



"On Tour"

In This Issue

SOFT PEDAL DRILLING

Soundproofing Sansinena No. 18 3

WHAT THE INDUSTRY EXPECTS OF A PRODUCTION ENGINEER

A. C. Rubel addresses A.I.M. & M.E.
at their San Francisco meeting 6

PUERTO RICO LOOKS TO U. S. INDUSTRY

An introduction to some of our newest customers
in one of America's oldest settings 12

INDUSTRIAL SUMMARY

Monthly digest of Company operations 18

ELECTED EBP ADMINISTRATORS

Rathbone, Trimble and Thomson are
successful candidates 19

"PREPARING FOR TOMORROW"

Reese H. Taylor discusses problems
of the future with foremen 20

SERVICE BIRTHDAY AWARDS 23

INSTITUTIONAL AD 24

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

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

Politics

"CY" RUBEL'S suggestion (Please read it beginning on Page 6) that oil workers take an active, positive part in the political, social and economic life of our communities reminds us of an incident that happened in the 'thirties.

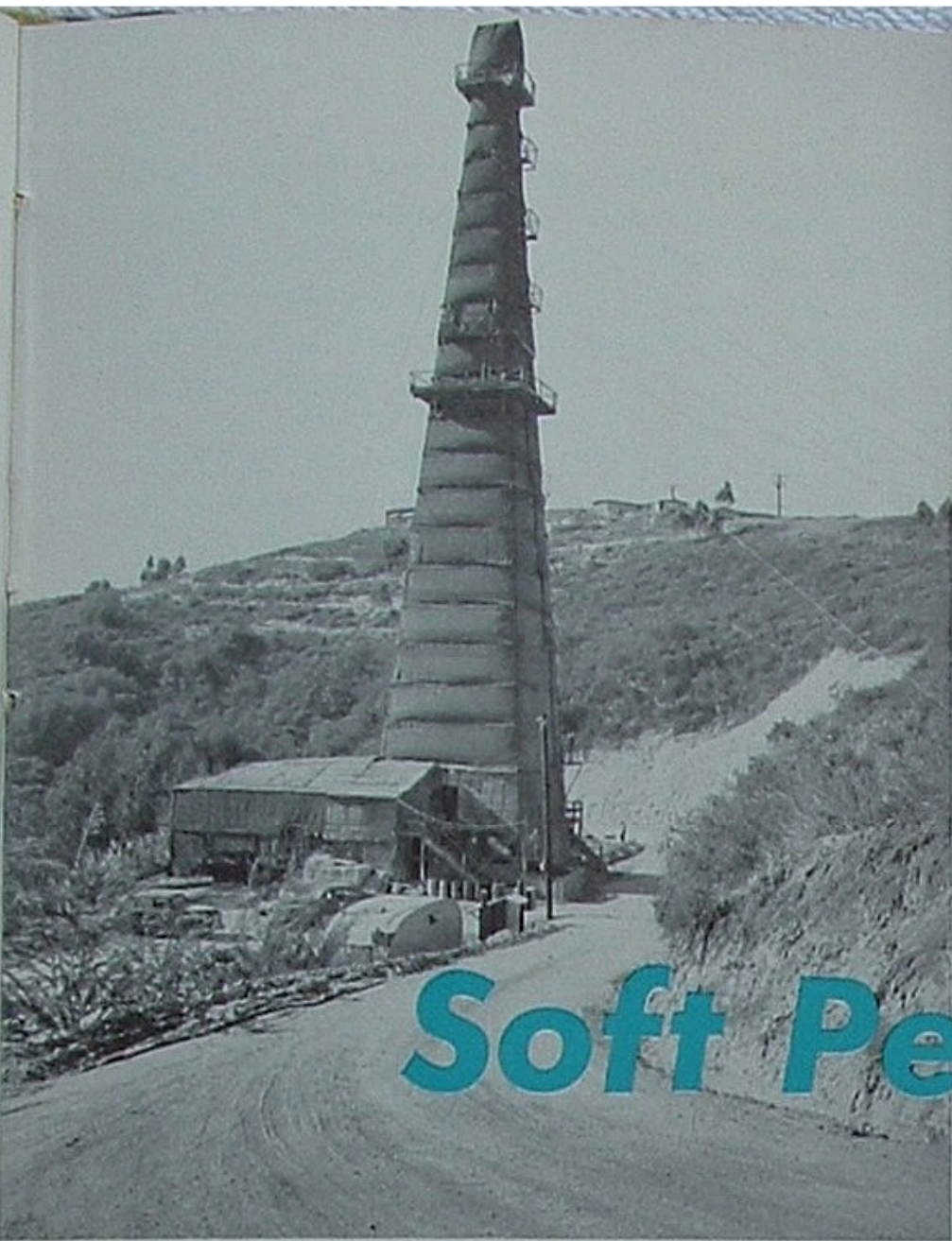
In our neighborhood during those depression-ridden days were two men of the ne'er-do-well variety. One, after flunking badly in law school, had somehow during the next few years picked up enough information to pass the easy state bar examinations. However, he never so much as opened a law office nor worked in one, but moved rather unsuccessfully from one non-legal job to another. The other man was one of those pitiable persons of unsound mind who, while never an asylum inmate, was always certain to reveal his mental shortcomings the first time you were introduced to him.

When election year came around, the half-baked lawyer, having nothing else to do, cast his hat in the political ring and, to the neighborhood's amazement, received his party's nomination for judge. In fact this unbelievable triumph so awakened all of us that even the impressionable man with the warped mind began circulating a petition naming himself as an independent candidate for public office. Scores of people smilingly signed the petition, knowing that neither they nor anyone else who knew the unfortunate character would ever vote for him.

The morning after election day all of us breakfasted on some unbelievable news. Our ne'er-do-well neighbor, the unsuccessful lawyer, was now a judge, having been elected to office by a landslide majority. And even the mental incompetent, who drew only two or three votes in his home precinct, attracted a losing but astonishing total of several hundred votes from strangers who balloted without knowledge or reason. Light mindedness on the part of the electorate had placed an incompetent man in public office and had come embarrassingly too close to electing an imbecile.

These incidents are of course extremes. Many men who run for and hold public office are capable and deserving. But far too many are political pawns and incompetents. That is why the word "politics," which should mean the science or art of government, is better known by the company it keeps—government waste, graft and corruption.

The blame rests not upon those in office but upon us who are too tired, too selfish, too busy, too indifferent to serve or take active part in selecting, nominating and electing our public officials. If we insist upon good governors, good government will follow almost as a matter of course.



The Cover

Decked out in a gown worth between 12 and 15 thousand dollars, Sansinena No. 18 in the La Habra area near Whittier shows what the well-dressed oil well is wearing this Easter—an elaborate frock designed solely for sound-proofing.

Soft Pedal Drilling

DRILLER John Machado of Santa Fe Drilling Company cites an incident to illustrate the noiselessness of a sound-proof rig:

“The folks out here are getting pretty neighborly with us now, but for a while the air was a little crisp. They didn’t pay much attention while concrete was being poured for the foundation, but while the rig was being put up and drilling equipment was being installed you could almost overhear some of the telephone conversations. Even the big sound-proof cover we installed didn’t ease the situation much. Folks had the idea drilling was a noisy business and they didn’t intend to lose a night’s sleep, oil or no oil.

“One day a couple of our roughnecks must have talked too loud down at the store. One of ’em apparently pulled that old gag about getting on up to the job by two o’clock so the driller could start drillin’, because sure enough that evening an unhappy little woman barged onto the rig floor and, greeting us with ‘This noise has just got to stop!’ demanded to see the general manager. Well, the boys looked at me and, while I was making up my mind who and where the general manager might be, our visitor really took a bite out of the oil tycoons—particularly those of us in sight.

“It seems that the noise of our drilling had completely upset the lady’s rest. Darned if I could hear a sound

standing 30 feet from the rig. But she had sensitive ears that couldn’t be fooled by a layer of canvas. She could hear a ‘grinding’ sound clear up on top of the hill, 200 yards away. What’s more, it had to stop before bedtime. If it didn’t, she’d have the law on us.

“More to keep the conversation from being too one-sided than anything else, I asked what time of day or night the noise seemed to bother her most.

“‘All the time,’ she answered. ‘Ever since today at 2 o’clock when you started drilling.’

“I told her that seemed a little odd because actually we had been drilling for three weeks.

“Well, for once I guess I really made a speech, for with a ‘Heavens, I’ll bet my husband left the car running,’ she racked up her tools and breezed for home. We haven’t heard a word from her since.”

Yes, of the countless new problems the oil industry is encountering every day, not a few of them have to do with people. Formerly no one paid much attention to the sound of drilling equipment at work. It doesn’t compare in volume to the pounding of a boiler factory or the roar of a train or even the milder rumble of a modern streetcar. But in a quiet neighborhood it could conceivably disturb the rest of very sensitive people living within a few hundred yards.

The days are slowly ebbing during which oil well



From a single-shot survey picture taken deep underground Tal Ledbetter, division drilling foreman, ascertains whether or not the crew is drilling a straight hole.

drilling and production can remain a dominion unto itself. Farms, cities and suburban residential areas are spreading out across some of the older fields. And hard-pressed explorers are finding hopeful indications of new oil reservoirs under some of our densely populated districts. Naturally, people who have been brought up on a misleading diet of sensational oil pictures have no appetite for drilling activities—especially when they have little hope of sharing directly in the gains. They have visions of forests of derricks, spouting gushers, burning wells, knee-deep mud or dust, droves of ill-mannered fortune hunters, and of course all the noise that goes with such a scene. Few realize that modern drilling can be quite as unobnoxious as a quilting bee.

The case in point is our Sansinena No. 18 now drilling in the La Habra area near Whittier, California. Here, where the Company has held mineral and drilling rights for more than 40 years, our current drilling program has to contend with orchards and fine homes that have gradually taken over surface rights. Union Oil Company could have ridden rough-shod over the situation and boldly demanded our drilling privileges. However, the oil industry too is faced with the obligation of being a good neighbor, for an important part of our game is that of winning friends and influencing people.

Having obtained a permit to drill, the Company went about its task on tip-toes. The derrick site served almost to hide the well from general view. The branch road was surfaced with material that neither grinds into dust nor churns into mud. The rig and its battery of tanks were compactly arranged and neatly painted. The roughnecks

Members of a Santa Fe Drilling Company crew assist driller John Machado, right, as he prepares to take a survey picture. The device being inserted in a Monel metal tube combines a compass, camera, flash lamp and timing mechanism. It determines the angle and direction of a hole being drilled.



would pass in any neighborhood for members of the college football team. And finally the engine house, pump house and derrick from gin-pole to ground were shrouded with the industry's latest in tailor-made coveralls—a sound-proof garment designed for the single purpose of silencing operations.

Such modern refinements are not uncostly. Sound-proofing of a rig, for instance, requires a heavy canvas fabric that has been chemically treated to make it fire-resistant. The canvas is padded with glass wool to stop the "grinding" sound. Sections of the material are laced together to provide a rig-fitting creation without midriff openings or neckline. The tailor who does the fitting charges about \$1500 just for the installation. He doesn't sell the costume, but agrees to rent it for about \$1200 a month.

Sound-proofing has been quite as effective as John Machado's story indicates. Some of the oil industry's keen-eared "pushers" claim that under favorable conditions they have been able to detect the turning of an uninsulated rotary table as far as one mile away. However, the noise that escapes Sansinena No. 18 would hardly interrupt a cricket at 10 paces.

Drilling crews, who are traditionally immune to hardships, have no serious fault to find with working inside the big tepee. It's a trifle awkward, they say, to contend with the sliding door when hauling pipe and tools into the rig. Electric lights have to be burned day and night inside. The derrickman insists that all the engine-generated heat collects in the rig's upper part, giving him too much warmth for comfort. But, to compensate for these disadvantages, sound-proofing provides a fairly comfortable shelter in bad weather.

Due to such refinements in modern drilling techniques, it is entirely possible for oil wells to mingle with the best dressed industries in our biggest cities. To date no one has suggested that we camouflage the cover with some good oil paintings. But give 'em time.

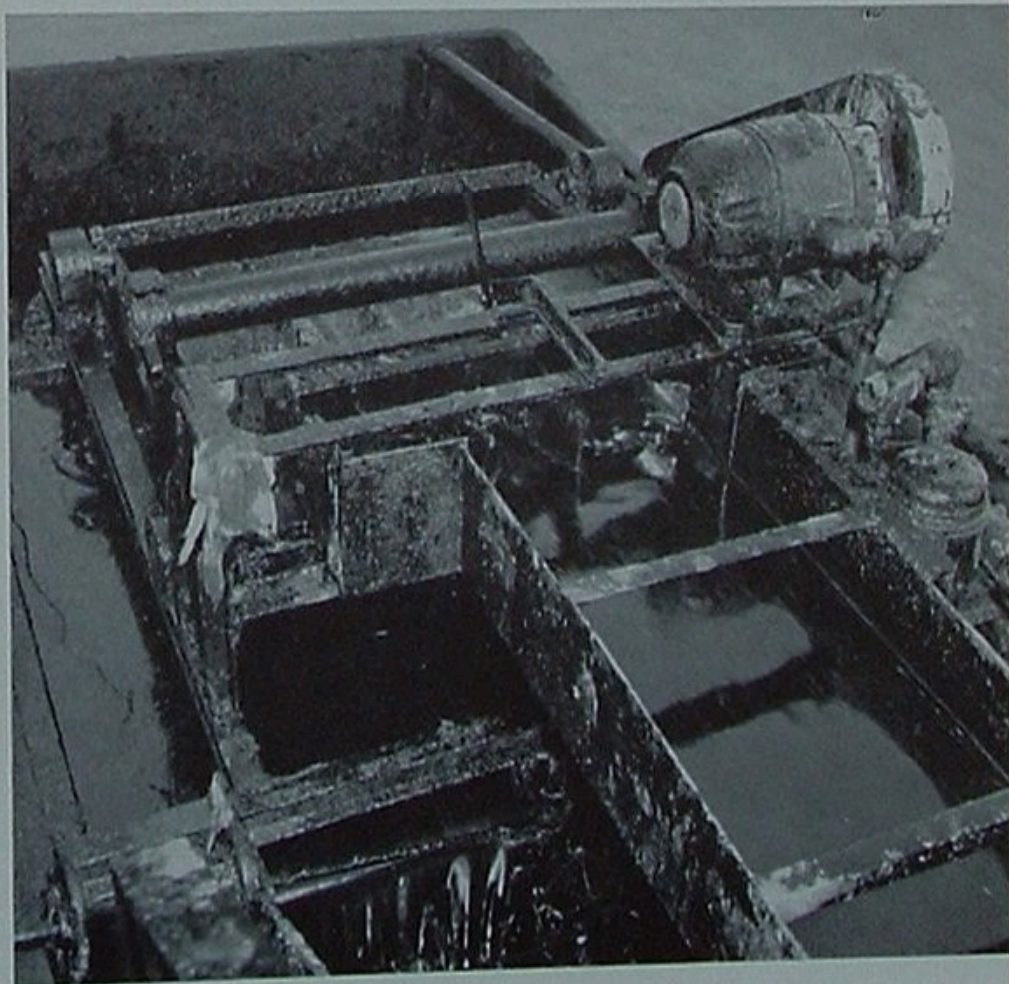
New Mud

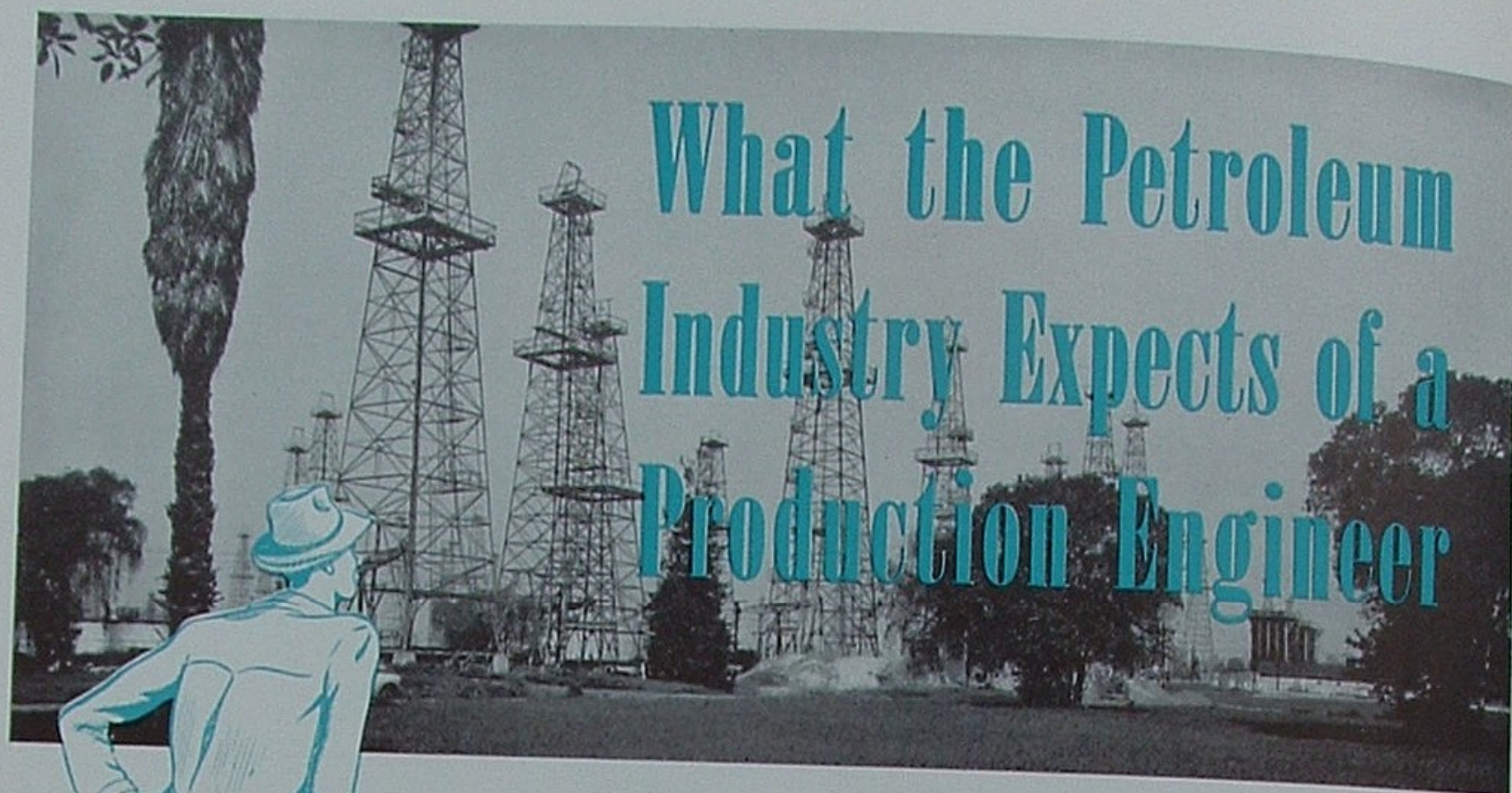
Another interesting feature of Sansinena No. 18 is our use of oil as a drilling mud. For many years various types of clay mixed with water have been circulated through wells to remove cuttings, cool and lubricate the cutting tools, and prevent gas from escaping. Although effective for these purposes, the old clays tended to plug some of the producing sands and thus reduce production. The new oil muds developed by Union Oil research have no plugging effect and, in several tests, have nearly doubled the producing rate of new wells.



This is a case of two bits being equal to several hundred dollars comments Don High, derrickman as he checks equipment used on the soundproofed Sansinena job.

A special oil is being used at La Habra in place of the usual mud to carry cuttings to the surface. It is proving more successful than the circulation of clay type muds.





What the Petroleum Industry Expects of a Production Engineer

By A. C. Rubel

Although presented to a group of petroleum engineers assembled in San Francisco on February 13, the following address by A. C. Rubel has meaning and application broad enough to inspire every Union Oiler who will analyze it.

PRODUCTION ENGINEERING is one of the newest terms in the lexicon of our rapidly expanding oil industry and so far lacks a concise definition. For general purposes let us define it as the application of engineering principals to the production of oil and gas.

Specifically, production engineering concerns itself with all phases of oil and gas production from the intricacies of reservoir mechanics to improvements in design of producing equipment. Some of the principal areas of activity for the production engineer are:

1. Well completion practice.
2. Design, installation and operation of producing equipment.
3. Reservoir studies to determine proper well spacing and production methods.

4. Secondary recovery practices including repressuring, flooding, and pressure maintenance.
5. Study and design of more efficient well pumping equipment and other mechanical lifting devices.
6. Study and development of any device or process for the more efficient recovery of oil and gas.
7. Research into all phases of the foregoing.

It is doubtful if any two companies utilize production engineers in the same manner. The smaller companies generally employ their services in all phases of the work while larger companies divide the work into highly specialized services. With such a diversification in the particular field, it is difficult, if not impossible, to prescribe any fixed academic preparation for the job.

In general it is my opinion that production engineer-

ing should be more or less limited to those problems dealing with the actual production of oil, and such applied reservoir work as may bear directly on that problem. The more involved reservoir studies and research can best be left to specialized men who have the necessary background of education, training and experience to carry such work, but who are of necessity somewhat removed from actual contact with the operations.

Education

Because we first need men who can produce oil by using our conventional methods, and improving on them where possible, and because the average student is financially and sometimes academically unable to go farther, I believe our basic undergraduate work in any engineering course should be a four-year course in which emphasis is put on the fundamental subjects of mathematics, the sciences, including basic chemistry and physics; English, with attention given to composition and report writing; economics; and as much drafting, surveying and applied mechanics as time will permit. Special emphasis

should be placed on summer or extra-time work in the field or laboratory as a valuable adjunct.

One summer's work in an oil field or an absorption plant will supply more applied knowledge and will generate more real interest on the part of the student than four years in a university.

It is from this four-year group of graduates that the industry must depend for a large proportion of its production foremen, superintendents, managers, and from it will come many of its operating executives. I likewise believe that every opportunity should be afforded and every effort should be made to provide those with the desire, the capabilities and the financial ability, the opportunity to pursue such graduate studies as are necessary to fit them for the more intricate phases of the work, and particularly in those studies and investigations involving reservoir performance and research.

In considering graduate work, attention must be directed to the excellent extension courses leading to both bachelors' and advanced degrees, which are offered by



A. C. RUBEL

MOST Union Oilers would shake their heads negatively if asked whether they knew one Albert Chatfield Rubel. But after a moment's thought or a little prompting, most of us would be certain to ask, "You don't mean 'Cy,' do you?" For that is the rustic nickname our vice president has acquired and evidently preferred throughout his twenty-seven years of brilliant accomplishment in the Company's oil fields.

You don't find a more regular, a more capable, more energetic, yet more amiable executive anywhere. With a field of operations extending from Paraguay in South America practically to the Arctic Circle, he is nevertheless no stranger to the newest member of the most remote drilling crew. If something important is about to take place, you can expect "Cy" to be on hand, regardless of what time of day or night it might be, or how many thousand miles it might be from Head Office, or whether the forecast predicts good weather or hurricanes.

Appropriately enough, "Cy" was born in Louisville, Kentucky, an area noted for its thoroughbreds. He holds a flock of university credits and degrees. He was Captain Rubel of the 304th Engineers during World War I and was awarded the Croix de Guerre and Distinguished Service Cross. His accomplishments for Union Oil Company and the oil industry would fill an encyclopedia.

But if you pump him for personal details, he is apt to point to an adornment on his office wall, a highly polished horse collar.

many of our universities in the form of night classes. Many men in the industry have received master's or even doctor's degrees in this manner while working at a regular job.

The Challenges

Considering the fact that our real knowledge of reservoir mechanics is still in a most elementary stage and that we are not sure even of some of the fundamentals, and considering that realistic estimates indicate that on a national basis the petroleum industry will probably not recover, by present known methods, more than 35 per cent of the original oil in place in our reservoirs—and in California probably not more than 25 per cent—

the field of production engineering has unlimited potentialities, both as an engineering problem and as an important economic element in the future oil supply of our country.

It is interesting to recall that the first official recognition of the role of production engineering methods as applied to oil field production came with the organization of the so-called "Marland Committee" of the A. P. I. in 1927 for the purpose of studying the role of natural gas in oil production. The language of the resolution creating this committee is noteworthy, and is quoted as follows:

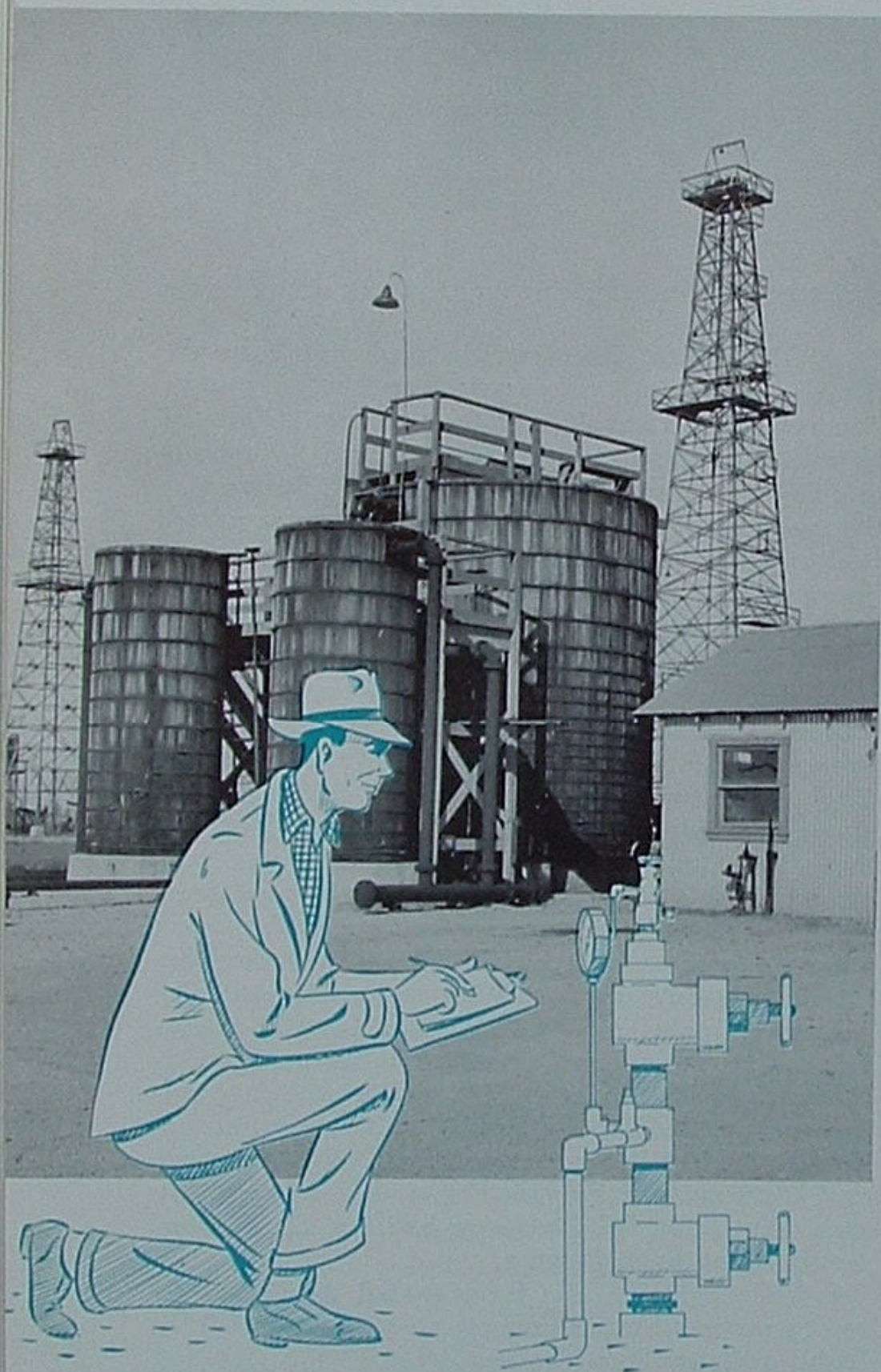
"... that the chairman of this committee be, and he hereby is, authorized and directed to appoint, or obtain the appointment of, a technical sub-committee to gather, collate and report back to this committee all available information, including the opinions of qualified scientists and engineers, regarding the importance of natural gas in the conservation and production of petroleum, and the best means of its most efficient utilization."

After a year of intense study, involving the organization of the best informed men in the industry as of that time, the committee's findings were summarized by the pronouncement:—"It is the conclusion of all committees that the conservation of gas in the production of oil is of paramount importance."

Such a pronouncement sounds so elementary as to be a bit foolish today, but upon its ultimate acceptance—and it was by no means generally accepted even at that recent time—rests the present day organization of the science and techniques of production engineering. The complete results of the study were later published under the title "Function of Natural Gas in the Production of Oil" by H. C. Miller under a joint arrangement between the U.S. Bureau of Mines and the A. P. I. This book was the first widely accepted treatise on the subject. The U.S. Bureau of Mines, many individuals in the industry and a very few companies were investigating and putting to use more efficient production practices, but there was no general acceptance and some outward opposition to the finding and recommendations of the committee.

The present problems of the production engineer open an almost unlimited field of study and practice, which requires the help of many branches of science, engineer-

"Some of the principal areas of activity for the Production Engineer are: secondary recovery practices including repressuring, flooding, and pressure maintenance.



ing and research. It is manifestly impossible to combine all of the qualifications in one man, but it is absolutely essential that the production engineer have a sufficient knowledge of the potentialities and possibilities of various sciences and make intelligent use of them. This requires a combination of natural ability, a high degree of imagination and resourcefulness, sound engineering education, and first-hand experience and contact with producing problems. Production engineering in this respect is a peculiar combination of pure and applied research and producing practices.

In my opinion, the petroleum industry must look more to the production engineer than to any other of its many technical workers for the continued supply of crude and natural gas. I do not except from this statement even the exploration geologist, since the probabilities are that there is as much new oil to be produced by the application of improved producing procedures to presently producing fields as there may be from new discoveries—or at least as much commercially profitable oil.

The Man

If we were to catalog the job specifications of a production engineer, I should say first that he be a man with an all-consuming interest in the problems of producing oil. He must have a lively and intelligent curiosity about all matters pertaining to production; and must be a completely independent thinker, willing to explore all new ideas and possibilities, but accepting them only as they meet the test of his own experience and judgment.

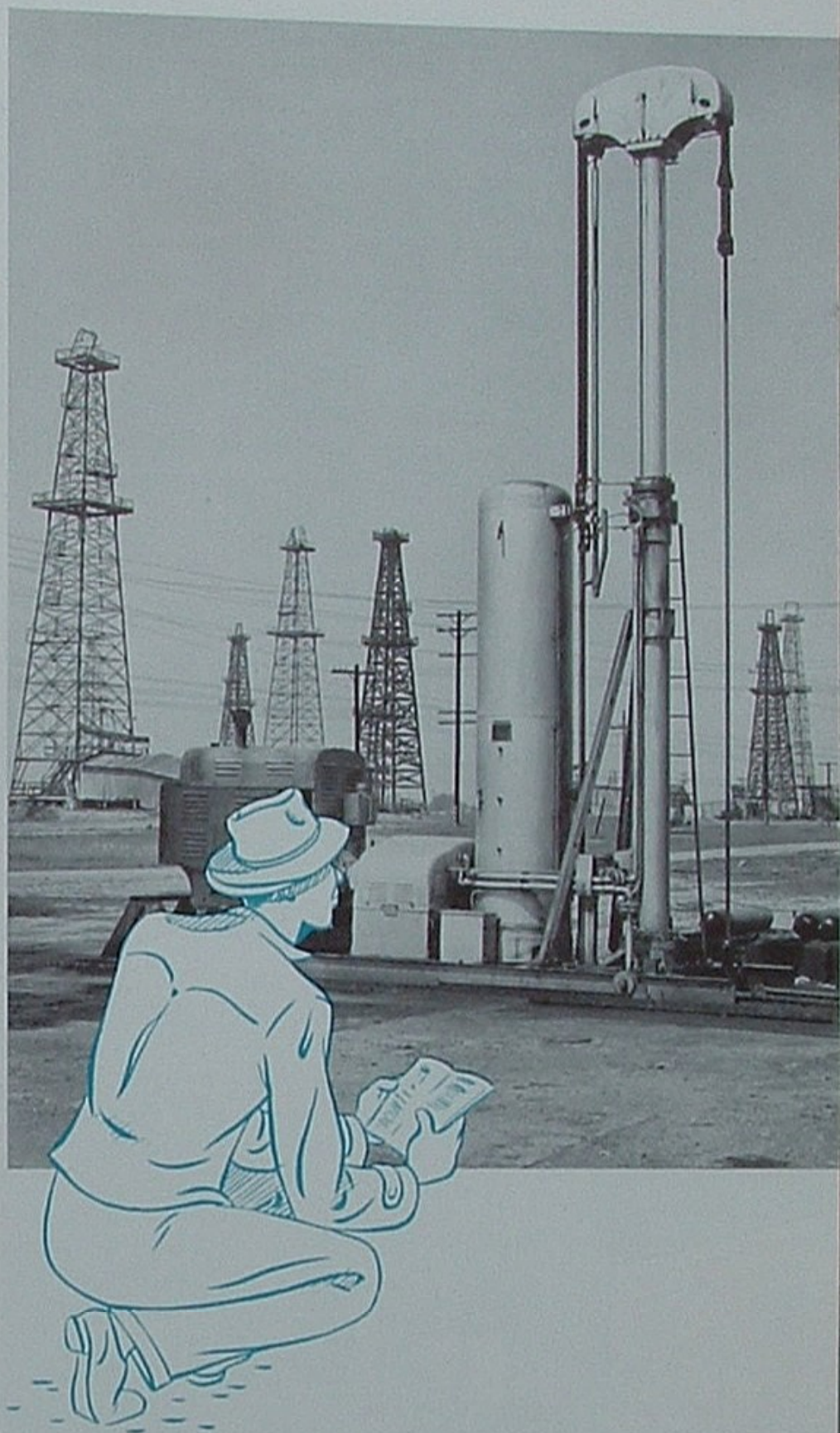
He must realize the limitations of his own knowledge and call freely upon all skills and talents of other branches of the industry, which can be of help in his problems.

He must realize the very limited extent of his own as well as industry's knowledge of production matters and be ready to try new ideas and new practices as conditions and finances permit, and to profit from both the successes and the failures resulting.

He must at all times keep in mind that a company or an industry which does not profit cannot endure, and he must measure his risks and his research in these terms.

Social Obligations

There is a second type of service and a related type of training which I believe industry as well as public



... Study and design of more efficient well pumping equipment and other mechanical lifting devices."

interest will and should demand in increasing measure, particularly from engineering and scientifically trained men. It is of little value to equip a man with the training and intellectual capacity to develop and excel along technical lines, and at the same time fail to equip him to understand equally well the social and economic problems attendant thereto.

It is certainly clearly apparent in the history of the

past few years that advances in science and technology in the oil industry, as well as in many other fields, has far outstripped our abilities to fit them to best advantage into our economics and social scheme of things. It is my firm conviction that until and unless the same brains, talents and abilities which are capable of creating our scientific and technological achievements are likewise employed to control and properly utilize them, we will continue to flounder in an economic and social mire.

We point with pride, and justifiably so, to the products of our research and development, and their benefits to humanity. We can name a long list of things that have helped to cure or alleviate human sufferings, or have

contributed to the elimination of misery and want. We may likewise name countless discoveries that have added greatly to the comfort and security of human beings.

But we must not forget that out of the same laboratories and plants, and in many instances out of the minds of those same investigators and engineers who have contributed so much good, have also come the forces of destruction which in two wars during the past 30 years seriously threaten to reduce civilization as we know it in the whole world today to a shambles.

If a balance in terms of human welfare could in some manner be struck between the benefits and miseries resulting from our past technological advances, it is very doubtful which way the scales might swing.

The purpose of this seeming digression is to plead, as a responsibility of engineering education and training, an equal responsibility to the political, social and economic life of our communities and our state and our nation. It is not enough to stand ready with our services in time of war. We must likewise take our part—and an active, positive part—in the peacetime affairs of our governmental processes.

Every engineer and every man of scientific attainments in this country should and must be a part of the political life of his community, his state and our national affairs. Politics is a word often strange to an engineer, but the whole machinery of our life is dependent upon that form of government which is controlled by politics.

We cannot all be councilmen, members of school boards, assemblymen or members of Congress—and many of us probably would not be suitable—but we can all be politically alert and do our part in our communities to see that proper and qualified men are chosen to represent us. We can take active part in our party organization and accept such responsibilities in community, state and national affairs, including elective and appointive offices, as time and conditions permit.

If we do not accept this responsibility, then we are by default permitting the affairs of government upon which our survival as a nation depends to degenerate further into the limbo of economic confusion.

It is, in my opinion, the obligation of our high schools,

"Many men in the industry have received Masters, or even Doctors, degrees while working at a regular job and taking advantage of extension courses offered by many of our universities.



our universities, and particularly our graduate schools, to prepare the students for this responsibility as they prepare them for their other obligations. It is likewise my opinion that industry should demand for its own selfish interest, if for no other reason, that its employees, and particularly those best fitted to participate, take part in these matters.

We as operators will go to great lengths to save a cent on the lifting cost of a barrel of production, and indeed that is an all-important part of our job. But what do we do when some board of supervisors or ill-advised city council spends thousands of dollars on unnecessary highways, poorly conceived flood control projects, or unwanted water districts which cost us several cents a barrel as producers and many dollars as taxpayers?

These examples are important as they affect the purse. Yet through our ignorance or indifference we send many elected representatives to our state legislatures and to our Congress who are wholly incapable by training, experience or intellect to cope with the local, national and international problems upon whose solution depend not only increases in producing costs, important as they may be to us, but the very existence of our form of government and the future lives of our children and our children's children.

What can we expect but chaos if we unleash the cataclysmic power of the atom and leave its utility to the vagrancies of political manipulation?

If we develop in our engineers and scientists the ability to utilize powers beyond the former dreams of man, must we not at the same time develop in those same engineers and scientists the responsibility and ability to control these powers for beneficial use?

From a cold-blooded appraisal, it would be far better for our country in particular, and civilization as a whole, to halt all scientific progress and divert our entire attention to the intelligent handling of what we have, rather than to proceed as we are without taking the means to develop the necessary correlative understanding for its use.

This can be done only by diverting as much of the science, skill, technology and intelligence of the engineer and scientist as may be necessary into political and economic thinking and action, so that every one of them can play a part in formulating the policies, devising the laws and controls necessary to put our technical advances in proper step with our progress along economic lines.

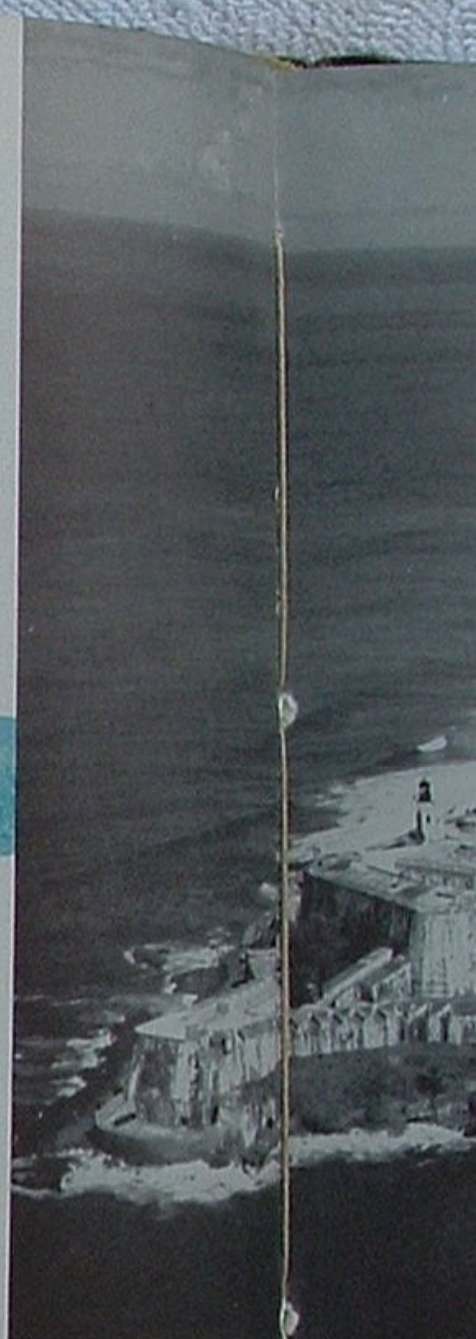


"Every engineer and every man of scientific attainments in this country should and must be a part of the political life of his community, his state and our national affairs."

Whatever sacrifices such an action involves on the part of our engineers, they and their employers must be prepared to make. Our schools and universities, and particularly our graduate schools, must prepare to make such objectives an important and mandatory part of their curriculum.

This is what industry and the public should expect of our engineers, and what the engineers must be prepared to give.

As guests of Earl K. Burton, Inc., Union Oil representatives at San Juan, Puerto Rico, we are introduced to some fellow American citizens and buyers of Union Oil Co. products.



San Juan, Puerto Rico, U.S.A., pre

Puerto Rico La

CHRISTOPHER COLUMBUS, so historians tell us, never set foot on any part of the continental United States. Instead, assuming that he had merely found a westerly route to the rich East Indies, he satisfied his 1492 discovery urge by touching at San Salvador, Rum Cay, Long Island, Crooked Island, Cuba and Haiti before hurrying back to Spain with his announcement.

However, on his second voyage in 1493, undertaken with 17 ships and 1500 men, Columbus did discover an island that has since become United States territory. It is a mountainous rectangle of land, 100 miles long, 35 miles wide, covered with a heavy carpet of tropical vegetation, and lying farther eastward than his previous major discoveries. He named the island San Juan Bautista after Prince Juan, heir to the Spanish throne.

Among the Spaniards of rank attracted to the New



ON TOUR

Wor
Leon
Baut
Don
back
an e
port
was

It
its p
is ca
Rico
TH
at th
app
know

ON T



San Juan, Puerto Rico, U.S.A., presents an inviting welcome to incoming aircraft. El Morro fortress, left, built in the 1500's by Ponce de Leon, seems immortal.

Puerto Rico Looks to U. S. Industry

ell us,
United
ound a
ied his
, Rum
iti be-
ment.
rtaken
ver an
ory. It
ng, 35
ropical
vious
n Bau-
e.
e New

World by Columbus' second voyage was Juan Ponce de Leon. He participated in the discovery of San Juan Bautista and, although taking up residence at Santo Domingo for the next 15 years, finally led an expedition back to the inviting island. This resulted in his finding an excellent harbor, which he named Puerto Rico (rich port), and in his founding a colony there of which he was appointed the official Spanish governor in 1510.

It is one of the oddities of history that this island and its pioneer city eventually traded names. Today the city is called San Juan and the island is known as Puerto Rico.

The Borinquenos Indians who inhabited Puerto Rico at the time of Ponce de Leon's colonization have disappeared into the mist of time without leaving any known blood descendants. Ruthlessly exploited by the

gold-hungry colonizers, they succumbed either to disease or mistreatment and by 1582 had completely vanished. However, slavery and peonage did not die with the Indians. Negro slaves were imported from Africa to work the unprofitable mining ventures or man the productive plantations. Today their descendants represent 25 per cent of the population. Slavery was abolished in 1873.

Puerto Ricans have demonstrated themselves to be a most virile people. As late as 1765 the island comfortable provided for a population of 45,000. By 1898, 900,000 people were beginning to find their limited quarters a trifle too crowded. Now, with a population of over 2 million, the island seems very small indeed.

The story of Puerto Rico, like that of other New World localities, is replete with conquest and interna-

tional rivalry. Englishman Sir Francis Drake attempted to wrest the island from Spanish control by naval onslaught in 1595. He failed, as did his countryman Lord George Cumberland in a later land attempt. Dutch troops succeeded in taking the city of San Juan in 1625, but retired after failing to conquer the famous Morro Castle fortress. Between these international struggles for dominance, pirates frequently used the island as a favorite source of free supplies; and a neighboring Indian tribe, the Caribs, regularly removed anything that could be had without the inconvenience of barter. Even hurricanes came often in their season to wreak great destruction on crops and human life.

It was on October 18, 1898, during the Spanish-American War that United States troops landed on Puerto Rico and took possession. They might have met with a bitter reception from the still formidable defenses of Morro Castle at San Juan had not the population, smarting from centuries of Spanish injustice, rather welcomed a change of government and the promises of democracy. The occupation succeeded and, in the Treaty of Paris signed December 10, 1898, Spain ceded Puerto Rico to the American flag.

The United States has much to be proud of, much to regret during our fifty years of democratic colonization. We effectively released Puerto Rico from a condition of bondage and have conscientiously avoided misrule and outside exploitation. But on the sins-of-omission side our record is not entirely blameless.

To the credit of Americans it can be said that we have been honest and fair in our dealings with the adopted neighbors. Our engineers and doctors have dealt effectively in greatly reducing the scourges of malaria and tuberculosis, which had long plagued the population. Congress has passed and amended a series of acts designed specifically to raise Puerto Rico to a political equality with the states. The island was made a territory in 1917 and United States citizenship was offered to all Puerto Ricans, of whom only 288 declined. During the last decade steps were taken to permit the election of a local governor by popular vote, which became an actual realization on January 2, 1949, when Luis Munoz Marin became the first such governor in 450 years.

To our discredit are fifty years of industrial disinterest and neglect. The island has more than doubled

Destined to rapid industrial development, modern Puerto Rico already has paper, glass and cement plants.





Pineapple fields have supplemented the island's income, but agriculture can hardly support its 3 million.

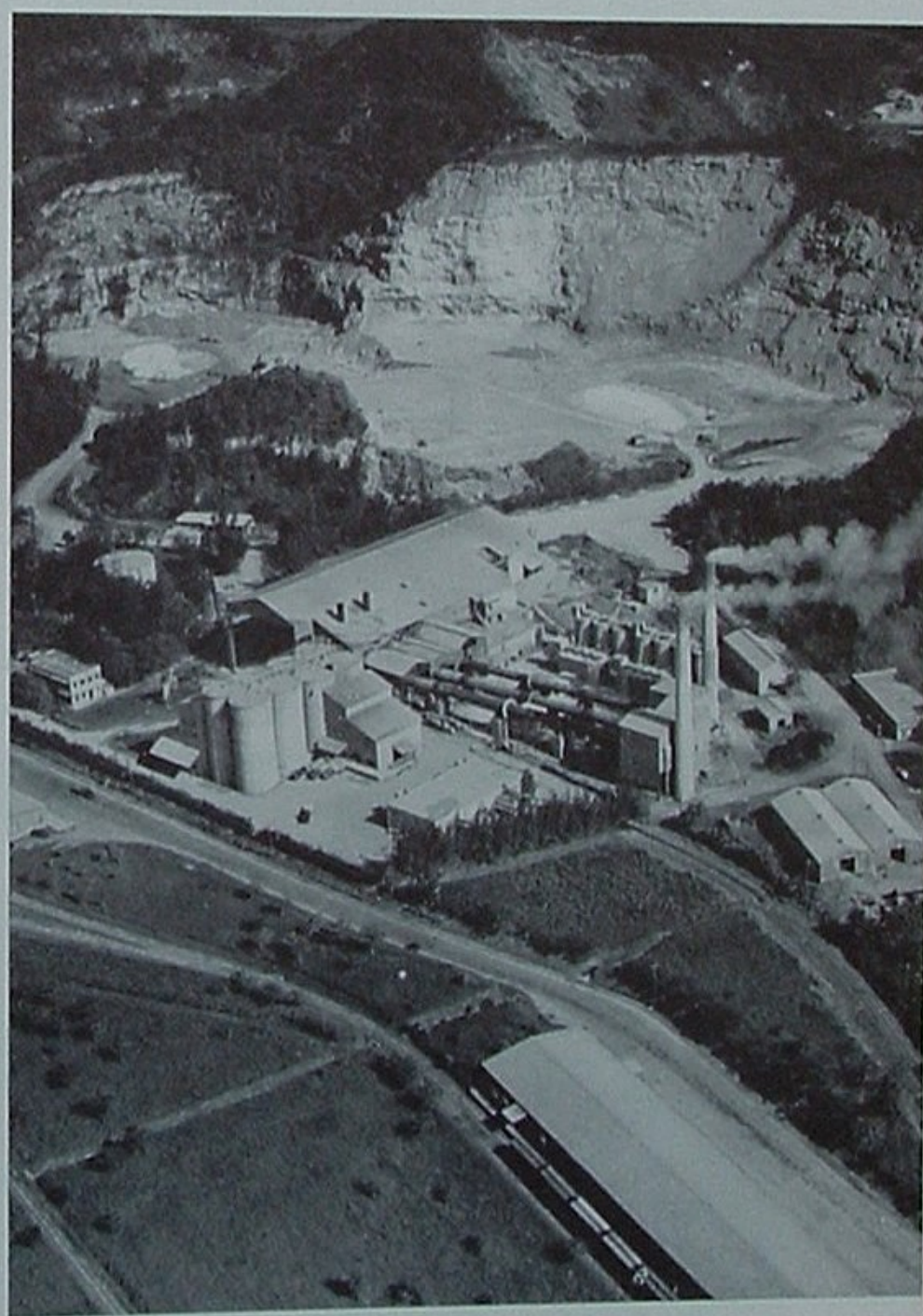
its population since 1898 to a 1948 census of 2,180,000. Such a dense population can hardly survive on an agricultural economy, even under the most advanced methods of cultivation. We have done extremely little to assist in developing manufacturing and other commercial pursuits through which the standard of living could be raised. Seventy per cent of the people receive only thirty per cent of the island's income. Higher commodity prices than we are obliged to pay on the mainland have kept many on a poverty diet of rice and beans, with an occasional holiday feast of vegetables and fish. Education has remained beneath American standards. English is taught in the schools, but Spanish remains the language of Puerto Rico's people, newspapers, and even government transactions. To some degree it is because of our procrastination that the average Puerto Rican considers his status as an American citizen no better than second-class.

So much for the history of this potentially rich island. What about the future?

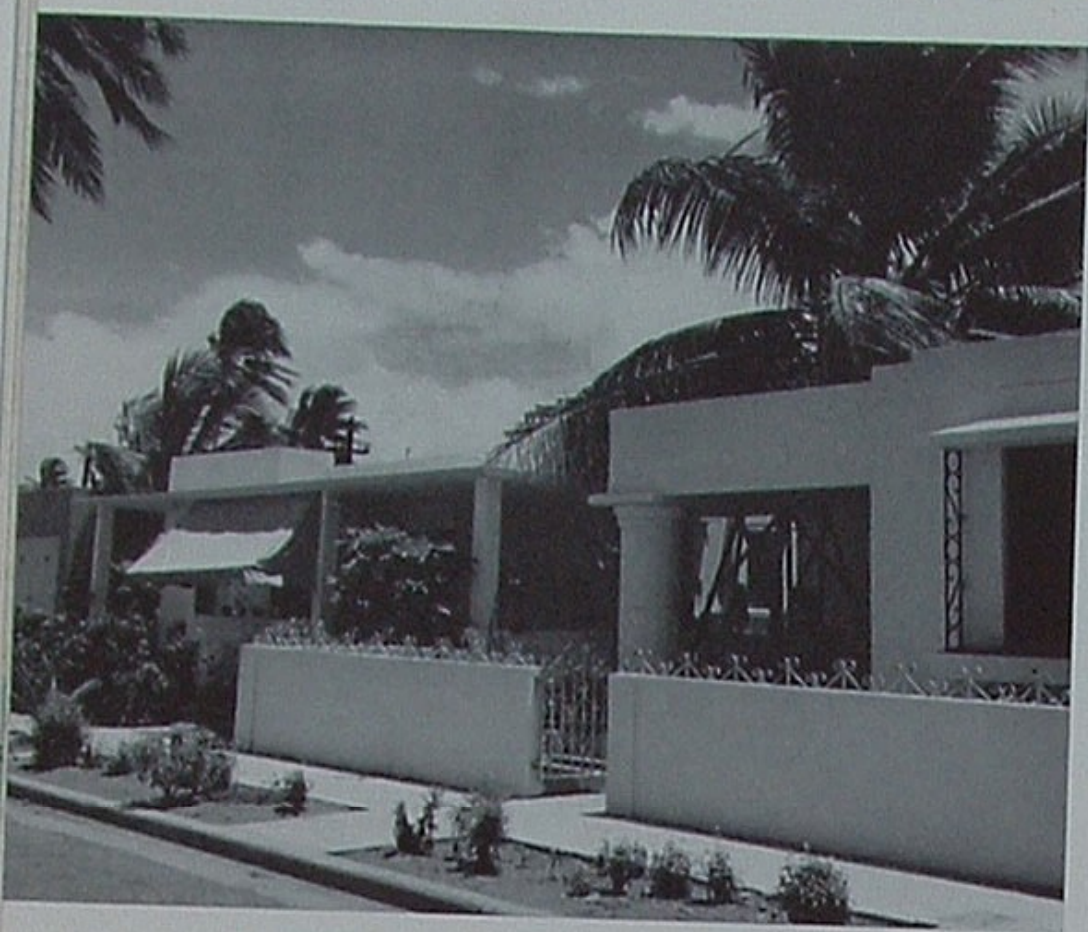
One of the best things that ever happened to Puerto Rico was the election of Luis Munoz Marin as governor. Equipped with the finer traits of the Latin people, such as imagination, enthusiasm and dynamic leadership, he also has inherited and acquired the more practical wisdom and perspectives of a businessman. A Puerto Rican in appearance and at heart, he also is a Yankee, having lived for several years in New York and received his advanced schooling at Georgetown University.

Don Luis realizes, perhaps more than any of his people, that democracy is an opportunity, not a tangible asset; a tool, not a finished product. He senses, like all

Americans should do, that a free people must not wait upon government decrees for a higher living standard but must rely upon their own wits, energy and industry.



From this cement plant are coming some of the new materials that will shelter thousands of families even from violent hurricanes.



A compliment to the year-around ideal climate of Puerto Rico is that these comfortable homes use shutters instead of glass for their windows.

From having lived a practical life, he is far more impressed by actual results than by academic theories. In a country that has gone through a long cycle of extensive business control by government, he is now wisely advocating relaxation of bureaucracy in favor of free enterprise.

A newspaper editor himself and often the subject of interviews, Don Luis has given colorful expression to most of his views:

"Don't trust politicians, even me," he advised. "If you want to sell your vote, do it. But make up your mind you can't have justice and the \$2 too."

Regarding birth control in a supposedly over-

populated country, he said, "We do not intend to plow our children under."

"Our main lines of endeavor are to increase our production faster than the increase in our population, and to insure as far as possible a fair distribution among all people. We want industrialization but no sweatshops."

"In production we don't want to saddle the people with theory. The policy is to give private enterprise a chance. If private enterprise is unable or unwilling, we are not theoretically opposed to having government do the job."

Of his Puerto Rican educational program, he remarked without flinching, "This thing may break our backs."

Of sugar cane workers to whom small parcels of farm land were recently allotted, he said, "Their main crop is personal liberty. Let the second crop be sweet potatoes, beans, what they want."

"We are not in an economic condition now for statehood. If we had to pay Federal taxes, how could we solve the school problem? It would take \$60,000,000 or \$70,000,000 a year—more than the island operational budget." But Don Luis foresees the day when Puerto Rico will write its own constitution and possibly become one of the United States.

Another hard-working factor along this new economic front is the Puerto Rico Industrial Development Company. This government-owned organization has launched upon an ambitious program that will go far toward reducing poverty, high costs, unemployment and other unsatisfactory social conditions. From offices in the United States they are doing an excellent job of luring new industries to the island. Offering tax exemptions and thousands of workers who can be trained quickly, Puerto Rico is in an enviable position to compete in the world's markets. Already in operation or construction are large plants for the manufacture of chinaware and

Flanked by the Atlantic and Caribbean, the island is vital defense outpost and a paradise for vacationers.





Here are some of 5,000 individual family units being constructed at Puerto Neuvo by Long Construction Co.

textiles, a \$5,000,000 hotel to accommodate the tourist trade, a \$24,000,000 dam and hydro-electric project, and countless other businesses and industries of smaller proportions. It is hoped that manufacturers of radio tubes, watches, jewelry, engineering instruments and other such specialties will also recognize the island's opportunities.

You might say that Puerto Rico has invited invasion and fomented its own industrial revolution. Mechanized equipment is gradually replacing slow and inefficient methods. Besides five large factories operated by the Industrial Development Company, some forty continental companies have established plants and headquarters. The world's largest home-building project is not in the United States but at Puerto Nuevo, P. R., where L. D. Long, a builder from Charleston, South Carolina, is erecting single-family concrete houses by the thousands. These modern and comfortable homes, costing only \$4,000 each and renting for \$25 a month, have already elevated the living standards of more than 3,000 families.

This new industry is of course exerting a wholesome influence upon older pursuits. The production and refining of cane sugar is undergoing modernization. A vigorous attempt is being made to acquaint American

tastes with the island's citrus fruits, pineapples, bananas, coffee, tobacco and rum. Oldest commodity of all, the climate, which is blessed by a mean temperature of 75 degrees F. and varies only about 6 degrees the year around, will undoubtedly attract thousands of tourists annually to this Atlantic outpost.

Among the companies that are taking a leading part in Puerto Rico's resurge are Earl K. Burton, Inc. The company was first incorporated in 1922 by the late Earl K. Burton. It is now owned and managed by Ludwig L. Aull. Besides serving in an engineering capacity, they represent a number of well known American companies, including Truscon Steel Company, American Creosote Works, Atlantic Cresoting Company, Chicago Pump Company, Bonafide Genasco, Inc., and Union Oil Company of California.

At present the Union Oil products that are finding their way to the island consist principally of packaged asphalts used for paving and roofing. However, Unoba Grease, because of its excellent all-purpose characteristics, is attracting very favorable attention in the plants, mills, factories and new mechanical devices. It is reasonable to assume that many other Union products will soon follow our pioneering Unolox into Puerto Rico's brightening industrial future.



INDUSTRIAL SUMMARY

● EMPLOYEE RELATIONS

The Family Medical Plan, proposed in February by Occidental Life Insurance Company, failed to attract enough eligible Union Oil employees and has been withdrawn. Occidental indicated that at least 75 per cent of all Union Oil employees with eligible dependents would have to be enrolled before the plan could be made effective. The original acceptance date of March 1 was extended to April 1 and representatives of the insurance company held discussions with employee groups at several locations to explain the plan's provisions. Management carefully refrained from influencing employees one way or another in making a final decision. A count of the enrollment on April 1 revealed that only 22 per cent of those eligible had signed for the insurance. Thereupon, a letter was sent from the office of W. C. Stevenson to each employee stating that it would be impossible to establish the proposed plan.

● MANUFACTURING

At Los Angeles Refinery, minor difficulty was had in the combination cracker near the end of March, but the unit lost only a few days of operation.

At Oleum, erection of new Triton facilities continues on the recent accelerated schedule and certain parts of the equipment are being placed in operation. The rearranged toluene unit to provide light gasoline separation facilities for the crude still was being placed in operation at the end of March. The dewaxing plant was down to permit the hook-in of new continuous filters, but the unit was scheduled to be in operation again by early April. Shutdown of the crude stills for column rearrangement was part of Oleum's April program. Final contracts on the miscellaneous buildings and Compound changes, as part of the over-all Triton program, have been awarded.

● MARKETING

Effective April 1, dealers were authorized to honor Union Oil Credit Cards on customers' purchases of U. S. Rubber Company tires and tubes in addition to the Firestone line. Also, Credit Card purchases of Prest-O-Lite bat-

teries were authorized as this additional line is now sold through Minute Man Supply.

In connection with the repainting of our entire truck fleet, measures are being adopted to insure maximum cleanliness of this rolling equipment at all times. The new color scheme and proper maintenance should enhance the importance of our truck fleet as an advertising medium.

● FIELD

In North America, activities of the Field Department have spread through a wide range of latitudes. At Morninville, 30 miles northwest of Edmonton, Alberta, Canada, at latitude 55 degrees north, our Alexander Indian Reservation No. 1, on a nineteen thousand acre farm-out from Imperial Oil Company, is drilling at 1,873 feet. Our Stone No. 1 on the Banquette Prospect near Corpus Christi, Texas, at latitude 28 degrees north, has been completed as a gas condensate well from perforations 6450-55 feet.

Other operations of interest are the drilling of Mackay No. 1, a wildcat well near Billings, Montana; the completion of Eraste Thibodeaux No. 1, a Tigre Lagoon prospect, as our first oil well in this district, which on initial test indicated a production rate of 300 barrels per day. Of the completions in California, Union and Morton & Sons, Dominguez Estates No. 3, with an initial rate of 529 B/D is one of the best recent completions in the Dominguez area. State No. 3 on the Ocean City prospect in Washington has reached a depth of 3,377 feet. The fourth well to be drilled in Paraguay, Picuiba No. 1, is drilling at 2,060 feet.

● DISTRIBUTION

Another milestone will be marked shortly in the transportation history of Union Oil Company with the opening of our first products pipe line terminal. This terminal, located at Rosecrans, California, is specially designed for motor transport operations. Approximately 20 Company transport trucks will distribute an average of 11,000,000 gallons of gasoline per month from this terminal to retail outlets within Los Angeles and vicinity. Gasoline stocks will be supplied through four miles of

existing pipe line from Los Angeles Refinery to Torrance Tank Farm storage, thence to Rosecrans through five miles of newly installed products pipe line.

● **MARINE** A contract was signed by the Company during March for preparation of plans and specifications for the proposed new tankship. The contractor will secure necessary approvals from government agencies and classification societies and will incorporate such modifications in design and general arrangement as may be necessary to meet special operating requirements.

The SS A. C. RUBEL sailed from Los Angeles Harbor on March 16 with a cargo for the Panama Canal Zone, proceeding thence to Houston, Texas, to load a cargo for Chile.

The SS PAUL M. GREGG was decommissioned for eight days during March for routine drydocking, hull painting and voyage repairs at the Todd Shipyards in San Pedro.

● **AUTOMOTIVE** The Company's institutional colors of blue, orange and white will soon replace the familiar red and yellow used for many years, first on horse-drawn tank wagons and subsequently on trucks. The firm of Raymond Loewy Associates was employed to design the new color scheme. Their basic plan calls for orange tank, blue body and orange wheels. An unusual feature of the new design, as applied to many of our larger tank vehicles, will be the replacement of the former painted letters with a tank side "UNION" sign raised in relief letters and painted white. All refinish work, both in Company and contract shops, is being performed under the supervision of three division superintendents. The usual time required to completely repaint the fleet is about 30 months. Under the accelerated program now being followed, it is estimated that the work will be completed within three or four months. First to be repainted are the vehicles operated by our Marketing Department.

ELECTED EBP ADMINISTRATORS



G. A. Trimble



C. E. Rathbone



M. S. Thomson

A TABULATION of ballots cast during the recent election of administrators of the Employees' Benefit Plan shows the following results:

1—To fill the expired term of Dumont Kimmell

C. E. Rathbone1647
H. M. Schafer1143

2—To fill the expired term of Harold Cole

G. A. Trimble1458
N. T. Ugrin1324

3—To fill the unexpired term of one year of D. L. Brymer

M. S. Thomson1629
H. F. Fifer1127

C. E. Rathbone, who at present is in charge of the

wholesale section of Sales Services, Head Office, attains his twentieth year of Company service on April 30th. He started work as barrel clerk in Los Angeles and progressed through a wide variety of marketing assignments in all of Union Oil's marketing territories.

G. A. Trimble, superintendent of the Automotive Department, Santa Fe Springs, came to work as a mechanic in 1920. Most of his years were spent in the Central Territory where he was appointed superintendent of his department in 1942. He has filled the Santa Fe Springs assignment since 1946.

M. S. Thomson started as a laborer at Los Angeles Refinery in 1940. His training and capabilities fitted him for a variety of technical and operating assignments, culminating in his appointment as assistant superintendent of Cracking at Los Angeles Refinery in 1946.

Preparing for Tomorrow

APPEARING before the Los Angeles Refinery Foremen's Association and their guests on April 1st in Long Beach, President Reese H. Taylor complimented the managers and foremen of our refineries for "playing an outstanding game" and divulged some of the challenges that must be met if we are to "come out on top."

Said Mr. Taylor during the course of his talk:

"That ability to change to meet circumstances, to be able to put on the pressure when things get tough, is really our most important asset as we face the future.

"We can only guess about the possibilities for the future. Nevertheless, we can prepare ourselves as individuals and as a team to meet those changes that will come, no matter what they may be.

"Most of our problems—past, present and future—fall under the broad heading of supply and demand, supplying the petroleum products that will meet the demands of our customers. In an almost steady progression, the people's use of oil has increased over the years. The magnitude of this increase confounded quite a few of the industry's prophets who had predicted that at the war's end there would be a substantial decrease in the demand for oil. Actually, the nationwide demand for petroleum has risen 15 per cent over the peak war year



Invited by Los Angeles Refinery foremen to be their speaker, Reese H. Taylor told of tomorrow's problems.

Dining at the speaker's table and introduced during the evening were (l-r) W. W. Busby, Charles Judd, Harry Lester, Reese H. Taylor, Paul Gooder, John Schultz, Kenneth E. Kingman, and W. J. Robinson.



and amounted to 2,243,000,000 barrels for 1948. Normal growth trends indicate that the use of petroleum will continue to increase at the rate of approximately 5 per cent per year.

"As far as oil is concerned, the West Coast is geographically isolated, so our conditions do not exactly parallel the national picture. California crude oil production currently is averaging 950,000 barrels per day, which is about 100,000 barrels per day more than the amount produced during the peak war year (excluding the oil from the Elk Hills Naval Reserve). And our own prophets predict that within the next five years the total petroleum demand within our marketing area may be increased by some 75,000 barrels per day.

"There are many valid reasons for optimism about a healthy market for some of our products here on the Coast. Since 1941 the California population has increased by almost 2,700,000 persons. The number of cars and trucks on the road has jumped 28 per cent. Almost double the amount of mechanized equipment is being used on farms. A large number of new industrial plants have come into the area. And so on.

"While these factors indicate a steady demand for certain petroleum products, there are indications of a definite change as to the type of products the consumer will want. The most important change is the decrease in the demand for heavy fuel oil, which is already apparent.

"There are two fundamental reasons for this weakening in the fuel oil market. One is the switch by the railroads to diesel engines, which from 1945 to 1948 decreased their liftings in our marketing territory from 126,000 barrels of fuel oil per day to 91,000 barrels per day—a drop of almost 28 per cent. . . . The second major factor is the importation of natural gas by the recently completed pipe line from West Texas to Southern California. The natural gas currently being imported by this line is equivalent to 51,000 barrels per day of fuel oil. Just recently the Federal Power Commission approved a 108 million dollar project to bring natural gas from West Texas to Central California and the Bay Area.

"Because of these and some other factors, in all probability, the market for heavy fuel oil will continue to decrease, which poses a serious problem for us all. Already our inventories are rising to burdensome levels.

"Within the limits of existing refinery facilities, our operations, as well as those of other Pacific Coast oil companies, are geared to yield gasoline and light products, and middle-of-the-barrel distillates in keeping with market conditions as they have existed and the crude oil that is available. The remainder, of course, is largely residuum.

"Since the market relationship between the lighter and heavy products is changing, the problem is not one



Employees attending foremen's dinner were (l-r) M. H. Garret, J. H. Garrison, A. G. Crocker, E. Keightley, E. R. Greaves, J. E. McHenry, L. G. Weir and W. A. Coie, all Marketing personnel from the Long Beach District.

for sales, but one for manufacturing . . . making the products the consumer wants from the available crude oil. Refinery yields can be varied within certain limits. However, assuming a continuing strong demand for light and middle-of-the-barrel products, it becomes obvious that we must consider ways of changing our refinery facilities if we are to materially increase the yield of these products at the expense of the residuum. For, if we cut back production and throughput to reduce the amount of fuel oil, we will not be able to produce enough of the needed products.

"As you probably know, Union's low gravity crude oil receipts vary from 40 per cent to 50 per cent of total crude. When this is combined with the residuums from normal light refining crude, our present refining processes produce about 50 per cent of the total crude run as fuel oil. Furthermore, this percentage is increasing. For a substantial portion of the additional crude oil necessary for the increased refinery runs has to come from lower gravity production.

"Thus, we are faced with the problem of having a large percentage of our production and reserves in low gravity crudes, which also are high in sulfur content, while the growing demand is for those products which cannot be made in sufficient quantity from these crudes with our present refining equipment.

The Solution

"The obvious solution is to develop a processing method which will convert the heavier crudes into more gasoline, diesel and stove oils. And engineering studies are currently being undertaken to determine what facilities will be necessary to accomplish this objective. Indications are that the most likely method is by a combination of coking the crude and hydrogenating and desulfurizing the coker distillate. This operation has been successful in the laboratory and work is now under way to confirm it in the pilot plant.

"I am not going into all of the problems that must be considered in connection with such a program . . . but it is worth noting some of the factors that have to be considered:

"Whether to use the delayed coking process or push development of a new type of fluidized coking unit?

"The best method of manufacturing hydrogen from coke or coker gas?

"Design of a reactor and catalyst system which will eliminate channeling and by-passing in the catalytic hydrogenation process.

"How to reduce the amount of hydrogen needed per barrel of coke distillate?

"The removal of hydrogen sulfide from the hydrogenation process and sulfur dioxide from the stack gases.

"Possible construction of a catalytic cracker.

"The Production Department's need of diluent to produce extreme low gravity crudes in the Santa Maria area.

"All in all, there are some 35 individual factors of a similar nature that must be considered in order to

make up the program as a whole. A large scale undertaking of this kind could increase our yield of diesel, stove oil and gasoline by 30,000 barrels per day, but our preliminary estimates indicate that such a program would require the Company to make tremendous capital expenditures. Therefore, it may be necessary to consider a lesser program, but in any event, if adopted, it will be ambitious and costly.

"The job of financing such a program, whether it is undertaken in full or in part, opens up a whole new series of problems. Careful estimates have to be made of the amount that will be available from earnings during the three years that the construction will take. It has to be determined what method is best to secure the outside financing that will be necessary. Should the money be borrowed or should preferred stock be issued and, if so, what kind? Or would it be better to sell additional common stock? The best decision in this regard can only be made after analyzing and studying every nugget of information we can get concerning anticipated financial and business conditions over the next several years.

"But we do know that something has to be done to eliminate the critical surplus of fuel oil that is accumulating and at the same time increase the yield of the products that are in demand. So the problem of financing will probably have to be worked out to accomplish the job. In the meantime, since it will take three years to complete construction on this project, you men might well spend some of your spare time thinking of ways in which our present facilities might be used to better advantage in this connection.

"Despite the fact that we have to embark on this con-



The Lafayette Hotel, Long Beach, was the scene of the Los Angeles Refinery Foreman's Association banquet held April 1st. About 200 dined and heard Mr. Taylor.

struction program to meet the changing demand, our existing refining facilities compare favorably with any in the industry. I think the quality and the quantity of the products you turn out offer ample testimony to your ability as managers and the efficiency of the equipment which you have at your disposal."

Supply

Turning his remarks to our supply of raw materials, Mr. Taylor pointed out that shortages have been predicted ever since the 1800's, when oil was first put to practical use. Today we are not so much concerned about running out of oil as we are about being able to maintain production at levels commensurate with potential demands in the future.

California proved crude oil reserves, he said, have increased due primarily to the development and extension of existing reserves, not through new discoveries.

It is obvious, unless some major discoveries are made in California, the day will come when we will have to secure additional supplies either from other areas or from synthetic sources.

The speaker climaxed his well received announcement of future goals by calling attention to our out-of-state developments, which will provide a trading cushion should it become advisable to import. Also quite within reach are the 2 billion barrels of oil contained in our Colorado oil shale holdings.

In conclusion, Mr. Taylor advised our not getting in a mental rut. War or economic upheaval could change our plans suddenly and dramatically. Tax increases or too much government control could be disastrous. Competition inside and outside the industry are putting in a good many brain hours to find the best procedure for any given set of conditions. Our job is to find an even better answer. The future and security of all the people of Union Oil depend on how well we manage and do that job.



SERVICE BIRTHDAY AWARDS

MAY, 1949

Forty Years

Cameron, Hugh M., L. A. Refinery Mfg.

Thirty Years

Collins, Raymond A., Central Territory
Hayes, Phillip L., L. A. Refinery Mfg.
Insko, Jesse H., So. Div. Field
Murphy, Albert, Northwest Territory
Northrop, Cyrus P., Coast Div. Field
Stone, Leslie W., So. Div. Field

Twenty-Five Years

Brown, Odie, So. Div. Field
Carroll, Leland J., Oleum Refinery Mfg.
Goodell, Percy W., L. A. Refinery Mfg.
Granberg, Julius L., Northwest Territory
Hanscom, Wm. A., Oleum Refinery Mfg.
Magill, Earl J., Northwest Territory
Myers, Ace, Northwest Territory
Pereira, Antonio A., Oleum Refinery Mfg.
Wanee, Victor, So. Div. Field
Zabel, Will D., L. A. Refinery Mfg.

Twenty Years

Capps, Glenn H., L. A. Refinery Mfg.
Clausen, Albert J., Oleum Refinery Mfg.
Doty, Leland M., No. Div. Pipe Line

Hiniker, George E., Central Div. Autom.
Imes, Merrill S., Southwest Territory
Miller, Ruth E., So. Div. Field
Newton, Wm. S. Jr., Northwest Territory
Niemann, Andrew F., H. O. Field
Titus, Starr A., H. O. Wage & Salary
Watkins, Ronald G., Central Div. Auto.

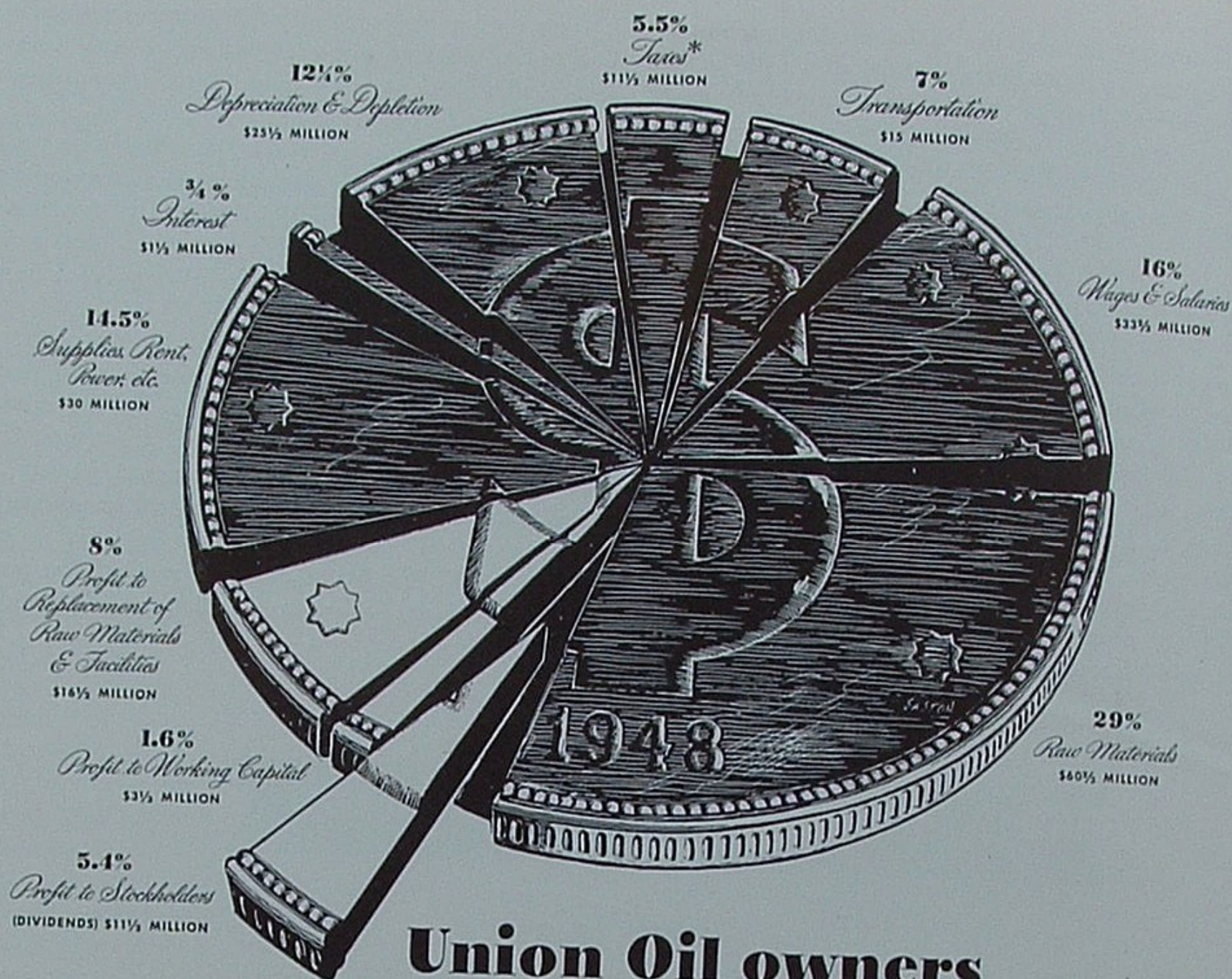
Fifteen Years

Baimbridge, Hugh S., Southwest Terr.
Bixler, Alvin, L. A. Refinery Mfg.
Coffman, Ivan W., No. Div. Pipe Line
Davis, John P., L. A. Refinery Mfg.
Dyer, Sam M., So. Div. Field
Figone, Albert, Central Territory
Flanigan, James W., So. Div. Field
Goss, Ethel M., Central Territory
Gray, James V., Oleum Refinery Mfg.
Hamblin, Arthur E., L. A. Refinery Mfg.
Harbert, Wm. J., L. A. Refinery Mfg.
Hawes, Arthur A., So. Div. Field
Hickin, Lester K., Oleum Refinery Mfg.
Holmgren, Francis L., So. Div. Field
Jennison, Earl C., So. Div. Field
Kanner, James W., Oleum Refinery Mfg.
Kutas, Andrew, No. Div. Pipe Line
Leonard, Clair E., Oleum Refinery Mfg.
Lishen, Russell H., Oleum Refinery Mfg.

Logan, Dwight C., Northwest Territory
McGee, Ralph M., So. Div. Field
Peterson, Earl H., Southwest Territory
Porterfield, Dale V., So. Div. Automotive
Raines, Karl, L. A. Refinery Mfg.
Ransom, Chalmer L., L. A. Refinery Mfg.
Reeve, Howard L., Southwest Territory
Robinson, Verlin E., Southwest Territory
Sherwood, Chas. L., Oleum Refinery Mfg.
Shryock, Leonard D., Laramie, Wyo.
Sluder, Ted, L. A. Refinery Mfg.
Stowell, Walter E., No. Div. Pipe Line
Van Nest, Albert F., Southwest Territory
Vaughn, John A., So. Div. Field

Ten Years

Anderson, Fred M., H. O. Employee Rel.
Baer, F. S., Executive
Birch, Howard L., Cut Bank, Mont.
Christensen, Evelyn, Northwest Territory
Christiansen, William, Cut Bank, Mont.
Gardiner, Jack Earl, Central Territory
Hageman, Edw. Roy Jr., Research-Wilm-
Hartley, Fred L., H. O. Mfg.
Hilbert, Louise, Southwest Territory
Laving, Leo D., H. O. Foreign Sales
Martin, Harold S., Oleum Refinery Mfg.
Perlin, Violet, Southwest Territory



Union Oil owners get 5.4% of 1948 sales dollar

LARGEST DOLLAR PROFITS IN COMPANY'S HISTORY

According to the bookkeepers, Union Oil Company made a net profit during 1948 of \$31,293,000.

If this bookkeeping profit represented the company's actual "take," our 34,035 common stockholders would be throwing their hats in the air.

BUT HERE'S THE JOKER

53% of these profit dollars had to be plowed right back into high-cost equipment, facilities and oil properties.

Another 11% had to go into working capital.

So the actual "take"—profits that were drawn out of the business in the form of dividends to stockholder-owners—came to \$11,320,000. This amounted to a return of only 5.4% on our total sales of \$209,000,000, or 5.6% on the capital invested in the company.

UNION OIL COMPANY OF CALIFORNIA

Incorporated in California, October 17, 1890

*Taxes in chart do not include \$35,200,403 which we collected for Federal, State and local authorities from our customers; taxes paid by our suppliers; or personal taxes paid by our stockholders and employees.

WHY DID WE HAVE TO PLOW BACK 2/3 OF OUR PROFITS?

1. Under the tax laws, a corporation can set sums aside each year to replace equipment and oil properties when they're worn out. (These sums are represented in "Depreciation and Depletion" segment of big chart.) But the sums you're allowed to set aside are based on what these things cost when you acquired them—not on what it costs to replace them today. Since those depreciation funds aren't adequate to replace equipment and oil properties at today's prices, we have to make up the difference somewhere—or go out of business. That's where one part of the "profit" dollars went—replacement.

2. Every housewife knows that it takes more dollars to meet daily expenses today than it used to. A corporation's daily expenses have increased just like the average family's. That's where the other part of our "profit" dollars went—into increased working capital required for day-to-day expenditures.