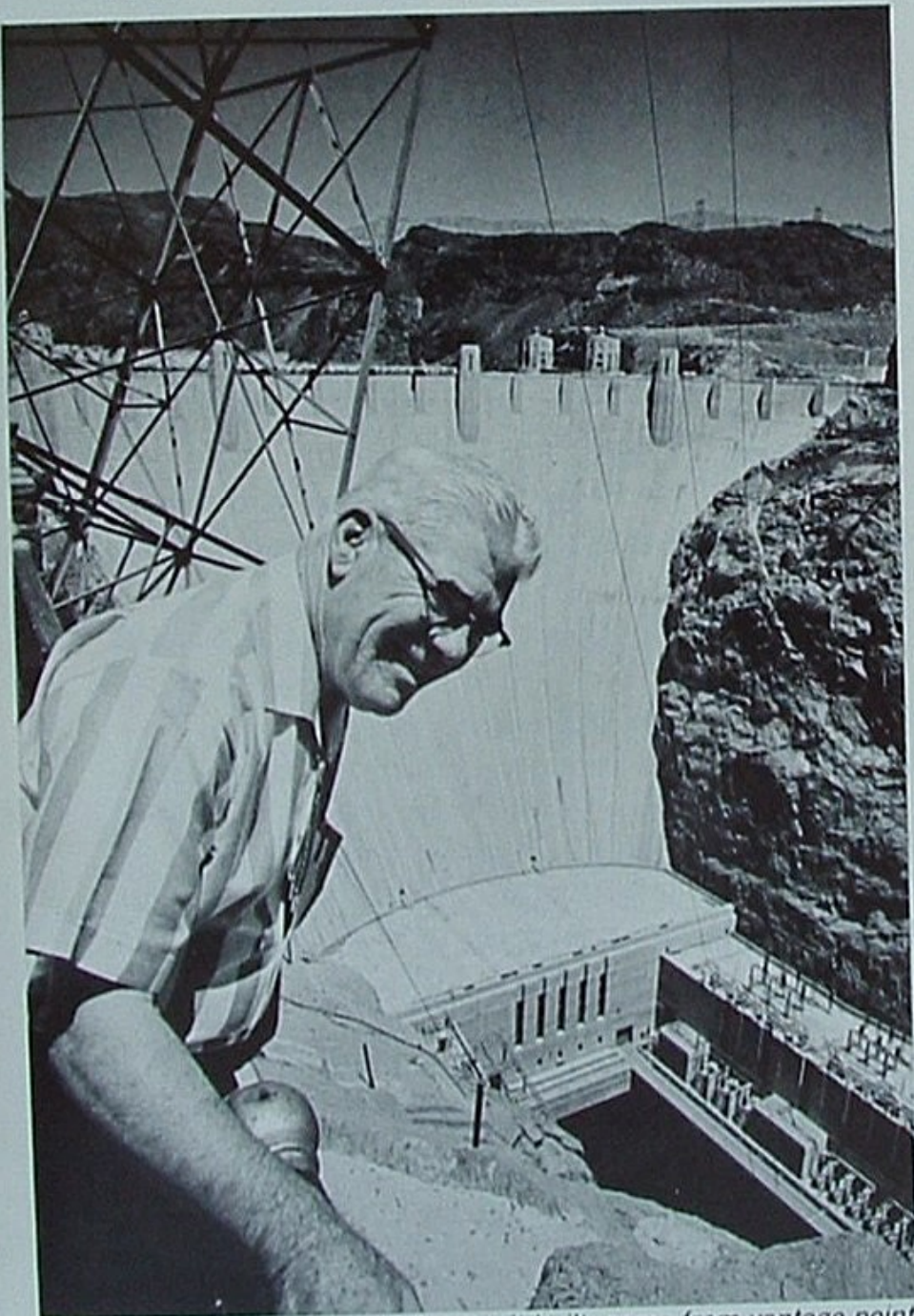
Union Oil Company supplied gasoline, diesel, solvent, 40 kinds of oil and 23 kinds of grease.



Six million tons of concrete, and half a million to go.



Trucks had to be lowered to canyon floor by derrick.



Joe Conroy, who saw it built, peers from vantage point.

TURNING BACK *The* PAGES

Thirty years ago, on September 30, 1935, Hoover Dam (then called Boulder Dam) was officially dedicated to the service of the Pacific Southwest. At that time it was described as America's greatest engineering accomplishment since construction of the Panama Canal.

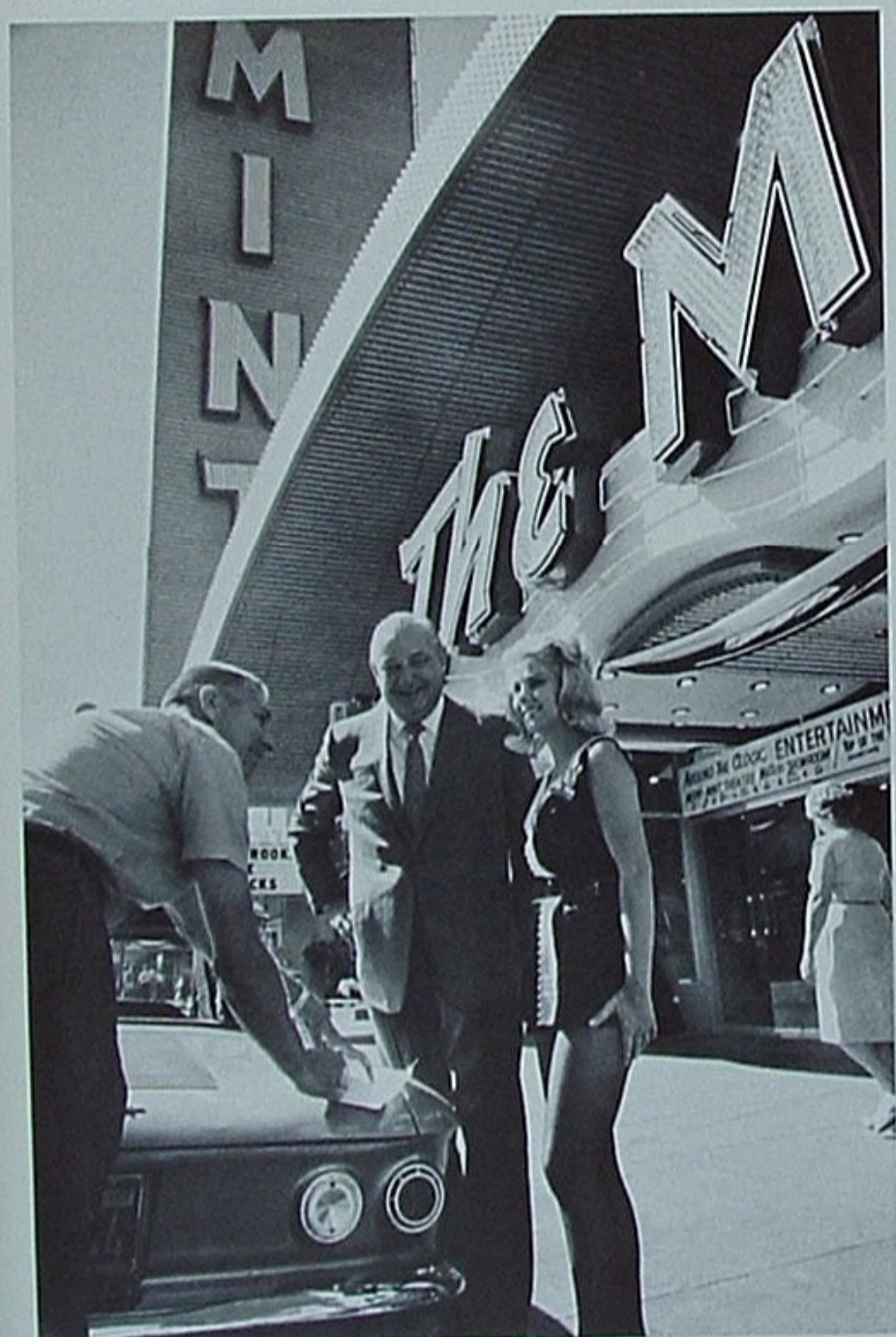
Built by Six Companies, Inc., who chose Union Oil to supply the petroleum fuels and lubricants, the 726 foot wall of concrete began its gigantic task of impounding Colorado River water in a 115-mile-long reservoir and of generating some two million horsepower of electric energy.

Finished two years ahead of schedule, the dam has undoubtedly by now returned to the West many times its original \$108 million outlay. Industry, agriculture, flood prevention and recreation all have benefitted mightily from this masterwork of a stout-hearted generation.

The only Union Oiler to work the Hoover Dam area during construction days and stay on to assist in developments over the past 30 years is Joe Conroy. He was a Union Oil salesman back in the Thirties; today he's consignee at Las Vegas. He's thinking, "A lot of water's gone through that dam." Here are some pictures to recall those days.



Mrs. Russell Garris points out newspaper article telling how her husband won 1964 Employees Credit Card Contest.



Garris signs up Barbara White with beaming approval of Sam Boyd of Mint Hotel in Las Vegas.

Russ Garris, winner of the 1964-65 credit card contest, describes inside tips on how you too can win.

TO ILLUSTRATE how Russell G. Garris won Union Oil's 1964-65 Employee Credit Card Contest, we suggested posing him with one of the 201 active new credit card customers he accounted for during the year. The customer chosen was Sam A. Boyd, managing director of the Mint Hotel and Casino in Las Vegas. We placed both men in front of the hotel and told the photographer to shoot. Everyone seemed a little unnatural and ill at ease. Then a significant thing happened:

W I N N E R

One of the hotel's most photogenic employees, Miss Barbara White, came out with a message for Boyd. Suddenly everybody relaxed. Boyd's face lighted up with a broad smile. Garris quickly drew a credit card application from his coat pocket and began to write. Miss White responded beautifully.

Later we confided to Garris: "That was quite a stunt you pulled making believe you were signing her up for a credit card."

"That was no stunt!" Garris replied. "I signed her up right on the spot."

Undoubtedly that incident explains better than we could how Russ won the contest. Furthermore, he went on to explain:

"I never approached any person with the idea that he was doing me a favor to sign an application. Actually, I was doing him a favor. Practically every prospect I contacted was either pleased or flattered to be asked. And why shouldn't they be?"

SALESMANSHIP

"Ever stop to realize how convenient a credit card is? When traveling, you don't have to carry large amounts of money or traveler's checks. In Union and affiliated stations the card is good for gas, oil, tires, batteries—practically everything you need daily or in

emergencies for the car.

"Then there's the accounting convenience. Each month the company sends you an itemized record of your purchases—gathered from everywhere into one envelope, each invoice bearing your signed okay, and all totaled for the month. Perfect for the household budget record or as evidence for the tax man!

"The credit card is great even if you pay cash for gasoline. Who knows when an emergency might crop up to ruin the best of budget plans? If so, just charge a few purchases at Union Oil until the storm blows over.

"What about the prospect who has gotten in the habit of using a competitor's credit card? Well, let me tell you something. Out here in the desert, as well as a lot of other places, service stations of one company may be few and far between. So I tell the competitor's customer to carry a Union card too—if only for insurance and as an excellent credit reference.

PROPER SELECTION

"Then you don't just hand out the applications wholesale to all takers?"

"Never. That would be a waste of effort. You're much better off to concentrate on good solid citizens—people who look like they work and pay their bills. And when I find one, I don't just hand him an application. I fill it out for him right then and there. All he has to do is sign it.

"Of course, sometimes you find such solid citizens in groups—like the PTA or the service clubs or the church groups. I belong to the Clark County Gem Society and the Las Vegas Trailer Club and the Optimists. These folks will almost take applications away from you when they know you're connected with an oil company. They're the cream o' the crop—the best people in the world to do business with. I like 'em!

"By the way, it was the Optimists' Club that gave me

I N L A S V E G A S

"Here in Las Vegas, also, we're a sort of gateway to the West. Lots of newcomers from the East stop here on their way to California. When I get a chance to see such people, I usually give 'em a 'Royal' welcome to the Pacific Coast—a Union credit card application."

THE FOLLOW-THROUGH

"But, Russ," we interjected, "How do you account for your high percentage of *active* new credit cards—the people who actually start and continue buying? Is it true that out of a few more than 400 applicants, you obtained 201 active new accounts?"

"That's right," he answered. "The answer to a good score in this credit card game is the same as that of a good score in golf—follow-through. I never take it for granted that my responsibility ends with the signing of each application. Whenever possible, I contact the applicant at a later date to see if he has received the card. If he hasn't, I make a few inquiries.

"Here's something else that's important: Whenever I receive a dollar in Autoscrip from the company, which tells who was issued a card, I sit right down and write the new customer a note of gratitude and welcome. Or else I give him a telephone call. That's one way to help him pick the right service station when he's making up his mind to stop. People appreciate being remembered and thanked."

the credit-card philosophy I work by. The Optimists' creed is 'Talk health, happiness and prosperity to everyone you meet!' Well, I also talk Union Oil credit cards to everyone I meet. The results have been optimistic to say the least."

Russell G. Garris joined Union Oil Company as a general clerk at Maltha Refinery in 1945. Since that date he has handled marketing distribution assignments at Bakersfield and San Diego. Currently, as dispatcher in Las Vegas, he is responsible for keeping a large portion of the Mojave desert area supplied with Union Oil products.

He's also a second-generation Union Oiler. His father, Charles H. Garris, now 91, worked in the company's Field Department before retiring. The elder Garris and Mrs. Garris, 87, still live in Taft, California, where Russ was born.

The big pay day for Russ and his wife came on July 7th of this year. They were guests of our top marketing men and their wives at a dinner-show in the Stardust hotel. It was the occasion but not the place for speeches. Vice President C. E. Rathbone simply handed Russ a \$500 check and said, "Here's something for your wife." That brought to exactly \$901 the amount Garris had collected in total prize money and Autoscrip.

The winner responded: "Thanks, but I think I will do better in 1965." 78



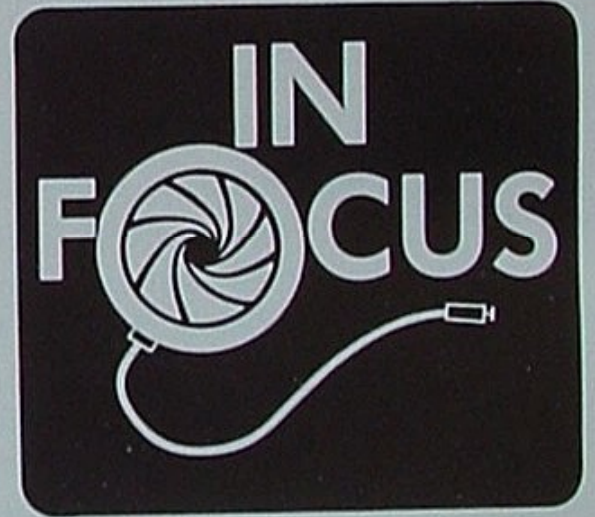
OREGON'S THUNDEREGG — FIRST STATE ROCK: *Walt E. Haynes (R), Union Oil consignee and Chamber of Commerce president at Prineville, Oregon, had the honor of presenting Gov. Mark O. Hatfield with a prized plume thunderegg during ceremonies marking Oregon's adoption of a state rock, the first state to do so. Recognition of the agate-studded rock is a tribute to the mining industry and to one of the world's fastest growing hobbies — rockhounding.*



BIOASTRONAUTICS OFFICER: *Lt. Joseph Janni, son of Union Oiler Frank J. Janni, Portland, holds the ultra-modern title of "Air Force weapons laboratory bioastronautics project officer." As such, he had a hand in developing five radiation instruments used aboard the Gemini 4 capsule when McDivitt and White pioneered America's first walk in space. Through an officer training course at the University of Portland, the bioastronautics officer went on to Cape Kennedy for the launching, then to the Manned Space Center in Houston to assist in flight control. The thing he is holding must be a widget.*

**NO ONE DISABLED
DURING 2 MILLION MANHOURS:**

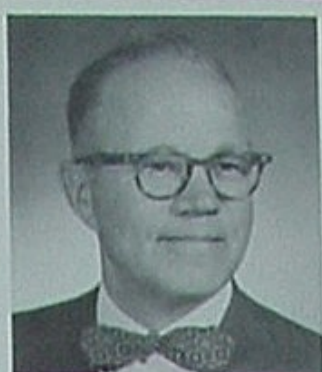
The Analytical Department at Research Center, Brea, now with 61 employees, has chalked up two million manhours without a disabling injury. Their record dates back to 1949. Vice President Dr. W. E. Bradley (left) presented the departmental recognition to supervisor George R. Lake and supplied wallet-size replicas for all employees involved.



ELECTED BY GIRLS' CLUB: *Officers elected by the Union Oil Girls' Club, Los Angeles, for the 1965-66 term are (from left): Margaret Cornalino, recording secretary; Joan Haden, president; Marjorie Van de More, treasurer; Linda Belcher, assistant treasurer; Geraldine Scheffels, corresponding secretary; and Sue Bolger, vice president.*



TWO THAT DIDN'T GET AWAY! Consignee Henry "Hank" Mocettini at Greenfield, California, thus far holds both first and second claims for the largest fresh-water fish taken in 1965 by members of Arroyo Seco Rod and Gun Club. His two lunker steelheads measured 27 and 24½ inches in length and weighed six and four pounds respectively. He also won the club's 1963 trophy for the largest rainbow trout taken.



HONORED: Larry W. Chasteen, assistant manager of Oil and Gas Reserves, was presented a service citation on May 26 by the Conservation Committee of California Oil Producers.



THE RED CROSS CAME AND GOT IT! A blood-donor innovation was tried successfully at Union Oil Center on July 9th. The Red Cross set up a six-bed facility in the mezzanine hallway and awaited the response. Inspired by resolute leaders of the Girls' Club, 144 employees heeded the call, and 133 units of blood were collected. One donor had especially good reason for being there; she said, "My husband had open-heart surgery last February and required 27 pints of the correct type blood right then. The Red Cross supplied it."



"THE DEPRESSION WAS ROUGH!"

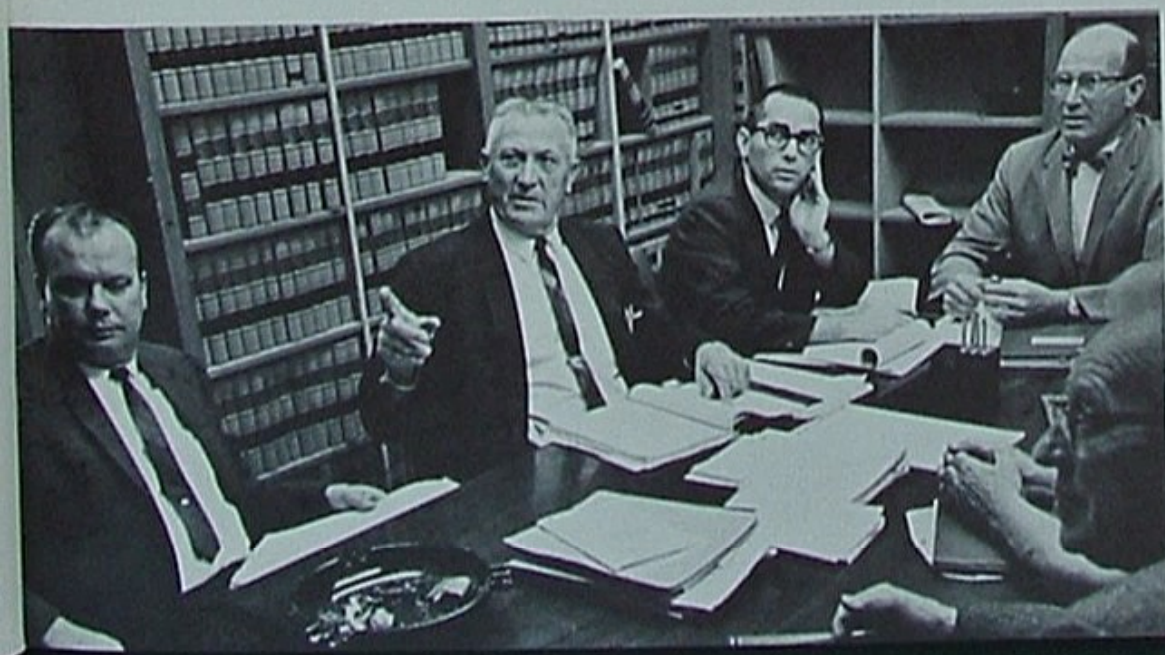
A long, long time ago, in November of 1936, Union Oil's division credit manager, C. H. Mann, sent a polite reminder to a Los Angeles credit card customer requesting payment of a \$5 balance. The letter bore no fruit—at least for 29 years. Now it has been returned by an executor of the customer's estate, along with the \$5. On the letter's margin is written, "That depression was rough! Sorry to make you wait so long. Thanks"



IT ADDS UP! Both of the accompanying photos introduce Bob Sheppard of Winston-Salem, N.C. But the pictures were taken \$2,000 apart. One shows a four-year-old with his first Union Oil dividend check of \$2. The other shows a teenager with the \$12.75 he received in "76" dividends this spring. Bob's father, who advised the boy to buy stock with part of his piggy-bank savings, states the young financier has 51 shares.



SIGN OF THE TIMES: The popularity of consignee Bert R. Harden and his wife among their fellow residents of Veradale, Washington, was given bill-board space on the occasion of Bert's 40th anniversary with Union Oil. A host of their friends in the Spokane area also honored the couple.



HIS HONOR, THE MAYOR: On June 30th, Clyde Bernhardt, utilities supervisor at Los Angeles Refinery, added to his responsibilities those of the office of mayor at Lomita, California. He was introduced to readers of Seventy-Six in the October, 1964, issue via an article commending his civic activities as councilman. In the photo he gives finger emphasis to a point while in conference with city officials (from left) Ray Farthing, Stan Green and former mayor Joe Haslam.

BUSINESS HIGHLIGHTS

continued from page 17

NEW MARKETING STATIONS

Union Oil consignees at Casa Grande and Holbrook, Arizona, and Salinas, California, are now operating from new marketing stations recently constructed by the company to replace obsolete facilities.

Located on new sites, all three plants have underground storage tanks for bulk petroleum products.

The Salinas installation features the first bottom truck-loading equipment installed at a Union Oil marketing station. This means the truck-loading operation is handled at ground level rather than by climbing on top of the truck.

OOPS, WE GOOFED

On occasion we may be gently chided for boasting of the West and its unprecedented growth, but now we find we are actually underestimating this mushrooming population trend and what it means to all of us.

For example, in the last issue of SEVENTY-SIX we reported on the significance of the growth in the West. Writing on the tenth anniversary of our serving the petroleum requirements of Western Airlines, we said:

"In those ten years, things have grown to the extent that Western's fueling system at Los Angeles Airport now handles 2½ times as much fuel every month as it did a decade ago."

The statement errs considerably—on the low side. What we should have said was this: Western's fueling system at Los Angeles Airport now handles 2½ times as much fuel every month as the *entire Western Airlines fleet* used 10 years ago.

That's really growing!

WEEKEND ADVENTURES

A June Dairy Tours promotion, part of our Weekend Adventure Drive program, was an apparent success.

Many letters have been received from dairies complimenting the company on the program.

Along with the Dairy Tour brochure, 300,000 credit card applications were distributed to homes by milk men during June, which was Dairy Month.

THEY'RE OFF AND RUNNING

Union Oil has expanded its coverage of horse racing this year. The company is sponsoring the Del Mar races over a 12-station California-Nevada CBS-TV network from July 31 to September 11.

HOW TO WIN CUSTOMERS

How do you keep customers coming back to your business? This is a serious question for any company that wants to stay in business for long.

Union Oil, after a lengthy study of the habits of motorists, decided to dramatize the answers for dealers. During July and August, Union Oil dealers gathered in workshop sessions to see a training film titled "The Plus that Makes the Difference."

The film shows the importance of the customer-dealer relationship, and points out that confidence and trust in the dealer are major factors that bring customers back for repeat business—assuming, of course, that you have a good product to sell in the first place.

SERVICE EMBLEM AWARDS



REFINING & MARKETING

September 1965

40 YEARS

CLARENCE TRUESDALE . . . Santa Maria Dist., Calif.

35 YEARS

EARL C. STINSON . . . Oleum Refinery

30 YEARS

FRANK T. GRAY . . . Los Angeles
CARL D. MORTON . . . Los Angeles Refinery
RICHARD E. PERRY . . . Union Oil Center
CHARLES W. ROBISON . . . Los Angeles Refinery
RICHARD C. VERRAN . . . Oleum Refinery

25 YEARS

LOREN F. GRANDEY . . . Union Oil Center
MALCOLM N. HULL . . . Los Angeles Refinery
RUSSELL R. RENTZEL . . . Los Angeles Refinery

20 YEARS

REFUGIO R. ALVARADO . . . Oleum Refinery
BERNARD J. AVERBECK . . . Phoenix
NORMAN L. BAKKE . . . Oleum Refinery
RAY F. BOTELLO . . . Los Angeles
WARREN W. BOUSMAN . . . Los Angeles Refinery
LEO M. CHAPMAN . . . Oleum Refinery
BILLY E. COLE . . . Oleum Refinery
CHARLES L. COOK . . . Oleum Refinery
WILLIAM D. COOK . . . Oleum Refinery
HOMER L. ERICKSON . . . Oleum Refinery
RICHARD F. HANCOCK . . . Los Angeles
EDWARD H. HANSON . . . San Francisco
JOHN HARMON . . . Oleum Refinery
LEE M. HARP . . . Santa Maria Refinery
EUGENE F. HILL . . . Oleum Refinery
HARLEY E. HOOKER . . . Great Falls, Mont.
JOHN W. HUNT . . . Los Angeles Refinery
FRANK J. KERTH . . . Anchorage, Alaska
ELO J. MALEK . . . Oleum Refinery
R. J. McLAUGHLIN . . . Los Angeles Refinery
HAROLD O. MILLER . . . Los Angeles Refinery
RALPH A. NICHOLS . . . San Diego, Calif.
FRANK J. OSTER . . . Midway Dist., Calif.
VERNON E. OWEN . . . Cut Bank Refinery

CHARLES S. PARKER, JR. Union Oil Center
 NELLIE P. PRICE Seattle
 LEO G. RECCHI Oleum Refinery
 DANIEL B. ROSE Oleum Refinery
 MILTON T. ST. ONGE Oleum Refinery
 WESLEY G. TAMES Oleum Refinery
 IRA W. TUCKER Union Oil Center
 EDWARD E. WALTON Seattle
 CLARENCE L. WILDMAN Oleum Refinery
 ERNEST R. WIVEL Oleum Refinery
 JESSE J. ZUPPAN Oleum Refinery

15 YEARS

JAMES LEE ANDERSON Oleum Refinery
 JOE N. BOYLES Los Angeles Refinery
 CHARLES L. CARVER Oleum Refinery
 DAVID F. CHARLES Union Oil Center
 OLIVER F. CONREY Santa Fe Springs, Calif.
 RICHARD COX Spokane, Wash.
 FORREST B. CRITES Oleum Refinery
 H. R. HANSEN, JR. Union Oil Center
 MELVIN L. INGALLS Oleum Refinery
 C. H. NOERENBERG Great Falls, Mont.
 H. K. VAN OOSTERWIJK Oleum Refinery
 ANTHONY PALUMBO Oleum Refinery
 ROBERT D. READY Cut Bank Refinery
 J. J. SNIDER Los Angeles
 LOUISE K. TULLEY Union Oil Center
 JOHN T. URONE Oleum Refinery
 ROBERT E. YOUNG Cut Bank Refinery
 LOUIS M. WITT Oleum Refinery

10 YEARS

JOHN W. ANDERSON Los Angeles Refinery
 PAUL ERZEN, JR. Los Angeles Refinery
 WENDELL R. GOTT Los Angeles Refinery
 DONALD L. HANLEY Los Angeles Refinery
 CHARLES J. HOLLAND Avenal Dist., Calif.
 JOHN P. MAYERNICK Oleum Refinery
 KAREY C. MAYFIELD Los Angeles Refinery
 ROY J. ROACH Los Angeles Refinery

SUBSIDIARIES

25 YEARS

PAUL F. LUETH Unoco, Hong Kong

EXPLORATION & PRODUCTION

September 1965

40 YEARS

L. A. BILLINGTON Santa Fe Springs, Calif.
 DENMAN E. TALLEY Bakersfield, Calif.

30 YEARS

EARNEST L. WARD Union Oil Center

20 YEARS

JAMES H. BRICKEY Orcutt, Calif.
 EDDIE H. CAPITANI Orcutt, Calif.
 CONRAD W. KURTZ Santa Maria, Calif.
 CHARLES W. SMITH Bakersfield, Calif.

15 YEARS

WILLIS M. STANLEY Roswell, N. Mex.
 ROBERT J. WALLACE Bardsdale, Calif.

10 YEARS

JOSEPH A. LANKO Coalinga, Calif.
 JAMES W. LIVINGSTON Dominguez, Calif.
 JACK A. MENEFFEE Houston
 HAROLD M. RAINEY Union Oil Center

CORPORATE

September 1965

30 YEARS

JACK F. GRAHAM Research Center

25 YEARS

EARLE F. MEAD Union Oil Center

20 YEARS

FRANCIS A. PATE Research Center
 FRANK A. RYSAN Research Center

10 YEARS

JOHN J. FLYNN Union Oil Center
 VIRGINIA W. SMITH Union Oil Center

DEALERS

September 1965

35 YEARS

J. W. MASKROD Snoqualmie, Wash.
 G. A. PAGE Fort Klamath, Ore.
 W. A. PAGE Fort Klamath, Ore.

30 YEARS

R. D. MUNOZ Santa Maria, Calif.
 W. F. MUNOZ Santa Maria, Calif.
 H. SARVELA & SON Winlock, Wash.

25 YEARS

D. M. CHUCKOVICH Los Angeles
 LOWELL A. HEPLER Los Angeles
 SERVICE MOTOR CO., LTD. Wahiawa, Hawaii

20 YEARS

CHRIST ANTHONY Los Angeles
 EDWARD H. HUETH San Bruno, Calif.
 WAYNE JOHNSON (February 1965) Astoria, Ore.
 W. D. KILLION Ventura, Calif.
 H. C. LESLEY Hardman, Ore.
 PALOMAR MOTORS Escondido, Calif.

15 YEARS

H. R. BAKKE Fairfield, Calif.
 FRED H. CLAWSON North Hollywood, Calif.
 FLOYD DOUGLAS Santa Ana, Calif.
 JOHN M. EPPLER Firebaugh, Calif.
 GORDON GILL Saticoy, Calif.
 RAY THOMPSON Cornelius, Ore.

10 YEARS

EUGENE BENNER Glendale, Calif.
 VIRGIL BOOMER Bonanza, Ore.
 LYNN G. BREEN Cedar City, Utah
 G. EASTMAN Escondido, Calif.
 H. EASTMAN Escondido, Calif.
 ROBERT JYSTAD dba
 JYSTAD'S UNION'S FINEST Kalispell, Mont.
 MICHAEL MICHAEL Seattle, Wash.
 C. L. RICKARD Nevada City, Calif.
 H. W. ROGERS dba
 DELL MERCANTILE Dell, Mont.

5 YEARS

WILLIAM BARKLEY Chico, Calif.
 A. J. BARRETT Solvang, Calif.
 BURDICK BURTIS dba
 B & B UNION SERVICE Billings, Mont.

BURNS CHEVROLET CO. Caldwell, Id.
 JACK CROTHERS Naches, Wash.
 JACK DARNELL Poway, Calif.
 ALVAREZ B. GAINER dba
 G & S SERVICE Los Angeles
 KENNETH E. GETTY Stockton, Calif.
 EDWARD GUINTINI Arcata, Calif.
 GUY JOHNSON Beaumont, Calif.
 FRANK KNOX Santa Monica, Calif.
 FRANK MOWREY Tracy, Calif.
 NICHOLAS BROTHERS El Cajon, Calif.
 WILLIAM RAPP Seattle, Wash.
 BOB SIMPSON dba
 B & B UNION SERVICE Billings, Mont.
 ALFRED T. STURKEN dba
 G & S SERVICE Los Angeles
 GEORGE J. TAYLOR Temple City, Calif.
 JOHN H. TOELLE Mira Loma, Calif.
 T. L. VELASQUEZ Colton, Calif.
 DONALD VOLGER Los Angeles
 JACK WALLACE Alderpoint, Calif.
 L. J. ZARDO Santa Barbara, Calif.

CONSIGNEES & DISTRIBUTORS

35 YEARS

JAMES B. SHOEMAKER Hanford, Calif.

30 YEARS

JOHN G. HANSMANN Mt. Vernon, Wash.

10 YEARS

CLIFF C. DAHLSTROM Poulsbo, Wash.

5 YEARS

JOHN F. LA ZEAR Show Low, Ariz.
 WAYNE SCHULTE Delano, Calif.

RETIREMENTS

August 1965

WILLIAM A. CHAMPLIN
 Union Oil Center August 1, 1927
 GENNIE P. HOLMES
 Research Center July 16, 1942
 GRADY A. LEDBETTER
 Richfield, Calif. July 26, 1944
 RALPH W. RAMPTON
 Bakersfield, Calif. January 3, 1936
 ERNEST B. STRICKER
 Los Angeles Refinery July 17, 1928
 FREDERICK W. VIDAL
 Orcutt, Calif. May 30, 1932

IN MEMORIAM

Employees

STANLEY BIEHN
 San Francisco June 27, 1965

Retirees

SAMUEL A. ALLCOT
 Lompoc, Calif. June 6, 1965
 LUTHER M. CARIKER
 Fullerton, Calif. June 20, 1965
 FERGUS GRANT
 Orange, Calif. June 19, 1965
 EDITH T. LARSON
 Seattle June 8, 1965
 FREDERICK SCOTT
 Saratoga, Calif. June 15, 1965

UNION OIL COMPANY OF CALIFORNIA
P. O. Box 7600
Los Angeles, California 90054



WHERE WE WORK

If you have noticed your paycheck and pay stub look a little different lately, here's why. As of August 1, our payrolls have been processed on this IBM 7074. William Marshall (right) is holding a tape reel containing payroll data for the entire company. In the background, Glenn Wahl checks the machine setup prior to making the payroll run. This magnetic tape computer system (only part of which is pictured) is one of several computers employed by Union Oil Company to produce operating,

financial, engineering and government reports. In the past, when punched-card machine-processing systems were used, a typical month's sales data required 400,000 punched cards. Now the basic sales data for the entire month of August is contained in the three reels of tape lying on the table near Marshall. With the magnetic-tape systems, it is possible to quickly produce the 150 or more *kinds* of monthly reports we use in marketing — and each *kind* of report may result in as many as 5,000 individual reports such as a sales analysis for each of our service stations. The speed and flexibility of magnetic-tape processing systems helps keep us competitive in the market place of today. ⁷⁶