



AUGUST 1950

*“On Tour”*



# On Tour



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ON TOUR accords photographic acknowledgement  
in this issue to Will Connell and Rod Daley.

T. D. Collett..... Editor  
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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.

# As Free Men We Proclaim

**Our Belief:** in the divinity of God, the dignity of man and the destiny of our country.

**Our Belief:** that "man shall live by the sweat of his brow."

**Our Belief:** in a "fair day's work for a fair day's pay."

**Our Belief:** that a man should live within his income and pay his honest debts, and that our government should operate on the same sensible basis.

**Our Belief:** that under the American Way of Life we already *have* a higher standard of living than any other government has ever offered—let alone delivered!!!

**Our Belief:** that as free men, proud of our achievements and jealous of our rights, there is no place in our midst for communists, fellow travellers and other cranks who by wild accusations and empty promises would lead us down the trail to political and economic slavery.

**Our Belief:** that it is our duty as free men to speak out in defense of our American Way of Life and to go on record to that end.

**So We Proclaim:** with the firm conviction that 99 per cent of all Americans subscribe to the above sentiments, that we—the undersigned employees of Basic Refractories, Inc., herewith and henceforth endorse and pledge our wholehearted support to the same. May God be with us.

The above proclamation was expressed, signed and sponsored by solid American working people of Cleveland, Ohio, whom ON TOUR takes pleasure in congratulating.



# COALINGA NOSE

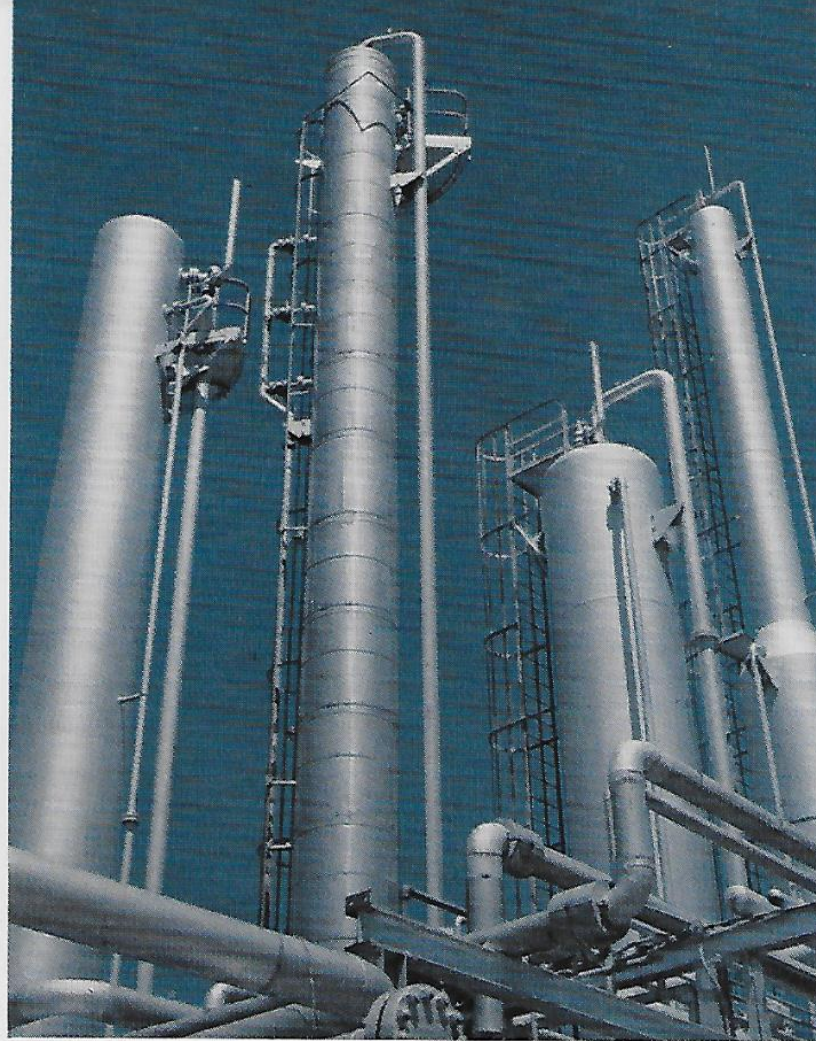
MILLIONS of years ago the bottom of an ancient sea was gradually covered with alternating layers or beds of disintegrating rock fragments washed down from surrounding mountains. Movements of the earth's crust lowered this area of sea and shore until, finally, some 8,000 feet of alternating sand and mud deposits lay above it.

The immense weight of these overlying deposits eventually compressed and compacted the bottom sand layers into sandstones and the silts and muds into hard capping layers of impervious shale.

Muds and silts, when transformed into shales, have almost no porosity and are quite as resistant to the seepage of gas and oil as a pane of glass. Sandstone, on the other hand, although it looks solid, contains a from-five-to-thirty-percent volume of voids or pore spaces capable of holding gas and fluid.

Fortunately, compaction of the sediments squeezed fluids, including particles of oil and gas, out of the shales or source beds and into the more porous sandstone that once comprised the ancient shore line. The petroleum particles, together with large volumes of salt water under hydrostatic pressure, traveled along the slightly tilted bed until they came to a point where the sandstone ends, or "pinches out," as geologists describe it. There in their sandstone prison, called a *stratigraphic trap*, they formed a commercial accumulation of crude oil.

Field Operator "Doug" Henley is working on a field trap setting, where crude oil from 12 Coalinga Nose wells is separated into two streams, liquid and wet gas.

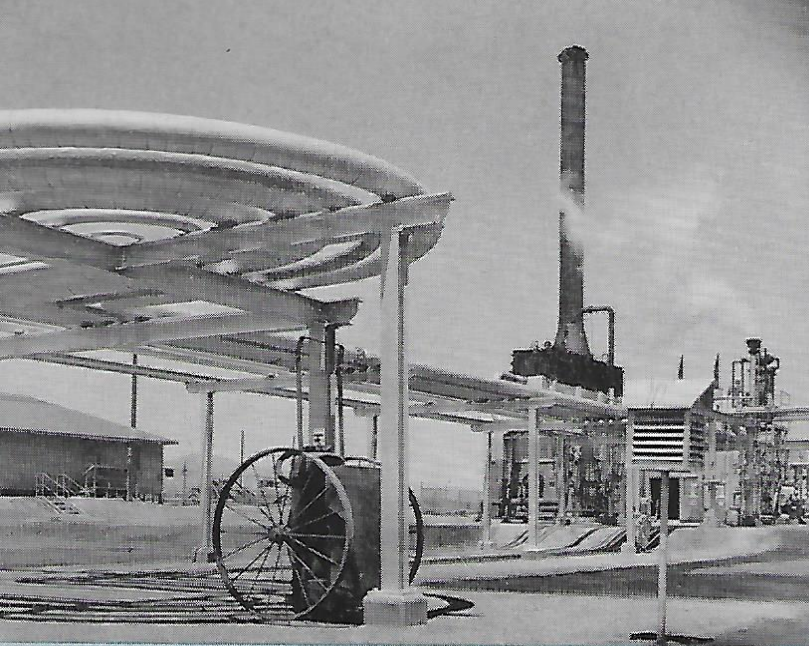


Dominating the Coalinga Nose gas plant are these columns, designed to separate liquid fractions from wet gas and produce dry gas, natural gasoline and LPG.

Next, the wet gas is compressed here to 550 pounds, at which pressure some of the liquid fractions, when cooled, condense and proceed to fractionating columns.



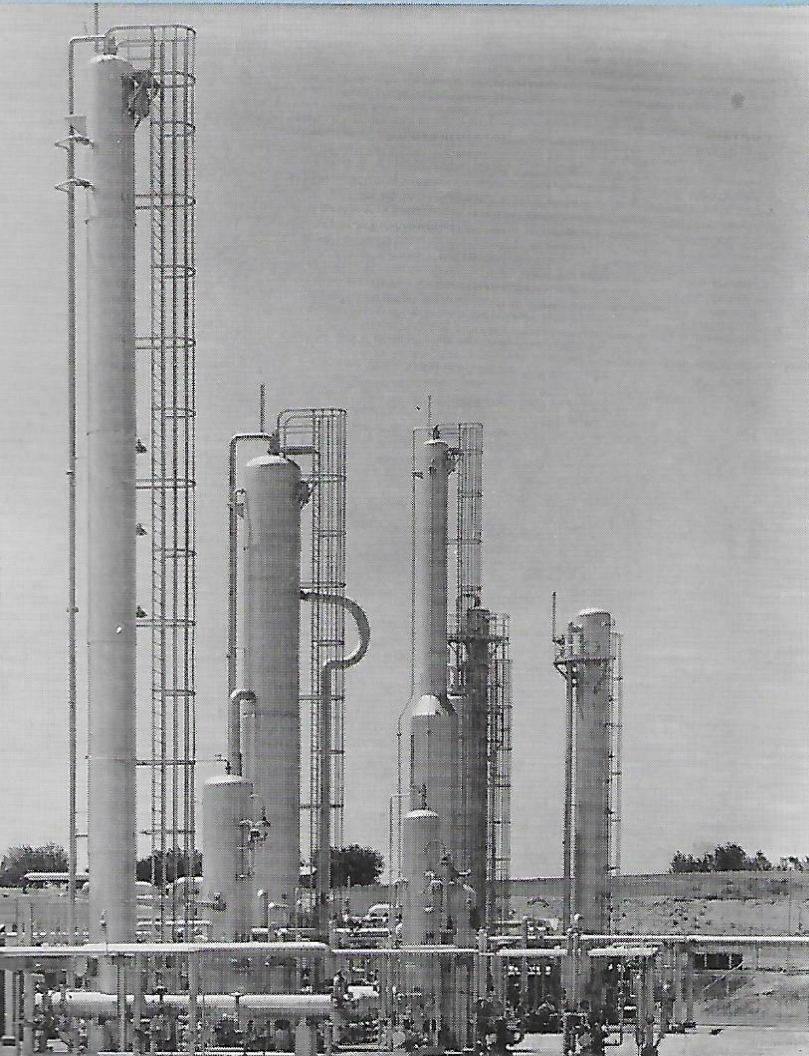
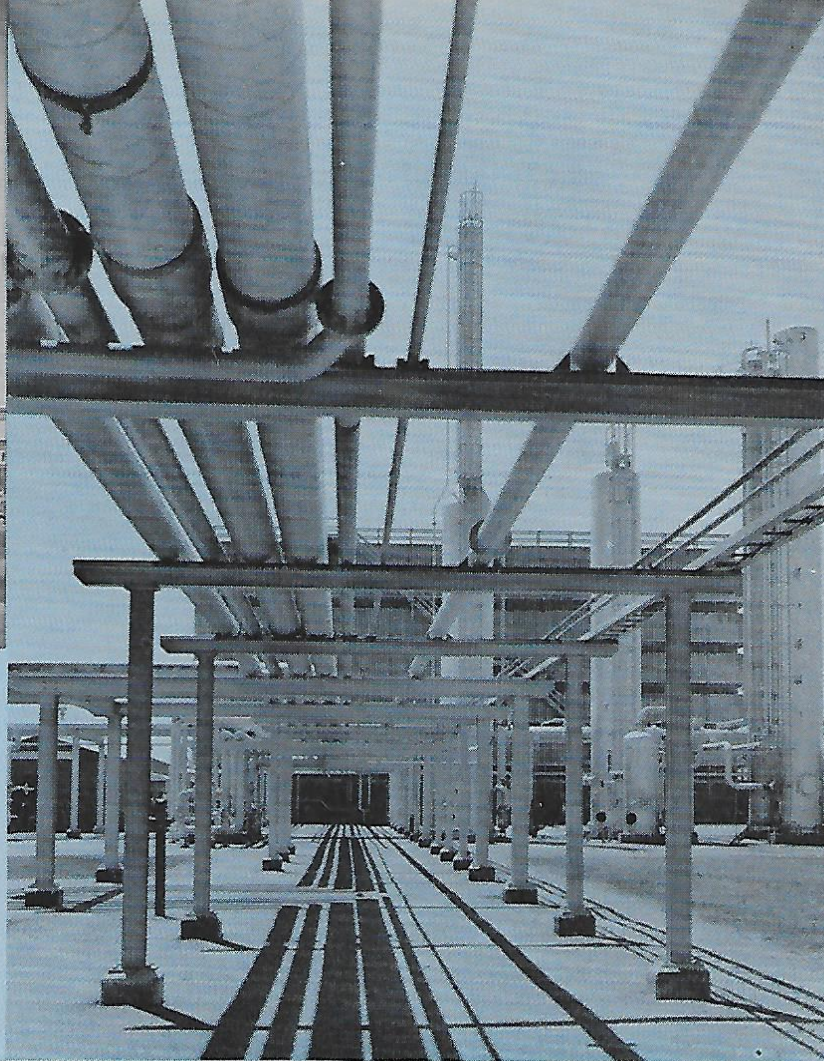




➤ Remaining liquid fractions are removed by absorption oil, which then is heated in gas-fired heater, right, and freed of LPG and gasoline by distillation.

➤ Overhead lines carry petroleum vapors back and forth between compressors and heaters on one side of plant across to columns, cooling tower and storage.

➤ These facilities process about 25 million cubic feet of gas per day, from which 30,000 gallons of LPG and 15,000 gallons of natural gasoline emerge.



But one day in 1938 the oil's long imprisonment ended. A driller's bit dug thousands of feet down through rock layers, penetrated the shale cap-rock, and struck oil in the porous sandstone. Scores of other wells followed. Nearly all were producing wells because prior sub-surface studies had accurately defined the oil bearing sands—an underground area resembling a gigantic human nose in profile. Due to its shape and because it was located near the California town of Coalinga, oil men soon began to call the new field Coalinga Nose.

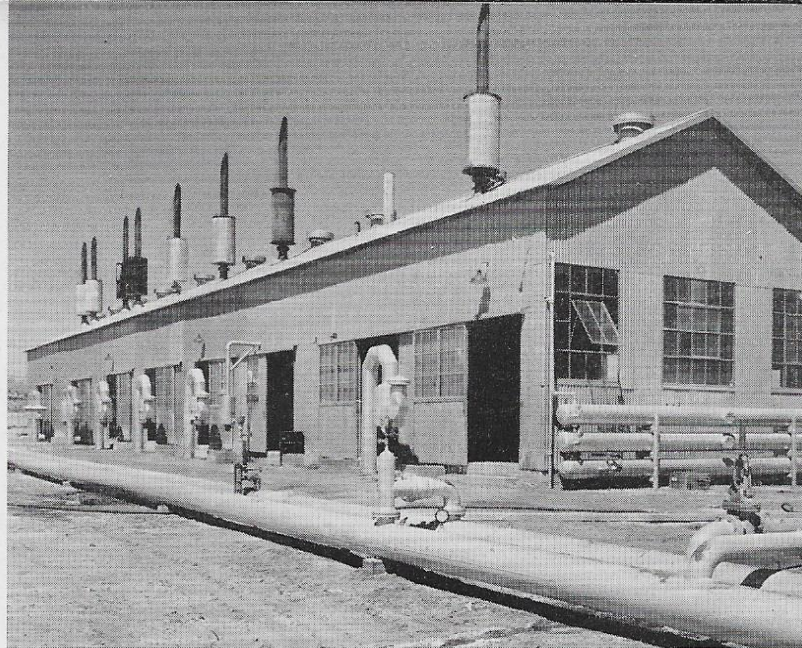
No pumps were needed to produce oil from Coalinga Nose because of the high formation pressure. The crude was composed in large part of gaseous fractions, which expanded when pressure was released and flowed upward of their own accord. In rising to the surface, the gas carried with it large quantities of liquid petroleum fractions, which are in great demand as components of heating and tractor fuels, gasolines and heavier petroleum products. The wells would continue to yield this wealth until enough gas had vaporized and been produced to seriously lower the reservoir pressure.



However, petroleum engineers in recent years have learned how to extend the life of many oil wells and greatly increase their yield of crude oil. One important way of achieving this is to strip the outgoing natural gas of its liquid fractions and return dry gas to the underground formation.

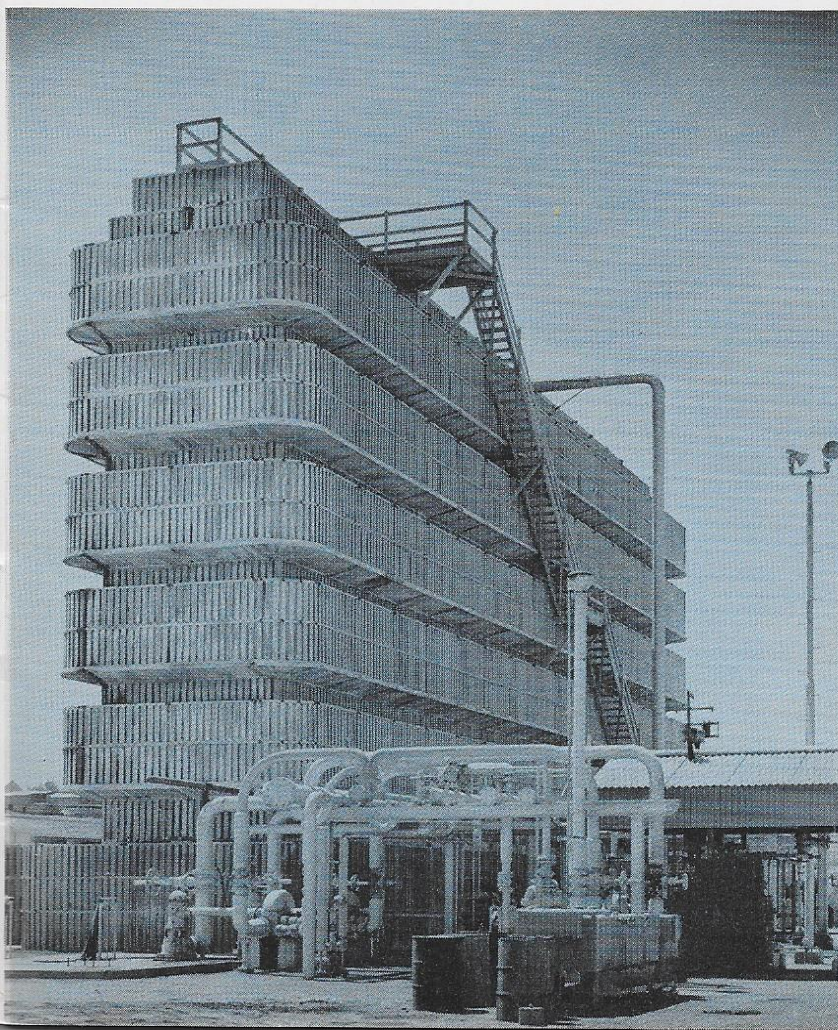
Studies of Coalinga Nose indicated that if dry natural gas was injected in selected wells throughout the field, it would not only prevent a rapid drop in reservoir pressure, but the gas would again move through the sandstone structure, drive other hydrocarbons out of imprisonment, pick up an additional load of petroleum vapors, and return again through producing wells. It is estimated that the ultimate production of certain oil fields can be increased as much as 15 per cent by this gas injection method.

The chief obstacle to such a plan in many cases is that a number of competing oil companies usually own or lease the sub-surface mineral rights. Since all are producing from the same reservoir, it is a natural inclination of each company to obtain maximum production and maintain it until the reservoir is exhausted. Certainly none would be justified in pumping valuable dry gas underground unless all other operators did likewise,



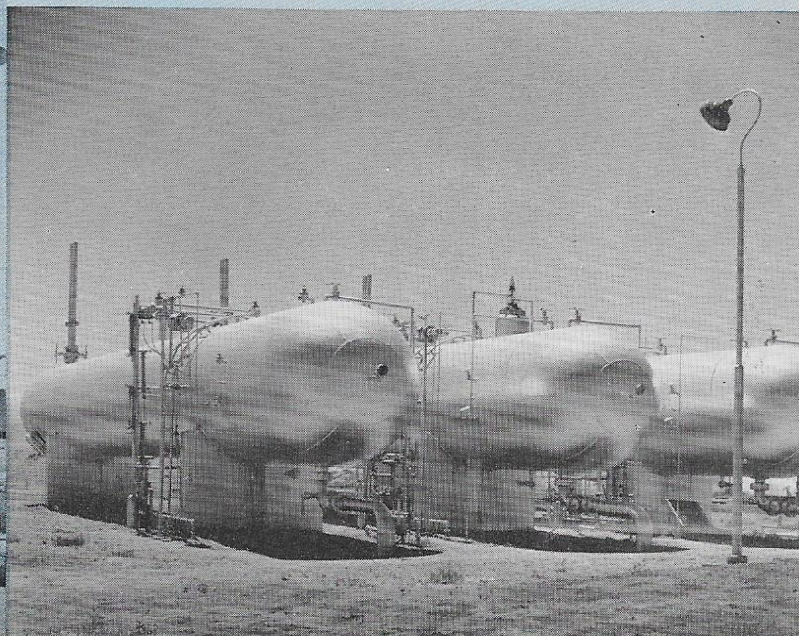
🏠 Dry gas finally returns to the compressor plant, where it is built up to 1,750 pounds of pressure before going underground through gas-injection wells.

since the benefits of gas injection in any one location usually are distributed throughout the entire field. The only solution is for all operators to produce their wells in the field on a cooperative basis, in what is now known to the petroleum industry as *unitized operation*.

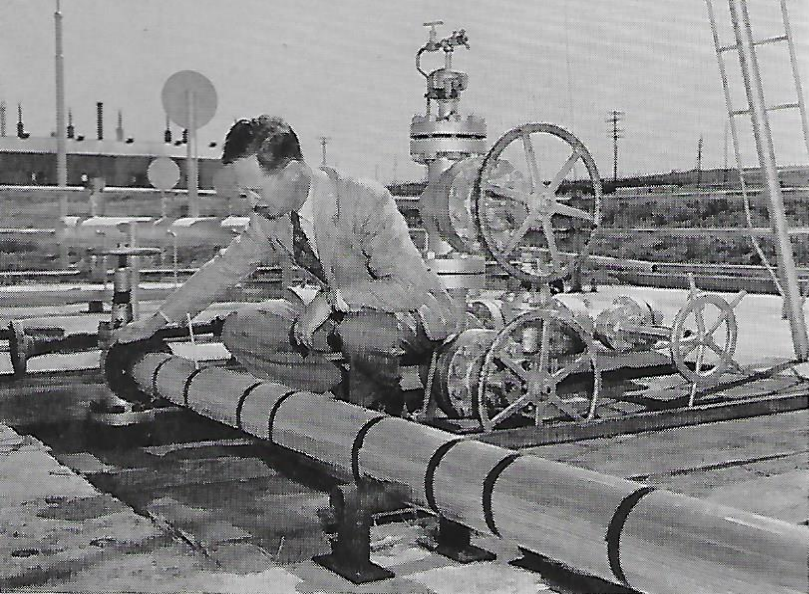


❖ Cooling towers are important to gas plant operations as a means of controlling process temperatures and cooling jacket water circulating to compressors.

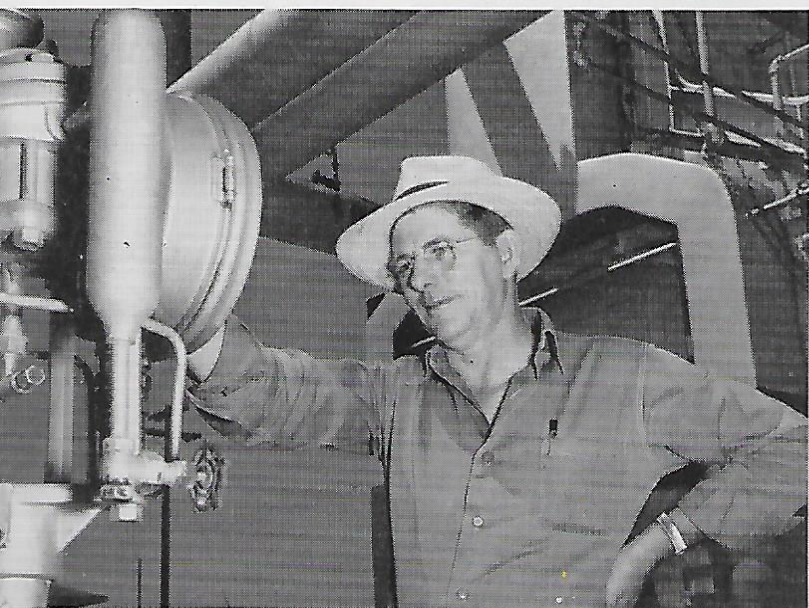
📦 The gas plant's liquid petroleum yield is stored under pressure in horizontal tanks pending shipment by pipe line and tank truck to consumer.





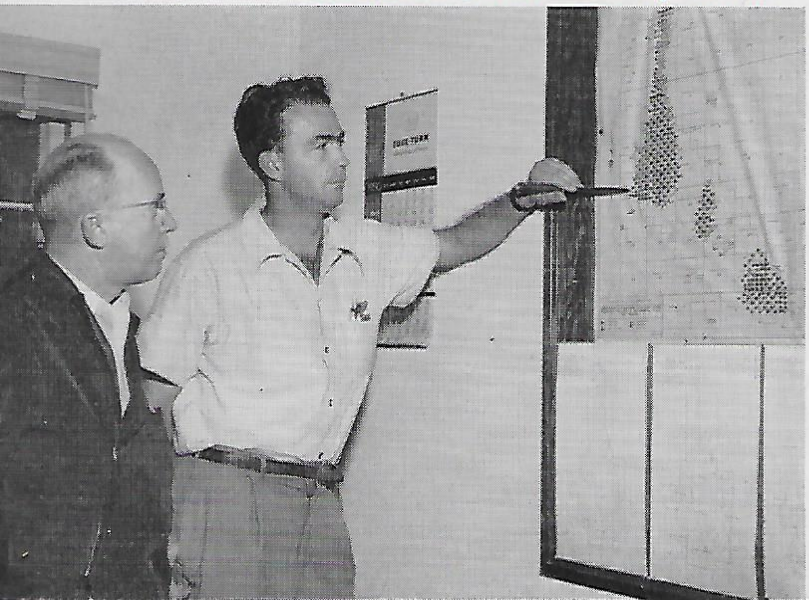


➤ At one of the gas-injection wells, Frank Boyd, production foreman, checks temperature of gas, which must enter well casing at near 150 degrees.



➤ John S. LeGate, senior tester at Coalinga, reads the ink-track of a recording instrument to ascertain that the heater is operating at its peak efficiency.

➤ L-R, H. H. Dievendorff, district superintendent, and R. F. Bauer, district production foreman, study a map of oil fields operating under their supervision.



It is under *unitization* that Coalinga Nose is today producing. The original discovery well was drilled for interests of the late Edward L. Doheny, whose Los Nietos Company, recently purchased by Union Oil, controlled 13.9 per cent of Coalinga Nose production. The McAllister California Oil Company control another 13.9 per cent and have contracted to sell all of this production to our company. Other participating companies are Honolulu Oil Corporation with 13.9 per cent; Standard Oil Company of California with 22.6 per cent; Superior Oil Company with 17 per cent; and The Texas Company with 4.8 per cent.

The percentage established for each participant is based upon scientific measurements of the producing zone under their fee property or leases.

Under the present agreement, Union Oil Company is operator of the entire field. This means that Company employees operate and supervise all equipment in the field, including wells, pipe lines, gas plant and maintenance equipment. The cost of our operations is prorated among all participants in relation to their holdings. Similarly, the oil produced is credited to each company on the basis of its reservoir holdings. The present objective is to pump all dry gas back underground as a means of increasing productivity throughout the entire field.

Coalinga Nose, the only unitization program in which Union Oil serves as operator, is however one of several in which the Company participates. Other important ones are the Rio Bravo, South Coles Levee, Northeast Coalinga, and Paloma units.

➤ L-R, Rita Jardon, Eda Forbes and Doris Allen lend a feminine touch to modern oil field activities by handling clerical duties of the Coalinga Nose office.





# Pay Day

7:00 AM

**Bill:** It's pay day, Anne! Our first one—the day we've been kind of looking forward to for about 25 years now. Let's step out tonight and celebrate our good luck.

**Anne:** Wonderful, Bill! And in some ways you are lucky—a swell job with a big oil company, a starting salary of 325 dollars a month, and every opportunity to reach the top. But you're entitled to a few breaks after all the hard work and sacrifices it took to get that degree in chemistry. How shall we celebrate? Maybe dinner out—and a good movie?

**Bill:** For the best wife a man ever had, nothing but the finest will do. Tell you what—pick me up at the plant about quitting time. We'll get into our best duds and have dinner at the Trocambo. I'd like to see what that place looks like on the inside—just once.

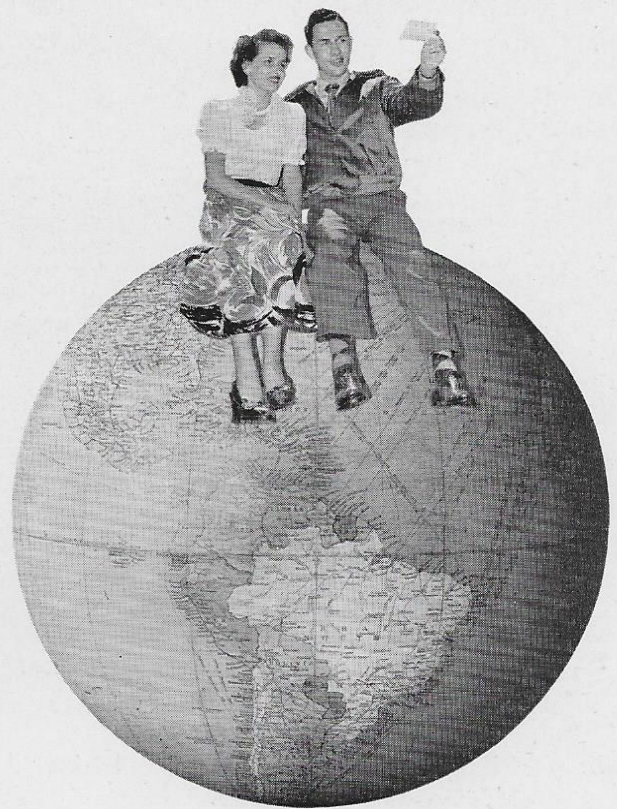
**Anne:** Okay, darling. Maybe our first pay day does call for something special. But the Trocambo's so expensive—and there's a bill or two to pay, remember. I'll pick you up near the gate at four-thirty.

4:30 PM

**Bill:** Say, Chief, how come only 286 dollars? I thought the starting ante was 325.

**Chief:** The sad story begins on your check stub, Bill. You see, Uncle Sam makes us take out \$31.80

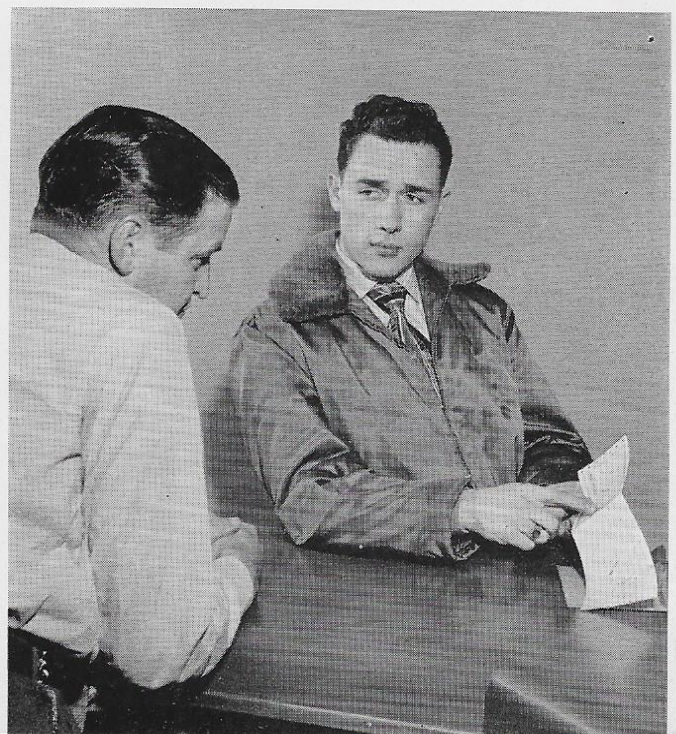
"It's pay day, Anne!"



in your case for Withholding Tax—income tax, you know. The dollar-sixty-three is for State disability insurance; it'd cost you twice that amount if the Company hadn't adopted an insurance company plan instead of the costlier State plan. The other four-eighty-eight is for Federal Old Age Benefit Tax. You'll get it back, plus the Company's donation, about 40 years from now—providing you watch your health and keep the world safe for Democracy.

**Bill:** Yeah, guess it's a good thing—the security part, at least. But \$31.80 is a pretty stiff income tax, isn't it? Hadn't figured on half that much.

"How come only 286 dollars?"







"Any objections to a hitchhiker?"

4:35 PM

**Bill:** Hello, beautiful! Nice car you're driving. Any objections to a hitchhiker?

**Anne:** Step right in, stranger. My philosophy is never to turn down a working man—especially on pay day. Couldn't spare about 300 dollars could you, mister?

**Bill:** Married me for my dough, eh? Well, don't mind if you did. There's the booty—every dime of it!

**Anne:** Only \$286? What on earth happened? I thought . . .

**Bill:** Yeah, so did I. But Uncle Sam beat us to the punch. Seems as if he insists on holding out a few bucks for our old age. And the governor grabs out another dollar or two in case I get sick or injured. But the one that really hurts is income tax—that Withheld item of \$31.80. Gee, I didn't know the Government took such a heavy cut. How would it be to double-cross the collector with about 12 little tax exemptions?

**Anne:** No thank you, kind sir. Two will be enough—when the time comes—and when the bills are paid—and when your take-home pay is really \$325 a month . . . By the way, Bill, Uncle Fred has asked us over for dinner tonight. He's having a group of the party leaders . . .

**Bill:** Just a minute, lady. Remember that date we had for the Trocambo? Uncle Fred is a swell guy and I hope he's elected senator. But none of that political hash for me tonight. I'm dining on steak at the Trocambo—and with a very gorgeous doll in tow!



"But the one that really hurts is income tax!"

4:45 PM

**Bill:** What are we stopping here for?

**Anne:** Just to pay a few bills. The rent's due, you know—and the lights and phone and another installment on our car and refrigerator. I'll hurry while you stay here and play penny-ante with the parking meter.

**Bill:** Hey, Anne, what're the little black books you're carrying?

**Anne:** Oh, these? They're just one of Uncle Fred's campaign stunts—calls 'em hidden taxes. Tell you about it later.

5:30 PM

**Anne:** Waal, podner, reckon we're on wheels, housed and refrigerated for another 30 days. Now to pick up a few things for breakfast—then home.

**Bill:** Tell me about those books, Anne. I'm curious. What's this hidden tax business of Uncle Fred's.

**Anne:** Really, Bill, it's a clever idea. I should have told you there's a whole carton of books here back of the seat . . . See, they're a kind of expense memorandum, only here on the right side is a separate column for taxes—not only the taxes most of us know about but also the other kind—hidden taxes.

**Bill:** What do you mean, hidden taxes?

**Anne:** They're the ones that don't appear on a company's bills—taxes a business has to pay on raw materials, on profits and for licenses and a lot of other things. They're included in the price of everything we buy, but you don't see them listed as taxes. That's why they're called hidden taxes.



**Bill:** I see. But what's the honorable Fred's angle?

**Anne:** Simply this. He's handed a supply of books to several hundred campaign workers—including his devoted niece of course. When we go to a store or pay a bill, we're supposed to ask the cashier the exact amount of our tax. Nearly every one of them can rattle off the sales tax in nothing flat. But when you mention hidden tax, they all but drop through the floor. The cashier asks the supervisor—the supervisor calls the store manager—the store manager calls his head office—and the amazing thing is that nobody knows.

**Bill:** Then why ask 'em?

**Anne:** That's the clincher. Here in the back of each book is printed a list of several hundred common items we use daily—everything from automobiles to zippers. But the price of each item is broken down into two figures—one showing the actual production cost—the other showing the amount of tax we pay, both direct and hidden. If the store manager doesn't know how much tax is hidden in a bottle of milk, we just turn to the item and show him. And usually he's so dumbfounded he can hardly wait to tell every clerk and customer.

**Bill:** Now I'm catching on. You offer to get him a free supply of books—he hands 'em out to his clerks and customers—pretty soon every voter is looking at Uncle Fred on the back cover and saying, "That man ought to be our next senator."

**Anne:** Bright boy! And I wouldn't be surprised if the auto agency alone gets us a thousand votes. Was the manager surprised when I told him the total tax on a new automobile is at least \$700!

5:45 PM

**Bill:** There's something about these drive-in markets I like—must be the tax-free parking—or is it tax free? . . . Anne, while you're getting the groceries, I'll run across the street and pick up that lawn mower and shovel we saw last week. Something to keep me out of your kitchen next Saturday, y'know.

**Anne:** Good idea—right after you've washed my breakfast dishes and scrubbed the kitchen floor . . . And since you're going to spend some money, here take a few of Uncle Fred's vote getters along . . . And, Bill, get one of those cheap alarm clocks at the drug store—and a box of talcum powder—and, let's see, what else was it? . . . Oh, I remember. Bill, I've decided you

can't afford to buy me a new coat for my birthday. Besides, I don't need one. What I'd like is a nice bottle of perfume—nothing big or powerful—just a few drops of something very good. While you're doing that, I'll pick up some hose, shoes and a purse I asked the store to hold for me.

6:30 PM

**Bill:** Oh, oh, there's that gas gauge pointing due west again. Better pull into Jack's for a sample of our 7600 . . . That reminds me, Anne, I forgot to try the hidden tax gimmick on the druggist back there. But let's see what Jack knows about it.

**Jack:** Hello, Bill and Mrs. Bill. That car you're driving is enough to make a thief out of me. Fill it with New 76 or 7600?

**Bill:** Better make it an even 10 gallons of 7600, Jack, and give us the full treatment. We're gluttons for free service.

**Jack:** Fine! If you'll release the hood, I'll dive in and go to work.

**Bill:** Jack, we're keeping a special set of books on this chariot and one column calls for taxes. How much tax do we pay on 10 gallons of gas?

**Jack:** Six cents a gallon, Bill—4½ to the State and 1½ to Uncle Sam—60 cents for the 10 gallons. It's posted right there above the pump.

"And, Bill, get one of those cheap alarm clocks at the drug store."







**"Without taxes I could buy it for 14 cents a gallon."**



**"Well, wha'd'y'know!"**

**Bill:** I know, but how about the hidden tax?

**Jack:** Hidden tax?

**Bill:** Yeah. Y'know the Company pays a lot of corporation taxes—transportation taxes—license fees—and so on. At any rate, the Company pays until you and I come along and pay the Company back. It's the consumer who eventually pays for everything. That's the tax I'm wondering about—the hidden tax.

**Jack:** Sorry, but you'll have to ask some of the big shots about that one. Guess it doesn't amount to much though—maybe a cent a gallon when it's spread out over all the gallons of gas Union sells.

**Bill:** Come to think of it, maybe gasoline is listed here in the back of this book . . . Sure, here it is . . . Holy cow! Did you say a cent a gallon, Jack? Look here. The total tax, including hidden tax, on a gallon of gasoline hits a national average of 11 cents. Say, that's more than you or Union Oil or anybody else gets for finding, producing, refining or selling the stuff. Without taxes I could buy it for 14 cents a gallon.

**Jack:** Well, wha'd'y'know! And look at some of those other items. Three dollars on a 15-dollar tire; \$2.36 on a 15-dollar battery. Wow, and three dollars tax on two dollars worth of whiskey. Say, where did you find that little book?

**Bill:** It's a gift, Jack—keep it. Here's several more for your employees. And, if you're interested,

I can get you a thousand to pass out to every customer who kicks about the high cost of gasoline.

**Jack:** Can you, no kidding? Say, it's a deal . . . Eleven cents a gallon! Are a lot of characters around here going to be surprised!

#### 7:00 PM

**Anne:** Bill, why so quiet all of a sudden? I'm nearly ready and . . . why, what are you doing with my expense book. Of all the nerve! That's where I was keeping track of . . .

**Bill:** Take it easy, dear, I haven't spoiled a thing. Just been adding the things I bought and figuring up our balance . . . Say, Uncle Fred hasn't missed a thing, has he? Listen to this:

"One worker out of nine in our country is on the public payroll.

"Approximately 17 million people are receiving regular checks from the Federal Government in the form of aids, grants, subsidies, benefits, pensions and salaries. Practically all of these people receive their pay for non-productive work or for outright inactivity. They consume the national wealth but add nothing to it.

"In 18 years local taxes have doubled; state taxes have quadrupled; and Federal taxes have jumped from less than two billion to more than 42 billion dollars a year.

"If every farm in the United States, including equipment and livestock, were sold, the farmers would realize about 25 billion dollars.



This amount would keep the Federal Government running for only seven months.

"Regardless of how poor or prosperous they felt in 1948, every man, woman and child in the United States owed \$1,740—his share of the national debt.

"Economists agree that taxation beyond 25 per cent of our national income will bring economic disaster—and already the tax rate is well over 30 per cent.

"Although people in high income brackets are paying approximately one-half of all income and social security taxes, it is the small wage earner who is hit hardest by hidden taxes. Four-fifths of all hidden taxes are paid by people earning less than \$5,000 a year."

Gosh, Anne, are we sitting on top of the world or is the world sitting on top of us?

**Anne:** Since you ask, Bill, I think we're being sat upon. . . . By the way, what's left of that wonderful salary you were talking about this morning?

**Bill:** It's taken a turn for the worse, Anne. Just look at that tax figure—\$109.67—and gone with the wind. I blush to report a balance of \$68.93 to last until pay day—next pay day, that is. And about a third of that will go for more hidden taxes.

**Anne:** Hardly a down-payment on the Trocambo, is it? And think of the groceries we'll need during the next 30 days. . . . Besides, Auntie wouldn't take "No" for an answer. She said we weren't invited—we were drafted. It seems that some of Uncle Fred's campaigners are a little skeptical about the tax booklet idea. When I told her

"Bill, why so quiet all of a sudden?"

Commodity	Labor and Materials	Total Taxes*
Rent	40.00	
Lights	325	2000
Auto payment	40.00	1.75
Refrigerator payment	12.00	20.00
Telephone	4.00	6.00
Milk \$ 146.48	.10	200
Bread \$ 109.67	.13	.08
meat	.10	.05
Scap	109.00	.40
Robbery	1.00	.04
Shoe	1.00	.50
Curve	10.00	3.00
Rawn mower	4.00	5.00
Travel	1.30	7.00
Alarm clock	2.00	.70
Talcum powder	.29	1.00
Perfume	9.75	.18
Cigarettes	.08	2.45
Gasoline	1.40	.11
Payroll deducted Taxes		1.10
	\$ 146.40	38.31
		\$ 109.67

*Handwritten notes:* 325.00 made in June today  
256.07 expense  
68.93

\*Refer to the back pages of this book to determine taxes, including hidden taxes, on many items of merchandise.

"I blush to report a balance of \$68.93."

about you and Jack over at the service station, she nearly did a cartwheel. Something tells me you're going to be called on for a rousing political speech tonight.

**Bill:** Say, I'm in a pretty good mood for one, too. Nobody's going to keep grabbing over a third of my pay check each month without an argument. You win, beautiful. It's pot luck at Uncle Fred's and we'll drive home past the Trocambo.

### Cast of Characters

Anne ..... Nell M. Kueny  
 Bill ..... Raymond E. Webb  
 Chief ..... Roy Wills  
 Jack ..... Frank Desimore

"Nobody's going to keep grabbing over a third of my pay check each month without an argument!"





# "76" VIEWS OF REFINING

*22. Pump Station* Enroute to refineries, we should obtain at least a bird's-eye view of how most crude oil is transported.

At right, we are looking down from a pipe line patrol airplane on Shandon Pump Station. Shandon is typical of some 15 plants that push liquid crude oil through 140 miles of pipe line connecting San Joaquin Valley fields with our Pacific Ocean terminal at Port San Luis. Such plants are equipped with two or more steam or electric driven pumps whose powerful impellers or pistons keep the oil moving at about three miles an hour. A second function of these plants is to heat some of the heavier varieties of crude, thereby causing them to remain less viscous, hence easier to pump. Storage tanks are useful at pump stations either to side-track a shipment or accumulate oil from tributary lines until a normal shipment of 50,000 barrels or more is ready for transportation through the main line.



*23. Pipe Lines,* although costly to install, are among the most economical means of transporting petroleum. They recognize few insurmountable barriers and throughout America can be seen stretching across thousands of miles of deserts, mountains and fertile valleys.

The main trunk at left, taking the shortest course across foothills of Cholame Valley, actually consists of two parallel pipe lines. The pipe varies in diameter from eight to twelve inches and is buried about two feet underground, except where it lies exposed above narrow gulleys and streams. One line transports the heavier crudes. The other handles light crudes and condensate. Through similar pipe line systems, most of the stabilized natural gasoline also proceeds from gas plants to refineries.

Constant watchfulness is necessary to guard against pipe line leaks and prevent highway and other construction crews from inadvertently doing damage. Patrolling was formerly done by workmen on horses, in buggies or afoot. Today low-flying airplanes are proving more satisfactory. Pilots on these runs can spot leaks or warn trespassers in a fraction of the time formerly required. Very little oil is lost enroute.







## 24. Pipe Line Terminal

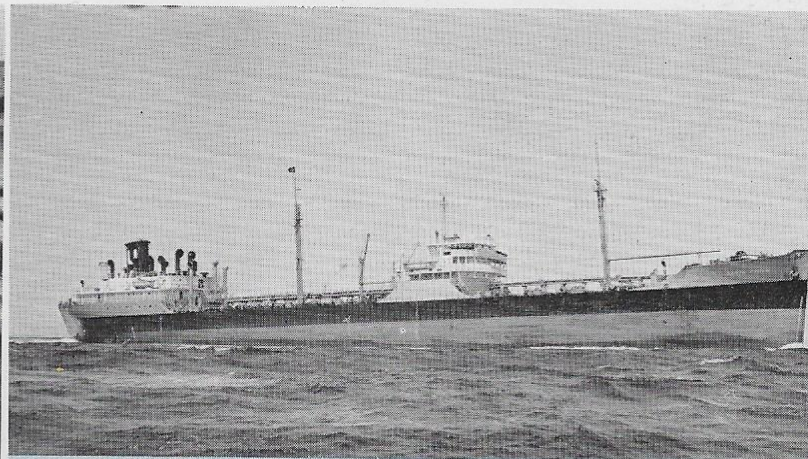
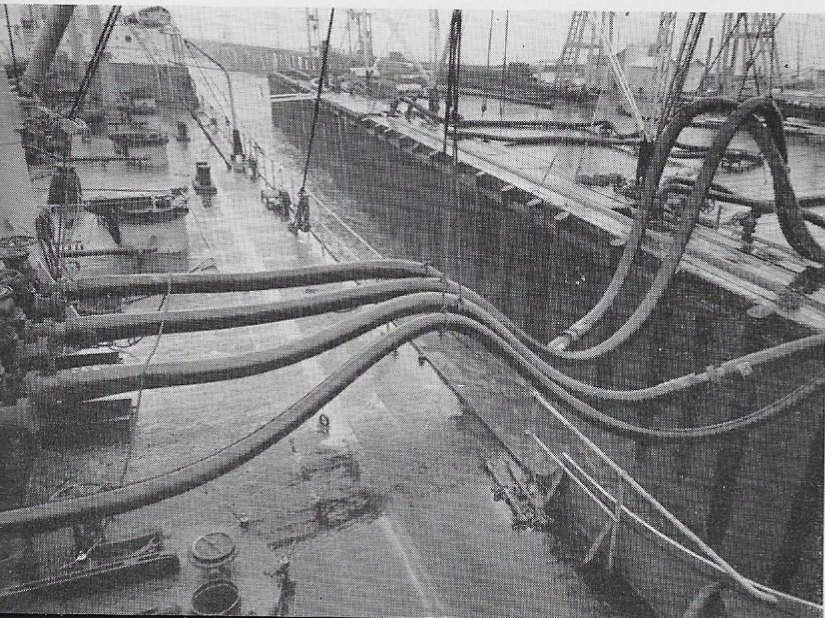
is the industry's name for Port San Luis, above, where pipe lines from the San Joaquin and Santa Maria Valleys terminate. Facilities at Avila Pump Station, here seen on the coastal bluffs, include storage tanks, oil-heating equipment and modern pumps that are capable of delivering well over 20,000 barrels per hour of crude aboard tankships. Additional reserve storage facilities, in the form of tanks and immense underground reservoirs, are located a few miles inland at San Luis Obispo.

This busy terminal often serves two large tankships at a time, operates day and night, and in a single month has accommodated nearly 50 ocean-going vessels. A ship has been loaded here with nearly 90,000 barrels of 35-gravity oil in the short interval of 4½ hours.

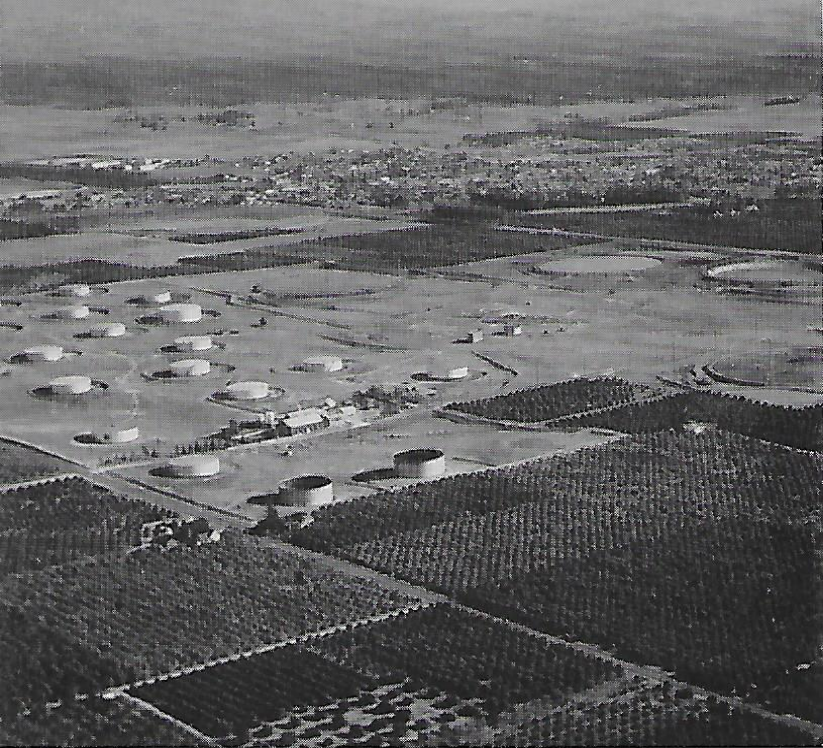
## 25. Tankships,

such as Union Oil Company's SANTA PAULA, below, take over the oil transportation job at land's end. This ship, one of seven Company's vessels, has a maximum gasoline cargo capacity of 140,000 barrels, but normally carries no more than 115,000 barrels of heavier crude oils released from Port San Luis lines. A compartmentized hold permits the transportation of several commodities each voyage.

Loading at Port San Luis takes place a half-mile offshore. Large flexible hoses connect ship tanks with wharf pipe lines. Through these, water ballast is pumped ashore while oil comes aboard. The loading view, lower left, was photographed during a heavy rain squall, indicating that roughest weather seldom interferes with ship schedules and the punctual movement of crude.







**27. Tank Farm** Somewhat different are the problems of transporting crude oil through cultivated areas and densely populated towns. Stewart Tank Farm, left, is the starting point of another pipe line connecting several fields directly with Los Angeles Refinery. From tank and underground reservoirs of this tank farm, oil is pumped by pipe line under orchards, farms, railways, highways, towns and cities. Fortunately laying of the pipe preceded many of these surface improvements and its existence is unknown to most people who reside near it. Nevertheless, increased vigilance is required to prevent oil leaks in such areas and to prevent pipe line damage by new construction.

Stewart Tank Farm is an important storage and relaying point for crude oils produced in the Los Angeles Basin and Orange County.

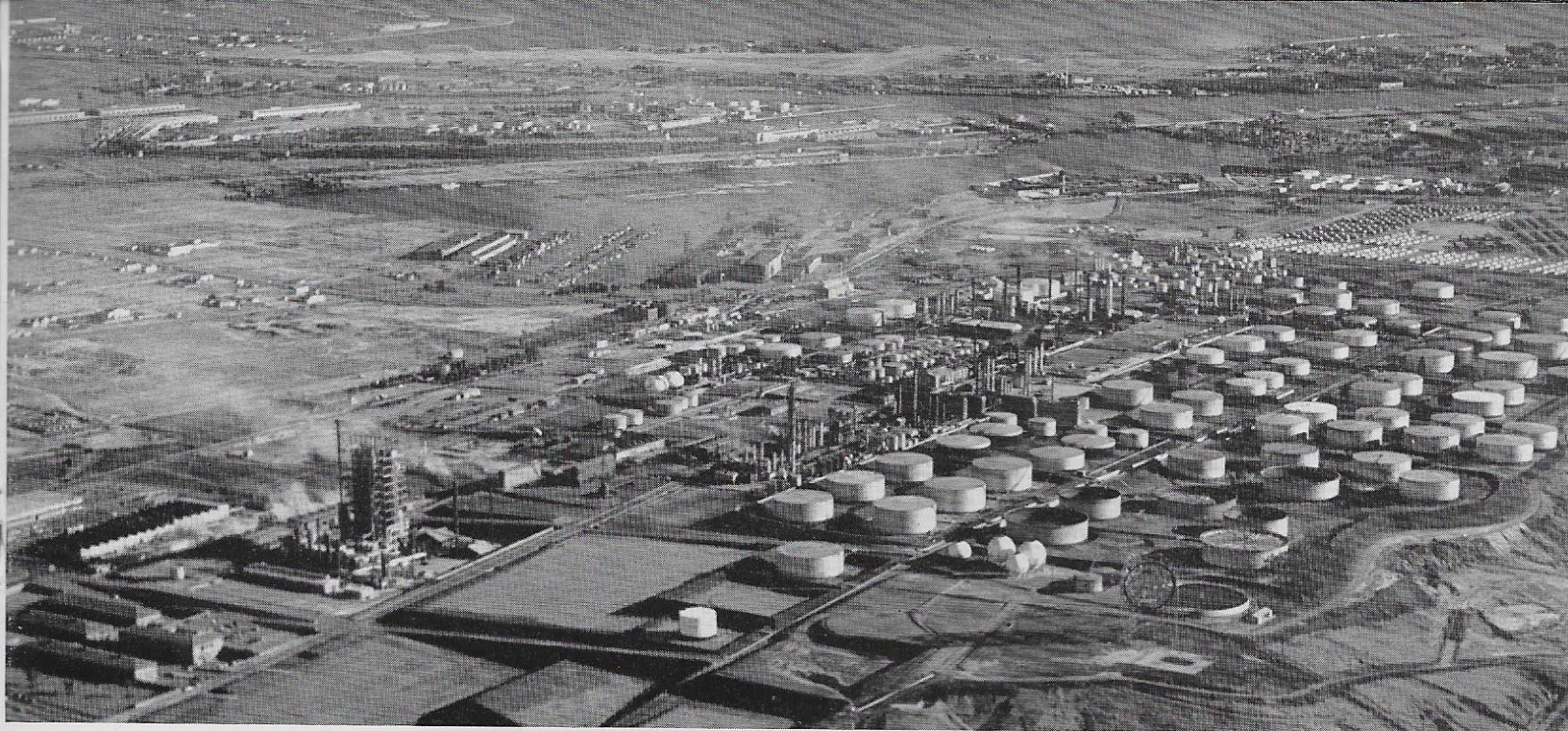
**26. Marine Terminal** After a coast-wise voyage of 170 miles, requiring about 12 hours, south-bound tankships arrive at the Company's Wilmington Marine Terminal, shown in right foreground of picture below. Here unloading begins at once into terminal storage tanks or on through an installation of pipe lines to Los Angeles Refinery, whose tanks stand just beyond the harbor area. This marks the end of a journey

for crude oil, condensate and natural gasoline, but only the beginning of operations that will effect their conversion into hundreds of products having literally thousands of uses.

Wilmington, however, is by no means used only as a receiving terminal. Here other ships are loaded with refined products and sent to such distant markets as Alaska, South America, Hawaii and New York. Its work is geared almost to world-wide petroleum needs.







## 28. Refinery

While still airborne, let's take advantage of good weather to view Los Angeles Refinery and the busy coastal area in which it is located.

Occupying a 394-acre tract in the extreme western portion of Los Angeles County, this refinery is one of the West's largest and most modern. It contains handsome office buildings, laboratories, shops, warehouses and every modern facility for the comfort and convenience of nearly 1,000 people employed to operate it. Some of its refining units rise higher than a 20-story office building and are valued in millions of dollars. It functions day and night throughout each year with never a voluntary shut-down. Many of its installations were

undreamed of 20 years ago except perhaps in the imaginations of inventive engineers; but so rapid is the growth of refining that another 20 years may witness even greater changes.

Despite size, changes and constant operation, the entire refinery presents an appearance of orderliness and exceptionally good housekeeping. It plays host to thousands of admiring visitors annually.

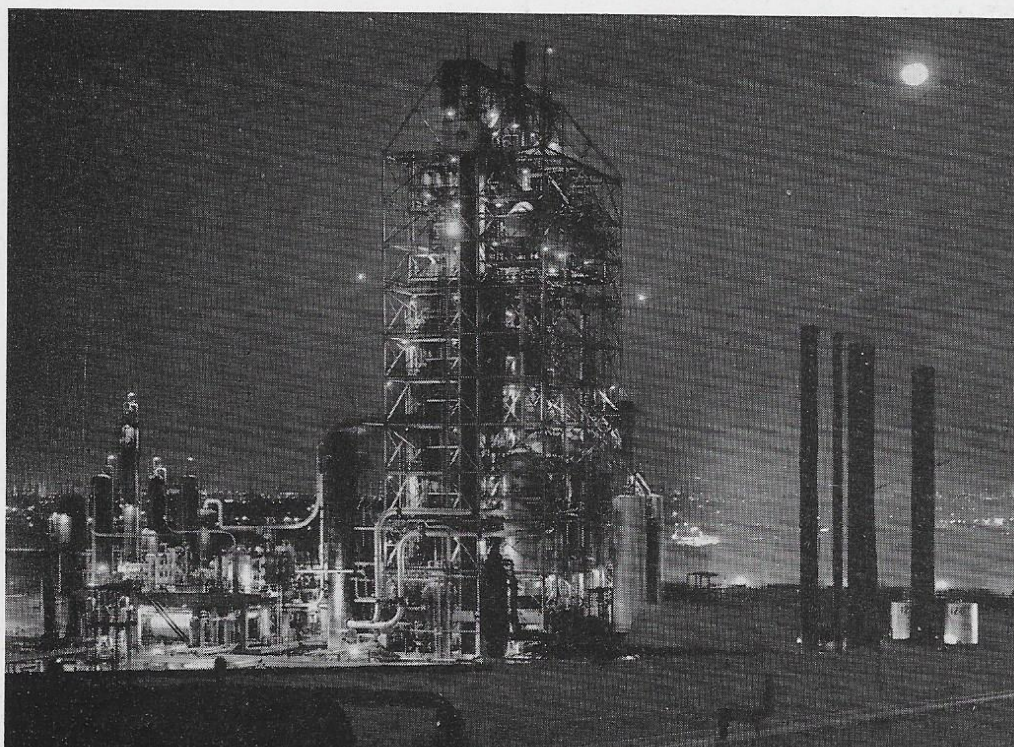
The products handled and manufactured in a refinery are inflammable, explosive and in other ways hazardous to workers. Yet, such great care is taken in training and safeguarding personnel that a worker is less apt to be injured here than on the highway or in his own home.

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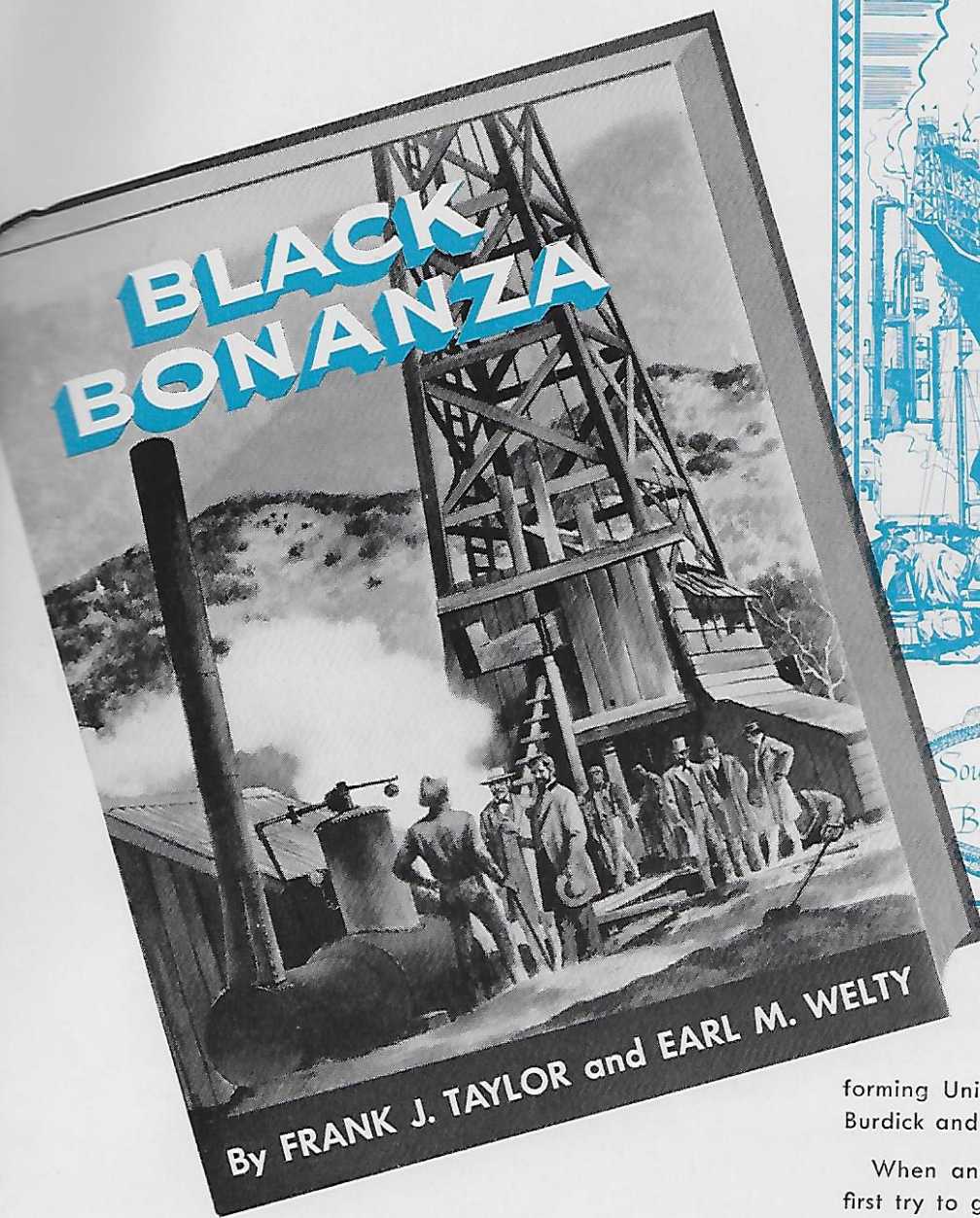
Working units of a modern refinery compete even at night with the brilliance of surrounding towns and cities. At right is the Thermoform Catalytic Cracking unit on night shift. In subsequent pictures its functions will be explained.

**To Be Continued**

ON TOUR







## Book Reveals

### BET YOU DON'T KNOW THE ANSWERS!

Who won the race of special trains to bring Texas gasoline to Los Angeles, and why was the race necessary?

Was our first tanker a steamship or sailing vessel?

How did Union's geologists use slabs of bacon to locate oil seeps?

Who threatened to wreck Union Oil to gain his ends?

Why was 1906 such a disastrous year for the Company?

What was the tremendous proposition made to Union in 1909 by 150 independent oil producers in California?

What were the real reasons and background for

forming Union Oil Company, and what had Ambrose Burdick and Daniel Dull to do with it?

When and under what circumstances did the British first try to get control of Union Oil, and who was the mysterious woman involved in the negotiations?

What was the story behind the story of the "swindle sheet," which resulted in two conflicting resolutions by the directors?

What was our "million dollar mystery" and why?

How did British secret naval maneuvers result in the former governor-general of Canada offering to buy \$15,000,000 worth of Union's stock? And how did the Kaiser kick Lord Grey's plans "in the teeth"?

When did the secretary of Union Oil write: "I am inclined to think that we made a serious mistake when we employed Mr. Stewart to look after our fuel business"?

**THE ANSWERS AND HUNDREDS MORE ARE REVEALED IN "BLACK BONANZA"**





# Company History

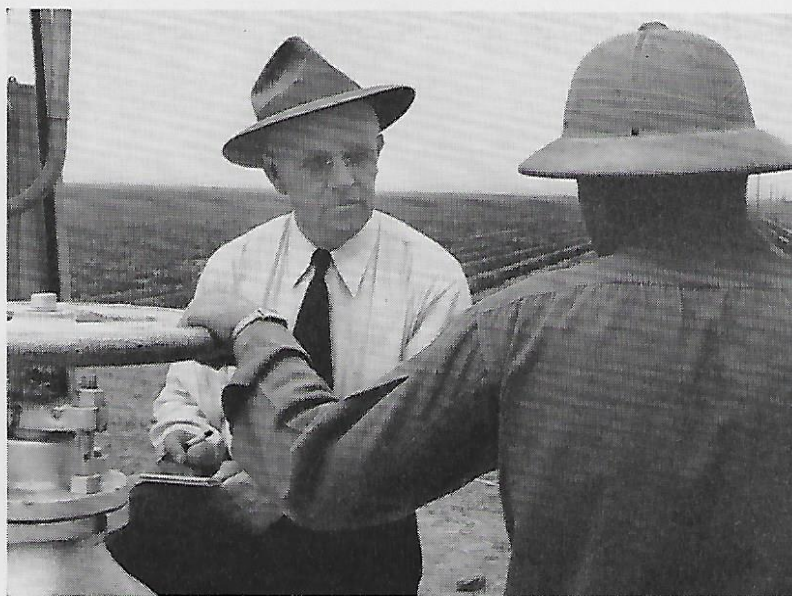
Fresh off the press in September will come "Black Bonanza," an historical narrative dealing with persons and events that brought Union Oil Company of California from the cradle to its present-day maturity and role of leadership.

Unlike many books written for public consumption, "Black Bonanza" had no need to manufacture or color situations of the past. The truth about our company during its 60 and more years of growth indeed has been stranger than fiction.

Authors of the new book enjoyed a rich storehouse of material. They questioned hundreds of veteran employees and other persons associated intimately with the Company. Their search led them finally to one of the nation's most famous libraries, where long-missing Union Oil documents had rested undisturbed for decades. Finally, their manuscript was carefully checked for accuracy with people who either witnessed the history-making events or had records to verify what occurred.

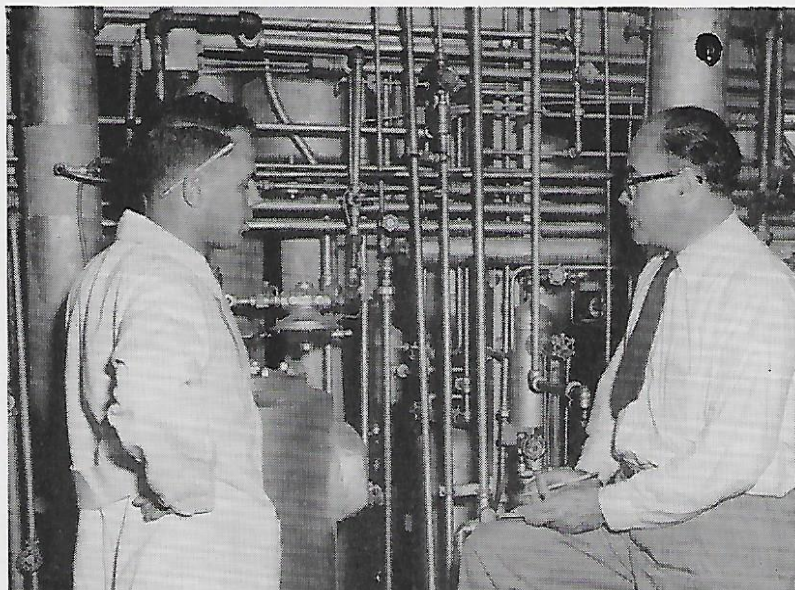
Undoubtedly, every Union Oiler will want to read "Black Bonanza" and keep the volume in his library. The Company is making this possible through a most generous plan—to be announced as soon as the books are ready for distribution.

## THE AUTHORS:

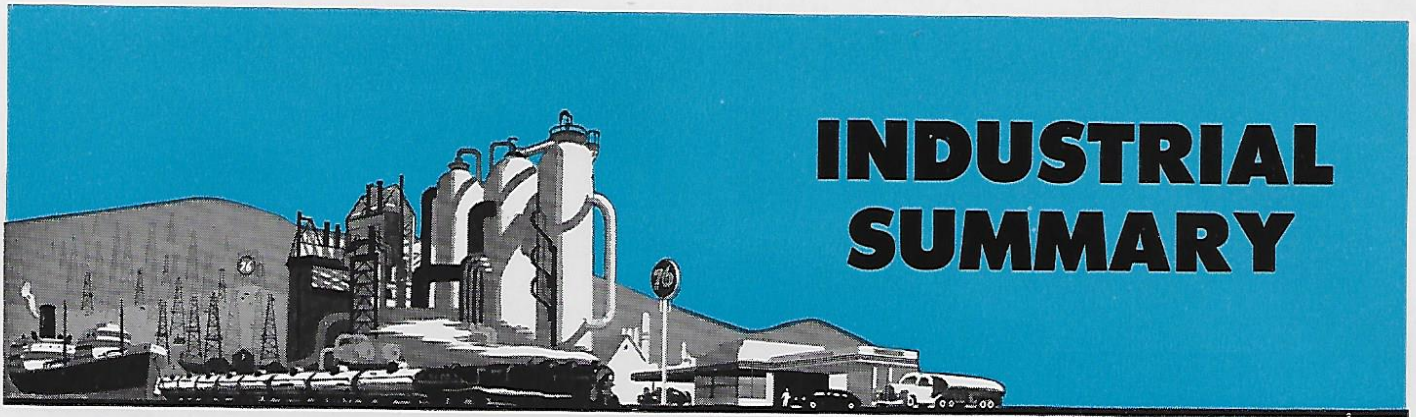


MR. TAYLOR has filled many important newspaper assignments, including those of war correspondent in France, press bureau manager in Germany, Austria and Russia, Washington correspondent and manager of the Scripps-Howard news bureau in Washington. Many of his magazine articles have appeared in the Saturday Evening Post, Country Gentleman and Reader's Digest. He is co-author of several other books, including "Oh, Ranger!" a popular story about the national parks.

MR. WELTY was editor of several California daily newspapers before becoming an editorial executive of the Honolulu Star-Bulletin, editor of the Hilo Daily Tribune-Herald, manager of the Pan-Pacific Press Bureau, and public relations director for Hawaiian Airlines and several allied organizations. He has specialized in research studies of Pacific history, sociology and economics, and contributed articles to Harper's, Collier's, Scribner's and Nation's Business.







# INDUSTRIAL SUMMARY

## ● **MARKETING**

Before the introduction of every new product to the public, there is a period of intensive training activity in the Marketing Department. Retail men went through such a period prior to the recent introduction of New 76 Gasoline. In order to familiarize Union Oil sales employees and dealers with the new gasoline, nearly 100 meetings were held. Five trained crews, composed of supervisory employees working in pairs, were on the road from San Diego to Seattle for about two weeks. One man of each team, a lubrication engineer, explained technical aspects of the gasoline, showing why we can with confidence use the slogan, "Fill your tank, feel the difference!" He also demonstrated the anti-knock power of New 76 in a test engine. His training associate, a sales expert, then outlined tested sales promotion and selling methods for increasing gallonage with New 76. Approximately 85 per cent of our dealers attended the meetings. Their reception of the new product and its sales potentialities was uniformly enthusiastic.

The Company has been awarded a bid on 130,000 barrels of aircraft jet fuel for delivery to the Government sometime in August.

It has been gratifying to note that the Phantom program mentioned in previous issues has been productive of results for which this campaign was designed, namely, more consistent under-the-hood checking at all retail units, with its attendant increase in motor oil sales. The percentage of salesmen who failed to identify the Phantom has been surprisingly low. Spot checks at numerous service stations have shown increases of more than 20 per cent in motor oil sales.

With the beginning of August business, all wholesale selling representatives were actively engaged in a sales campaign called Union Oil's 60th Anniversary Sell-Exhibition, featuring lubricating oil and grease. During this program, which will extend for a four-months period, each sales representative, including consignees and their employees, will be assigned a quota based on

1949 sales for the same period. Sales in excess of quota and sales to new customers will be awarded point values. The points can be applied on 1400 or more prizes, ranging from toys to sporting goods, silverware and television sets. These prizes are all nationally known, first quality merchandise that will appeal to every member of a contestant's family.

To acquaint all eligible participants with details of the program and to arouse and maintain their enthusiasm throughout the campaign, a series of colorful, interest-creating mailing pieces will be sent to each contestant's home at regular intervals. Preliminary response to the program justifies an anticipated increase of at least 10 per cent in sales.

*from Roy Linden*

## ● **INDUSTRIAL RELATIONS**

A revised Medical Panel booklet, listing the names, addresses and telephone numbers of over 600 doctors approved to handle Employee Benefit Plan cases, recently has been printed. All employee members will be issued a copy in the near future.

The Safety Board has approved a Driver Award Plan to provide recognition for accident-free driving of Company vehicles. It will honor employees who drive pool cars or commercial vehicles in excess of 3,000 miles per year without an accident. In principle it compares with similar plans used by other large-fleet operators. Particulars will be published soon.

*from W. C. Stevenson*

## ● **FIELD**

In the Long Beach Oil Field, in the immediate vicinity of our Long Beach Community Lease, a small sized oil boom has been in progress, resembling on a smaller scale the boom at Placerita. Flowing production was encountered by the Rodger Enterprise well No. 1 at a depth between 2,300 and 2,400 feet. This well, completed May 20, 1950, was the discovery well.

To date, 15 new wells have been completed and 12



old wells have been recompleted in this shallow pool. Union Oil Company has drilled three new wells and recompleted two old wells. Total area of the zone is probably less than 25 acres, therefore the average well density is less than one acre per well. Total thickness of the producing sand is approximately 50 feet, with an average of not more than 30 feet. Production decline is very rapid, so the discovery will not be a factor greatly affecting the state supply situation.

On July 11, fire destroyed the old Snow compressor plant at Orcutt. No employee injuries were caused by the fire nor sustained during efforts to control it. The completely destroyed facilities, installed between 1912 and 1914, were among the Company's oldest. Emergency equipment was handling half of the plant's normal throughput within 10 days after the fire. Completely modern replacements will be operating within four months.

*from Sam Grinsfelder*

## ● MANUFACTURING

New bulk asphalt blending and shipping facilities have been completed at Oleum Refinery in time to more efficiently handle the seasonal heavy asphalt demand.

At Los Angeles Refinery the crude oil processed during June was the highest reached during a single month in the past four years.

A new water well was successfully drilled at Maltha Refinery. Water from the old well had been made unsuitable for industrial use because of oil seepage.

To more efficiently serve our asphalt customers in the Pacific Northwest, a new asphalt refinery is to be constructed at Edmonds, Washington. This plant will process California crude oil and is scheduled to produce about 18,000 tons per month of paving asphalt, road oils and cutback asphalt.

Completion of this new plant is scheduled for June, 1951.

*from K. E. Kingman*

## ● TRANSPORTATION

The Automotive Department has just completed and released to Marketing-Distribution four maximum-capacity, diesel-powered truck and trailer transports. One of these is operating in the Central Territory and three in the Southwest. These vehicles can carry 7,400 gallons of gasoline in fully compartmentized tanks. Design of this equipment embodies all modern safety features possible, providing safe operation over the highways and in making deliveries. Fire department officials in several cities and communities expressed their

approval of the equipment without reservation. In the past, such authorities have been skeptical of large transportation units, but improvements and advances in design have largely overcome this feeling.

Southwest Territory's plan of operation calls for transporting blending stock from Los Angeles Refinery to Maltha, where it is used in refining processes. From Maltha, the new trucks will haul finished gasoline to Las Vegas, Nevada, and way points. This departure from the use of gasoline-powered equipment is expected to produce considerable savings in distribution costs.

*from Ronald E. Gibbs*

## ● PURCHASING

Rumors of shortages and Government allocation of many items from tires to pipe have resulted in a flood of inquiries to Purchasing as to the advisability of building up inventories.

A detailed survey of 54 commodity classifications of importance in Company operations was conducted early in July. With the exception of tubular goods, light gauge sheet steel, quarter barrels and por-pails, supply was found to be ample to meet all demands. Some shortages may occur in the future in the items mentioned, but current market conditions are not hampering our operations.

Similar market surveys will be conducted at frequent intervals. Any conditions calling for special handling will be brought to the attention of departments concerned immediately.

*from E. H. Weaver*

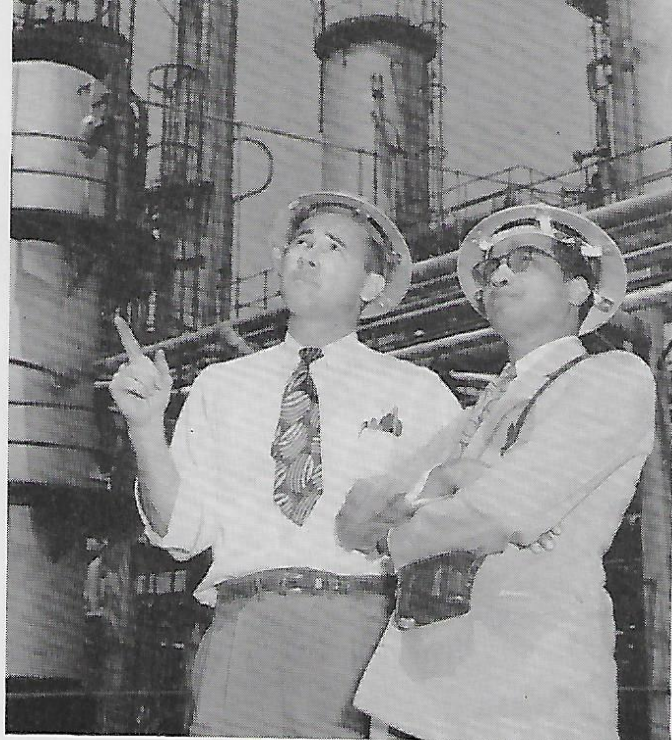
**FROM CHICAGO** comes photographic evidence that Pilots Bob Woodhouse and Woody Jongeward, holders of the world's endurance flying record, are still enthusiastic about the Union Oil products that kept them aloft for nearly 47 days. The flyers and their "City of Yuma" attracted wide interest during a recent public-appearance flight from Yuma to Chicago.







**FROM MEXICO** recently came Senora and Senor Fernando Rodriquez, left, to become more intimately acquainted with Union Oil products, for which Senor Rodriquez is our Tiajuana distributor. He is the son of Mexico's former president; has developed an exceptionally successful sales organization; and, with his beautiful wife of Spanish descent, has gained many friends on both sides of the border. They were entertained at Fox Studios by, continuing from left, James E. Ruman of 20th Century-Fox and our J. W. Miller.



**FROM INDIA** came Dr. V. K. R. Rao, right, on June 27, to make studies of our Los Angeles Refinery equipment. He is director of the Delhi School of Economics, University of Delhi, and is making an extensive tour of America in order to assist development of the oil, aircraft and citrus industries in his native land. He holds numerous scholastic degrees and awards; is a prominent teacher and lecturer; and has been a member of many Indian Government committees. His Union Oiler escort at the refinery was Elton Barnett, left.

## Organization Changes

**Marketing** The early retirement of W. A. Newhoff, vice president and manager of Central Territory, was announced, effective July 12, and resulted in two new appointments to key managerial posts.

F. K. Cadwell, former manager of Northwest Terri-

tory, Seattle, is now manager of Central Territory with offices in San Francisco.

A. D. Gass, who was successively district sales manager in Los Angeles and Seattle, has been appointed the new manager of Northwest Territory.



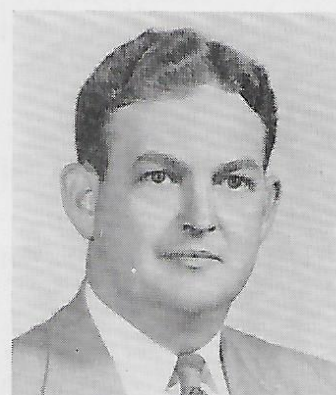
**F. K. CADWELL**  
Manager Central Territory  
San Francisco



**A. D. GASS**  
Manager Northwest Territory  
Seattle

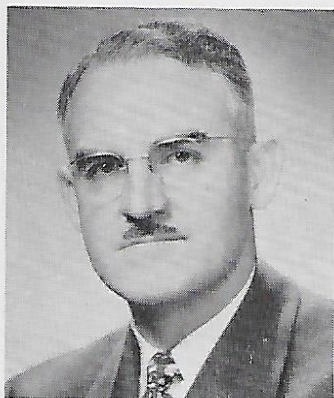


**PAUL H. BOYD**  
District Manager  
Long Beach

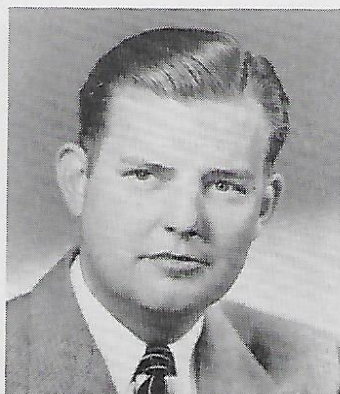


**GEORGE S. SMITH**  
Manager Sales Services  
San Francisco





**FRED C. BARR**  
Personnel Representative  
San Francisco



**J. H. McGEE**  
Supervisor Asphalt, Refined,  
Burner and Fuel Oil Sales  
Los Angeles



**A. R. OUSDAHL**  
District Sales Manager  
Everett



**R. BRENCHLEY**  
District Sales Manager  
San Jose

The resignation of R. C. Ingram brought about the appointment on June 12 of Paul H. Boyd as district manager at Long Beach. Paul moved to his new marketing assignment from Head Office, where he had served as supervisor of Fuel Oil and Asphalt Sales.

A second member of the Head Office Sales group, G. S. Smith, former supervisor of Refined Oil Sales, was appointed also on June 12 as manager of Sales Services, Central Territory, in San Francisco. He succeeds Fred C. Barr, who has now returned to his former responsibility as personnel representative in San Francisco.

A realignment of staff responsibilities in Head Office Marketing brought J. H. McGee, former district sales manager at Everett, to Los Angeles as supervisor of Refined, Burner Oils and Asphalt Sales, effective June 26.

Succeeding McGee at Everett as district sales manager, effective June 26, is A. R. Ousdahl, formerly special representative in Chicago.

Previously, on May 9, R. Brenchley, district representative in San Diego, moved ahead to the responsibilities

of district sales manager, San Jose, replacing J. J. Greeley, who has resigned.

**Manufacturing** A newly created assignment at Los Angeles Refinery brought about the appointment of Fred L. Hartley as general superintendent of Operations, effective June 1. He is now responsible for the activities of processing and operating plants at this refinery.

Frank Lammerman moved to the Glacier Division as superintendent of Plants on August 1. He will supervise our refinery and absorption plant at Cut Bank, Montana. Simultaneously, Max Parkin, former superintendent at Cut Bank, was appointed assistant superintendent of Operating and Treating at Los Angeles Refinery.

**Field** On May 15, J. C. Rector was appointed supervisor of Gas Contracts after having previously served as assistant to the manager of Field Operations. He succeeds J. M. McNeill, resigned, and his headquarters will remain in Los Angeles.



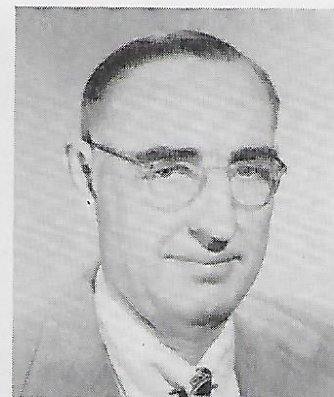
**FRED L. HARTLEY**  
General Supt. of Operations  
Los Angeles Refinery



**FRANK LAMMERMAN**  
Superintendent of Plants  
Glacier Division



**MAX PARKIN**  
Asst. Supt. Operating and Treating  
Los Angeles Refinery



**J. C. RECTOR**  
Supervisor of Gas Contracts  
Los Angeles



## Company Operations Attract Los Angeles Stock Exchange

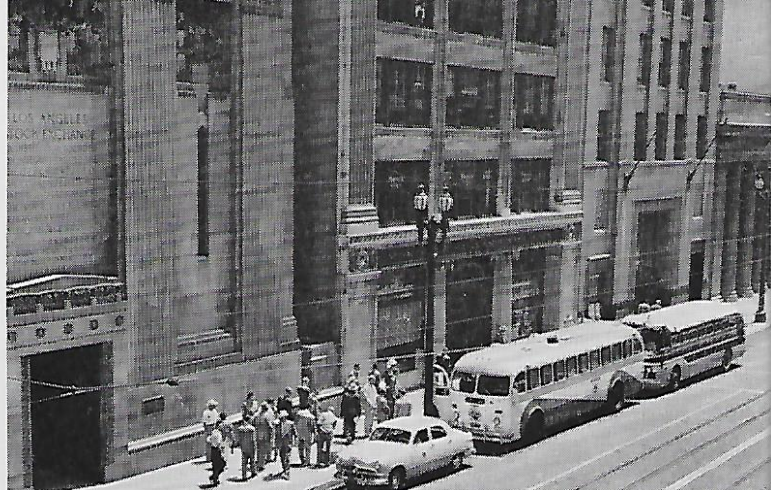
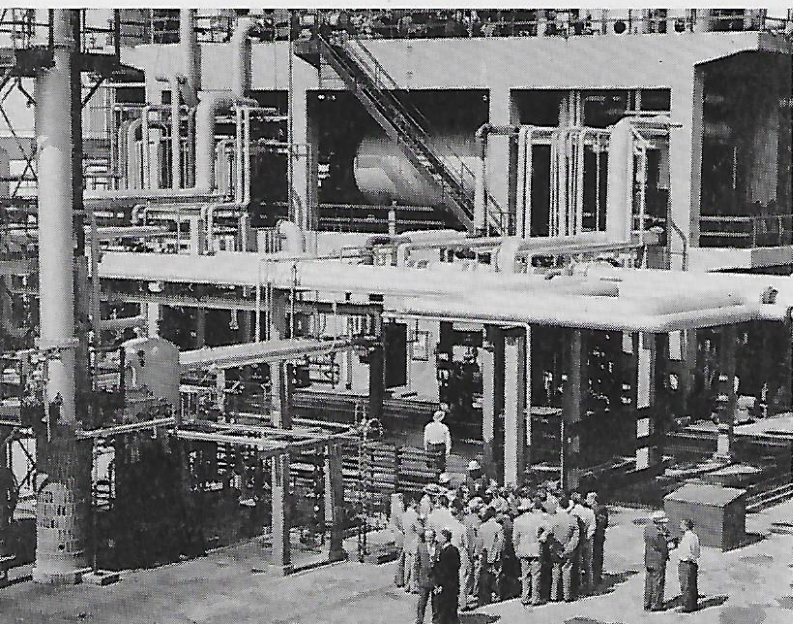


*From bus windows, Exchange Members viewed the steel derricks of Dominguez, discovered in 1922 by Union Oil.*



*Lending an ear to Union Oiler guides, the visitors were given factual data on oil production and refining processes.*

*This group, dwarfed by the nearby Thermoform Catalytic Cracker, learned how refinery smog is being eliminated.*



*Guests began their tour of Company field and refining units from Stock Exchange on Spring Street, Los Angeles.*

**M**EMBERS of the Los Angeles Stock Exchange have embarked upon a commendable program of visiting certain industrial plants whose shares of stock are handled daily across Exchange counters. Second on their list of scheduled tours took place July 12 when 250 leaders of finance and industry were guests of Company executives. In a caravan of busses they were escorted through our oil field at Dominguez, then through portions of refining units and research facilities at Wilmington.

Boarding each bus at Dominguez was a qualified Company engineer or superintendent who gave the guests a brief description of this field. Thus, they learned that Union Oil's Callender No. 1, drilled in 1922, was the discovery well and initially produced 1,193 barrels of 32-gravity crude daily. It continues to produce at the rate of 41 barrels and has accounted for over a million barrels of crude. The Dominguez field has yielded about 180 million barrels since its discovery.

At Wilmington, research men, led by Vice President

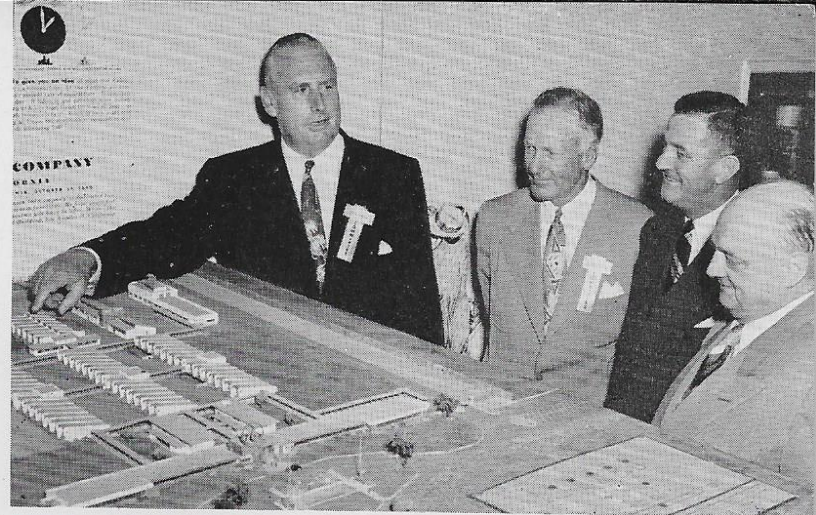
*At the Pilot Plant, Wilmington, our Hypersorption method of separating valuable petroleum gases was demonstrated.*







At the Company developed shale retort, many had their first view of shale oil and the rock from which it comes.



L-R, hosts Reese H. Taylor and W. L. Stewart, Jr., described new Research Center model to Phelps Witter and W. G. Paul.

C. E. Swift, explained the Company's interest and success in such processes as Hypersorption and our new method of recovering oil from shale.

Of equal interest to the touring group were several units of Los Angeles Refinery, where they stepped from busses and made a walking tour to heaters, columns and control rooms.

Prominent among Exchange members participating were W. G. Paul, president; Phelps Witter, chairman of the governing board; and Murray Ward, who heads the plant tour committee.

President Reese H. Taylor represented Union Oil as host during a buffet luncheon for all visitors following the tour.



The tour ended happily, too, when buses paused at the VFW Hall, Wilmington, to test stock brokers' appetites.



## SERVICE BIRTHDAY AWARDS

### AUGUST 1950

#### Forty Years

Schmidt, John E., Central Territory

#### Thirty-Five Years

Bogeman, Clara M., H.O. Comptroller's  
Clevenger, Porter S., No. Div. Pipe Line

#### Thirty Years

Bissett, George C., So. Div. Field  
Dysinger, Ray V., So. Div. Field  
Hallam, Jim E., So. Div. Field  
Hanmore, Guilford S., So. Div. Field  
Havely, Coy G., Oleum Refinery Mfg.  
Henderson, Leo W., No. Div. Pipe Line  
Hesser, Arah W., H. O. Field  
Layton, Chas. K., Central Territory  
McCall, Percy F., So. Div. Auto.  
Mauerhan, Ralph W., So. Div. Pipe Line  
Melton, Walter E., So. Div. Field  
Nentzer, Donald L., No. Div. Pipe Line  
Moore, Harry B., Oleum Refinery Mfg.

Neylon, Irene M., Oleum Refinery Mfg.  
Rebello, Antonie, Oleum Refinery Mfg.  
Samuelson, Carl J., Northwest Territory  
Stafford, Robt. J., Oleum Refinery Mfg.  
Trimble, George, No. Div. Auto.

#### Twenty-Five Years

Arnold, Wm. D., So. Div. Pipe Line  
Bishop, Phillip M., Northwest Territory  
Fraser, James K., L.A. Refinery Mfg.  
Fulton, J. G., H.O. Wage & Salary Adm.  
Hinders, Edward J., L.A. Refinery Mfg.  
Rose, John, Oleum Refinery Mfg.

#### Twenty Years

Anschutz, I. H., Oleum Refinery Mfg.  
Armour, John, L.A. Refinery Mfg.  
Crain, Robt. O., So. Div. Field  
Donoho, C. G., Research—Wilmington  
Emery, Mildred J., Southwest Territory

Gass, Adney D., Northwest Territory  
Pollard, John Y., Maltha Refinery  
Schindler, G. W., L.A. Refinery Mfg.  
Tucker, Alvin L., L.A. Refinery Mfg.  
Wyke, Chas. T., L.A. Refinery Mfg.

#### Fifteen Years

Bonetti, Pete M., Coast Div. Field  
Fisher, John H., Northwest Territory  
Hanna, Strentzel, Oleum Refinery Mfg.  
Lowe, Everett R., Southwest Territory  
McCormick, J. P., Oleum Refinery Mfg.  
Pounds, Cecil M., Central Territory  
Sheehan T. Jr., Comptroller's Wash.  
Vaughn, Fred H., So. Div. Auto.  
Wachtel, Herbert H., So. Div. Field

#### Ten Years

Fawcett, Philip N., L.A. Refinery Mfg.  
Mulliken, Beverly B., Central Territory  
Veazey, George, Texas Gulf Div.—La.





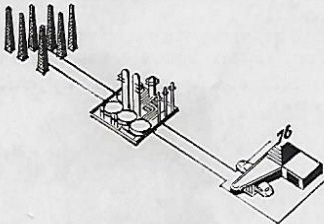
# How to sabotage America's Oil Industry

**1. Every day** the people of the United States use up 6 million barrels of petroleum.\* In order to refine that petroleum into useful products the American oil companies have built 375 refineries at a cost of 4½ thousand million dollars. Union Oil's four refineries, for example, represent a total investment of \$96 million.

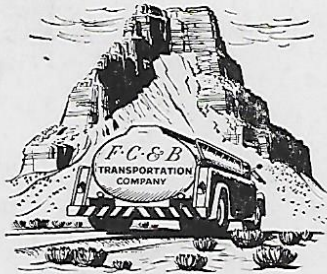
\*Each barrel contains 42 gallons.



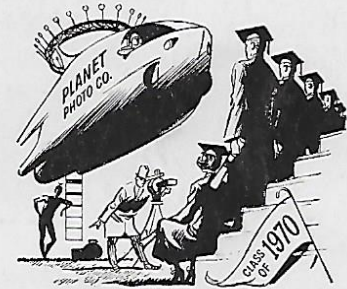
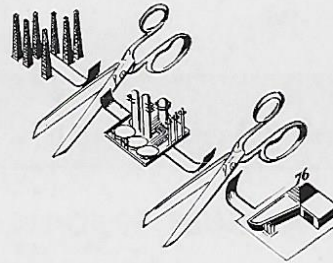
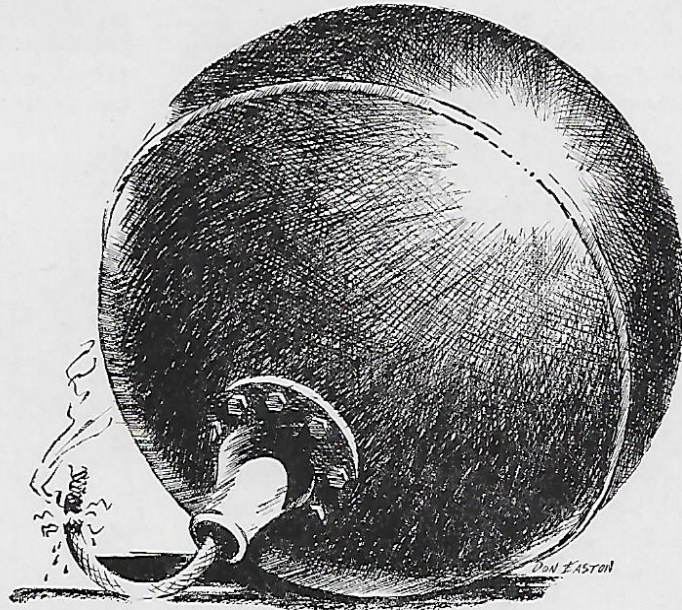
**2. Obviously,** no company in its right mind is going to lay out 25 or 30 or 100 million dollars for a refinery unless that company has an assured supply of crude oil to keep the refinery operating. Neither can it do so unless it has some marketing setup through which it can sell the refinery's finished products to the public.



**3. Consequently,** the oil industry has tended to develop along the lines of "integrated" companies — companies that produce, refine and market oil under one organization. Union Oil is one of those "integrated" companies. And there are 104 more in the U. S. — all competing vigorously with each other.



**4. In addition** to these "integrated" companies, there are some 34,000 others, large and small, which specialize in only one or two phases of the oil business. The existence of "integrated" companies is of vital importance to these specializing companies. For it enables them to find markets for their products and services, and/or products for their marketing operations.



**5. Recently,** the Department of Justice has indicated its desire to break up the "integrated" oil companies because they are "too big." The Department would like to force all companies to confine their activities to one or two phases of the business. In view of this, we'd like to ask two questions: First, if a company is not permitted by law to market its own products, who is going to risk his capital in the costly refinery improvements America will need for the better products of tomorrow?

**6. Second,** if a company can't contract for a sure supply of crude, who is going to risk his capital in the additional refineries we will need for the increased population of the future? If this is the opening wedge or a campaign to nationalize the oil industry, we can understand the Department's actions. If not, it is one of the surest ways we can think of to sabotage America's oil progress.

## 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.*