"On Tour"

JULY 1952

On Tour

JULY 1952
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In This Issue

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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 17, California.

Mother Earth Deals Us A Good Hand

FIVE STRAIGHT

Producers

"Hello, John! This is Charlie calling from Jewett 83X. We landed 2½-inch tubing at 6,099 feet last night inside the combination string, and changed over from water to oil. We hit her a few licks with the swab about an hour ago, and the well is now flowing into the sump. Estimated flow is 1,920 barrels a day through a 34/64-inch bean. The oil is 37-gravity. Clean. Flow pressure on the casing is 440 pounds, with tubing pressure at 650 pounds. Estimated gas rate is 1,094 MCF. Some well, eh boy?

"Did you say 1,920 barrels per day through a 34/64-inch bean?

"Yeah. One-nine-two-o!

"Say, that is some well, Charlie. Thanks for the dope!"

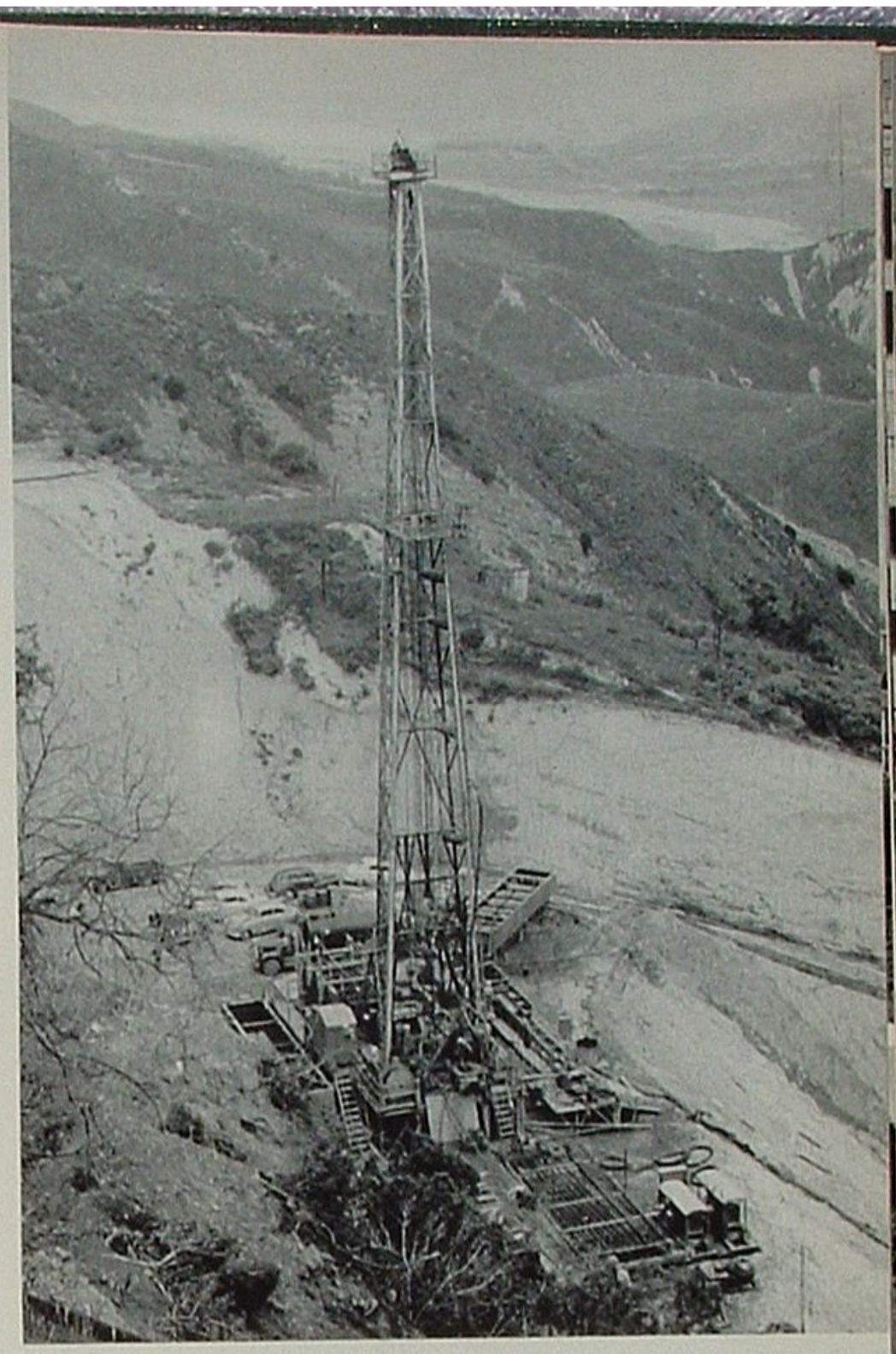
Such was the conversation that undoubtedly took place via telephone on April 20 between Drilling Foreman Charles Brown near McKittrick and Valley Division Superintendent John Fraser at the Bakersfield office. It meant, to those of us less familiar with drilling jargon, that Union's second oil well on fee (Company-owned)

The bringing in of an oil well is feverish business. Below, the drilling crew installs a "riser" preparatory to "swabbing" a well that does not seem inclined to flow.

property a short distance from McKittrick, California, had more than fulfilled expectations. A few weeks earlier, the Company's C.C.M.O. No. 84-24, a wildcat venture, had opened the play with 925 barrels of daily production. Due to tricky formations in the area, the second try, although only 100 yards away, might have amounted to nothing more than a dry hole. But quite the opposite happened. Jewett Fee No. 83 was completed as a flowing well and, through a small metallic aperture measuring 34/64 of an inch in diameter, was producing nearly 2,000 barrels of oil and over a million cubic feet of natural gas every 24 hours. Moreover, crude testing 37 degrees in gravity is light—high in gasoline content—and very much in demand these days at West Coast refineries.

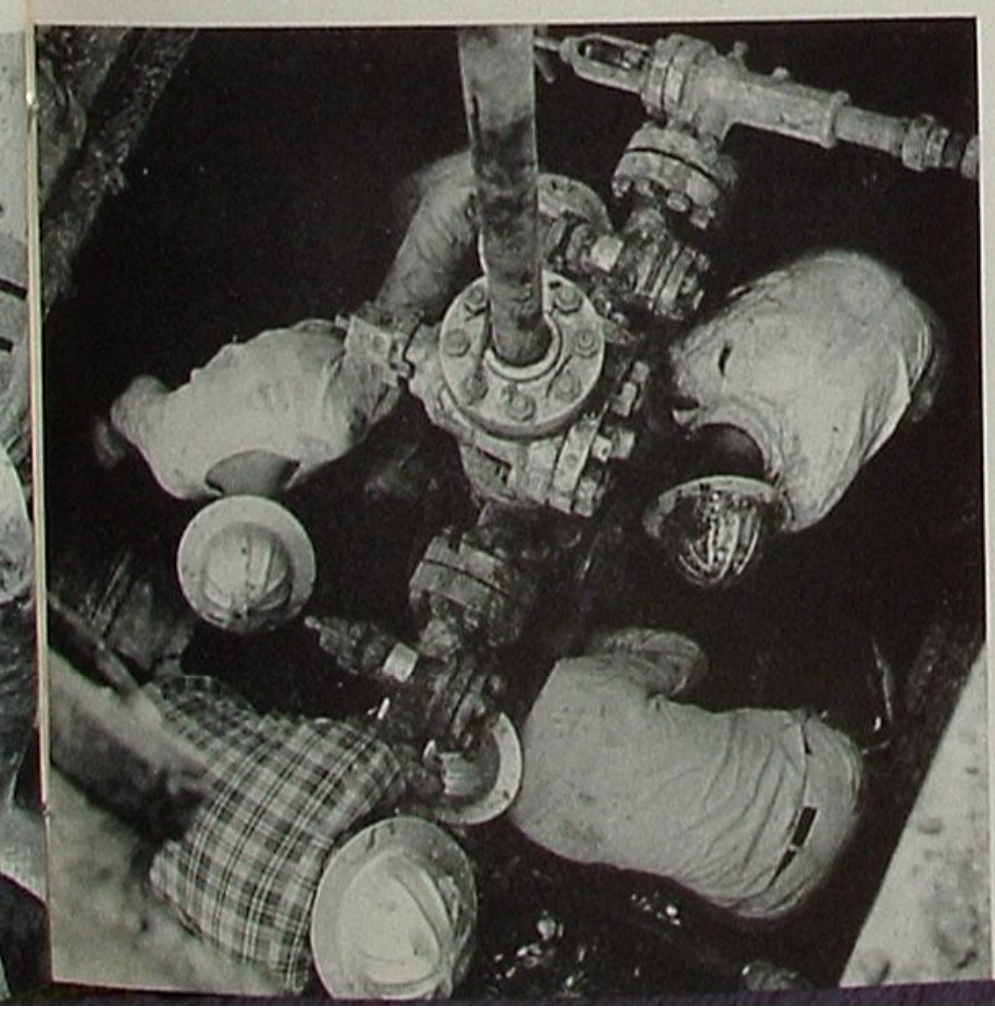
Lucky too, ON TOUR happened to be in the McKittrick area looking for wild-flower pictures a day or two before the well came in. As a result, you see on our front cover this month one of the most delightful sights any oil worker could imagine—a wildcat oil well about to make its 2,000-barrel debut and the table handsomely decorated with California poppies. Ain't nature grand?

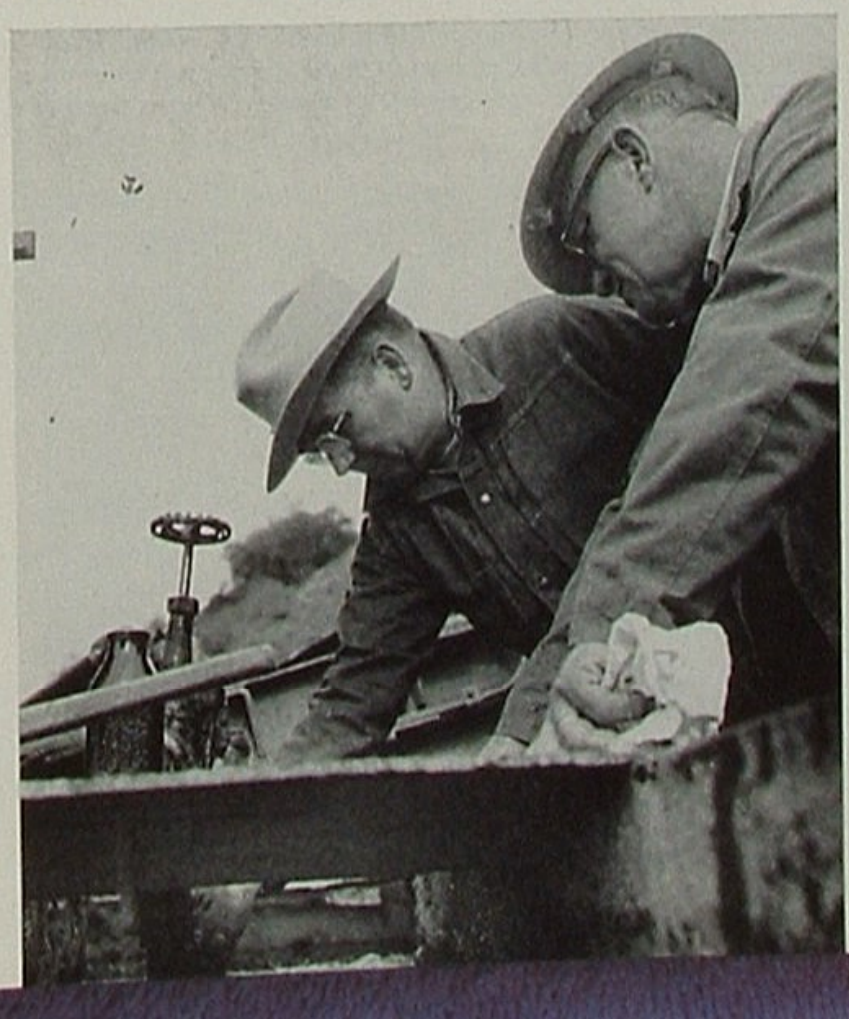
Occasionally, even corporations seem to have a run of luck. Hardly had Jewett excitement reached the front page news before our Santa Paula office, on April 27, announced the completion of Torrey No. 83 in Ventura County. Here was an exploratory venture that at first intended to go no deeper than 7,500 feet. But the drill encountered Sespe oil sand near that depth; continued boring through 1,600 feet of it; and still had not reached the bottom of this productive zone when a decision was made to complete the well. With

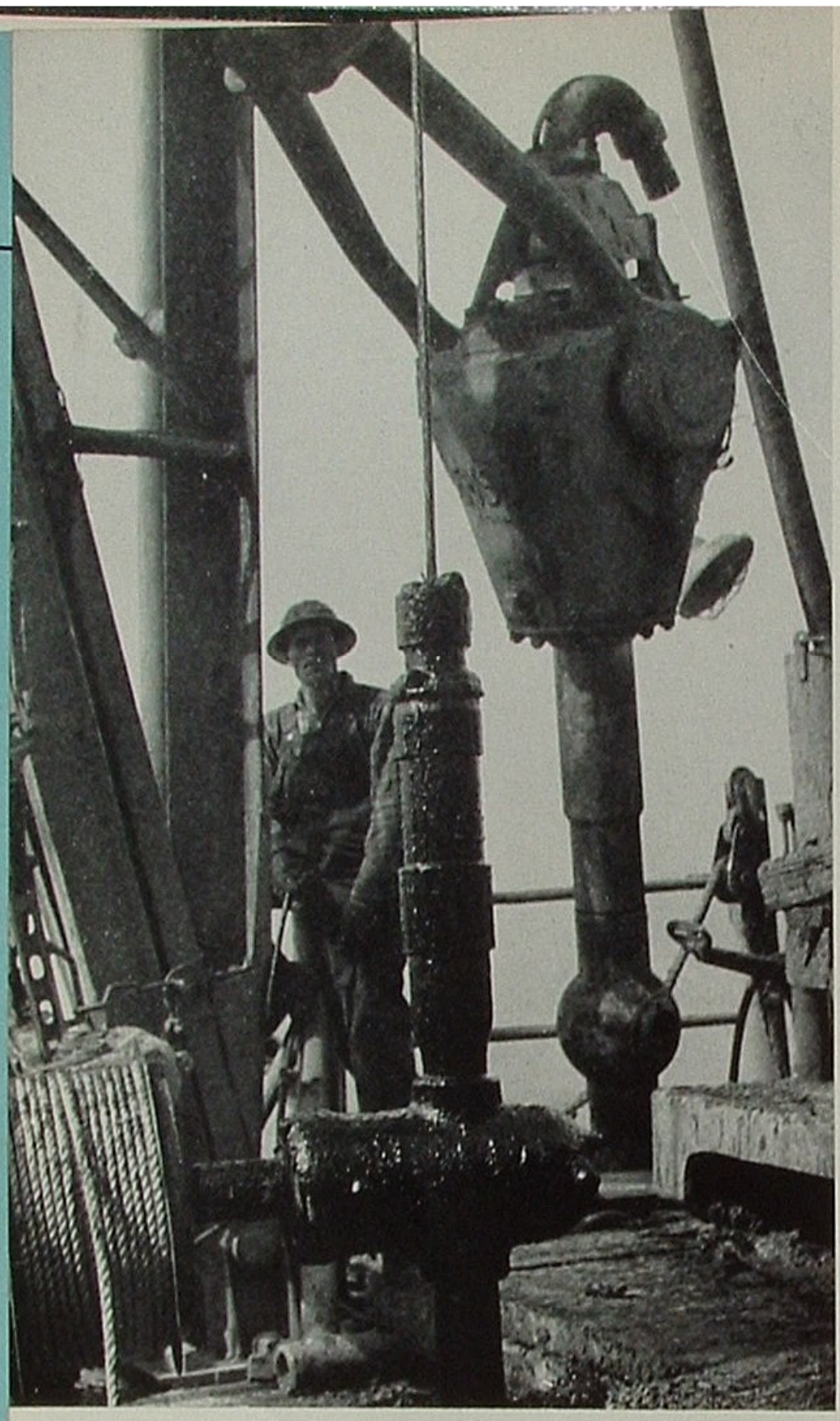


The wildcat well, Torrey No. 83, above, justifies months of expensive drilling when Vice President A. C. Rubel and Superintendent C. W. Froome, below, see crude emerging.

Here in the "cellar" they connect the well's tubing and casing to the "Christmas tree," a sort of plumber's nightmare of pipes and valves to control flow of oil.







"Swabbing" means lifting drilling mud and water from a well, thereby decreasing pressure from above and encouraging oil to flow of its own accord instead of being pumped.

the aid of pumping equipment, Torrey No. 83 began producing 18.5-gravity crude at a rate of 800 barrels per day. The value of this discovery may be multiplied many times when the depth and extent of the producing sand is determined by future drilling. The well is located on fee property of which the Company owns a 30.000-acre tract.

And on that same day, April 27, word was flashed from Terry County, Texas, that Union Oil's Miller No. 2 in the Adair Wolfcamp area had just been completed for 778 barrels per day of 44.3-gravity crude. This was the sixth well to be drilled on 1,400 acres of Company leases in this area.

Not to be outdone, Union Oilers in the Los Angeles Basin Division announced on May 5, that their 32nd well

Thomas Stoy, petroleum engineer trainee, examines the stack of drill pipe that penetrated 6,099 feet of earth to complete Jewett Fee No. 83, producer on this month's cover.

When completed, wells are turned over to production men. Production Foreman William Knick, above, holds two inserts or "beans," used to control the flow of crude.

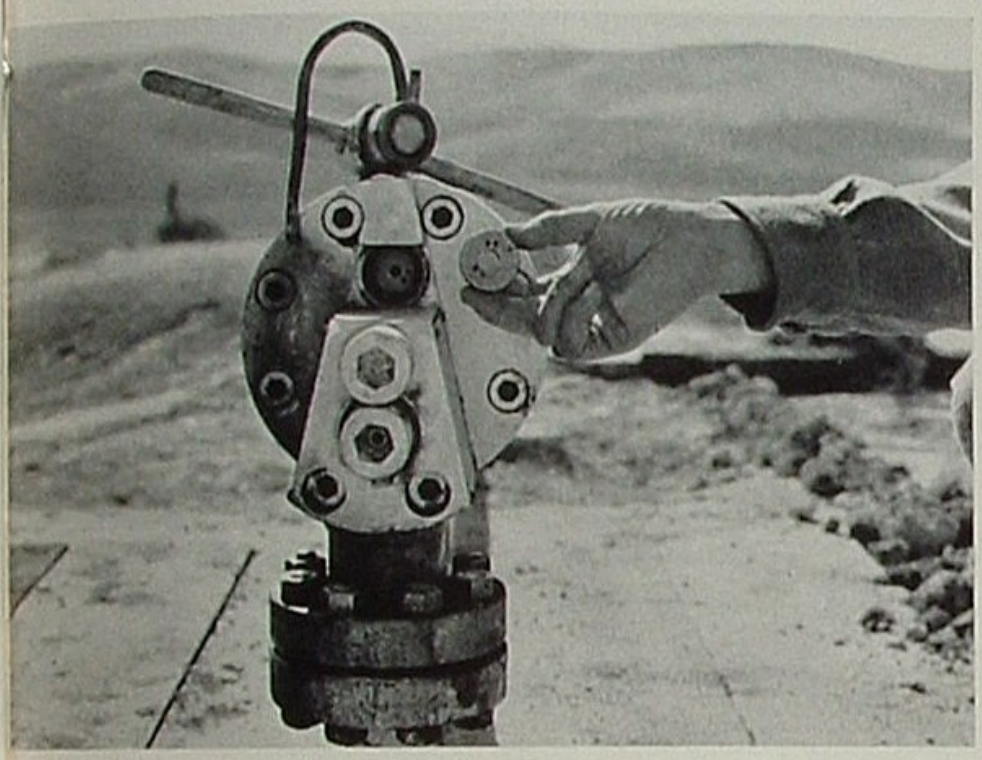
in the Sansinena Field was a "lulu". The well, Sansinena No. 49, stopped at a depth of 4,337 feet and began producing 24-gravity crude at a controlled rate of 1,200 barrels daily. It is the most prolific well to date in a field where daily production has now passed the 5,000-barrel mark.

And most recently, on May 12, Union Oil tested the Vaqueros Zone in the Coalinga Nose Field of California and came up with 37.8-gravity oil flowing at a rate of 1,522 barrels per day. To conform with good production practices, the well has since been restricted to an output of 650 barrels daily.

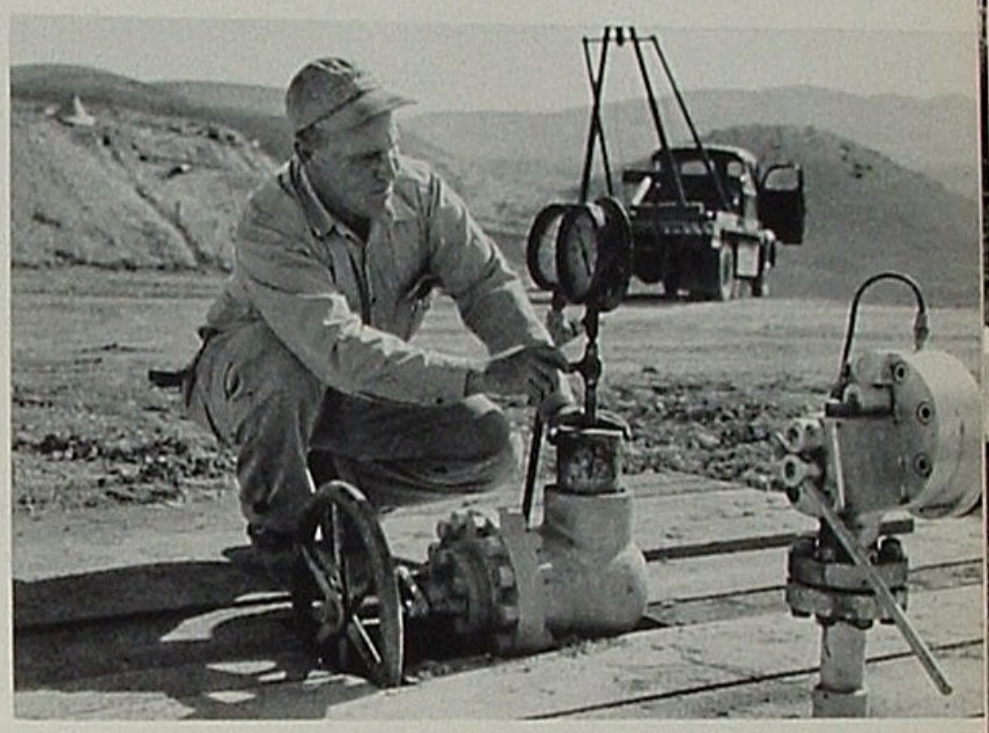
Drilling for oil remains one of the world's greatest gambles. You can ante millions into the pot without drawing a winning hand. You can lose heavily, make a little extra, or get filthy rich. Over the long stretch, you're apt to just about break even. But the memory of a good hand is rarely forgotten. And it's pretty hard to beat five straight in the same suit—all big producers.

Carl Steiner, division petroleum engineer, indicates with his right hand openings in a section of casing. Such slotted pipe is installed only through layers of productive oil sand.

Hale Ingram, field engineer, and Charles Brown, drilling foreman, check diameter of casing that will line the well and of smaller tubing through which oil is produced.

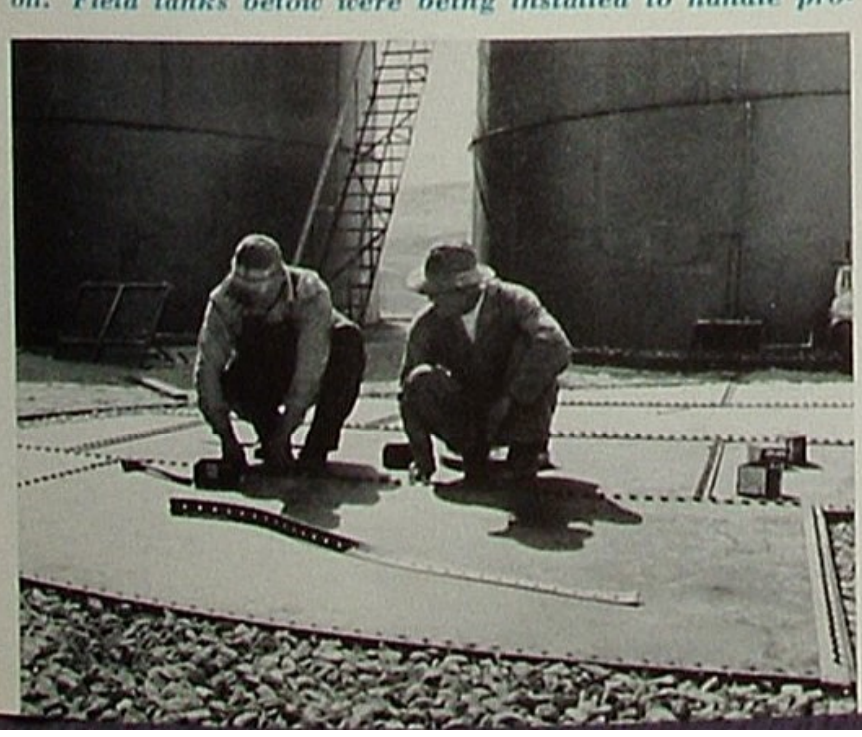


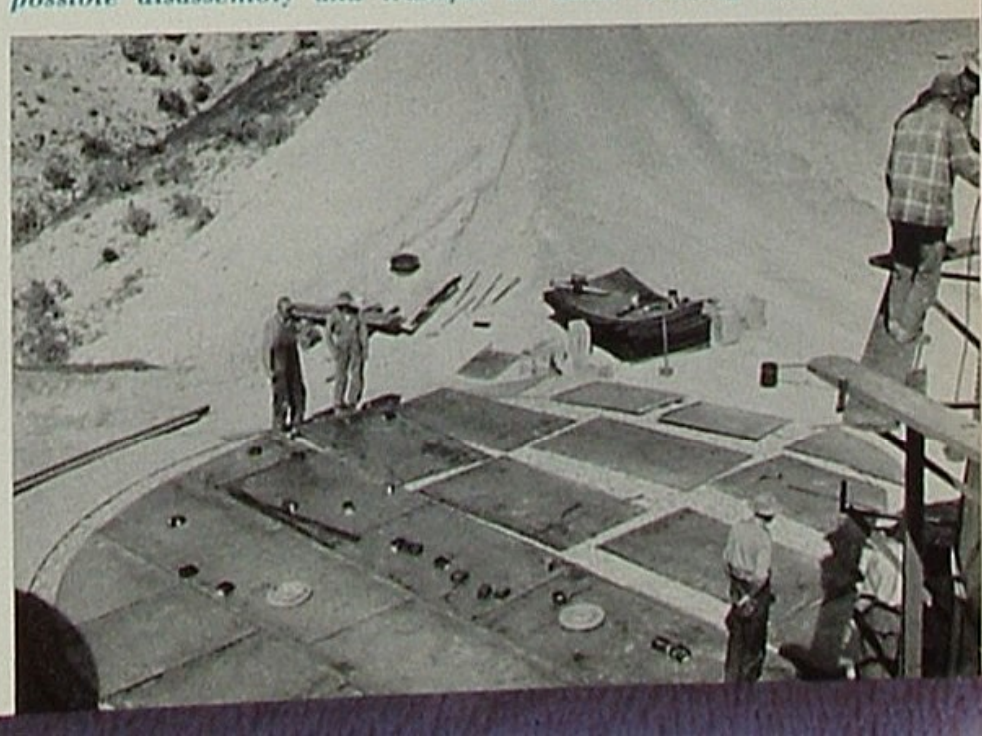
The bean openings vary in diameter from 1/64 to 64/64 of an inch. Different sizes installed in the rotating mechanism above provide a means of changing rate of flow.



Harry Boness, assistant production foreman, is aided in his analysis of underground conditions by two gauges, which indicate varying pressure inside tubing and casing.

When workers begin fabricating tanks near a wildcat drilling site, it is a reasonable certainty that drillers have struck oil. Field tanks below were being installed to handle production from Jewett Fee No. 83. Instead of being welded, field tanks are put together with bolts and nuts, facilitating possible disassembly and transfer to other drilling sites.





Let's Test Your Political I.Q.

BEFORE reading beyond this page, please examine the accompanying political platforms of 1932. All three are considerably abbreviated digests of the originals and have been stripped of assertions that might identify the sponsoring parties. But in substance and in spirit they represent factually the aims of and promises made by three political parties to American voters exactly 20 years ago.

Two of the platforms are so similar in content that political students of 1952 might have difficulty in naming the party organization where each originated.

The third, however, appears to be a direct give-away. It reflects almost verbatim the political events that have taken place in America during the past one score years under the Party in Power:

One of the "Economy and Taxation" planks is a mild introduction to taxes that in 1951 were adding $614 to the price of every automobile, 5 cents to every loaf of bread, 9 cents to every quart of milk, and so on—taxes that now make 189 separate levies on a suit of clothes, 154 on a bar of soap, 201 on a gallon of gasoline, and so on—taxes that cost the average American family 38 cents out of every earned dollar, or approximately 4½ months of labor per worker annually.

One of the "Currency and Credit" planks appears to have been more than realized through U. S. abandonment of the "gold standard"—strict regulation of credit during and after the war—and a system of government financing that failed enormously in balancing the budget, inflated our currency to disastrous proportions, and plunged the country into catastrophic debt.

In the "Foreign Relations" field, did we join a league of nations, cancel war debts, reduce armaments in the 1930's, recognize Soviet Russia, etc.?

Have any government agencies been created to regulate farm prices and prevent farm losses?

Is banking affected by strict government control?

Was five billion dollars poured into "Social Welfare" projects, or was that just a drop in the bucket?

Perhaps we have been a little too suggestive in helping you identify the authors of one political platform. But, just for the fun of it, examine all three. Identify the platform that you think was of Republican, Socialist or Democratic origin in 1932. Then turn to Page 22 for the correct answers.

WHAT POLITICAL PARTIES

1

- ☐ DEMOCRAT
- ☐ REPUBLICAN
- ☐ SOCIALIST

ECONOMY AND TAXATION

Advocates immediate and drastic reduction of expenditures by abolishing useless commissions and offices, consolidation of agencies, and elimination of extravagance to make possible a 25 per cent Federal saving.

CURRENCY AND CREDIT

Favors the preservation of a sound currency at all hazards; maintenance of the national credit by balancing the budget; and international conference on money questions.

PUBLIC UTILITIES

Favors regulation to the full extent of federal power of holding companies which sell securities in interstate commerce, and of the rates of companies which do an interstate business.

FOREIGN RELATIONS

Opposes cancellation of debts owing to the United States by foreign countries. Favors settlement of international disputes by arbitration. Favors a consultative pact to supplement maintenance of the Monroe Doctrine. Favors an army and navy adequate for national defense, based upon a survey of all facts affecting the existing establishment, that the people in time of peace may not be burdened by an expenditure approaching $1 billion yearly.

AGRICULTURE

Favors refinancing of mortgages through reorganized farm-bank agencies at low rates of interest; extension of the cooperative movement; control of crop surpluses; enactment of every constitutional measure that will help farmers receive a price for their products which exceeds their cost.

BANKING

Favors more rigid bank supervision; speedier relief for depositors of banks which have suspended; severance of affiliated security companies from the banks; divorce of the investing and commercial banking business; restriction of the Federal Reserve Bank in permitting use of their facilities for speculative purposes.

SOCIAL LEGISLATION

Favors extension of federal credit to states whose diminishing resources make further aid to the needy impossible; expansion of the federal program of necessary and useful construction; advance planning of public works. Advocates unemployment and old-age insurance under state laws; encouragement of the shorter working day and week through its adoption by government services as an example.

WHAT DO YOU ASS

2

- ☐ DEM
- ☐ REP
- ☐ SOC

Advocates prompt
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Favors international

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RTIES

DO YOU ASSOCIATE WITH THE FOLLOWING 1932 PLATFORMS?

2

☐ DEMOCRAT
☐ REPUBLICAN
☐ SOCIALIST

3

☐ DEMOCRAT
☐ REPUBLICAN
☐ SOCIALIST

Advocates prompt and drastic curtailment of federal, state and local government expenditures to a level which can be steadily and economically maintained for some years to come.	Favors steeply increased inheritance and income taxes on the incomes and estates of both individuals and corporations.
Pledges itself to uphold the gold standard and to oppose any measure that will undermine the government's credit or impair the integrity of the national currency. Favors international monetary conference.	Favors complete government control of the credit and currency system; and the creation of an international economic organization to deal with money, credit and investments.
Favors legislation to authorize the Federal Power Commission to regulate the charges for electric power transmitted across state lines.	Advocates the government control of power resources; and operation of the power industry by administrative boards on which wage earners, consumers, and technicians are adequately represented.
Favors adherence to the World Court; the enactment of a measure authorizing our government to call or participate in an international conference in case of any threat of non-fulfillment of the provisions of the Kellogg-Briand Pact; the proportional reduction of arms by agreement with other nations; and maintenance of the parity of the U. S. Navy with any other.	Favors adherence to the World Court and entry into the League of Nations; cancellation of war debts and reparations; the reduction of armaments, leading to the goal of total disarmament; recognition of Soviet Russia; abandonment of all military intervention by the United States in the affairs of other nations; prohibition of the sale of munitions to foreign powers.
Pledges assistance to cooperative marketing associations; modification of the Agricultural Marketing Act as experience shows necessary; tariff protection against foreign substitutes for our farm produce; extensions of authority of Reconstruction Finance Corporation to make loans on agricultural commodities, and to Federal Farm Board.	Favors the reduction of tax burdens by shifting taxes on farm property to other sources of revenue; creation of a federal agency to market farm products; social insurance on crop losses caused by adverse weather; government acquisition of grain elevators, stockyards, etc.; creation of public boards to determine best utilization of rural lands.
Favors a thorough, periodic examination of companies affiliated with member banks until sufficient information has been acquired on which legislative action may be based; revision of the banking laws to protect depositors; and the creation of a federally supervised system of home-loan discount banks.	Favors complete acquisition of Federal Reserve Banks by government; formation of a government-owned corporation to cover all departments of banking.
Urges the creation of emergency relief funds for temporary loans to states; favors loans to states and local authorities and private concerns for revenue-producing and self-liquidating projects. Endorses principle of high wages. Favors adoption of the shorter working day and week by government and private employers as rapidly as possible. Recognizes and approves collective bargaining by responsible representatives of employees.	Favors an immediate appropriation of five billion dollars for relief to supplement state and local expenditures, and an appropriation of equal amount for public works, including records, reforestation, slum clearance, etc. Advocates a compulsory system of unemployment compensation financed by government and employers; old age pensions; health and maternity insurance; establishment of minimum wages, the six-hour day the five-day week; free public employment agencies.

Intent on proceedings at an evening meeting of Inter-Departmental Study Group No. 1 are members, from left,

Haines Finnell, Homer Law, Andrew Hauk, Harvey Fifer, Ben Anderson, Fred Broughton, Clarence Hand, Myrl

Reaus Ledbe

INTER-DEPARTMENTAL

STUDY GROUP

EXCITES INTEREST

A forward step toward wider employee acquaintance and better understanding of corporate affairs was taken in June, 1951, with the formation at Home Office of our first Inter-Departmental Study Group. John E. Arens of the Comptroller's Department suggested such an organization and was assisted in its formation by Ralph A. Nevens, John H. White, Gerald A. Woods, Leroy B. Houghton and Arthur L. Quackenboss.

Their aim was to form a study group of not more than 30 invited members, each member representing a different department or major function within the Company. The group would meet one evening monthly, with Union Oil approval but not under Company sponsorship. With members taking turns as speakers at these meet-

An outstanding field trip enjoyed by the Study Group and several Home Office guests was arranged through the cour-

tesy of C. F. Braun & Company of Alhambra, California. In their handsome and immaculate plant, where more than

300 re largest

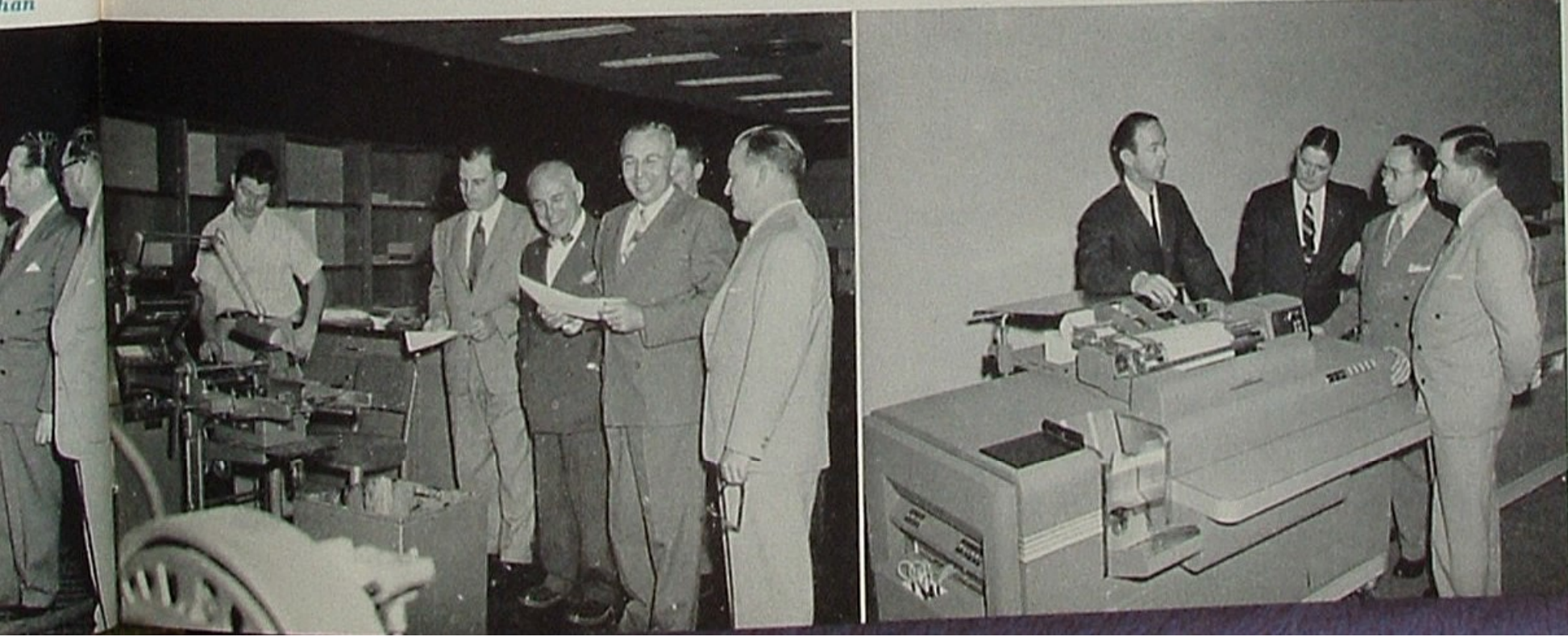
Reaugh, Bob Bungay, Charles Perkins, Harvey Lee, Tal Ledbetter, Paul Foreman, John Arens, Gerry Woods, Dick Pennell, Larry Chasteen, Oz Ousdahl, Dick Davis and Don McFaddin. Speaker, below, was Dave Ruesch of Tax Div.

ings, it was thought that all present might gain a better knowledge of departments and operations. Acquaintance and friendship would ripen between employees who rarely have the opportunity of meeting. New ambitions and accomplishments might be sparked. If the first organization proved successful, others would be encouraged to form.

After one year of activity, the pioneering group reports most gratifying results. Those invited to join have responded with enthusiasm. The monthly meetings have been fully attended. Member speakers have brought into focus some of the most interesting aspects of their departments and jobs. Question-and-answer periods during the meetings have evoked equally interesting discussions. Field trips in addition have given the group first-hand acquaintance with oil fields in the Los Angeles Basin and with the plant of C. F. Braun & Company, manufacturers of refining equipment.

Meanwhile, five similar Study Groups have been formed or are in the process of formation at Home Office —proving adequately that the idea was an excellent one.

300 refineries and chemical plants, including the world's largest cat-cracker, have been built, the guests were acquainted with the vast amount of engineering, mechanical and clerical work that goes into a modern refining unit.



INDUSTRIAL SUMMARY

• INDUSTRIAL RELATIONS

The Company has submitted petitions to the Wage Stabilization Board for adjustments in rates or other compensation for employees. Prior approval is required of all rate changes which exceed the 4.2 per cent general increase of last January. Approvals thus far received have enabled the Company to start payment of increases to most employees concerned. As fast as additional approvals are received, payments will be made as promptly as possible through our payroll offices.

This year's technical recruitment program has been concluded successfully despite a shortage of engineering graduates. It is felt that we obtained a better than average share of graduates available for employment. National statistics show that industry's need for graduate engineers was 15 per cent higher in June of 1952 than last year; however, in 1952 the universities were graduating 35 per cent fewer engineers.

from W. C. Stevenson

• MANUFACTURING

Los Angeles Refinery's new Fluid Catalytic Cracking Unit, which boosts the Company's total catalytic cracking capacity to top position on the Pacific Coast, is undergoing start-up tests. Production from this modern unit gradually will help relieve the short supply of 7600 Gasoline experienced during the past several months. Finely ground clay-type catalyst used in the process is circulated through the plant at a rate of about 85,000 tons per day. The length of time for a given particle of catalyst to circulate through the entire system is only six minutes.

A new cracked gasoline finishing unit at Los Angeles Refinery is expected to be in operation in July. The unit will treat about 15,000 barrels per day of cracked gasolines that are ultimately blended into motor gasolines.

Construction of the new Crude-Vacuum Distillation Unit at Los Angeles Refinery is progressing as planned, with its start-up scheduled for December of this year.

Extension of Wharf A at Oleum Refinery enabled the SS SANTA MARIA, our new tankship, to load a cargo of lubricating oil for shipment to our eastern markets late in June.

The Edmonds Refinery is now running at capacity to supply asphaltic products to the Northwest Territory.

from K. E. Kingman

• FIELD

The importance of gas as a fuel in American homes and industry is receiving increasing recognition. There appear to be no foreseeable bounds to the expansion of this great industry. As witness to the amazing growth, in recent years we have seen multimillion dollar investments made in transmission lines from the Gulf Coast to the Eastern Seaboard and from West Texas fields to the West Coast. And there is now under consideration the installation of a gas line connecting fields of Northern Alberta to West Coast cities of Canada and the United States.

Our Company is playing a significant part in supplying the gas to meet this demand. Our immense reserves of gas in the Gulf Coast fields have for more than a year been tied into transmission lines linked to the East Coast, deliveries from our leases normally running in excess of 85 million cubic feet per day. We have been successful in developing very substantial gas reserves through our exploratory activities in the Peace River area of Northern Alberta, and in consequence are in excellent position to benefit by the proposed transmission line linking these fields with cities of the Northwest. In California we produce about 142 million cubic feet of gas per day. Practically all of this gas is rich in natural gasoline, and we operate 13 absorption-compressor plants for the purpose of extracting and utilizing this product. After supplying gas for fuel requirements of our field, pipe line and refining facilities in California, the remaining "dry" gas, amounting to approximately 50 million cubic feet a day, is sold to the public utilities companies.

from Sam Grinsfelder

• PURCHASING

At this writing the steel industry is again on strike. If continued considerably, the strike may affect some of our operations, particularly drilling. If of short duration, it may not seriously reduce commodities now in good supply. However, any increase in steel prices will, of course, affect prices of many allied lines.

Reports indicate that manufacturers' and consumers' inventories are still high. Until inventories are reduced to a more realistic figure, many industries will not record production and sales figures prevailing since Korea. All classes of textiles, hides and leather, fats and oils, pulp and paper, rubber, some chemicals, lead, zinc, antimony, paint ingredients, some steel items and valves and fittings, are no longer scarce. Ample copper and aluminum are just around the corner. Lower prices quoted on some commodities reflect a desire to convert inventories to cash.

Surplus Material Sales has sold 6,009 tons of scrap for the five months of 1952, compared to 3,367 tons for the same 1951 period, an increase of 78 per cent.

from E. H. Weaver

• TRANSPORTATION & DISTRIBUTION

The SS SANTA MARIA arrived at Wilmington on June 12 with a cargo of 138,000 barrels of natural gasoline. Cargo was purchased in the U. S. Gulf and was loaded by the vessel during her initial voyage enroute from Sparrows Point, Maryland, to California.

The annual fire school training program has been completed in the Northern Division Pipe Line System. A total of 269 employees attended the school, including 18 employees from Malta Refinery and 80 employees from the Production Department in Santa Maria.

Our tank roof replacement program—embracing the eventual renewal of 21 floating roofs on our 100,000-barrel tanks at Torrance Tank Farm—is progressing satisfactorily. To date, new roofs have been installed on seven tanks, and by the end of 1952 a total of 13 tanks will have new roofs installed.

from Ronald D. Gibbs

• MARKETING

The superiority of T5X, Union's outstanding heavy duty motor oil, is being demonstrated to Company marketing personnel in a new colored sound slide film entitled, "The Battle of Wear." The film will be widely used in acquainting truckers and other industrial consumers with T5X merits.

A new full scale road service test on Triton RR Diesel Engine lubricating oil was initiated on May 13 in an SD-7 1500-h.p. General Motors EMD locomotive recently purchased by the Chicago, Milwaukee, St. Paul & Pacific Railroad. A similar engine using a competitive oil is being used for comparative purposes.

Increased activity in road and airport construction is evidence by first quarter gains in asphalt sales. It appears that sales for 1952 will easily exceed those of 1951, which was a record year for the Company.

During April our Central American Division's 6,000-barrel tankship M/V UNOBA helped fight a fire aboard the tuna clipper SAO JOAO in the harbor at Puntarenas, Costa Rica, successfully preventing damage to the wharf at that port.

A cooperative truck painting program has been approved for eastern motor oil distributors. Trucks and salesmen's cars used primarily for selling and delivering Union Oil products will be painted royal purple and identified with Royal Triton decals.

An important milestone in our eastern marketing activities will be reached in early July when nearly 3.5 million gallons of Triton base stocks will be discharged at Good Hope, Louisiana, and Carteret, New Jersey, from our newest tankship, the SANTA MARIA. Arrangements have been completed for compounding, packaging and shipping of Royal Triton, T5X and Unitec at these points, thereby effecting substantial savings in freight costs and delivery time.

Application has been made to W.S.B. for authority to initiate a 40-hour work week for our retail employees.

from Roy Linden

Reactions:

Head Clerk Jesse MacClocklin:—"Retirement in 1956 will come too soon!"

Stenographer Gene Moore:—"As a place to work it's simply gorgeous!"

Engineer James Watson:—"The Company's investment will pay big human dividends."

Superintendent of Training & Safety Harold Keans:—"It's a morale builder."

Division Petroleum Engineer Charles Bowden:—"The answer to efficiency in our use of manpower."

"Dog House" ALA

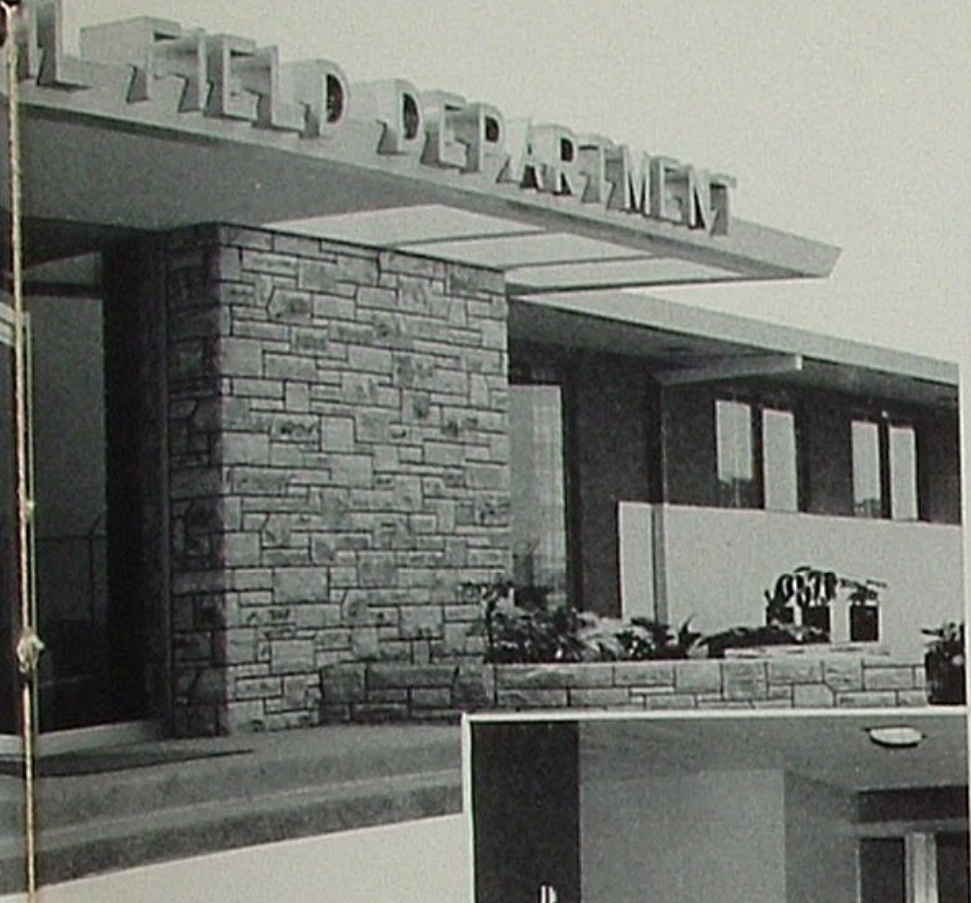
TECHNICALLY, a *dog house* is the small combination office and locker room that adds a touch of shelter to every oil well drilling operation. But Field people are capable of speaking in such terms of any office—not excluding the impressive structure above, which is the new headquarters of our Los Angeles Basin Division.

Located at Santa Fe Springs, in a community of other Union Oil offices and installations, the building enhances a modernization program started several years ago and brings an air of permanency to our sojourn there.

In the words of Tal Ledbetter, division superintendent:

Petroleum engineers in conference room are Doyle Graves, Lewis Kelsey, William Cerini, Robert Wheeler, Phillip Cook, Edgar Borglin, Robert Briggs and Albert Woodward.

Draftsmen Robert Pilchard, Larry Lee and Jack Bergman describe their new drafting room as the best-lighted, best-proportioned and best-equipped they have ever used.



1952

Receptionist Cecile Brant

"Our producing oil wells in the Los Angeles Basin have doubled in number during the past 10 years to a present total of about 800. It now takes an organization of 400 Union Oil people to handle the work. By bringing our supervisory and skilled personnel under one roof, we are realizing a great saving in time and energy. Furthermore, the added comforts and conveniences do their part in making all of us happy on the job."

Dorothy Norvell, Ralph Atherton and Lloyd Kinney find the community kitchen complete with every home advantage, except that each diner is obliged to wash his own.

Division Superintendent Tal Ledbetter:—"Ask some of our 90 people in this office how they like it."

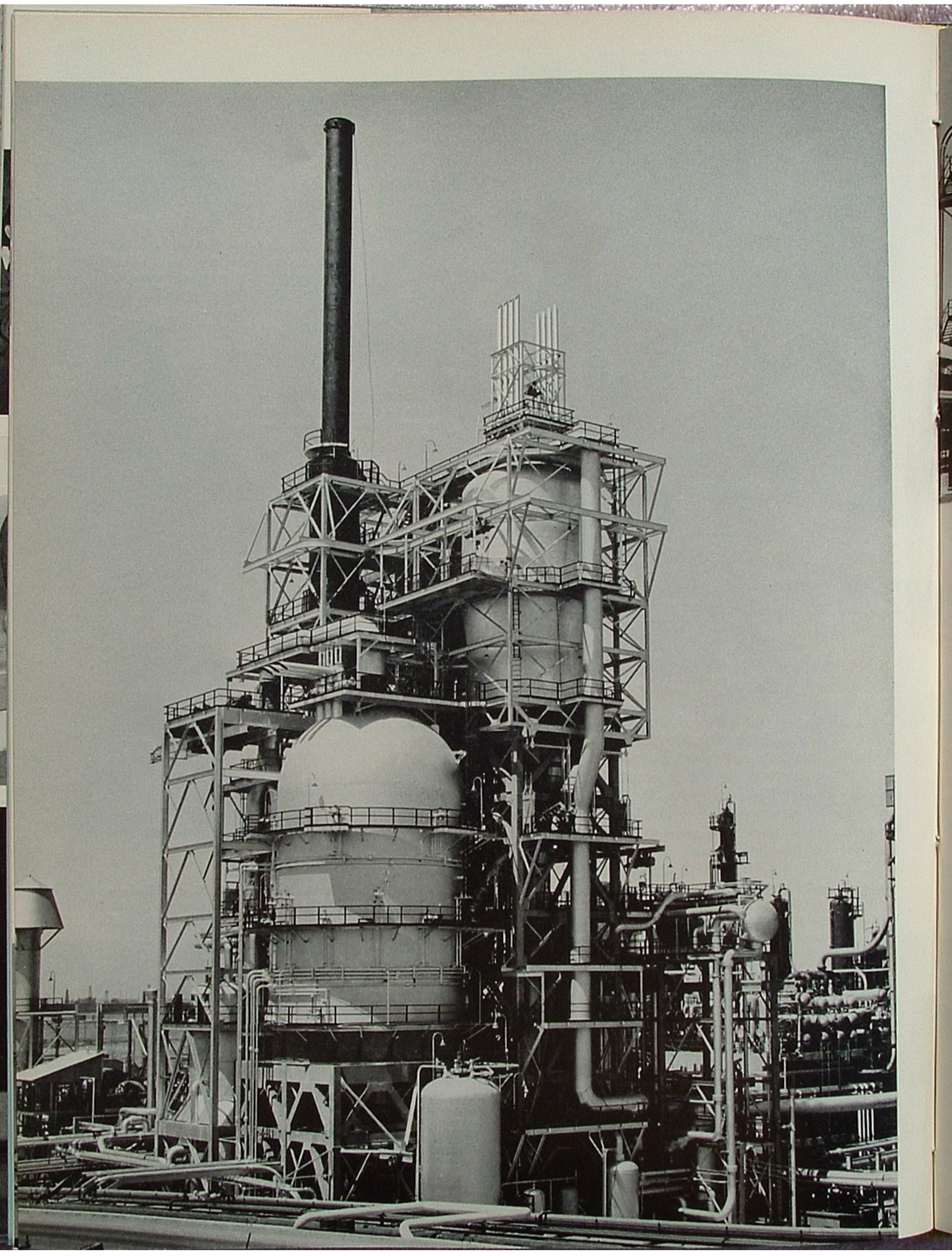
Division Geologist George Feister:—"A geologist's work is 90 per cent office work, I'm now happy to say."

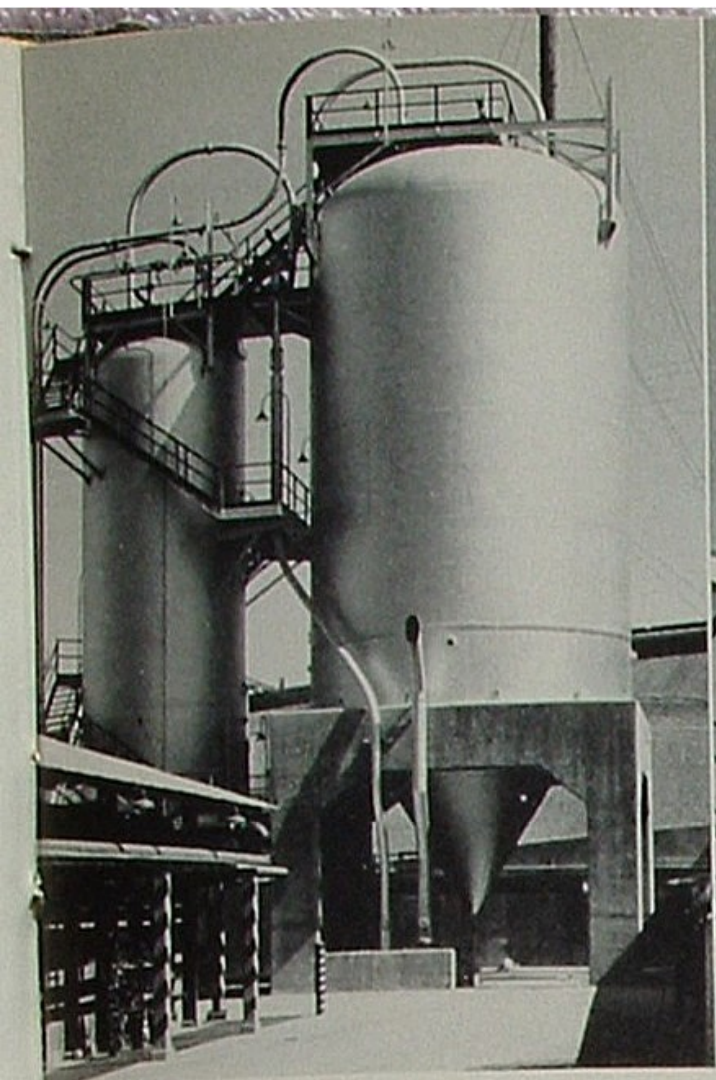
Secretary Ruth Miller:—"I hate to go home and leave this wonderful air-conditioning."

District Superintendent T. R. Tinker:—"Now we don't have to spend half our time looking for each other."

Division Drilling Superintendent Erwin Price:—"A tin roof was the best we could ask for 30 years ago."

In the patio Harriet Morris, Lydia Rank, Phyllis Mohagen, Trella Garman, Anne Pellant and Jeanne Fox use the mid-morning coffee break to catch up on a fast moving world.





CATALYST STORAGE HOPPERS

AIR BLOWER FACILITIES

DE-ETHANIZER COLUMN

LOS ANGELES REFINERY'S *Fluid Catalytic Cracker* ON STREAM

By Fred L. Hartley

EIGHT MILLION DOLLARS WORTH of new tools was added to the Union Oil kit in June with completion of Los Angeles Refinery's Fluid Catalytic Cracker Unit 152. These new facilities augment and complement the older Thermofor Catalytic Cracking Unit, giving our company the largest total catalytic cracking capacity in the West.

Cracking—in case you need to be informed—is the rather magical process by which some of the larger hydrocarbon molecules of petroleum are broken into smaller molecules, thereby increasing the yield of high-value gasoline and other light products while decreasing the yield of low-value fuel oils.

The two methods most commonly employed are *thermal* cracking and *catalytic* cracking. Thermal cracking depends upon high temperatures and pressures to break the larger molecules apart. Catalytic cracking employs a catalyst—in our case, a naturally occurring aluminum silicate clay—to promote greater conversion to gasoline at low pressures and high temperatures. Each method offers certain advantages, depending upon the type of gas oils being processed and the quality of *end* products desired.

LOS ANGELES REFINERY'S FCC UNIT NO. 152

Union's Los Angeles Refinery is now in a position to employ both processes effectively. Gas oil stocks are first cracked catalytically at the FCC and TCC Units. Then, those gas oil hydrocarbons that did not respond to catalytic cracking are cracked thermally at Unit 33.

The gasolines produced catalytically are excellent blending stocks and are credited to a great degree for improvements in octane rating of motor gasoline during the past 10 years.

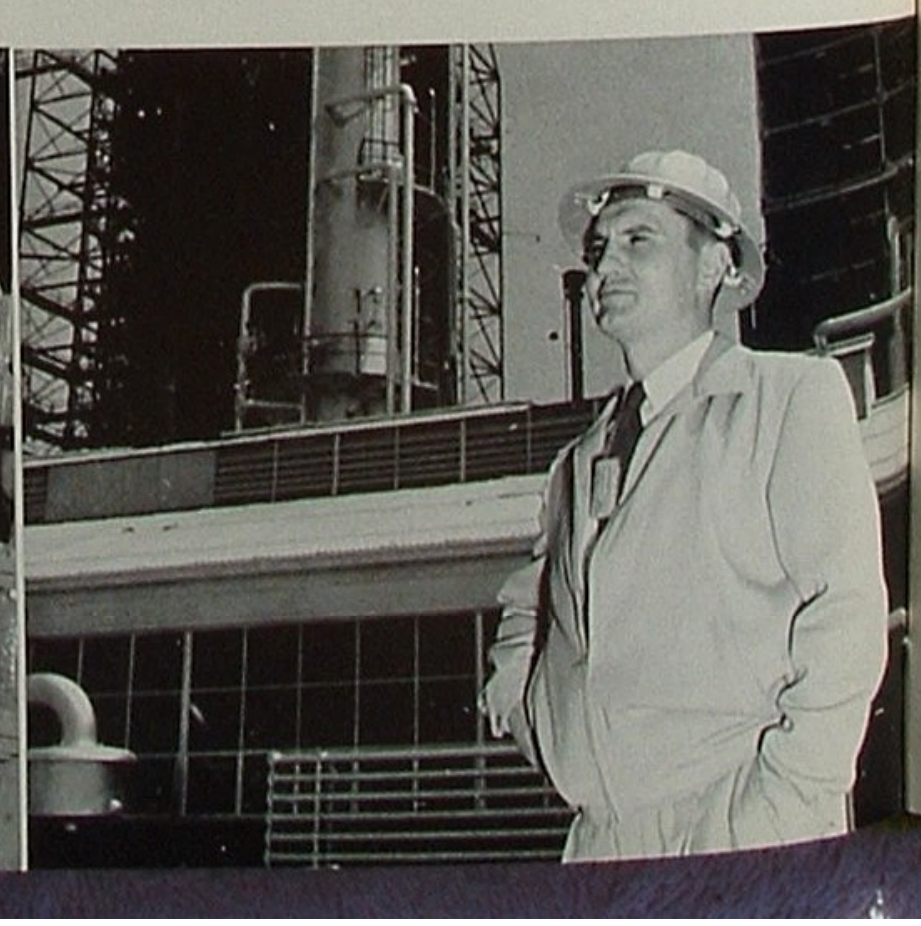
The Fluid Catalytic Cracker is so named because its powdery catalyst flows like a liquid when agitated with air or steam and/or oil vapor, and thus can be made to flow through the cracking and regeneration equipment. In contrast, catalytic pellets used in our Thermofor Catalytic Cracking process have to be lifted mechanically by elevators.

Fluid cracking was decided upon as the most economical and best qualified process for further increasing our yield of gasoline per barrel of crude oil. The new process can effectively handle heavy gas oil containing a relatively high percentage of sulfur and nitrogen. Such stocks were formerly limited to fuel oil production, whereas they will henceforward be a source of high-quality gasoline.

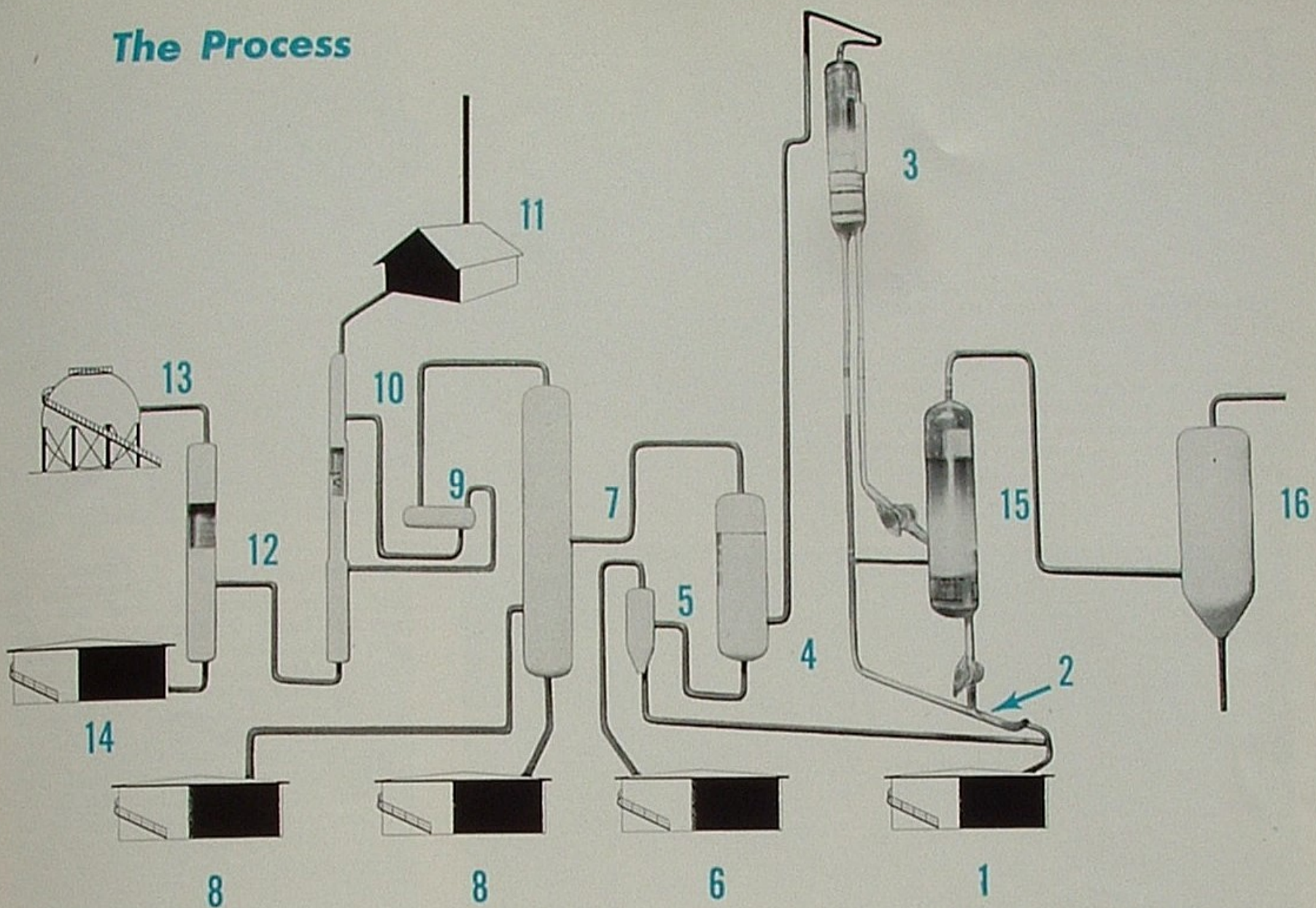
FCC Manpower

The task of putting a new unit like the Fluid Catalytic Cracker *on stream* requires a vast amount of planning, training and initial equipment testing. Shown above in classroom studies that required several weeks are Cracking Department operators, from left, Lester Thomson, Frank Hood, James Muths; Frank VanAcker, class instructor and assistant superintendent of cracking; A. Q. Milburn, Ivan Underwood, Walter Pollard, A. L. Alexander, William Mhoon, Hugh Derby, Donald Link, George Jordan, Thomas Hargrave, Norris Hartsell, Robert Haire, James Hester, Theodore Aarup and John O'Toole. Below, from left, are Walter Pollard of the Los Angeles Refinery process group, Ronald Deering of the Research and Process Department, and Clyde Caldwell, project manager and a key man in all phases of FCC construction and operation. Another member of this group, Robert A. Campbell, FCC engineer, was absent when these pictures were being taken.

Process engineering was accomplished under Homer Reed, chief engineer, and A. E. Kelley, manufacturing process supervisor. General engineering was supervised by R. H. Bungay, manager of engineering and construction, and P. H. Wilson, resident engineer, in conjunction with the Arthur G. McKee Company, general contractors. Construction accounting was the responsibility of T. W. Gardiner, T. R. Jones and Arthur Burry, comptrollers.



The Process



Fluid catalytic cracking can be understood by following a charge of heavy gas oil through the above flow-model:

Beginning from the storage tank (1), the feed stock is preheated to about 400 degrees F. and brought into contact at (2) with powdered catalyst heated to 1,100 degrees F. Most of the oil vaporizes at this contact point and is carried with the catalyst, by means of steam pressure, up to the REACTOR (3). Here, at a temperature of around 975 degrees, the catalytic change is completed; catalyst settles toward the bottom; and petroleum vapors move out of the REACTOR through its top exit.

An AUXILIARY COLUMN (4), operating at a top temperature of 500 degrees F., effects the separation of cracked oil into two streams. The liquid *bottoms* flow to a SLURRY SETTLER (5), which removes and returns to the REACTOR charge stream a portion of the oil containing all remnants of catalyst, and produces for storage (6) a clarified *slurry* oil that later can be blended into fuel oils. Gas, gasoline and other vapors from the AUXILIARY COLUMN'S top proceed to the MAIN COLUMN (7) where they are separated or *fractionated* into several oil classifications ranging from fuel oil upward. The heavy oils are recycled through the FCC, sent to Unit 33 for thermal cracking, or delivered to fuel oil storage (8).

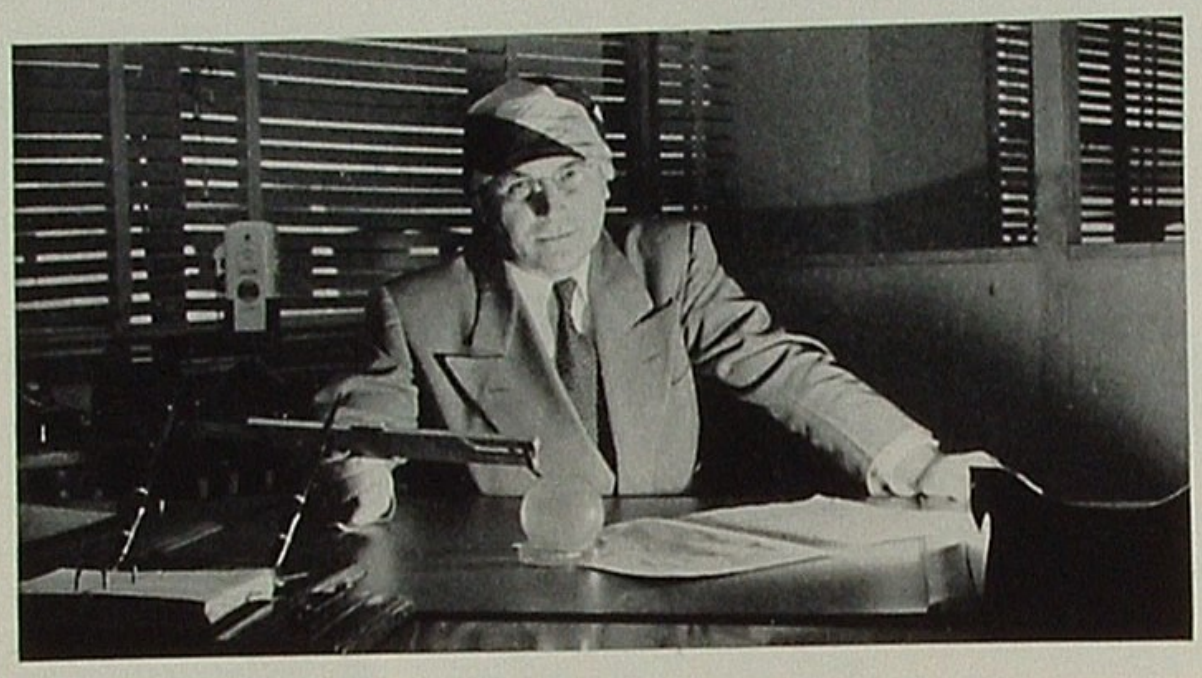
Light fractions from the MAIN COLUMN go to a DE-ETHANIZER COLUMN (9), where ethane and lighter gases are removed and sent to refinery furnaces for use as a fuel. In a similar manner, the de-ethanized stock is stripped of its pentane gas in the DE-PENTANIZER (10), of its propane gas in a DE-PROPANIZER, and of its butane-butylene fraction in a DE-BUTANIZER column. Pentane is blended into 7600 Gasoline. Propane is used as refinery fuel or as feed stock for alkylation and polymerization processes. The butane-butylene fraction is stored (11) for eventual processing via ALKYLATION into aviation gasolines of the highest quality. There remains at the end of the FCC process a cracked gasoline (12), which is chemically treated and fractionated into blending stocks for maximum production of 7600 and 76 Gasolines.

The catalyst, a powdery clay mined in Utah, becomes coated with carbon during the cracking process. To condition it for reuse, it is sent from the REACTOR (3) to the REGENERATOR (13), where controlled amounts of air are admitted, causing the carbon to burn. This burning process not only cleans (reactivates) the catalyst but reheats it to its proper 1,100-degree cracking temperature. Exit gases from the REGENERATOR pass through the COTTRELL PRECIPITATOR (14), which traps and removes catalyst dust to prevent pollution of the atmosphere.

Union Oilers

SWAMI and Assistant Manager of Sales Services Joe Bateman of San Francisco despaired of prognosticating future sales with the aid of machines and charts, and one day fetched an old-fashioned crystal ball to work. His accuracy has improved 102.7 per cent, and he now gets away from the office early enough to watch the lady wrestlers every Friday night. The flashy turban was an F. K. Cadwell idea.

from E. E. Richards



AN AWARD for "meritorious achievement in the field of employment relations" was presented to Union Oil Company in Los Angeles on May 12 by the Merchants & Manufacturers Association. The award certificate was being presented to Vice President A. C. Stewart by the Association President Bryant Essick, center, in the Los Angeles Times photograph above. Others to receive certificates were, from left, William L. Aldrich of Northrop Aircraft, Inc., Mrs. Bobbie W. Devine of North American Aviation, Inc., and Robert J. Cannon of Cannon Electric Company.

SO SPIC AND SPAN is the Los Angeles Refinery cafeteria at all times that the City of Los Angeles Health Department officials frequently point to it as a model of cleanliness and approved sanitation methods. The above see-how-it's-done tour was headed by Donald F. Grant and served as a refresher course for sanitation engineers of the Los Angeles Health Department. Girls appearing in the photograph are, from left, Mary Ayers, Elaine Mixon, Mary Welty and Erika Wildenhain. They, together with Cafeteria Steward Herbert Zirnite (coatless), are among the Union Oil people to whom greatest credit is due.

from Paul K. Doyle

LT. COL. ARTHUR J. READ has been cited for his outstanding performance of duty as commander of the 40th Infantry Division's 143rd Field Artillery Battalion, which unit fired the first shot after the 40th's arrival in Korea in January. The Colonel was our assistant resident manager at Santa Barbara prior to his latest tour of military duty. He also served the Army in Europe during World War II.

CRESTON M. HARNOIS, manager of wage and salary administration, has been admitted to Stanford University for an intensive summer course in the Graduate School of Business. He has been a member of the Industrial Relations Department since joining Union Oil in 1944.

ELWOOD L. HIATT, assistant to Vice President Ronald D. Gibbs, returned in June from a three months' course in advanced management at Harvard University's Graduate School of Business Administration. His steady rise in the Company dates from 1933, when he was employed as a tank truck salesman at LaGrande, Ore.

HORSEMEN and mule skinners participating in the Elks' Parade and Rodeo at Santa Maria, California, on May 31, were predominantly Union Oilers, according to the accompanying photographs. Top Hand and Grand Marshall of the Parade, riding a beautiful black horse, was our Reese H. Taylor. George Thomas, drilling foreman at Santa Maria, was a helper on the old Union Oil No. 1 tank wagon. In the mounted posse at left were Clarence Froome, Cy Rubel, Basil Kantzer, Margaret Taylor, Fred Peuter, Bill Butler, Judith Kantzer, Sam Grinsfelder, Haines Finnell, Catherine Eggleston, Scotty Greene, Bill Eggleston and J. H. Powell, all riding horses from Union Oiler stables.

Sports

BOWLING CHAMPS OF 1952

The Burnham Bowling Play-off, in its 26th annual test, measured No. 1 team of Home Office as Union Oil champions of 1952. The winning team was composed of, left to right below, Reamer Fenton and Marion Knight of Purchasing, Harry Staman of Manufacturing, Bill Stockert of Purchasing and Bob McLane of Field. Rolling a team series of 2,717 pins, they beat their nearest rival, L. A. Refinery No. 1, to the Burnham Trophy by a margin of 95 points. Each of the winners was awarded an individual statuette in addition to having his name inscribed on the perpetual trophy.

Third, fourth and fifth best team scores were posted by Cut Bank No. 1, Seattle No. 1, and Oleum No. 1 bowlers.

Reamer Fenton of the championship team also was the top individual bowler of the tournament, averaging over 200 points a game to mark up a series total of 614 pins. For this feat he received a new bowling ball donated by Executive Vice President W. L. Stewart, Jr.

Ed Scott, right, of Houston, Texas, waxed sizzling hot for 10 frames to chalk up a 245 high-game, good for a new pair of bowling shoes, compliments of "Rocky" Rockfellow, manager employee relations.

INSPIRED PERFORMANCE

A possible clue as to how Home Office bowlers rose to Company championship heights in 1952 is contained in the two photographs below. At left we find two of the Burnham champs, Reamer Fenton and Harry Staman, sharing a banquet ovation with Evelyn Eaton of Comptrollers and Caryl Keir of Refinery Sales. Their foursome won highest honors during the winter season of Home Office League competition, and the girls were certainly no handicap, so the gentlemen aver.

At right are runners-up in the same league, from left, Bob Hislop, Sue Isenhouer and Bob McBeth. Along with Velma Warner, who was absent on account of illness when the pictures were taken, this all-Comptrollers team kept the winners in splendid bowling condition. The trophies were presented in May at a dinner-dancing party.

GOLF CHAMPS The Employees' 26th Annual Golf Tournament, held May 10 at the Western Avenue Golf Course in Los Angeles, found a new Union Oil champion in the person of Art Hawes from Los Angeles Basin Division of the Field Department. His score of 73 was a stroke better than the 74's carded by Grant Hendricks and Jack Muzzal. Grant won low gross runner-up trophy through the partiality of a flipped coin. Art appears at left in the above photograph with Grant, center, and Basil Kantzer, winner of the low-net Triton Trophy.

Flight winners in this popular tournament were, at right, R. Abercrombie, Jim Huebner, J. A. Dickman and S. Sawyer, plus camera-evaders Jack Muzzal, Otto Brandle and Joe Silvis.

In the remaining picture, upper right, Joe Maxwell of Bakersfield is seen receiving the Bull-Thrower's Trophy from Bob Osborne, right, member of the tournament committee. The Century Handicap, for best guessing, went to Grant Tiemann.

THE FAIR PLAY On May 24, members of the Girls Club in Los Angeles staged a women-only sequel to the Company's major golf tournament. Fay Sinclair of Comptrollers and Barbara Ulmer of Southwest Territory finished the 18-hole route all even with 92's. A toss of the coin gave Fay, at left, the championship and a new pair of shoes.

Other prize winners, below, were, from left, Jan Crowley of Field, Bea Kendall of Los Angeles Refinery, Aurelie Langefort of Automotive who won the gratitude of everyone for her work as committee chairman, Barbara Ulmer and Vivian Ferguson of Southwest Territory, and Eleanor Murphy of Field.

Let's Test Your Political I. Q.

(Continued)

ANSWERS

No. 1 was the Democratic Party Platform for 1932

No. 2 was the Republican Party Platform for 1932

No. 3 was the Socialist Party Platform for 1932

YESSIR, if you placed the Democratic donkey over Platform No. 1, you are an old-timer with an excellent memory, or a straight-A student of political history, or just a guy that looked at the answer first. For No. 1 actually *was* the Democratic Party Platform for 1932. Its sponsors then described it as a "covenant with the people to be faithfully kept by the party when entrusted with power."

But don't feel upset if you failed to identify No. 2 as the Republican Party Platform. Democrats and Republicans were pretty much alike in oratory back in 1932, except that one party was in office and the other wanted to be. The Democrats, being out, could and did point with scorn at their opponents' shortcomings. But neither party, in looking toward the future, ventured to advocate any startling departures from established constitutional processes of government. The platforms they pledged were fundamentally alike.

Finally, if you were led to believe, through events that have taken place during the last 20 years, that No. 3 must have been the Democratic slate, then we can only say, "Congratulations on your high political I.Q.! You may not be a student of history, but you're a master of facts." Believe it or not, No. 3 was the Socialist Party Platform for 1932, which was taken over nearly lock-stock-and-barrel by the Democratic Party. Socialism never won a greater victory.

The late Alfred E. Smith, Democratic governor of New York and presidential candidate in 1928, had this to say after nearly four years of the "New Deal":

"I suggest to my party on Capitol Hill in Washington . . . that they do the right thing and not the expedient thing.

"I suggest that they dig up the 1932 platform from the grave that they buried it in, read it over, and study it, breathe life into it, and follow it in legislative and executive action, to the end that they make good their promises to the American people.

"I suggest that they stop compromising with the fundamental principles laid down by Jackson and Jefferson and Cleveland . . . stop attempting to alter the form and structure of our Government without recourse to the people themselves, as provided in their own Constitution.

"I suggest that they read their Oath of Office to support the Constitution of the United States . . . to remember that they took that oath with their hands on the Holy Bible, thereby calling upon God Almighty Himself to witness their solemn promise. It is bad enough to disappoint us.

"I ask them to read from the Holy Scriptures the Parable of the Prodigal Son and follow his example . . . Stop wasting your substance in a foreign land, and come back to your Father's house."

It was the democratic Thomas Jefferson who once said: "I place economy among the first and most important of virtues, and public debt as the greatest of dangers. To preserve our independence, we must not let our rulers load us with perpetual debt. We must make our choice between economy and liberty, or profusion and servitude. If we can prevent Government from wasting the labors of the people under pretense of caring for them, they (the people) will be happy."

And writing to people of all parties and all political eras, John Stuart Mill — 19th Century philosopher, economist and champion of human liberty—said:

"A people may prefer a free government, but if, from indolence or carelessness, or cowardice, or want of public spirit, they are unequal to the exertions necessary for preserving it—if they will not fight for it when it is directly attacked—if they can be deluded by the artifices used to cheat them out of it—if by momentary discouragement, or temporary panic, or a fit of enthusiasm for an individual, they can be induced to lay their liberties at the feet of a great man, or trust him with powers which enable him to subvert their institutions—in all these cases they are more or less unfit for liberty; and though it may be for their good to have had it even for a short time, they are unlikely long to enjoy it."

The year 1952 represents another great pivotal point in the history of human freedom. Many of our freedoms have been lost, usurped, or modified. But our freedom to vote for candidates of our choice has been preserved. Through this powerful medium we do have the opportunity of turning from the Socialistic Road, which historically has led swiftly to autocracy, dictatorship and human slavery.

It is high-time that the best and wisest of Americans be placed in public office—and that, once in office, they adhere to the Constitutional limitations imposed. It is high-time that we return to the basic freedoms upon which this nation was raised to unparalleled heights. It is high-time for a re-declaration of independence by every individual American.

SERVICE BIRTHDAY AWARDS

JULY 1952

Department	Location	Years
EXPLORATION & PRODUCTION		
Brown, Rhuben N.	Santa Fe Springs	35
Blackmore, Clifford F.	Santa Fe Springs	30
Honeycutt, Wallace J.	Dominguez	30
Kilian, John G.	Richfield	30
Hazzard, John C.	Home Office	15
Hodgson, Joseph L.	Cut Bank	10
Miller, Chester G.	Cut Bank	10
MARKETING		
Campbell, Edward M.	Portland	35
Holbrook, Harry I.	Home Office	25
Murakami, Makoto	Honolulu	25
Pattison, Kenneth S.	Los Angeles	20
deJong, John C.	Edmonds	15
Granville, Mel B.	Los Angeles	15
Hilton, Orville P.	Los Angeles	15
Neeley, Robert H.	Rosecrans	15
Cockrell, Adeline R.	Home Office	10
Ericksen, Carl Moller	Seattle	10
Fisher, Margaret L.	Los Angeles	10
Goyan, Gerald H.	Eureka	10
Schifsky, Sylvester	Seattle	10
Parrish, Hallie D.	Seattle	10
DISTRIBUTION & TRAFFIC		
Hand, Clarence R.	Home Office	35
AUTOMOTIVE		
Andrews, Earl L.	Santa Fe Springs	30
Johnson, Homer C.	Santa Fe Springs	20
Gibbs, Chas. M.	Santa Fe Springs	10
COMPTROLLERS		
Houx, Orrin D.	Los Angeles	30
Nero, William C.	Home Office	15
MANUFACTURING		
Beeson, John R.	Wilmington	25
Gerz, Peter N.	Oleum	25
Moore, Mahlon T.	Wilmington	25
Souza, John M.	Oleum	25
Tobin, Raymond C.	Wilmington	25
Winschell, Wm. L.	Wilmington	25
Cook, Raymond C.	Wilmington	20
Ennes, Robt. R.	Wilmington	20
Ward, Michael J.	Cut Bank	20
Chaffee, Donald M.	Oleum	10
DeFigueiredo, Manual A.	Oleum	10
Paris, Edgar T.	Wilmington	10
Turner, Willie T.	Wilmington	10
MARINE		
Whitney, Burke L.	Wilmington	15
Kadous, Richard F.	Wilmington	10
Kirk, Margaret E.	Wilmington	10
RESEARCH & PROCESS		
Holmes, Gennie P.	Brea	10
Wilkinson, Herbert F.	Brea	10
INDUSTRIAL RELATIONS		
Parker, Flossy B.	Home Office	10

Retirements

A grateful Company and hosts of well-wishing employees are bidding farewell to the following Union Oilers who have concluded long careers of Company service and are retiring:

GEORGE R. McCONNELL
Field Department
Employed 12/1/17—Retired 6/1/52

WILLIAM H. BRIMHALL
Automotive Department
Employed 3/16/32—Retired 7/1/52

JAMES R. MITCHELL
Automotive Department
Employed 7/1/44—Retired 7/1/52

THEODORE A. GOULD
Pipe Line Department
Employed 3/25/22—Retired 7/1/52

ARCHIE B. McCLELLAN
Central Territory
Employed 6/21/28—Retired 7/1/52

DAVID H. MERTES
Central Territory
Employed 9/30/45—Retired 7/1/52

WILLIAM R. RALPH
Southwest Territory
Employed 5/30/17—Retired 7/1/52

IN MEMORIAM

With deep regret and with earnest sympathy toward their families and intimate associates, we report the death of the following employees:

On March 15, 1952
JOHN EVERETT LICHLYTER
Los Angeles Refinery

On March 3, 1952
GEORGE ALBERT MEALS
Southern Division Field
Retired May 31, 1951

On March 25, 1952
JOHN M. QUINN
Oleum Refinery
Retired October 11, 1950

On March 26, 1952
SQUIRE B. YOUNG
Southern Division Pipe Lines
Retired July 31, 1951

On March 27, 1952
CLAUDE E. CHEATUM
Oleum Refinery
Retired February 2, 1952

On March 30, 1952
IRA ELLIOTT MURPHY
Northern Division Pipe Lines
Retired April 4, 1948

On April 3, 1952
LOUIS W. MILLER, JR.
Southwest Territory

On April 4, 1952
PERRY E. BALES
Southern Production
Retired Oct. 10, 1949

On April 5, 1952
JAMES M. McCULLOUGH
Oleum Refinery
Retired July 7, 1944

On April 5, 1952
ARTHUR W. RUSHTON
Southern Production
Retired July 30, 1947

On April 25, 1952
FRANK LOUIS MANNING
Southwest Territory

On April 27, 1952
JOSEPH F. GALLAGHER
Central Territory
Retired Jan. 2, 1944

On April 27, 1952
JONATHAN B. HUGHES
Coast Production
Retired April 29, 1949

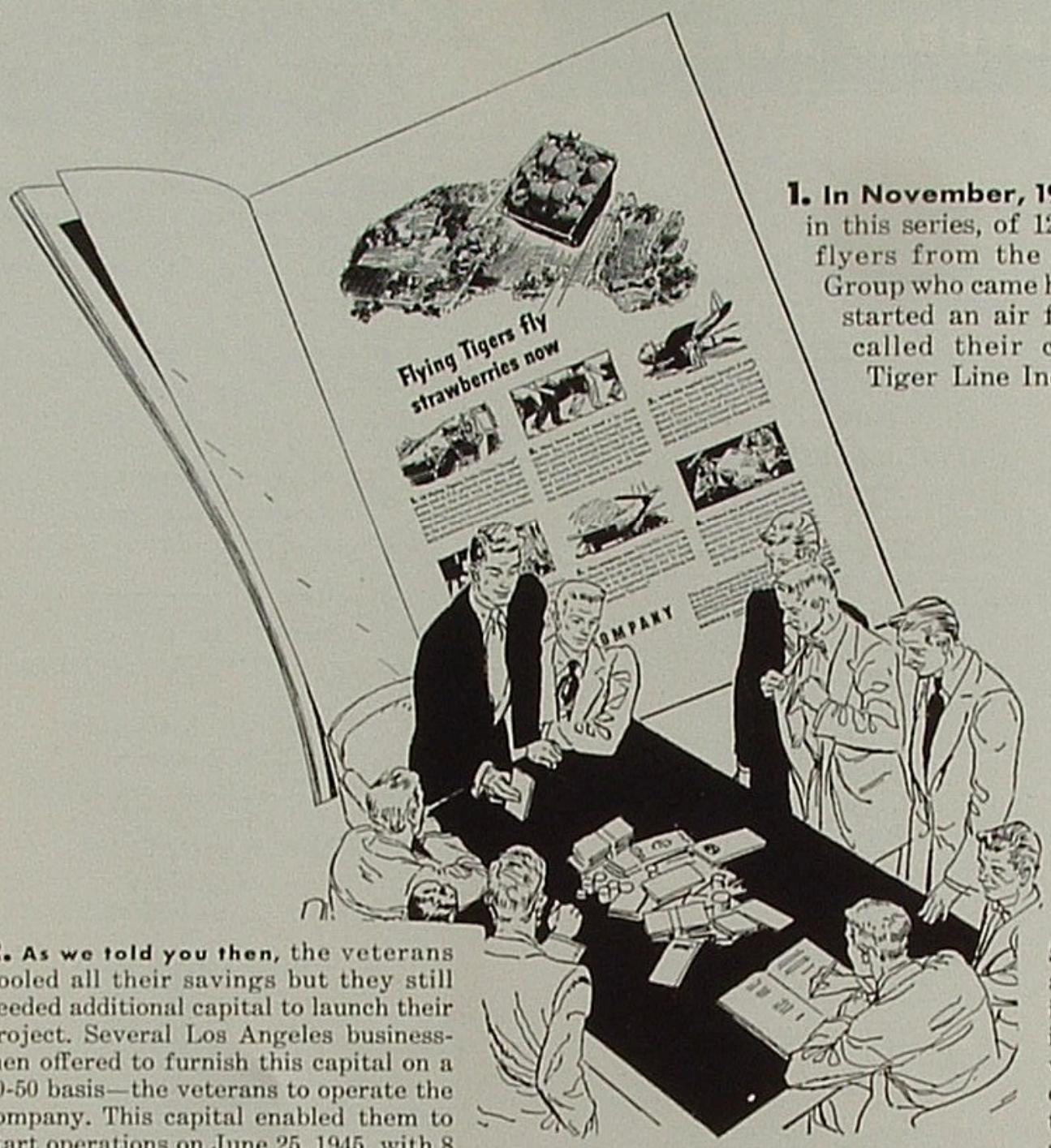
On May 7, 1952
FRED JACOBSON, JR.
Oleum Refinery

On May 13, 1952
BEN H. SILER
Southern Production

On May 31, 1952
WILLIAM F. COGGINS
Oleum Refinery
Retired March 26, 1944

On June 6, 1952
OLIN McKENLEY MAY
Oleum Refinery

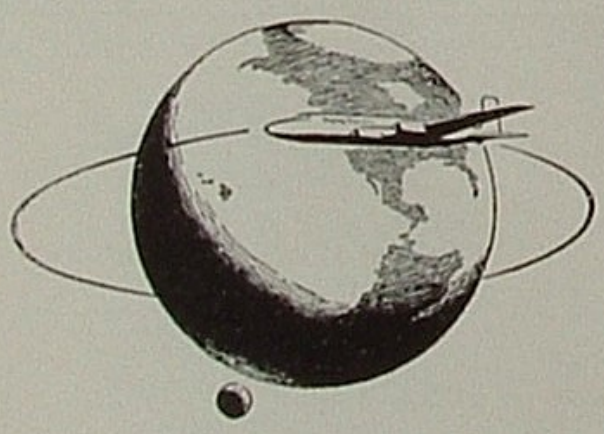
How the Flying Tigers got over the Hump



1. In November, 1945, we told the story, in this series, of 12 India-China "hump" flyers from the American Volunteer Group who came home from the war and started an air freight business. They called their company The Flying Tiger Line Inc.

2. As we told you then, the veterans pooled all their savings but they still needed additional capital to launch their project. Several Los Angeles businessmen offered to furnish this capital on a 50-50 basis—the veterans to operate the company. This capital enabled them to start operations on June 25, 1945, with 8 war surplus Conestoga cargo planes.

5. The company has used Union Oil aviation products since it began operations in 1945. But that doesn't seem nearly as important to us as the fact that the men were able to accomplish these things. It could hardly have happened under anything but the American profit and loss system.



3. Over the last seven years the company's growth has been spectacular. Their fleet of planes has grown from 8 to 39. In 1949 they received the first certificate to fly U. S. Air Freight Route 100. And they now operate daily transcontinental schedules to 43 cities, in addition to world-wide contract and charter services. The company has now contracted for seven new DC-6A's—the largest order ever placed for cargo planes.

4. Last year their fleet earned a total revenue of $15½ million compared to $458 thousand the first year. In 1951 their planes flew a total of over 13½ million miles compared to ½ million miles the first year. Today The Flying Tiger Line Inc., is the world's largest certificated freight and contract air carrier.

6. For without the *profit incentive* the businessmen wouldn't have put up the capital to start the business in the first place. Without the hope of gaining financial independence, the veterans wouldn't have had the *incentive* to sweat out the problems of starting the company and developing it. Altogether, we think it's a wonderful example of the advantages of our American free enterprise system over others.

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.

Manufacturers of Royal Triton, the amazing purple motor oil