



JULY 1950

"On Tour"



VOL. 12, NO. 7
JULY 1950

In This Issue

SANTA PAULA OFFICE BUILDING	Front
is trim and sturdy after 60 years of service.....	Cover
UNION OIL'S FIRST HOME	3
NOW CALIFORNIA'S FIRST OIL MUSEUM	4
PETROLEUM PIONEERS	6
SANTA PAULA FESTIVAL	8
MAGNETIC FLEET	9
THE CHIPMUNK WHO FOUND COMPLETE SECURITY	10
INDUSTRIAL SUMMARY	12
"76" VIEWS OF REFINING	15
RECORD CROWD VISITS REFINERY	20
A FIFTY-IFTY PROPOSITION	22
SERVICE BIRTHDAY AWARDS	23
	Back
HOW BIG ARE THE OIL COMPANIES?	Cover

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

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

**Deep in the Heart
OF TAXES**

Raymond Moley's enlightening editorial is reprinted here through courtesy of The Los Angeles Times

Here's a suggestion for a gasoline salesman who has filled 'er up for a farmer who has just heard the President tell about the Brannan plan. It could happen in almost any State.

"So you think you are getting something for nothing and that a lot of fat cats are paying all the taxes? That's what you think! Well let's look at the facts.

"When you paid for those eight gallons of gas just now, you paid more than 197 taxes.

"First, you paid a Federal excise tax and a State gasoline tax. You probably know that much, because it's posted with the price. But that's only the beginning of the story.

"I am a dealer and I pay seven kinds of taxes—three to Uncle Sam and four to the State.

"The man who brings the gas to me from the bulk plant in the next big town pays several more taxes.

"The bulk plant is owned by a big company that sells through this whole area. That company gets its gas from a terminal by truck. The trucking company pays six Federal taxes and 11 State taxes.

"The terminal people pay 11 Federal taxes and 14 State taxes.

"The gas or oil at the terminal comes by pipe line from the refinery in Louisiana. To get it to the terminal it travels in four States. The pipe line company pays taxes in all those States. In all, it pays 51 State taxes and 12 Federal taxes.

"The refinery in Louisiana pays 12 Federal taxes and 17 State taxes.

"Then there is the pipe line that brings the crude oil to the refinery from the well. That company pays 12 Federal taxes and 15 State taxes.

"Now we get back to the well. The owner of that well pays 11 Federal taxes and 16 State taxes.

"If my arithmetic is right, that's a total of 197 taxes—68 Federal and 129 State.

"If I wanted to go on, there are several others. . . . But here's another victim—I mean customer—coming, and I have to stop.

"Just one more word, though. Who pays all these taxes—the big oil companies? No, you pay them. The benefits you get from Uncle Sam you pay for yourself. If you didn't, you wouldn't get any gas, for this gas business is no charity. And, when you come to think of it, government is no charity, either.

"The government takes it from you and gives part of it back. The rest goes for government employees' pay, nonpolitical tours and a lot of other things. If you weren't a smart fellow you wouldn't buy gas from me. And if you weren't a smart fellow I wouldn't waste all this time telling you these things. Good-by and better luck next Congress."

ON OCTOBER 17, 1890, the officers of four oil companies were summoned to a meeting in Santa Paula. Undoubtedly several of the gentlemen tied carriage or saddle horses to a hitching rail outside the town's finest new office building before walking up to a corner office on the second floor.

Hours later the group emerged to announce that a union of their four companies had been agreed upon. The consolidated organization was to be known henceforward as Union Oil Company of California.

By that business gesture, the Hardison and Stewart Oil Company, Mission Transfer Company, Sespe Oil Company and Torrey Canon Oil Company ceased to exist as independent operating companies.

But there is no evidence that unemployment resulted. Thomas R. Bard, former president of the Mission, Sespe and Torrey Canon companies, was appointed first president of the new concern. Lyman Stewart, partner in Hardison and Stewart and vice president of Mission, was named vice president of Union Oil. Hardison, who had participated in all four companies in the offices of treasurer, general manager or superintendent, became the first Union Oil treasurer. And I. H. Warring, secretary of both the Mission and Torrey Canon companies, continued in this same capacity with the new corporation. Appointed with these officers as the Company's original Board of Directors were John Irwin, Alexander Waldie, Dan McFarland, W. S. Chaffee and Caspar Taylor.

Union Oil's First Home

Although Time has called all of Union Oil's founders to other realms of endeavor, the corporation birthplace remains as you see it here—spic and span, well preserved, still functioning as a district headquarters for Union Oil in Santa Paula. Built in 1888 by Mission Transfer, the stone and brick building shows hardly a crack or scar. Its projecting second-story windows are a priceless link with the forgotten tools and skills of yesterday. That its years of usefulness may have only begun was indicated on June 3, 1950, when the building's ground floor was officially reopened and is . . .





Star exhibit of the new California Oil Museum at Santa Paula is this pre-1900 cable-tool drilling rig. Its authentic parts, gathered 1871; a back-brake and sand reel used to control the bailer; a band wheel, pitman and stirrup which raise and lower the walking and lowering the cable tools. Most of the derrick is necessarily left to our imagination, but a genuine crown block and rag-line spud-

..... Now California's First Oil Museum

IDEAS of preserving something of the tradition, equipment and spirit that prevailed in California oil fields prior to 1900 were born in the minds of veteran oil men, some of whom have witnessed nearly the entire evolution of this swiftly changing industry. They saw,

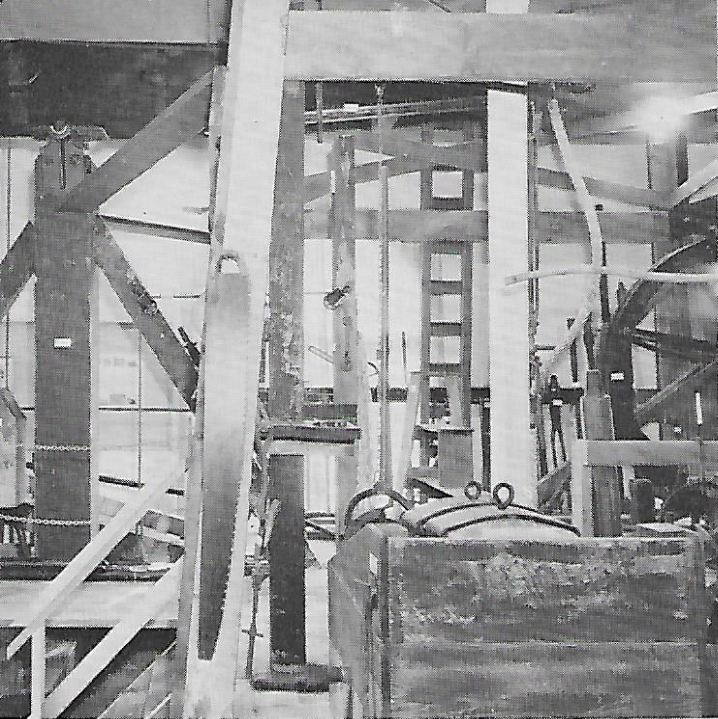
gradually fading into oblivion, tokens of an era that deserves to be recorded permanently in American annals. Why not start an oil museum where young America, living in an age of mechanical wonders, might pause to measure an industry's progress and appreciate some of the human sacrifices and qualities that supported its development?

With their habitual contempt for procrastination, these stalwarts of a hard-fisted era pitched in. Out of

Harry G. VanDenburgh, former Union Oiler, found old journal entries highly entertaining. The Mission Transfer safe is still used by our Santa Paula District office.

Ralph M. Putman, retired Company office manager, posed with a desk, pay window and Hardison & Stewart journal, all dating back to years around 1888.





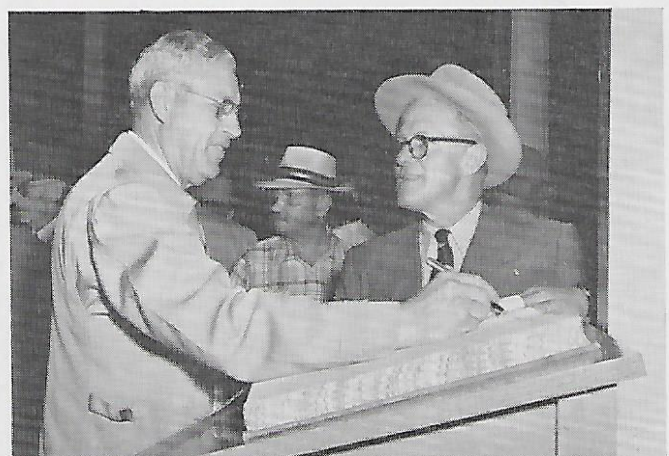
from some of California's oldest oil fields, include, from left, a Farrar and Trefts portable boiler and drilling engine patented in beam; a walking beam supported by its Sampson post; a temper screw for paying out the drilling rope; and a bull wheel for raising ding sheave rest nearby alongside an ancient bellows and bit forge. Savvy? Printed cards mark and define the equipment.

decaying shops were brought ancient equipment and nameless hand-made tools. Near long abandoned wells were found bits of rig and rod and tubing. Skillful hands came out of retirement to build a pre-1900 derrick, authentic from its Farrar and Trefts portable boiler to the "rag-line spudding sheave" in its crown block.

There was little doubt as to where such legendary equipment ought to "spud in." Santa Paula was California's "Oil City" of the roaring '90's, and therein stood the granddaddy of Western oil offices fairly begging an invitation.

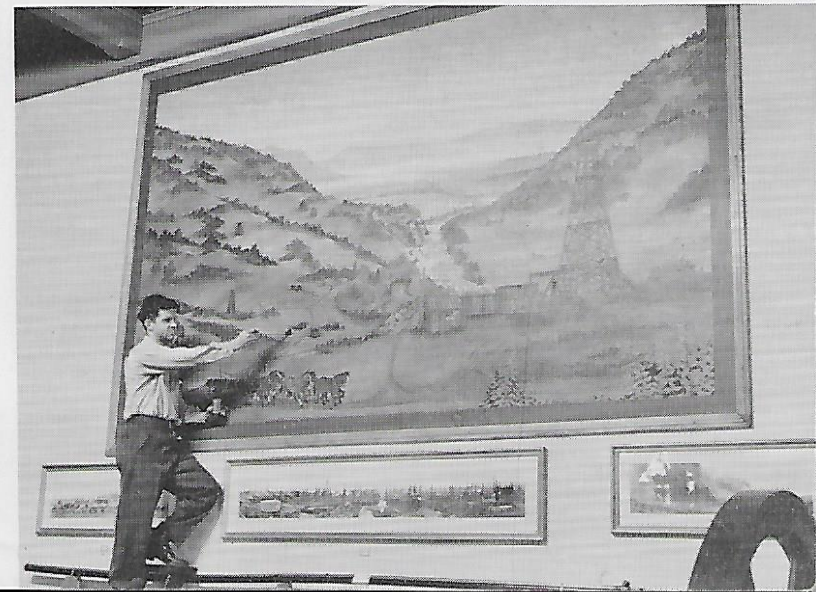
Union Oil more than cooperated. The building's entire lower floor was set aside as a public museum. Hundreds of Company relics were added to those of other firms to make the opening display complete. And Santa Paula employees have already opened the door for several thousand visitors.

Clarence Peck, retired Comptroller, inspected an 1897 seal. The fireplace mantel and tile came round the Horn by windjammer, the tile being of European make.



Head well pusher of the Museum project was Clarence Froome, superintendent of our Ventura Division, here seen inviting Frank Gess to sign the register for visitors.

Even the murals became 100 per cent petroleum when Bob Davis, Company draftsman at Santa Paula, offered his talents to paint Santa Clara Valley scenes of 1890.

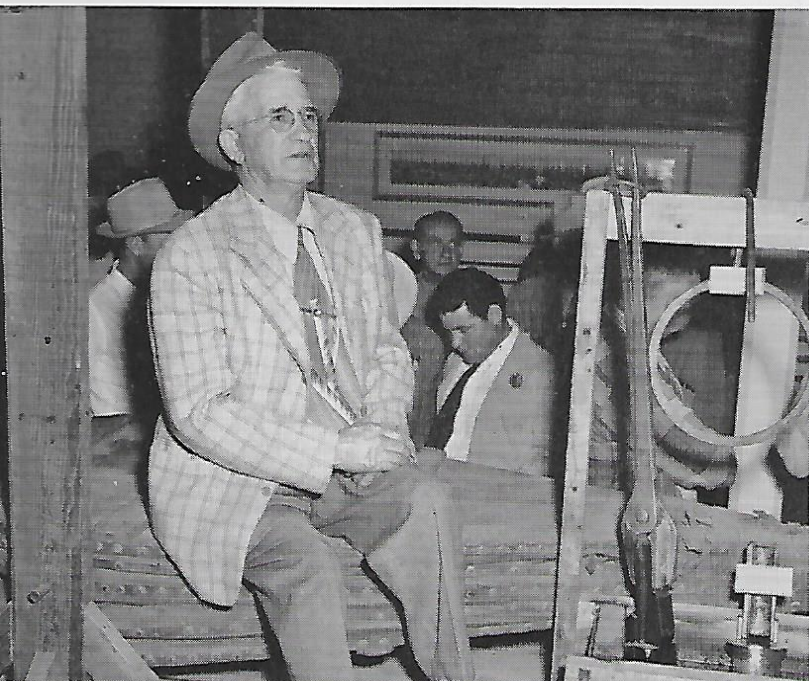


... Petroleum Pioneers

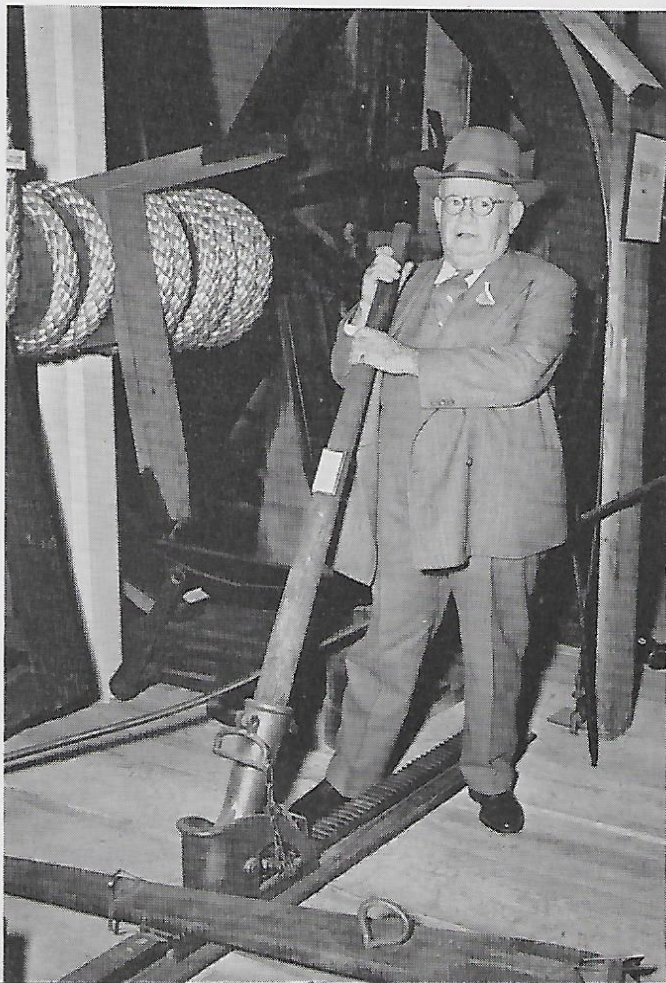
CERTAINLY no visitors will ever have deeper appreciation of the California Oil Museum than the group of Petroleum Production Pioneers who were invited to a special preview on May 27. This 1400-member organization composed largely of men who have had 30 or more years of oil field experience, turned out in full force to *watch 'er blow in*.

Their reactions and comments were a heart-warming tribute to those who planned and assembled the museum exhibits. At sight of the old *boiler*, many a *tool-dresser* of yesterday subconsciously drew only near enough to be warmed, not burned, by its cold fire box. They stroked the *band wheel* and hefted its detached *bull rope*. The *sand wheel* reminded someone of a racy story he had heard first in 1895 and has been re-hearing as the "latest" ever since. A *yellow-dog* oil lamp sitting on the *jack post* failed to light dozens of cigars only because its wick no longer glows. Hands groped through the *knowledge box* as if expecting to withdraw a yellowed invective from the boss.

Former cable-tool drillers refused to let by-gones be by-gones. Working under protection of the *headache post*—a sturdy upright timber that prevented the *walking beam* from falling and cracking any skulls in its path—they pulled the *driller's stool* in working position and took a few turns on the *temper screw*. They were *on tour*



Jack Reed, holder of Union Oil's longest service record and now retired, recalled that the bellows was a favorite place to "pay the rent" (take five).



Ed Stearns, honorary president of Petroleum Production Pioneers, declared cigars had a better flavor 50 years ago lighted from a "yellow dog" on the "tail post."

"Broomy" Broomfield handled similar tool clamps in Pennsylvania, Texas and California as early as 1899. He rose from driller to presidency of Barnsdall Oil Co.

again, looking for "Old Maud," Lakeview and Spindletop.

Most visitors to a museum quickly gulp down its contents and hurry away to lunch. Not so the pioneers who came to Santa Paula. They began arriving before the doors opened—put in a long day of reminiscing—and, as if waiting for the *night tour* to come on duty, sat around *paying the rent*.

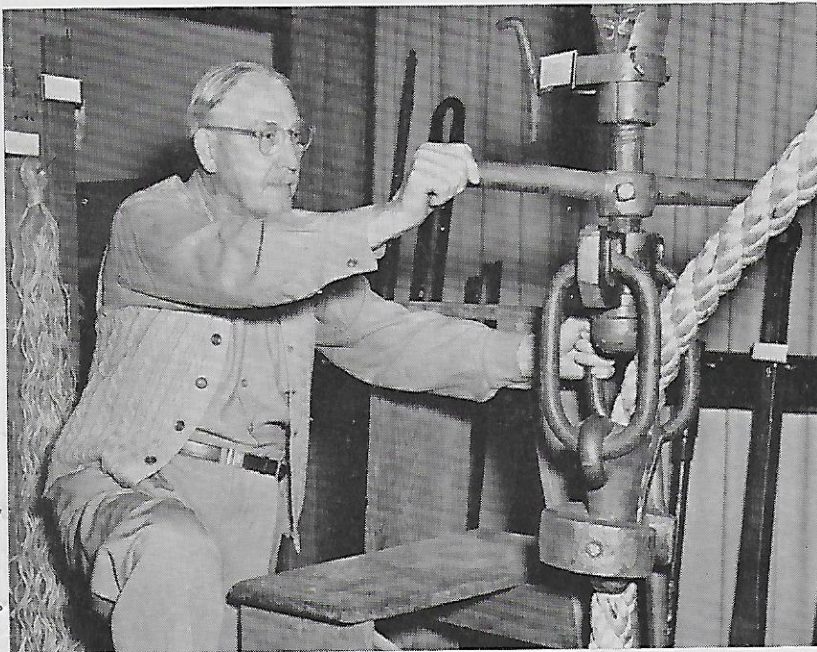
Petroleum Production Pioneers, Incorporated, was founded in 1944. Besides its membership of veterans having 30 or more years of oil producing experience, it makes room for "junior" members having some 30 years of potential and at least 10 years of completed oil production service.

Objectives of the organization are to promote sociability and friendship among oil industry men who have much in common; to bring younger men and their new ideas into intimate association with older men and their years of practical experience; and to preserve for posterity an accurate record of the oil industry's accomplishments.

They more than any others are given credit for the California Oil Museum and will likely remain its proprietors. The public is invited to view this museum and, if possible, lend private collections of antique oil equipment to the exhibits.



Sam Grinsfelder and Cy Rubel, Petroleum Pioneers still in Company harness, mounted No. 1 tank wagon, complete except for a team of horses.



The temper screw was back in expert hands when Frank Hill, retired Union Oil executive, rested one foot on the driller's stool and demonstrated a forgotten technique.

"Why, I made that bit back in 1900," exclaimed Frank Vinger who in that year was foreman of Union Oil Well Supply Co. He pointed out the identifying trade mark.



... Home Town Festival

Left to right, Audrey Tory, Shirley Capps, Paul Wilson, Jack Anderson and Ruby Blanchard depicted costume changes that have taken place during 60 years.



Warren L. King, mayor of Santa Paula, left, and Lester Price, chairman Board of Supervisors, Ventura County, officially snipped open the new California Oil Museum.

The mounted posse was made up entirely of straight-legged horsemen from Head Office. Strangely, only a hard riding ex-cowpuncher from Arizona was unseated.

SANTA PAULA has always been as loyal to Union as any community can be to its successful home-grown product. We didn't make our biggest oil discoveries in the nearby hills, or establish a big, modern refinery there, or even get a lion's share of the local gasoline business. But that's where the struggling young corporation went to grammar school and molded much of its present-day character. When a case of corporation home-sickness crops up, we think first of Santa Paula.

This year was no exception, and the town moved up its annual festival to coincide with the Museum's opening on June 3. Vice President Cy Rubel led the parade on a handsome steed and behind him came a well-mounted posse of Union Oilers representing our present head office in Los Angeles.

And after dining on the fatted calf, young men joined with older ones to discuss the Company's ex-Mission properties. The hope of striking it rich right in our Santa Paula backyard has never subsided.

The Convertible of Honor carried, left to right, Jack Cline, manager of People's Lumber, Clarence Beckley of Santa Paula Building & Loan, and Union Oiler Froome.





Magnetic Fleet

SOMETHING quite useful as well as novel has been adopted by the Marine Department to keep track of our globe-trotting tankships. It consists of a metallic map on which are shown all of the Company's regular trade routes and ports of call. Small replicas of tankships, complete with their Union Oil names, are magnetized and will obligingly cling to any route or port where they are placed.

Daily or oftener, a member of Captain Stene's Head Office crew adjusts the miniatures to correspond with radioed positions of ships at sea. Thereby, personnel who plan the loading and dispatching of marine cargoes can tell almost at a glance how many hours each vessel is from its scheduled destination.

Left to right, Charline Durant and Pauline Crell of Head Office Marine Department learn from Harry Butler, assistant ship dispatcher, how it is possible to keep an eye on seven Union tankships plying the Seven Seas.



The chipmunk who found



ONCE upon a time a young chipmunk named Everett was graduated from college and came home to visit his father, an elderly gentleman who lived under an oak log near Covington, Ky.

The first night he was home, Everett swaggered down the tunnel into the burrow dining room and helped himself to a big meal of his father's choicest seeds. Then he selected one of his father's best cigars, a full inch long and all Havana.

"It's nice to have you home again, son," Mr. Chipmunk said.

"Yep," said Everett. "Must be."

"But," said Mr. Chipmunk, "I suppose you'll soon be leaving to look for a job."

Everett flicked his cigar ash onto the rug. "Not a chance, Pop. Definitely not a chance. The fact is, I don't like the whole economic system today."

Mr. Chipmunk twitched a whisker ever so slightly. "What's the matter with it, son?"

"No security," Everett chirped. "The way I see it, the state ought to take over. Give you a safe job, give you a snug, warm place to live, give you plenty of seeds to eat, give you free medical care, give you free clothes, give you —"

Mr. Chipmunk gently raised a protesting paw. "Now, just a minute, son. I'm proud of the American system. Lived by it all my life. I've worked hard, managed to save a few seeds every year, and we've not done too badly. The mortgage on our log is fully paid up. I was able to send you through high school and Chipmunk Aggies. And in a year or two, I think I can retire—"

Everett grinned at him. "Wise up, Pop! *Wise up!* Why beat your brains out?! If the state'll give you everything, what's the sense of scurrying all over the forest trying to earn a buck?"

Mr. Chipmunk's tail snapped irritably. "Now listen, son. In the first place, stop calling me Pop.

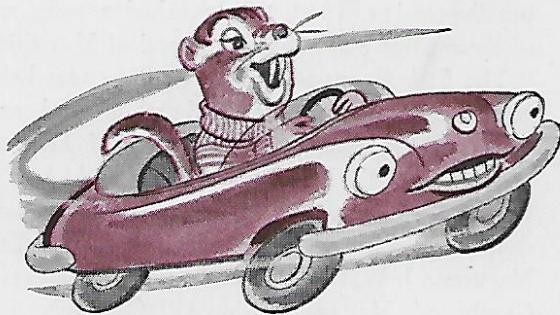
complete security

In the second place, you'd find that if you got *complete security* you'd lose your freedom. If the state were to *give* you everything, it would *control* everything. Control your body and soul. I don't believe you'd like that."

Everett burst out laughing. "Stow it, old timer, stow it! You just haven't got the word yet, that's all. But you'll learn." He whacked his father a jovial blow across the stripes. "Say, sport, how about lending me the car tonight? Big dance going on down in the meadow."

Mr. Chipmunk reached into his pocket for the keys. "Drive slowly, son. Lots of rabbits tearing around in cars these days. You can't be too careful."

"Don't worry about this lad, Pop. I can drive circles around any little old rabbit that ever came down the path."



Next morning at 7 o'clock the phone rang beside Mr. Chipmunk's bed. "Sorry to bother you, sir," said a voice, "but your boy had an accident last night. Smashed up a couple of rabbits in a convertible. Frankly, sir, he'd been drinking. We had to put him in jail."

"I'll be right over," Mr. Chipmunk said tensely.

Twenty minutes later Mr. Chipmunk arrived at the jail, a formidable structure the chipmunks had built by inverting an iron wash tub and imbedding the rim in solid rock. The Sheriff led him to Everett's cell. Everett was alternately yelling and gnawing on the bars. "Lemme out!" he squawked. "Lemme out of this place!"

Mr. Chipmunk stared sadly at his son for a moment. Then, suddenly, he gave a little chuckle.

"What's funny?" Everett screamed. "Get me out of here!"

Mr. Chipmunk put a paw through the bars and

patted Everett's head. "Tell me, son," he asked, "are they keeping you snug and warm?"

"Sure, but —"

"Are they giving you enough seeds to eat?"

"Sure, but —"



"Are they giving you free medical attention?"

"Medical attention, he says! Get me out —"

"And I dare say the good Sheriff will find a safe, easy job for you—on the rockpile. Am I right, Sheriff?"

"Right," said the Sheriff.

"And I suppose that the Sheriff will even give you a free suit of clothes—a little number with horizontal stripes."

Everett looked aghast at his father. "Cut the comedy, Pop!" he wailed. "Get me out of this place!"

"No, son," said Mr. Chipmunk. "I'd like you to stay right here for a few days. I think you'll find it a rewarding experience."

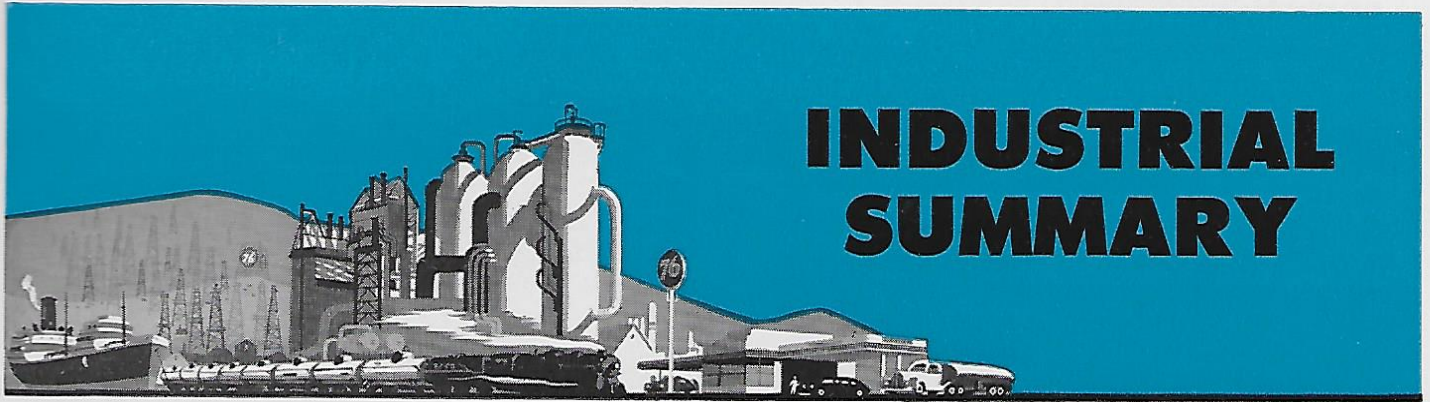


"Why?" Everett screamed. "Tell me why, Pop!"

"Because, my boy," Mr. Chipmunk said, "it'll give you a very good idea what it's like to get *complete security* from the state."

Mr. Chipmunk winked at the Sheriff, put on his hat, and walked out of the jail.

Reprinted through courtesy of "The ORANGE DISC," bi-monthly publication of the Gulf Oil Corporation.



INDUSTRIAL SUMMARY

Union Oil Announces New 76 Gasoline

On July 1, Union Oil Company announced a sensational new gasoline, "New 76." New 76 is a high octane, popularly priced gasoline. It is as outstanding in its field as is 7600 among the premium fuels.

New 76 is being offered to the public for only one reason: To increase our gasoline sales in a competitive market.

At present, Company dealers sell more *premium* gasoline in relation to *regular* than any other service stations in the West. We are the leader in premium gasoline sales because in 7600 we have the finest gasoline in the United States.

Now the Company is putting its dealers in a position to do the same thing in the *regular* gasoline market that they have done in the *premium* market.

For New 76 has the highest octane rating in its price class. It offers 17 per cent faster starting, quick warm-up, exceptional freedom from gum, is "Balanced for Performance." It is the result of 60 years of refining experience and of developments that are exclusive with Union Oil.

To introduce New 76 to the public, \$250,000 is being spent on advertising. This includes newspaper and magazine ads, billboards and radio spots. Stations have been decorated with multi-colored pennants, signs and pump stickers.

The sales slogan for New 76 is "FILL YOUR TANK—FEEL THE DIFFERENCE."

● **MARKETING** John W. Graham, Manager Foreign Sales, visited Japan during the latter part of April and May to further the relationship between Maruzen Oil Company, Limited, and Union Oil Company.

Since early 1950, Martin Manders of our Manufacturing Department has been assigned to them for the reconstruction of their Shimotsu Refinery and their Mat-

suyama Refinery in Southern Japan, which assignment is now complete and Manders will return this month.

Maruzen's marketing organization is making rapid strides, and since their first dealers were appointed during September, 1949, they reached a sales rate of 5% of the market potential by the end of May this year.

The first Maruzen dealers' meeting was held at Wak-anoura in Central Japan on April 29, and was attended by over 150 dealers from all parts of Japan. After an inspection of the Shimotsu Refinery, which is processing Union Oil Company's San Joaquin Valley crude, the dealers were addressed by Y. Takahashi, President of Maruzen; J. W. Graham, Union Oil Company; and H. R. Greatwood, Manager, Union Oil Company, Japan.

Navy Special Fuel Oil

The Union Oil Company has been awarded a contract to deliver 1,620,000 barrels of Navy Special Fuel Oil into government tankers at Wilmington for the period beginning July 1 and ending December 31, 1950. This quantity represents 40% of the Navy's total West Coast requirements for the period covered.

Direct Mail Program

An unusual direct mail advertising program, with the Company sharing the cost, is being offered to Union Oil's independent dealers. The object of the program is to increase both the dealer's and the company's sales by encouraging his own neighbors to patronize his station.

The program consists of a series of six mailings to a list of people selected by the dealer. Unlike the pieces offered in most cooperative mailing programs, the cards are highly personalized. They are large and attractively illustrated. In addition to the sales message, they show the dealer's picture, his name, address, and a map of his location.

Because of this more personal approach, the program is meeting with enthusiastic dealer acceptance.

from Roy Linden

● INDUSTRIAL RELATIONS

The Company has formalized its vacation policy for employees from the United States who have entered foreign service. All provisions of the regular vacation policy apply and, in addition, these employees are granted special *home* vacations every two or three years depending on the length of time they have spent in foreign service.

The vacations are for two or three months, again dependent on length of foreign service, and exclusive of travel time involved. Travel expenses for the employee and his family are borne by the Company. The term *foreign service*, as used here, does not include Alaska, Canada or the Hawaiian Islands.

The run-off election conducted on June 1 to determine Research employees' choice between Oil Workers International Union and "No Union" resulted in a decision for no union. Of 104 eligible voters, 102 voted. There were 56 votes for "No Union," 46 for Oil Workers International Union.

from W. C. Stevenson

● **FIELD** To provide information that may not be generally known by Union Oil people, here are some recent figures pertaining to the Company's crude oil production and sales from operations in states outside of California.

For the month of April, 1950, our out-of-state production and sales averaged 17,200 barrels daily. This did not include an additional 2,000 barrels daily produced in Montana and refined in our refinery at Cut Bank. Production in the Gulf Division, which includes both coastal Louisiana and coastal Texas, accounted for 12,000 barrels daily. The West Texas Division sold 3,000 barrels daily and produced slightly in excess of that amount. In Wyoming, production and sales amounted to 2,200 barrels daily.

With exception of the Rocky Mountains, producing areas outside the state of California have their crude oil production controlled by state agencies. The number of barrels permitted to be produced from wells in any field for any month is determined by these agencies in accordance with the production capabilities of the wells and market demand for the type of crude produced. Currently, production is in excess of supply, and these agencies, in general, have decreased the yield of crude to a fraction of what the wells could produce.

from Sam Grinsfelder

● PURCHASING

Cooperative efforts have been continued with all operating departments to further reduce inventories and have local vendors stock material for immediate pickup.

Because of the West's industrial growth, many manufacturers are recognizing the importance of having spare

parts, firebrick, dyes, fittings and many other items immediately available. It is anticipated that this trend will gather momentum and extend throughout the year to other commodities not in short supply.

Many eastern manufacturers have recognized the increased importance of western markets and established branch factories on the Coast. New capital has been attracted and many new industries have sprung up. As a result, a large number of fabricated items, formerly available only on long term commitment, can now be secured locally on short notice. These new sources of supply will be identified as they develop.

from E. H. Weaver

● COMPTROLLER'S

C. K. Howard, former chief clerk of Disbursements Division, has left the Company, as his health would not permit continuation of active service. He served Union Oil Company faithfully and capably for 33 years in various capacities in the Sales Department and Comptroller's Department.

Lyman Limbocker has been appointed chief clerk of Disbursements Division, succeeding Howard. Limbocker has worked in various accounting divisions of the Comptroller's office and in recent years was assistant to the chief clerk.

W. J. Calvert is transferred from the Payroll Division to Disbursements Division to fill the position formerly occupied by Limbocker.

from Irving J. Hancock

● GENERAL COUNSEL

Effective June 12, the handling of all matters relating to motor fuel, sales and other excise taxes come under jurisdiction of the Tax Division, Legal Department. All relevant correspondence and reports previously forwarded to the supervisor of Marketing Accounts should be directed to the Tax Division, attention W. A. Ely, who has been appointed excise tax supervisor and reports to D. L. Shepherd, manager of Tax Division.

The customary close cooperation between the Tax Division and Comptroller's Department will continue to be maintained in such a way that matters requiring reference to both tax laws and accounting will receive mutual consideration.

from L. A. Gibbons

● MANUFACTURING

Crude oil runs to refineries were again increased in June to meet the seasonal demands of our customers.

Nylon fabric, usually thought of in association with clothing, is now being used at Oleum Refinery for filter cloth in the manufacture of Aristowax. It is expected that the longer life of nylon will justify its higher cost as compared with canvas filter cloth normally used for this purpose.

from K. E. Kingman

● **PUBLIC RELATIONS** The Marketing Department is building up a library of short moving pictures of the type that is popular with civic groups, lodges, clubs and similar organizations. Union Oil employees may borrow these films by making application through the nearest District Sales Office or by asking the assistance of Union Oilers in marketing and service stations. Duplicate prints have been furnished to each Marketing Territory. In some areas a projectionist is also available.

Due to the popularity of these films, it is recommended that application be made two or three weeks in advance of a proposed showing. By so doing, a wider choice of pictures can be made available and no group will need to be disappointed.

The library is being augmented gradually and at present contains nine interesting film documents. Each is a 16mm color movie with sound and is approximately 30 minutes in length. They are as follows:

CONSTANT CHALLENGE—The Company's 60th Anniversary historical review.

SKIFARI—A skiing film showing nationally known experts at favorite winter sports centers.

TOURNAMENT OF ROSES PARADE—A complete presentation of floats appearing at Pasadena in 1950.

WILDFOWL — BASS — SALT-WATER WONDERLAND—A sports picture filmed partly in slow-motion.

TROUT-FLY TIEING AND FISHING—An outdoor film using the majestic High Sierras as a backdrop.

THE TWO DOCTORS—An exceptionally interesting picture revealing medical problems in Mexico.

SIAM, THE PHILIPPINES, AUSTRALIA—A travelogue that highlights the Pacific's colorful areas.

THE 1949 RAMS—A football report showing the star performers and best *pro* games of 1949.

BIRDS OF PREY OF THE SONORA DESERT—Infinite skill and patience were required to film this one.

Automobile Insurance

Insurance on automobiles has become a "must" in the State of California, as well as in other states having a financial responsibility law, and July 15th being the renewal date for employees' automobile insurance under the Company's master policy, a few points should be considered by all employee automobile owners at this time.

To meet the requirements of the Financial Responsibility Law in California, a driver involved in an automobile accident in which anyone is injured or property is damaged to the extent of \$100 or more, is obliged to file a report with the Motor Vehicle Department. Evidence of adequate insurance, or sufficient deposit of securities to satisfy all judgments which may be rendered, must be furnished. Penalty for failure to comply means suspension of the Operator's License.

The insurance coverages necessary are bodily injury and property damage, which cover legal liability to other persons for injuries or death and/or damage to property resulting from the operation, maintenance or use of your automobile. This insurance is extended to cover anyone operating your car with your knowledge and consent. An additional coverage at a very nominal cost, and well worth considering, is the medical payments coverage, which provides reimbursement for medical expenses resulting from injuries suffered in an automobile accident by the driver or passengers, or while entering or alighting from your automobile. The Guest Law of the State of California makes it almost impossible for passengers to collect damages from you or from

the operator of your car. Limit of liability per person is available from \$250 to \$2,000 at a cost of from \$3 to \$10, depending upon your use of the car and territory in which it is operated.

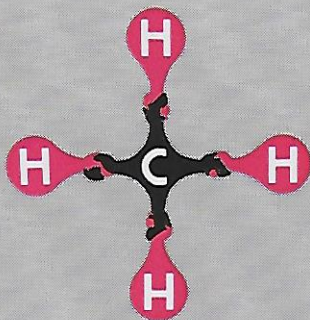
Coverages for the damage to your own automobile are collision and comprehensive fire and theft. The former covers direct damage to your car caused by collision or upset, and the latter covers other accidental damage to your car. The most desirable collision coverage is the deductible form, which provides that in case of accidental damage to the insured automobile, the owner pays the amount of the deductible and the insurance company pays all over that amount. Rate changes during the past year have in most instances resulted in lower premiums for collision coverages.

Employees presently insured under the Company's master fleet policy will receive automatic renewal certificates shortly. Premium rates may be obtained from, and coverages may be placed through, the Insurance Division, Union Oil Building, Los Angeles. New insurance becomes effective immediately the application form is completed and forwarded to the Insurance Division, or at any later date specified. Request for transfer of coverage to another automobile, or advice of change of address should be forwarded promptly to the Insurance Division.

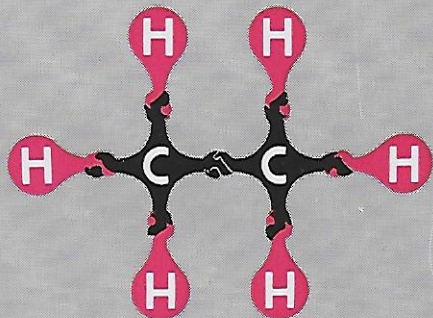
Coverage can be extended without additional charge to the use of 2-wheel trailers with passenger cars, but no coverage is provided on house trailers unless specifically added to the policy and premium charged therefor.

from A. E. Morrison

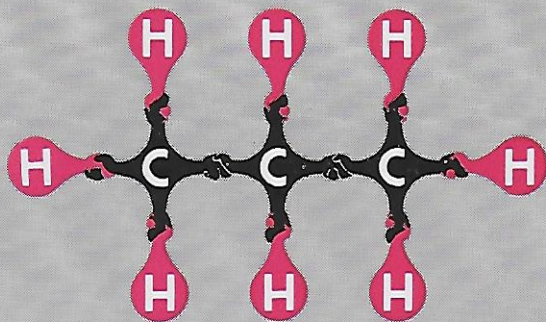
"76" Views of Refining



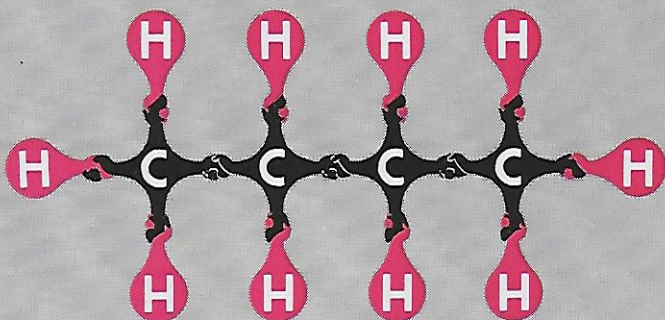
METHANE (CH₄)



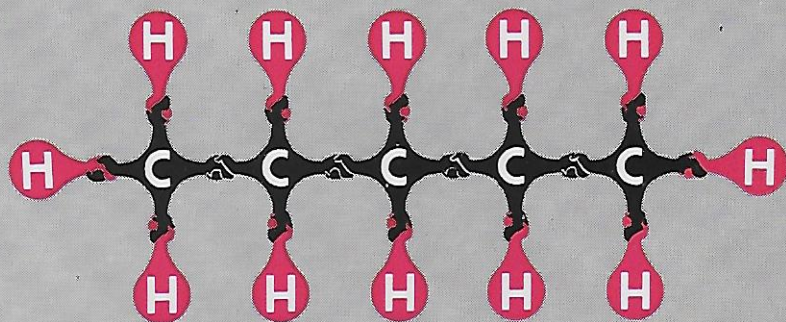
ETHANE (C₂H₆)



PROPANE (C₃H₈)



BUTANE (C₄H₁₀)



PENTANE (C₅H₁₂)

14. Hydrocarbons emerging in gas or vapor form from an oil well consist almost entirely of the lighter paraffins. There may be a few naphthenes and possibly some aromatics present, but, if so, these other families are decidedly in the minority.

Science has devised a systematic method of naming the hydrocarbons. All of the paraffins, you will note, have names ending with "ane"; and the prefix added to this family name in individual cases is a sort of number indicating the quantity of carbon atoms contained in an individual molecule. Substituting these foreign-sounding prefixes for our own one, two, three and four, we have *meth*, *eth*, *prop* and *but*. And starting with *pent*, fifth in series, science has adopted the Greek roots, namely, *hex* for six, *hept* for seven, *oct* for eight, *non* for nine, *dec* for ten, and so on. Accordingly, such names as methane, ethane, propane, butane and pentane have a distinct meaning. Each represents a different member of the paraffin family and tells us how many carbon atoms its molecule contains.

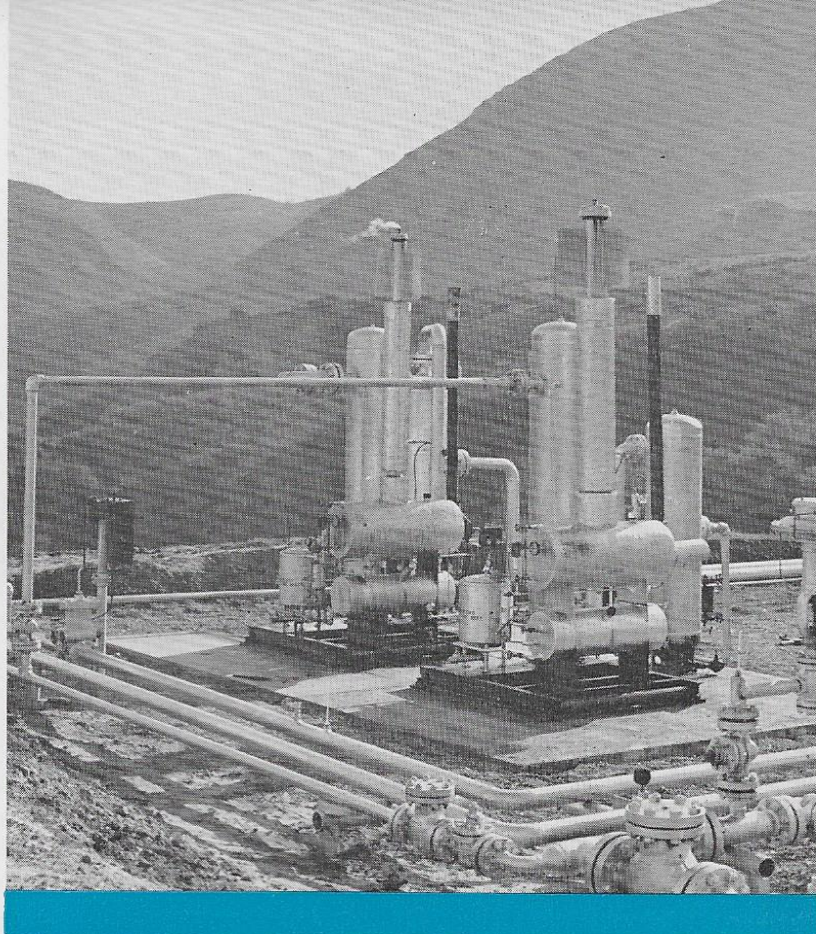
The five paraffins shown here are the lightest members of their family and are the best known components of wet gas. Methane and ethane remain gaseous under normal atmospheric conditions and are quite generally known under the name of natural gas. Propane and butane, frequently recognized by their chemical names, are referred to oftentimes as LPG, or liquefied petroleum gases, because when held under sufficient pressure they can be handled in liquid form. Pentane and a rather lengthy series of heavier hydrocarbons are the principal constituents of stabilized natural gasoline.

15. Gas Dehydration

Returning to the gas phase of field processing, let us see what happens to this lighter petroleum stream.

Nearly all petroleum gas contains some water vapor, which, under certain conditions, may cause pipe line corrosion or may form a hydrate that freezes readily, shutting off the pipe line flow.

Modern installations, right, in our Grimes Canyon area near Santa Paula effectively prevent any such corrosion or stoppages by partially dehydrating the gas. As the stream enters one of these tanks, it contacts a glycol solution. The glycol, having a thirsty affinity for water, absorbs water vapors. Dehydrated gas then is ready for pipe line transportation. The glycol solution is prepared for re-use by being heated in a boiler section of these units. Water vapors are boiled off and released to atmosphere while the glycol solution continues its cyclic career of absorbing and freeing more water vapors. Such units operate automatically, requiring only periodic inspection and maintenance.



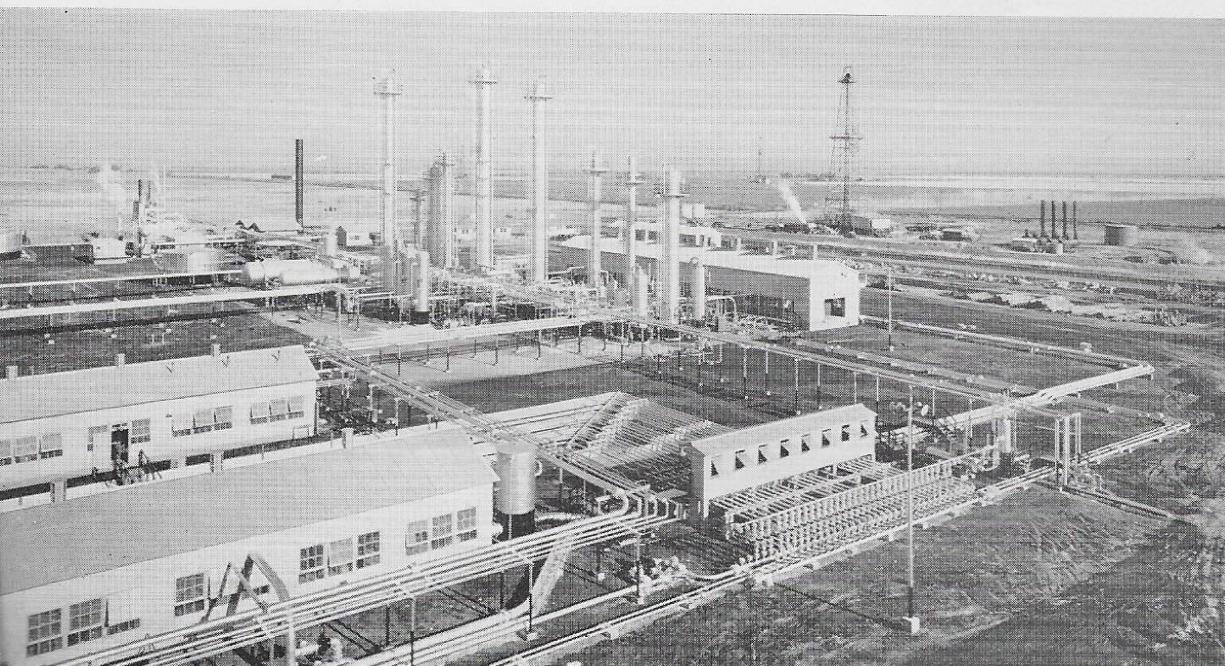
16. Gas Plant

Usually a gas stream contains large quantities of liquid hydrocarbons that can be recovered and put to many uses. This refining process also normally takes place in a plant located in or near the oil field.

Below is an exceptionally fine gas plant in San Joaquin Valley known as the Paloma Cycling Plant. Through its roadway of pipe lines, right foreground, some 125 million cubic feet of *wet* gas arrives from surrounding oil wells each day. A main function of the plant is to separate dry natural gas (methane and ethane) from accompanying liquid vapors and to further segregate the liquid into several fractions.

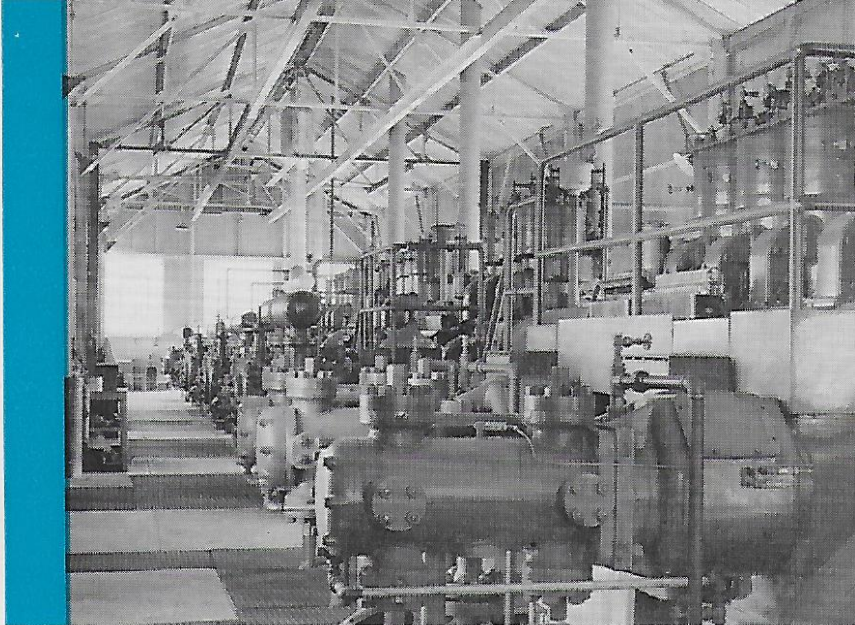
The 125 million cubic feet of *wet* gas thus processed daily may yield some 118 million cubic feet of dry natural gas, 3,600 barrels of propane, 2,300 barrels of butane, 2,100 barrels of pentane and other light hydrocarbons collectively known as *natural gasoline*, and 6,200 barrels of still heavier fractions called *condensate*.

An interesting fact regarding this plant is that its production of dry natural gas is *cycled* back into the oil wells. There it helps to maintain high underground pressures; becomes saturated again with *wet* vapors; and circulates back to the plant with valuable quantities of petroleum that would otherwise remain underground.



17. Compressors play an important role in gas plant operations. These in our Coalinga Nose Plant, for example, compress all incoming gas to a uniform pressure of 550 pounds. Under this pressure and when cooled to about 80 degrees F., some of the heavier hydrocarbons liquefy and are therefore easily drained out of the gas stream. Finally, compressors subject out-going dry gas to a pressure of approximately 2,000 pounds, in which condition it is pumped underground to repressure the oil field.

Coalinga Nose natural gas is not recycled in the manner described at Paloma. Rather, it is injected only in selected locations as a pressure means of driving crude oil through rock formations and toward the producing wells. Nearly all of the injected gas is eventually recovered and it serves to greatly increase the yield of other hydrocarbons from an oil field.



18. Columns, such as these graceful vessels, left, at Paloma, represent the heart of a gas plant.

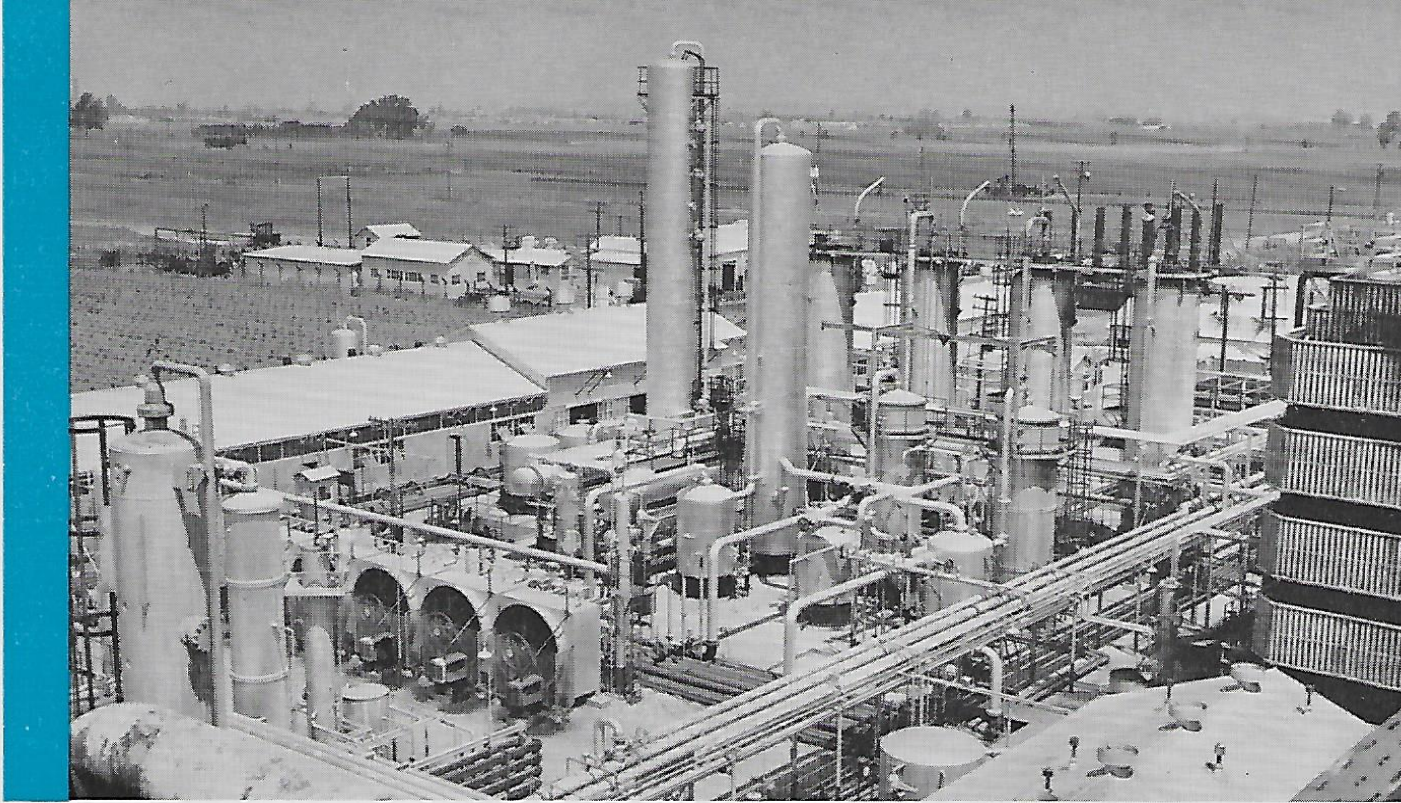
The short column, left foreground, is a gas-oil separator. Although wet gas leaves the oil well in gaseous or vapor form, some of its heavier hydrocarbons soon begin to condense and form a liquid stream. The portion that freely liquefies is called *condensate* and, after flowing from the bottom of this separator, is processed separately from the upward flowing gases. Upon being heated and admitted to a *condensate debutanizer*, one of the columns in background, it loses most of its light gases held in solution and proceeds to storage under the label of *de-butanized condensate*.

The tallest column, foreground, is an absorber, used to remove liquefiable petroleum fractions from the *wet* gas stream. Inside it are layers of trays over which flow shallow streams of absorption oil. Through a series of inlets called bubble-caps, gas from the gas-oil separator is obliged to bubble upward through each stream of absorption oil. This oil, a specially refined petroleum product, has a strong affinity for the propanes, butanes, pentanes and heavier hydrocarbons.

Next step is to isolate all fractions thus absorbed. This is accomplished in another vessel by heating the *rich* absorption oil sufficiently to make the lighter fractions vaporize. On being withdrawn and cooled, these liquid portions of the distilled fractions constitute *raw gasoline*.

The further separating of *raw* gasoline into its component hydrocarbons is properly called *fractionation*. In columns where temperature and pressure are carefully controlled, propane vaporizes first out of solution, followed by butane. Pentane and other hydrocarbons in the gasoline boiling range are similarly removed and sent to separate storage as *stabilized natural gasoline*.





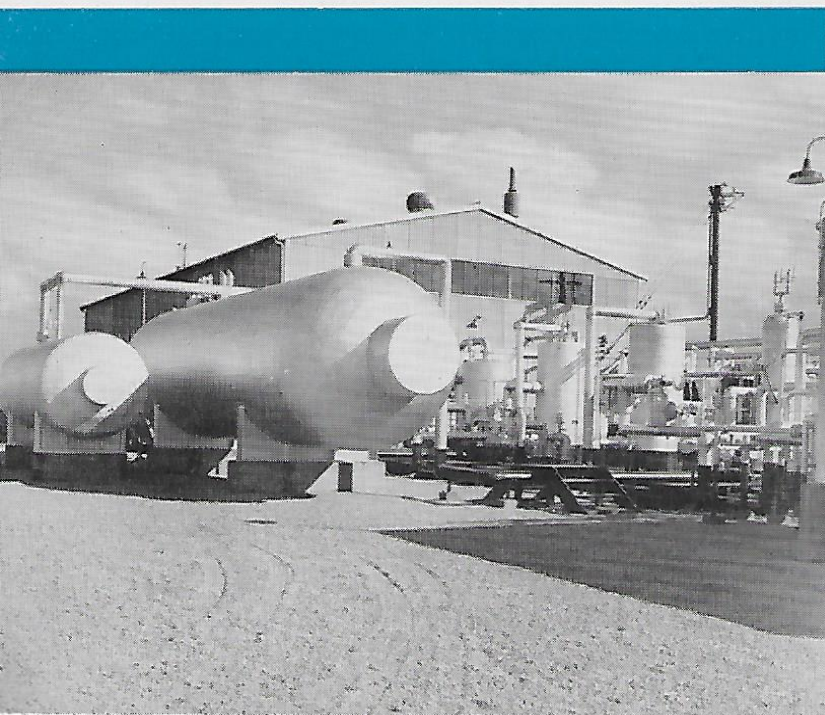
19. Impurities

that sometimes accompany a gas stream in sufficient quantity to necessitate removal include carbon dioxide and hydrogen sulfide. Part of the Battles Plant, above, consists of facilities for this type of processing.

The two tallest columns, center, are from left to right a *reactor* and an *absorber*, both designed for the carbon dioxide removal process. The *absorber*, operating somewhat like the Paloma absorber we have previously described, uses MEA (monoethanolamine) solution in place of absorption oil. Gas requiring this treating process bubbles upward through trays of MEA solution. The latter, having an affinity for carbon dioxide, becomes enriched with this non-burning substance. Heating qualities of the natural gas are thereby proportion-

ately increased. The MEA solution then proceeds to the *reactor* column where, by application of heat, the carbon dioxide is boiled out of solution and removed in nearly pure condition.

Two shorter columns, to the right of the carbon dioxide absorber, begin the process of removing hydrogen sulfide. They contain a solution of water and soda-ash in which iron oxide is suspended. As gas passes through this solution, its content of hydrogen sulfide reacts with iron oxide and most of it leaves the gas stream. Four taller columns standing abreast, background, complete the de-sulfuring. They contain wood shavings impregnated with iron oxide. As gas passes downward through these shavings, its remaining hydrogen sulfide similarly reacts with iron oxide, forming a sulfur deposit on the wood shavings.



20. Dry Ice

became a by-product of the oil industry when the Union Oil plant, left, was added to other facilities at Battles. With large amounts of pure carbon dioxide on hand, as a result of gas purification, it was sound economy to use rather than waste this non-petroleum compound.

Dry ice is actually carbon dioxide that first has been compressed and cooled to liquid form, then released in several stages to atmospheric pressure. This release of pressure swiftly lowers the temperature of carbon dioxide, causing its formation into an extremely cold, waterless snow. The snow is then compressed into blocks of ice.

21. To Summarize our photographic description of gas processing, let's fly over the South Coles Levee Recycling Plant near Taft.

Wet gas entering the plant through a system of pipe lines, extreme left, is the lighter of two petroleum streams, the heavier oil having already departed via pipe line toward refineries.

Installations, center, are, from left to right, a cooling tower for quickly lowering the temperature of hot gases and liquids; absorber and fractionation columns where the light hydrocarbons are separated into usable products; a long row of buildings housing compressors, electric generators and pumps; in the background, heating equipment; at extreme right, office buildings and a warehouse. A smaller cooling tower, toward the right, cools water circulating to the compressors and gas engines.

The dry natural gas produced by such plants may be

used in part as a plant fuel, or pumped underground to produce more oil, or delivered into gas company pipe lines as a heating fuel for homes and industry.

Propane, butane and stabilized natural gasoline are stored in the 11 spherical and two horizontal tanks, all of which keep these petroleum products under pressure and in liquid form. The road loop at right is evidence that liquified petroleum gases are generally shipped by tank truck. They go either to jobbers and large consumers as a power or heating fuel or to refineries and chemical plants for further processing into high anti-knock gasolines and synthetic compounds. Natural gasoline, although sometimes used in this form as a motor fuel, is usually a better product if blended with refinery gasolines. It is transported either by truck or by gasoline pipe line.

De-butanized condensate is stored in the three tanks, near foreground, pending shipment by pipe line to refineries.



Record Crowd Visits Refinery



Always busy but at no time over-crowded was this reception area where tours were organized and begun.



The refinery cafeteria and change-house provided stout barriers for keeping Hop-alongs on the range.

SURPASSING their three previous performances, both as to quality of program and numbers of visitors entertained, Los Angeles Refinery held its most successful open-house to date on June 3. An actual count of 3,900 visitors, plus an estimated hundred or more who departed through unofficial exits, added up to a guest total slightly exceeding 4,000.

As usual, nobody missed the exciting fire-fighting demonstrations. A capacity crowd overflowed bleachers at each of three 45-minute shows, and Universal News Reel was on hand to record one fire demonstration for theatre audiences. Television will undoubtedly take advantage of this *natural* by the time another open house rolls around.

D'ya know what quantity of free refreshments it takes to fuel a crowd of that size? Here are the figures: 6,800 large servings of cake with "76" orange frosting, 5,280 bottles of pop; 6,000 cups of ice cream, and 100 pounds of coffee.

Special invitations were issued to retired refinery employees this year with the result that 28 were on hand to renew old friendships.

A child-care center, offered for the first time, catered to 38 infants and 85 toddlers between the ages of two and five.

Not a single mishap marred this well planned and greatly appreciated day.



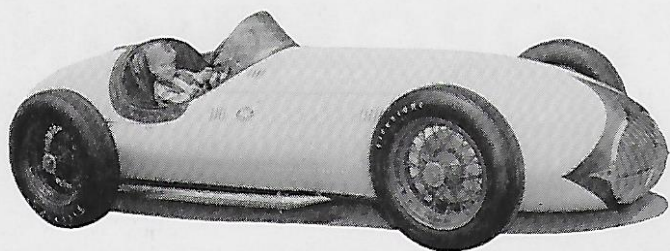
Special guests of Los Angeles Refinery employees were retired Union Oilers whose many years of loyal service helped to bring about, not only better ways of refining oil, but warmer sympathies among workers.



Research entertained with an artistic display of candles made from petroleum wax by artist Ramon Castellanos.



Popular also were Dr. Polly's hydrocarbon models, revealing the basic composition of petroleum products.



"Some soapbox!" agreed David Freigh when permitted to drive a 300-horsepower Koehnle Special at considerably less than its top speed of 175 per hour.

Right, teams of highly-skilled fire fighters thrilled visitors with their techniques of handling oil fires. Below, C. H. Van Marter, who has taught fire prevention and control extensively, excelled at the mike. Below at right, a difficult trench fire succumbed in 50 seconds to fog nozzles and teamwork by experts.





A FIFTY **I**FIFTY PROPOSITION

FIFTY MILES AN HOUR isn't fast—on one of those long stretches of desert highway where there are no curves, no crossings, no drunks, few cars, and good drivers.

But zoom round a bend sometime to find a stalled truck blocking the entire road and see how fast "50" eats up the stopping space. An average driver uses two seconds, or 193 feet, just to *perceive* and *react*. Under ideal conditions—a safe dry highway, new tires and good brakes—he brings his car from "50" to a full stop in not less than 297 feet, about the length of a

football field. Under less favorable conditions or at higher speeds the modern automobile needs a thousand feet of highway to stop, but usually goes out of control and into the junkyard. The accompanying table of stopping distances is not supposition; the facts were established by skillful drivers in hundreds of skid tests.

STOPPING DISTANCES ON LEVEL ROADS

SPEED (In miles per hour)	20	35	50	70
REACTION DISTANCE (In feet) based upon 2 seconds percep- tion time plus 3/4 second reac- tion time	81	140	193	283

TOTAL REACTION AND BRAKING DISTANCE (In feet)

Rough macadam or concrete

Dry surface, new tires	98	191	297	487
Dry surface, smooth tires	99	194	305	503
Wet surface, new tires	108	222	360	610
Wet surface, smooth tires	114	252	401	691

Smooth macadam or concrete

Dry surface, new tires	101	198	313	516
Dry surface, smooth tires	106	203	327	535
Wet surface, new tires	114	242	401	691
Wet surface, smooth tires	121	276	429	827

Today's worsening driving hazards were made evident by our Company experience in 1949. During the preceding five years an average of 1.4 employees lost their lives annually in on-duty automobile accidents. Last year three Union Oilers died as a result of such on-duty accidents. In 41 off-duty accidents during 1949, 43 employees were injured and one was killed.

One of our greatest shortcomings is that we read instead of heed public traffic warnings and advice.



Life-saving warnings and suggestions are placed on nearly every curve, grade and intersection. But too many of us thing they're meant for the other guy.

Ever notice the sobering effect an actual crash has on every driver who passes by? The speeders slow down. The weavers start hewing to the line. The boulevard neurotics show a few vestiges of human decency and politeness. — At least until the episode is forgotten.

Photographic documents, such as the ones we borrowed this month from police files, provide the next strongest appeal for driving sanity. We purposely by-passed hundreds of gory ones in order to see what happens to normally careful drivers such as you and I. Every speedometer is these expensive piles of junk registered "50" or less at the moment of impact.

In fact, more people die at "50" than ever reach the ripe old age of 75.



TAKING A LONG VACATION?

Well, don't make it longer than you had planned by detouring to a hospital. And it might be a good idea to read over the following travel statistics each morning.

**Number of Fatalities per
100 Million Passenger Miles**

Mode of Travel	1945	1946	1947	1948
By rail	0.16	0.18	0.16	0.13
By bus017	0.19	0.21	0.18
By domestic scheduled airlines	2.1	1.2	3.2	1.3
By automobile	2.9	2.5	2.3	2.1



SERVICE BIRTHDAY AWARDS

JULY, 1950

Thirty-Five Years

Shea, James J., Oleum Refinery Mfg.

Thirty Years

Baker, Peter J., H. O. Comptroller's
Chansler, Robert P., So. Div. Field
Kinsey, Chester C., Northwest Territory
Newhoff, William A., Central Territory
Rebella, William V., Central Territory
Summers, William A., So. Div. Field

Twenty-Five Years

Anderson, Kenneth C. M., H. O. Field
Clow, Harold K., So. Div. Field
Crawford, Herbert O., H. O. Comp.
Jacobson, Fred, Jr., Oleum Refinery Mfg.
Katzenberger, Chas. H., So. Div. Field
Licht, Estelle, Central Territory
McAnallen, H. L., No. Div. Pipe Line
McGourty, Charles J., So. Div. Field
Morris, Harry, No. Div. Pipe Line

Penaluma, Thomas J., L. A. Ref. Mfg.
Taylor, Clarence C., Central Territory
Wade, Joe W., So. Div. Field

Twenty Years

Baker, George S., Honolulu District
Folts, Fred B., L. A. Refinery Mfg.
League, Andrew B., L. A. Refinery Mfg.
Leedy, Oliver E., Northwest Territory
Perry, Paul C., H. O. Foreign Sales
Retherford, Ernest O., Central Territory
Taylor, Claude, L. A. Refinery Mfg.
Wasley, Harold W., So. Div. Field

Fifteen Years

Apostol, Constantine, Marine, Wilmgtn.
Burns, Orville L., H. O. Comptroller's
Clark, Charles M., So. Div. Field
Conway, Warren F., So. Div. Automotive
Deppe, Gerald T., L. A. Refinery Mfg.
Gilchrist, Allen J., L. A. Refinery Mfg.

Grant, Wm. Chas., Southwest Territory
Kroenig, Frank G., L. A. Refinery Mfg.
McMurray, Ralph G., Southwest Territory
Miloe, Helen Mary, Southwest Territory
Neely, Carl J., So. Div. Field
Norris, Burrell B., Southwest Territory
Peterson, Louis R., Southwest Territory
Peverill, LeRoy E., Southwest Territory
Totten, Oren M., Southwest Territory
Tower, Dudley, Texas Gulf Div.
Wade, Vance A., So. Div. Field
Wright, Robert W., Coast Div. Field

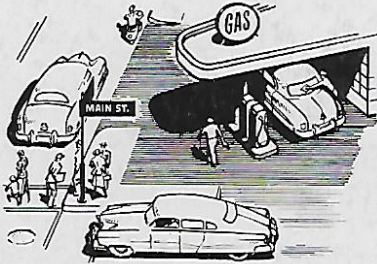
Ten Years

Berg, Clyde H. O., Research, Wilmington
Buell, Warren H., H. O. Comptroller's
Doucette, W. C., Louisiana Gulf Div.
Kelley, Arnold E., Mfg. Plant Process
Ousdahl, A. R., Refinery Sales, Chicago
Pownall, John R., Research, Wilmington
Smith, Gerould H., Research—Oleum
Stephen, John, Southwest Territory
Wilson, John F., Research—Wilmington
Searing, H. H., No. Div. Automotive

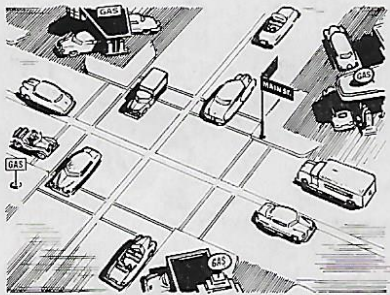
How big are the oil companies?

1. Back in 1910, Union Oil Company was 20 years old. There were 58,000 cars in the 5 western states and we did an annual business of \$12 million. This was just about equivalent to the total annual business that any 6 big grocery super-markets will do today. Yet it represented approximately 23% of the oil business done in the 5 western states.*

* Figures are based on crude oil receipts.



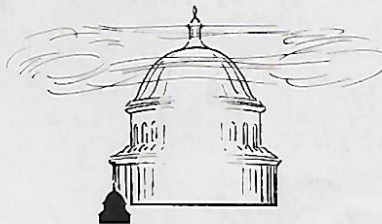
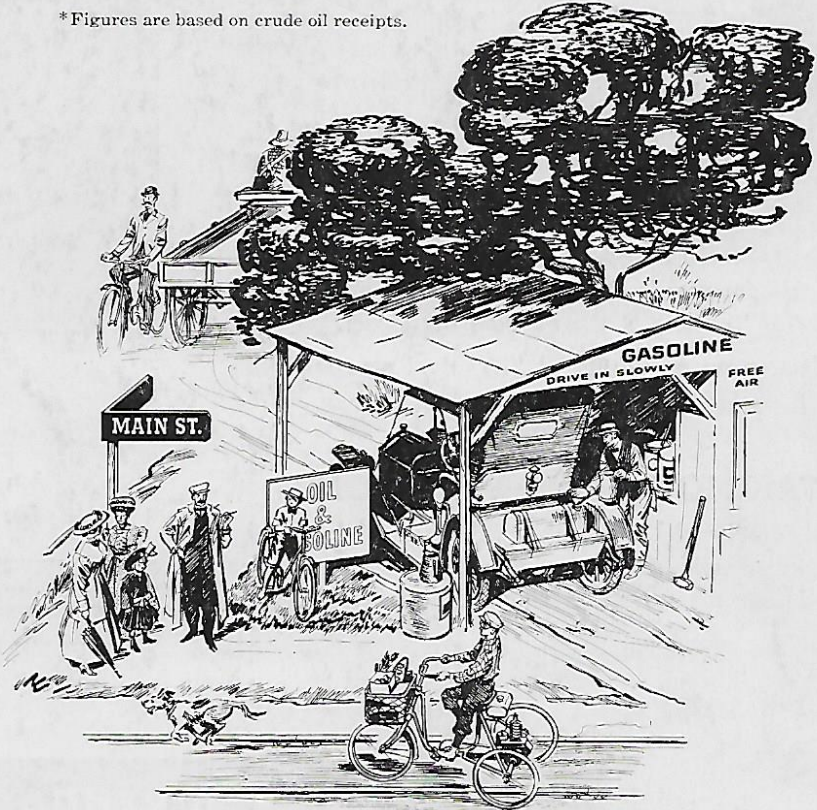
2. Today, there are 100 times more cars in our marketing area and we do an annual business of \$200 million. Yet, in spite of this growth, our share of the oil business in the 5 western states is now 12 1/2%. If we were the only company this had happened to, we'd think there was something wrong with us.



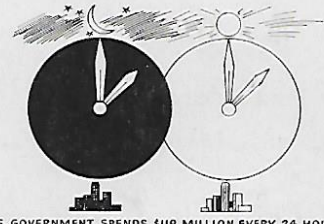
3. But every old, established oil company in the U. S. has gone through a similar experience. The reason for this is that the oil industry—like all American industry—is intensely *competitive*. As the business has grown, new companies have entered the field and *competition* has grown also. As a result, there are far more companies in the industry competing for the business today than there were in 1910.



4. In view of all this, it seems rather strange that we've heard so much talk recently about **BIGNESS**. Of course, individual companies are bigger today. They have to be bigger to serve a bigger country. But the vast majority aren't as big in proportion to the total business as they were 40 years ago. In fact, they are getting steadily "smaller" all the time.



5. If size is a cause for concern, maybe we should take a look at our Federal government. Its "business" is 62 times as big today as it was in 1910. Its payroll is 19 times larger. And it is costing the American people—in direct and indirect taxes—62 times as much.



U.S. GOVERNMENT SPENDS \$119 MILLION EVERY 24 HOURS

6. To give you an idea of what this means, here's a comparison: At the Federal government's present rate of expenditure—\$119 million per day—it takes in and pays out more money *every 42 hours* than Union Oil does all year—as much money *every 2 1/2 hours of each night and day* as Union Oil stockholders received in dividends all during 1949.

UNION OIL COMPANY OF CALIFORNIA

INCORPORATED IN CALIFORNIA, OCTOBER 17, 1890

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