THE

TEXACO STAR

SPRING 1953

FROM OUR POINT OF VIEW

This is the first issue of THE TEXACO STAR since the election of a new President of the United States. More citizens voted in that election than ever before in our national history, and it is simple logic to reason that more people were made aware of the importance of their voice in choosing the men who are to serve them.

In making their choice, they exercised a privilege too rare in too many countries. They selected, just as they select daily those ideas, products, beliefs, and principles that they favor.

Your management believes that the results of their selection strongly indicated endorsement of a great deal of what the petroleum industry stands for and believes in.

Though the voters made their choice for a number of reasons, there can be little doubt that one of the primary factors that influenced them was their wish to see business and industry operating with less interference from the Government. In that sense alone, the election was a victory for the concept of free enterprise, a concept which has long been an American premise and a pillar of our national strength.

Ours has always been an industrial climate. Industry is as characteristic of our nation as freedom and opportunity, and if it is to remain so — as the people have voted it should — American industry needs the backing of a Government which regards it as a friend and strives to understand its problems.

Your management believes Texaco stockholders and employes — who typify the American people — will continue to serve their own best interests by keeping informed of developments at all levels of government (national, state, county, township, and village) that bear upon the petroleum industry.

And it believes that in the future more and more citizens will recognize their obligation to speak up between elections, to communicate their views to those they have elected to represent them.

Economic as well as political freedom in this nation is essential if Americans, through benefits created by healthy, free American enterprise, are to continue to raise their standard of living and aid in raising the standards of living for less fortunate people elsewhere in the world.

A TEXACO GEOLOGIST at the left discusses the features of an oil-saturated core taken from a Texaco well near Glendive, Montana. The other Texaco Geologist holds a dense shale core with a brachiopod mold that dates from the Ordovician period, more than 300,000,000 years ago

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THE
TEXACO STAR

SPRING 1953

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A PUBLICATION OF THE TEXAS COMPANY FOR STOCKHOLDERS AND EMPLOYES

J. SAYLES LEACH, Chairman of the Board of Directors; A. C. LONG, President; R. F. BAKER, Executive Vice President, G. R. BRYANT, E. R. FILLEY, J. W. FOLEY, M. HALPERN, A. N. LILLEY, L. H. LINDEMAN, A. M. OTTIGNON, J. H. PIPKIN, R. L. SAUNDERS, TORREY H. WEBB, and J. T. WOOD, JR., Vice Presidents; OSCAR JOHN DORWIN, Vice President and General Counsel; W. G. ELICKER, Secretary; ROBERT FISHER, Treasurer; ERNEST C. BREEDING, Comptroller, 135 East 42nd Street, New York 17, New York . . . Published by the Industrial and Public Relations Department: Philip C. Humphrey, Manager, Public Relations; Wilfred B. Talman, Editor, Company Publications Division; J. Lawrence Filson, Assistant Editor; Ellis Prudden, Associate Editor in charge of THE TEXACO STAR.

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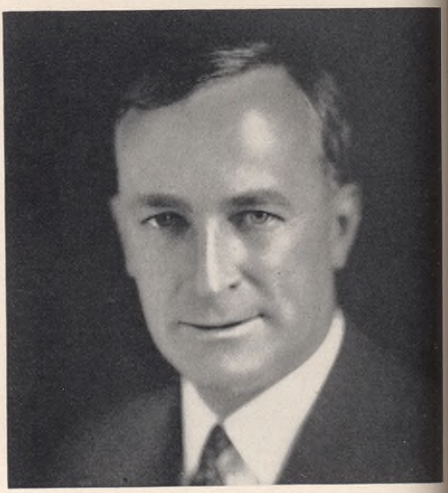
THE COVER PICTURE shows a new Texaco tanker awaiting the launching which is described on Page 10.

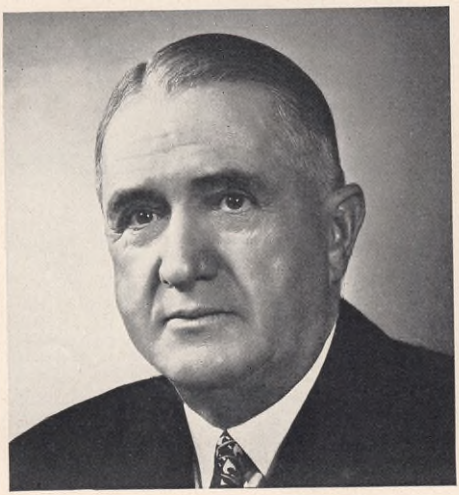
W. S. S. RODGERS AND HARRY T. KLEIN RETIRE AS TEXACO'S CHIEF EXECUTIVES

W. S. S. Rodgers

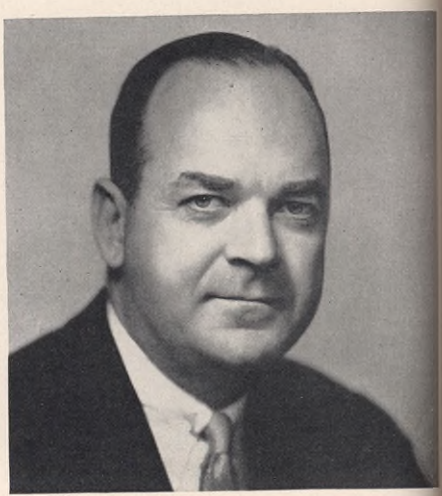


Harry T. Klein

J. SAYLES LEACH AND A. C. LONG ARE ELECTED TO TAKE OVER THE TOP POSTS



J. Sayles Leach



A. C. Long

In a Great Tradition . . .

LEADERSHIP AND TEAMWORK

Leadership and teamwork are indispensable factors in the success of any corporate enterprise, and no more important need for either exists than among those who bear the greatest responsibility for a company's progress. At The Texas Company, progress has been given a lot of elbowroom, and it has, like oil, gone places. Over the years, the outstanding contributions of W. S. S. Rodgers and Harry T. Klein to The Texas Company's progress have been in a great tradition of leadership and teamwork.

In accordance with the compulsory retirement plan of The Texas Company, W. S. S. Rodgers and Harry T. Klein retired from active participation in Company affairs as of March 1 and April 1, 1953, respectively.

However, both Mr. Rodgers, who was Chairman of the Board of Directors, and Col. Klein, who was Chairman of the Executive Committee, are continuing as Directors of the Company and members of the Executive Committee. Their advice and counsel will continue to be available to the Company as arranged for by contractual agreements.

On the date of his retirement, Mr. Rodgers was succeeded as Chairman of the Board and chief executive officer by John Sayles Leach, former President of the Company, and Mr. Leach's office, to which he had been elected on April 22, 1952, was filled by Augustus C. Long, previously Executive Vice President.

Combined, the careers of the four men involved in the top management shift represent over a century and a quarter of oil industry experience with The Texas Company.

For more than 37 years, Mr. Rodgers has been associated with Texaco. He was chief executive officer for a longer period than any other official in the Company's history, serving in that capacity from August 9, 1935, until his retirement.

During his administration, which began with his election as President in 1933, Mr. Rodgers led The Texas Company to recovery from the depression of the 1930's, through the all-out efforts of World War II, and into postwar expansion unprecedented in degree. In this period the Company's assets tripled. Perhaps the most significant single accomplishment under Mr. Rodgers' leadership has been the building up of the Company's crude oil reserves.

When he was elected Chairman of the Board in 1944, Mr. Rodgers was succeeded as President by Col. Klein, who had been Executive Vice President and General Counsel.

During his 32 years with The Texas Company, Col. Klein has been a strong advocate of just and non-discriminatory laws in the field of petroleum taxation. He was one of the founding members of the American Petroleum Industries Committee of the American Petroleum Institute and served as chairman from the committee's inception in 1932 to 1944. In 1950, New York University conferred upon Col. Klein the honorary degree of Doctor of Commercial Science, citing, among other attributes, his "character and integrity."

Col. Klein served as President until his election as Chairman of the Executive Committee on April 22, 1952.

Mr. Leach, who started his service with The Texas Company in the Dallas office of the Sales Department in 1916, was promoted to the Presidency from the post of Executive Vice President last year, having served Texaco in numerous capacities from salesman on up.

Since Mr. Long, a graduate of the United States Naval Academy, joined the Company in 1930, he has been principally concerned with foreign operations. He has served The Texas Company both on our shores and abroad in Ireland and the Netherlands. During World War II, he was on military duty in South America and Washington, and in London, where he served as a petroleum attaché assisting in the coördination of petroleum supplies for the allied nations.

Mr. Long is Texaco's eighth President.

He and Mr. Leach, elected by the Board of Directors to assume the responsibility of leading The Texas Company forward in the years ahead, have taken over from two men who have established a great tradition of Texaco leadership and teamwork. **END**

"Lives Built on Real Values"

by HARRY T. KLEIN

ON THE THRESHOLD OF RETIREMENT, COL. KLEIN COMMENDS TO ALL THE QUALITIES HE HAS FOUND CONSPICUOUS AMONG THOSE WHO HAVE GUIDED THE COURSE AND FORMED THE POLICIES OF THE TEXAS COMPANY

There comes a time to every man when he must, as the old phrase has it, hang up his sword and shield. No man can come to that moment without a sharp pang of regret for the cessation of many warm and treasured daily associations. He may, however, find compensation in an honorable pride in the course he has finished and in the constructive accomplishments in which he has had a modest part. And he can look back over the road he has traveled and be grateful for those principles of conduct by which he found guidance.

Over a good many years of working with people, I have become convinced that what makes for the success or failure of any man is found almost wholly within himself. Although there may be an exception here and there, neither accident nor external circumstance really determines a man's career. What determines it, lies within his own mind and heart. The outward life of any man: his attitude toward his work, his relationships with other people, his veracity and dependability —all these are an extension of his own inner values.

In my life I have sought to be guided by what seem to me to be three sound principles of conduct. They have guided men long before I was born, and shall continue to do so long after I am gone.

Industry

The first of these principles is *Industry*.

The world has not outgrown its ancient need for men who are willing to work. The form and nature of work may vary with changing times; the need for industrious men never varies. I certainly have no disposition to indict what is commonly called "the younger generation." It includes some of the finest young men and women it has ever been my privilege to know. But it is also true, and we had better face it, that hard work is increasingly unpopular with millions of younger people. Too many believe that "society"—that is, other people—"owes them a living." Too many believe that it suffices merely to work hard enough to "get by."

Now, our free society could never have been built by that kind of people. Nor can it be maintained by that kind of people. The society we enjoy was founded and enlarged by men and women who believed that a man deserves rewards only if he earns them. In those days, a man would have considered a suggestion that he be content merely to "get by," an unforgivable reflection on his personal honor.

I think it important that no one should imagine that in our time the value and rewards of personal industry are less than they were in the past. Indeed, the opposite is true. The young man or woman who is willing to work hard, intelligently, and faithfully stands a better chance than ever before to reap rich rewards. Actually, his—or her—chances of achieving these rewards are increased by the presence of those who believe in giving the least possible effort for the greatest possible compensation.

Almost every American boy or girl dreams of reaching the top in his or her own chosen work. That is as it should be: ambition and the opportunity to make the dreams of youth come true are of the very essence of our free life. But how are they to be realized?

It has been my observation that there always are opportunities to "reach the top" waiting for industrious

young men and women who are willing to work hard for an education and do their level, intelligent best to render an economic service. In the economic world there always exists a market for products, ideas, and services which have value to others. The person who renders a genuine economic service has something for which he can ask, and get, an appropriate price. He may, perhaps, even receive substantial financial rewards. But the man who, while thirsting for such rewards, renders no real economic service, has nothing to sell. His mere desire for success is not marketable.

Just as personal happiness is a by-product of useful lives built on real values – on sound foundations of industry and integrity – so in almost every case is outstanding success in a chosen endeavor a by-product gathered by the person who is primarily absorbed in rendering real economic services. It still is true that "he profits most who serves best."

Sobriety

The second of the three principles that have meant much to me is *Sobriety*.

A person may be said to be sober when he is in full command of his own faculties. If he is not in such command, he fails to be master of himself. He who is not master of himself will, simply as a practical matter, find it almost if not completely impossible to guide and direct the work of others. This remains true even if a young man or woman begins with exceptional natural endowments. None of us can be held responsible for the quality of his natural abilities. But each one of us is, by the iron discipline of life itself, held to strict accountability for the use to which his natural abilities are put.

Anything, no matter what its nature or form, that robs one of full control over himself and his own decisions, is his mortal enemy.

The man of sobriety seeks always to see himself, as well as his surroundings, steadily and whole. He neither exaggerates his own importance and capacities, thus making himself obnoxious to others, nor does he timidly underestimate himself so that he fails to achieve tasks that may be well within his powers. He can be a man of vision without becoming an irresponsible enthusiast for every novel idea; he can coolly estimate consequences of proposed acts without succumbing to a fearful and paralyzing pessimism.

Above all, the man who makes sobriety a cardinal rule of conduct is, in business and professional life, fitting himself for leadership. Of course, no man is expected to be perfect. But when mature business and industrial leaders look about among their juniors with an eye to selections for advancement, possession of the quality of sobriety is an important factor in their decisions. Often a more brilliant man is passed by, only because lacking sobriety he lacks stability, while the choice falls upon some less spectacular man who is at all times in command of his faculties.

Economy

The third principle I commend is that of *Economy*.

Today, the idea of economy, particularly with reference to the staggering rise in the cost of government, has many advocates and few practitioners. It is psychologically difficult for the average man to keep his own small financial house in order when the old virtues of thrift and honesty are openly, and apparently successfully, flouted in public affairs. He is tempted to follow the example of the politicians and practice deficit-finance in his *own* affairs.

Hardly anything could be more directly calculated to lead to business failure and often to personal tragedy. The man who sinks ever deeper into the morass of personal debt is of little value in business. Wherever he goes, he carries his mounting frustrations with him; his mind is not at ease to devote itself with clarity and concentration to the problems that arise in his work. He unfits himself for greater responsibilities and the commensurate rewards that might otherwise rescue him from his predicament. He defeats himself.

The principle of economy, of course, does not relate exclusively to money. It relates to anything which a man can fairly call an asset: his time, his physical strength, his abilities, his emotions. These are his own personal capital. If they are squandered, the whole man suffers. His work suffers. The true man of economy conserves his assets. He does this, not to hoard them unproductively, but that he may invest them wisely, and from the investment receive an appropriate return.

Standing upon the threshold of retirement, I commend to all, and particularly to those whose business careers are just beginning, these three principles of conduct: Industry, Sobriety, Economy. They do not exhaust the list of sound rules which a wise man imposes upon himself. But taken together they indicate an attitude of the whole person toward his life and work, an attitude proved by experience to be rich in spiritual and material rewards. At least, speaking quite humbly for myself, I have found it so and believe that it can be so for others.

I have found these three qualities of lives built on real values most conspicuous among those who have guided the course and formed the policies of The Texas Company. They have animated the entire operations of the great Texaco enterprise all over the world, giving the name "Texaco" a character universally recognized, and equaled by few other business or industrial efforts. It is something of which a man can be forever proud, and for which he can feel the profoundest gratitude, to have served, to have been a part of, such an enterprise as this. **END**

R. F. BAKER IS ELECTED EXECUTIVE VICE PRESIDENT

E. R. FILLEY AND J. W. FOLEY MOVE UP TO VICE PRESIDENCIES

In addition to the recent shift in top management, Texaco's Board of Directors has elected a new Executive Vice President and two new Vice Presidents.

Following a meeting of the Board on December 10, 1952, R. F. Baker, formerly Vice President in charge of the Domestic Producing Department, became Executive Vice President, and E. R. Filley, who was previously General Manager of the Domestic Producing Department, replaced Mr. Baker as Vice President in charge of the department.

J. N. Troxell, formerly Assistant General Manager of the Producing Department, was appointed to succeed Mr. Filley, effective January 1, 1953.

Effective February 1, 1953, J. W. Foley, Assistant to the Chairman of the Board—in which capacity he will continue to serve—became a Vice President.

Mr. Baker, an alumnus of the Sheffield Scientific School, Yale University, joined Texaco in 1916 after serving as geologic aide to the United States Geological Survey. He has been a Vice President since 1949 and a Director of the Company since 1950.

E. R. Filley, who was graduated from Baker University, Baldwin, Kansas, began his service with Texaco in 1914. His entire career with the Company has been spent in the Producing Department. In 1929, he became Division Manager, Oklahoma-Kansas Division; was advanced to Assistant Manager of the Producing Department at Houston in 1938, and became Manager in 1947. He was promoted to General Manager in 1949.

A graduate petroleum engineer of Texas A. & M. College and one of the youngest Vice Presidents ever elected by Texaco's Board, J. W. Foley, who was born in 1911, started with the Company as a Rotary Rig Helper in 1932. He has had wide experience in both domestic and foreign producing operations. In the Domestic Producing Department, he has served as District Petroleum Engineer, Drilling and Production Foreman, and Superintendent of Gas-Gasoline Operations. Abroad, he was Petroleum Engineer at Bahrain Island. In 1949, he was made Assistant to Vice President, and in 1950, Assistant to the Chairman of the Board. **END**

R. F. Baker

E. R. Filley

J. W. Foley

TO ASSURE TOMORROW'S MOBILITY,
TODAY'S SCIENTISTS ARE EXPERIMENTING WITH . . .

Fuels for the Future

Today's illusions of tomorrow are wonder-filled. In the imaginations of both young and old, in every conception of the future, tomorrow is a place where spaceships zoom at star-heights and where, as in the past, transportation is one of the enormous differences from the world of the present.

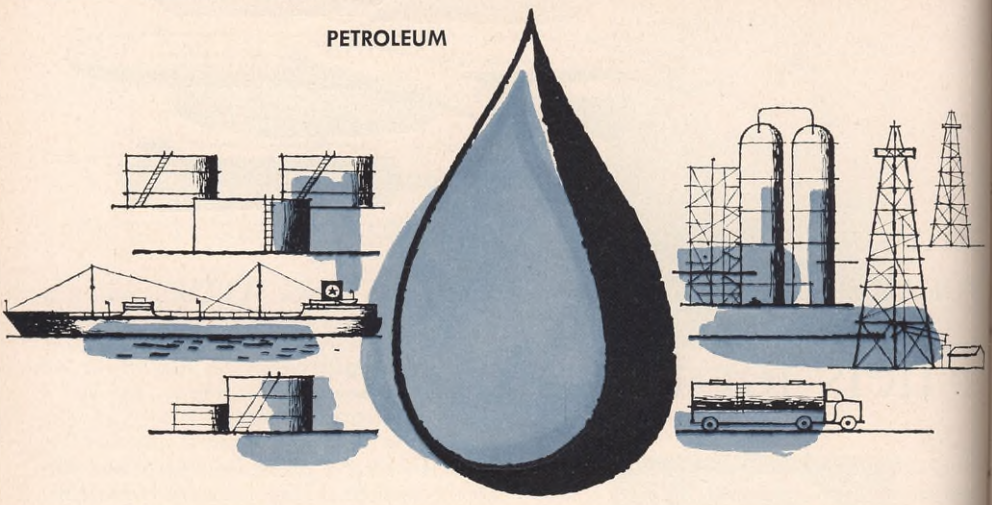
From such imaginations reality takes root. The horse, for instance, was there to begin with, but someone dreamed up the idea to saddle him. The wheel first turned in another's mind, and men and time taught it to convey in increasingly better ways.

Progressive peoples of all centuries and places have always been greatly concerned with getting about faster and going farther, and doing both with greater efficiency and economy. Each new mode of transit, for a time, convinced its users that they had gone about as far as they could go, but the farther they got, the more infinite stretched the horizon. New distances invited them, and new dreams spurred them on.

Just how much of current conjecture science will adapt to the shape of things to come is, of course, as immeasurable now as, say, the oceans and continents were to ancient civilizations, but one thing is certain: whatever the principal conveyances of the foreseeable future, it is evident that the principal source of motive power for their engines will be liquid fuels.

For more than half a century, petroleum has been the main source of that fuel. In all likelihood it will continue to be for many more years. However, the fact remains that petroleum, unlike the horizon, is finite. It has its limits. How far they may be expanded, what they may yield in the future, no one can now predict.

Oilmen can only say that, despite the alarmists who have always cried, "We'll soon run out of oil," available petroleum supplies in the United States have continued to increase and will probably be adequate for years to come. Aware that the consumption of petroleum products is increasing steadily, the oil industry recognizes



THE QUESTION IS NOT WHETHER PETROLEUM WILL CONTINUE TO FURNISH FUELS FOR THE FUTURE.

its responsibility to the nation's motorists as well as to the industry's stockholders and employes. It has always planned for the future, and it is planning now.

Throughout the industry, research and development experts are investigating, experimenting with, and probing into the techniques and economics of producing synthetic liquid fuels. They are looking who knows how far into the future, preparing for a day when crude oil may be more difficult to locate and more expensive to recover, when it may be more economical to produce liquid fuels by synthesis.

Because of the vast amount of research and because of some of the scientific miracles of our times, the term "synthetic" no longer conveys the impression of substitute materials of inferior quality.

Technically speaking, methods for making synthetic fuels are well developed and some processes have been used commercially for many years in foreign countries where petroleum is relatively scarce and costly. If necessary, they could be put into effect in the United States today.

Coal, for example, is a source of liquid fuels in some parts of the world. Because it is the greatest of all the fossil-fuel deposits in our land, coal is the ultimate goal for synthetic fuel.

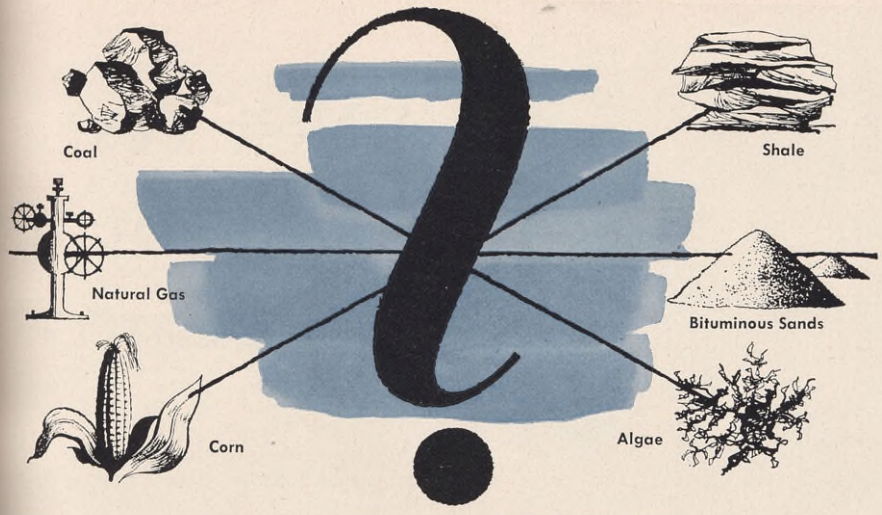
Oil from shale is another possibility.

The oil shale deposits of Colorado and Utah include a bed of shale known as the mahogany ledge, which will yield roughly 30 gallons of oil per ton and is sufficient to yield a total of 100 billion barrels of oil. Leaner deposits in the same area and other parts of the country might increase the total to about 300 billion barrels. Present studies seem to indicate that, of all the possible synthetic liquid fuels, oil from shale comes nearest to being economical to produce. In this connection, the work of the National Petroleum Council's Committee on Synthetic Liquid Fuels Production Costs, under the chairmanship of W. S. S. Rodgers, recently retired Chairman of the Board of Directors of The Texas Company, has been significant.

There are known processes for converting natural gas into synthetic liquid fuels. Use of natural gas as a raw material for liquid fuels is, of course, faced with competition for its use as a direct fuel in the growing domestic market.

The possibility that corn or other vegetable matter may someday be the basis for liquid fuels may seem stranger than fiction, but as incredible as the prospect may seem, science has been developing synthesis along these lines. One of the particular attractions of using agricultural sources would be the "growing" of fuel as fast as it is needed, comparable to the growing of trees for manufacturing paper.

Since agricultural raw materials obtain their energy from the sun, they offer another interesting facet. Whereas any of the fossil fuels (petroleum, coal, oil shale, natural gas, peat) could be exhausted, the sun will always be around to supply energy to vegetation.



BUT WHETHER WE WILL EVER NEED TO RELY ON RESOURCES SUCH AS THESE FOR LIQUID FUELS

A somewhat similar method of utilizing solar energy is the growth of algae in water. It is highly probable that the organic matter in algae (practically all seaweeds and allied fresh water forms) can be converted to liquid fuels in several ways.

Though the possibilities of algae cultivation are still largely undetermined, one of the most intriguing factors of this prospect is that it can be expected to yield more pounds of solid matter per year than even potatoes, the most productive of all land crops. The fact, too, that the raw material would be somewhat less difficult to collect than agricultural crops makes algae an interesting future prospect.

Despite the drawback of remote location, the bituminous sands of northern Canada are still another potential source of liquid fuel. Unfortunately, only a small percentage is suitably situated for strip mining. The recovery of oil from such sands is relatively easy, but the primary oil from them is not of very high quality.

Which source might ultimately supply the basis for synthetic fuels remains to be seen. Each has its respective problems. In fact, the *when, where,* and *by whom* of establishing a synthetic fuel industry is more important than the *how*. As L. C. Kemp, Jr., Director of Research for The Texas Company, pointed out at the 1952 convention of the National Petroleum Association, "the entire problem of synthesis rests on economics."

The raw materials, the techniques for obtaining them, and the processes for turning them into synthetic fuels are all available, but, at present, liquid fuels can be made from petroleum more economically than from any other natural resource.

Last September, in a paper delivered to the American Chemical Society's Symposium on "Unsolved Problems of the Petroleum Industry," H. V. Atwell, Research Associate at Texaco's Beacon Laboratories, said, "The petroleum industry recognizes its responsibility for meeting all demands for the products which it normally supplies. Petroleum technologists have followed closely all developments in fuel synthesis abroad, and petroleum research laboratories in this country have conducted much research which will be useful as a foundation for fuel synthesis in coming years."

Because the petroleum industry is best equipped to manufacture and market any of the proposed liquid fuels, it is logical that synthetic production will develop within the industry. No matter which source or which processes may gain prevalence in the future, it will amount to the making of crude oil and processing the crude . . . a job the oil industry is doing superlatively today and is prepared to continue tomorrow. As a vital part of the industry, The Texas Company is doing research on synthetic fuels. Should the day ever come when necessity requires synthetic fuels, Texaco will be prepared to play whatever part it may be called upon to perform in supplying the demands of America's motorists. **END**

"...GODSPEED AND SMOOTH SAILING"

AFTER LEAVING THE GREASED WAYS, the new tanker is taken over by tugs in the James River. From here, she went to the fitting-out docks and was completed for her maiden voyage in March

A New Texaco Tanker Starts Her Career

On our cover, the streamlined prow of Texaco's newest tanker, the S. S. *North Dakota,* awaits the moment of launching.

At exactly half past 10 on the morning of December 18, 1952 — shortly after the cover photograph was taken — the breaking of the customary bottle of champagne climaxed the christening. While the crack of glass was still in the air and the wine still sputtered, the 18,000-ton tanker glided smoothly down the ways into the James River at Newport News, Virginia.

First in a series of four tankers to be built for The Texas Company by the Newport News Shipbuilding and Dry Dock Company, the latest addition to the Texaco fleet got its bubble bath from Mrs. Elizabeth Walsh Long, wife of the Company's recently elected President, A. C. Long.

Many of the Company's officials, including W. S. S. Rodgers and Col. Harry T. Klein (who are now retired), were present for the ceremony, at which the Misses Elizabeth, Ellen, and Sheila Long attended their mother as maids of honor.

The *North Dakota,* built to the highest classification standards of the American Bureau of Shipping, will be among the fastest tankers ever constructed and will have a service speed of 18 knots, as will its three contemplated sisterships.

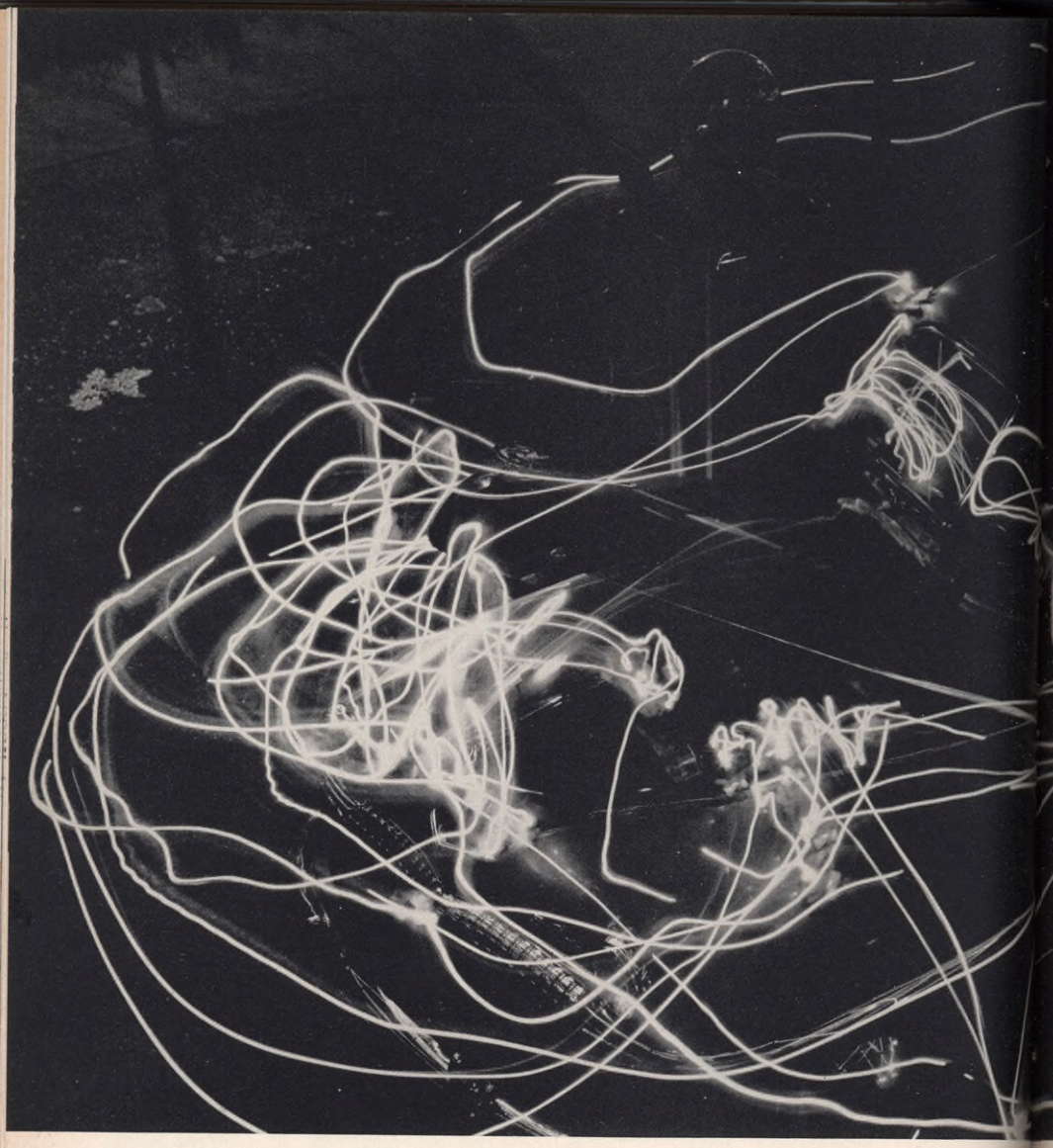
With an over-all length of 562 feet, six inches, the new tanker has accommodations for two passengers and 44 officers and crew, a cargo capacity of 152,000 barrels or about 6,400,000 gallons, and dry cargo space of 43,000 cubic feet.

The contract for all four of the Texaco tankers was awarded to the Newport News shipyard on June 19, 1951, and the keel of the *North Dakota* was laid on June 30 of last year.

The *North Dakota* now brings the number of Texaco tankers to 39 in all. **END**

HITTING THE WATER FOR THE FIRST TIME, THE *NORTH DAKOTA* SENDS UP A WHITE SPRAY

ON THE LAUNCHING PLATFORM (*left to right*) are A. C. Long (President of The Texas Company), J. B. Woodward, Jr. (president of the Newport News Shipbuilding Company), W. S. S. Rodgers (former Chairman of Texaco's Board), Harry T. Klein (former Chairman of the Executive Committee), Mrs. Rodgers, Misses Elizabeth and Ellen Long, Mrs. Long (the new tanker's sponsor), and Miss Sheila Long



What Goes on Here?

Photographs don't lie, but whoever made the patterns of light in the above picture seems to have vanished as completely as yesterday.

Actually, he was there all of the time, moving about at his normal rate of speed before an open camera lens, doing a job that is familiar to Texaco customers.

The "he" you can't see is Texaco Dealer Paul Schucht of Fanwood, New Jersey, who (with small light bulbs attached to both wrists) is giving Texaco Circle Service to a customer's car.

What you *can* see is how thoroughly Circle Service covers an automobile.

From a dealer's cordial greeting to his courteous "thank you," Circle Service is pump island service at its best. Fast and efficient, it also includes taking the customer's order, cleaning both sides of the windshield and the rear window, filling the gas tank, and checking oil, water, tires, and battery.

Photographer John Keller, who made the photograph, also rigged up the lighting device. **END**

THE TEXACO DEALER conspicuously absent in the picture above, performed Circle Service steps below

New Pioneer

WHERE WAGONS RUMBLED WESTWARD, OIL IS WRITING A NEW CHAPTER IN OUR HISTORY

Oil has called men to many places.

Its voice, the booming bass of a gusher, has been heard around the world, beckoning—from time to time—the seekers and the planners and, in their wake, the investors and the builders.

Some 50 years ago, it roared, "Come on down to Texas!" and out of coastal plains grew the thick roots of a great American industry.

Later it said, "I'm here in South America," and by-and-by it signaled from afar, "I'm here, too . . . under the hot sands of Arabia."

Always it seemed to call loudest to Americans, shouting: "When you come, bring your pocketbooks and your steel, your wits and your hard-work clothes. Hoist your derricks. Sink deep your shafts. Build your roads. Erect your quarters. And be doubly sure you brace your hopes with the stiffest starch."

And so they went, in much the same spirit that sent their pioneering forefathers into an unknown wilderness they came to call "land of the big sky."

That land was the American Northwest, where oil is bringing new pioneers to the prairies of North Dakota and Montana.

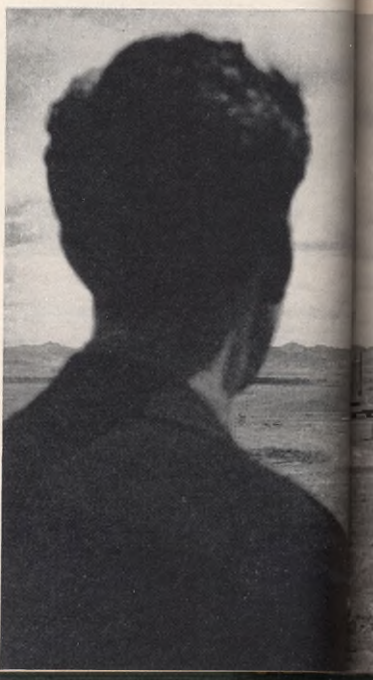
In territory first explored by Lewis and Clark on their historical expedition early in the 19th Century, oilmen midway in the 20th Century are seeking, and sometimes finding, petroleum.

For the third time in civilization the character of the area, once the domain of the buffalo and the Indian, is changing. The herd and the horde gave way

"There was the sky above, blue as paint, and the brown earth rolling underneath . . ."

— THE BIG SKY
by A. B. Guthrie, Jr.

THIS TEXACO WELL IS IN THE VALLEY



in the Land of the Big Sky

MONTANA WILDCAT, NEAR GLENDIVE

to immense farms and sprawling ranches, now prominent throughout the countryside. But the oilman's arrival is more and more apparent as week after week new derricks jut up from the sunburned grass, and new roads lace new oil fields to old towns.

Where wagon wheels once cut a trail to the Pacific, the industry's technicians are cutting through the "brown earth" in quest of new reserves of crude oil. At depths, sometimes, of more than 10,000 feet, they have—with a minimum of confusion and a maximum of ingenuity – found the oil that summoned them to what geologists call the Williston Basin, an immense regional depression containing marine sediments and structures favorable for the accumulation of oil in commercial quantities.

Their discoveries are keeping the prairie roads and rails extra busy. Huge trailer-truck combinations are hurrying heavy drilling equipment to the fields, and others are carrying crude oil to loading racks at railside. Long strings of tank cars, filled with crude, are riding steadily overland behind Diesel locomotives en route to refineries. And the seekers themselves, unlike the weary pioneer settlers who trudged on foot beneath skies "blue as paint," are traveling swiftly and comfortably in passenger cars and other automotive vehicles

SUBJECT: DRILLING PROGRESS

OVER YELLOWSTONE RIVER

whose speed is manufactured from the oil they find.

All of the Williston Basin oil boom is in the modern manner. As the pictures on these and the following four pages show, going after oil in the land of the big sky is decidedly businesslike. There is none of the hurly-burly and the frenzied drilling activity that characterized a boom town in the industry's early days.

Although oil companies have sent drilling contractors and their crews, seismic parties, and many other specialists to North Dakota and Montana cities and towns,

OFFICES ARE OFTEN MAKESHIFT

the boom has been, on the whole, unspectacular. Some signs of the oilmen's entry are, of course, evident. Hotels are full, stores and restaurants are well patronized, and improvised trailer "towns" and offices have leaped up. But there is no shouting in the streets and no runaway rise in the general economy.

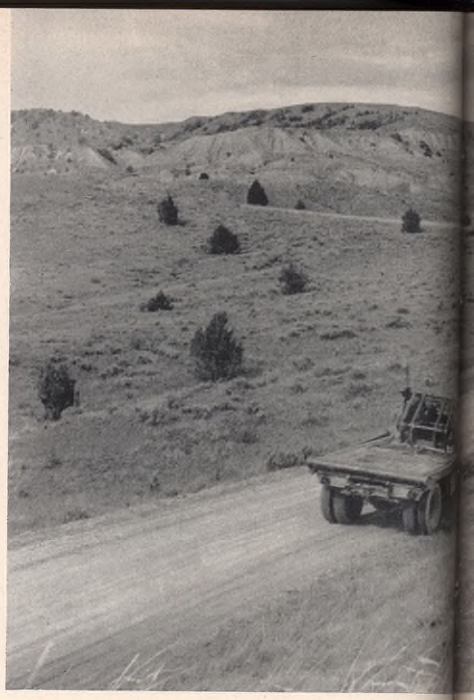
Oil is adding to the prosperity, but it is not changing traditionally conservative attitudes nor is it erasing memories of hard times endured in the Dust Bowl years of the 1930's.

Oil leasemen, who are keen students of the moods and caprices of peoples in places where oil is being

CONFERENCES ARE INFORMAL

sought, have found that the already prosperous farmers in the area can occasionally be amazingly indifferent to the leaseman's solicitation.

One farmer, goes a story, was approached by a leaseman with a check already made out for $10,000. At the moment, the farmer was engaged in the sale of a horse that couldn't have brought him more than $50,



RURAL ROADS ARE CREATED AND IMPROVED AS

but he spurned the leaseman, who insistently shoved the check under his nose. "Look," said the irate farmer, turning upon the nonplused leaseman, "come back another time, bub. Can't you see I'm doing my darndest to sell this here horse?"

Whether or not the story is true, it still serves to illustrate an economic fact: though Williston Basin acreage, which could be leased for as little as 10 cents an acre in 1949, has lately been contracted for as high

FROM WELL CUTTINGS, MAYBE A CLUE

OIL ES A WAY FOR ITSELF

as $1,000 an acre, no one is getting unduly excited about the lease play.

Actually, relatively few wells are being drilled, which makes the Williston Basin oil boom decidedly different from oil booms in the past. The significant things about the basin are its potential reserves of oil and its estimated importance in the future. Big as the area's potentialities are (some authorities believe that the Williston Basin may contain one of the largest reserves

DRILLING A SEISMIC SHOT-HOLE

BEFORE AND AFTER — THE LIFE OF A ROCK BIT

MORE PIPE FOR MAKING HOLE

QUIET! SEISMIC DETONATION

LANDMEN KNOW THEIR TITLES

of crude oil in the country), development has, nonetheless, proceeded slowly and will, from all indications, continue to do so.

Last year, the *National Petroleum News* commented that "oil economists find the economic implications" in exploring a province "400 miles long and 300 miles wide, with immense crude possibilities, stagger the mind. They (oil economists) are determined that this discovery (Williston Basin) shall be woven into the national wealth without the usual pains marking the birth of previous discoveries."

A lease broker who was in the Scurry County, Texas, play a few years ago and has now set up shop in Glendive, Montana, has a fairly typical comment about what's happening in the region. He says, "The Williston Basin is where West Texas was 30 years ago, and I'm going to stick around here for a long time."

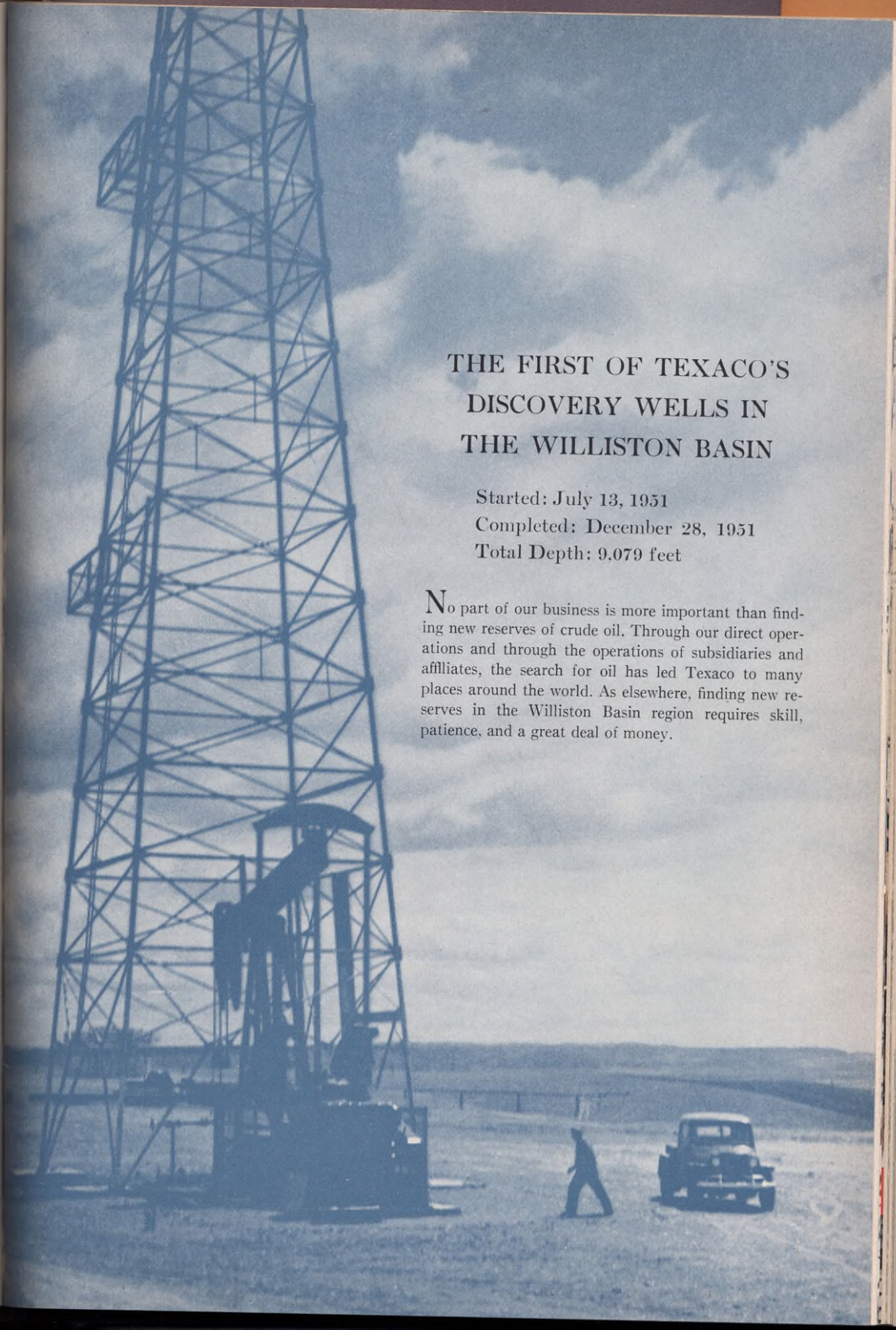
That pretty much sums up the outlook of a good many individuals and firms operating in the area today, and it augurs well for stability in the development of the basin's oil reserves over the years.

One of the new pioneers in the land of the big sky, The Texas Company has figured prominently in oil exploration and production, centering its operations around Glendive and Williston, North Dakota *(see back cover)*.

In 1951, the Company made a significant oil discovery on the Cedar Creek structure near Glendive. In 1952, as a result of intensified geological and geophysical exploration, Texaco made additional oil discoveries along the same structural trend. These discoveries indicate that The Texas Company has found substantial reserves since the Producing Department entered the Williston Basin play in 1948, and has good future prospects in the region. **END**

PARDNER, THIS IS GLENDIVE

. . . CONSTANT SURVEILLANCE



THE FIRST OF TEXACO'S DISCOVERY WELLS IN THE WILLISTON BASIN

Started: July 13, 1951
Completed: December 28, 1951
Total Depth: 9,079 feet

No part of our business is more important than finding new reserves of crude oil. Through our direct operations and through the operations of subsidiaries and affiliates, the search for oil has led Texaco to many places around the world. As elsewhere, finding new reserves in the Williston Basin region requires skill, patience, and a great deal of money.

Guests of the Management

Teachers assemble in auditorium to hear talks by Texaco plant officials

If anyone were to define the American way of life he would find it difficult to do so without including business and education as two of the principal elements that compose it.

Certainly, no two institutions contribute more to our society in general and to our community welfare in particular. In America, as in no other country of the world, business and education have reached proportions of unusual magnitude, so much so that few lives are untouched by either.

Just how well one knows the other, however, is something like our relationship with the next door neighbor. Some of us know him, and some of us don't. We may see him every morning on his way to work, catch a glimpse of him through the window as he reads his evening newspaper, or greet him across the hedge on a Sunday, but still not know much about him.

Figuratively speaking, there is also a hedge between business and education. Some teachers can see over it, but others may catch only a blurred image through the branches.

As some of us have misconceptions of our neighbors, some educators have misconceptions about business.

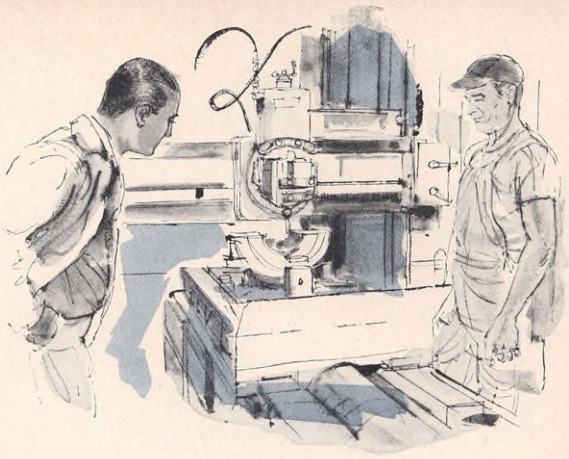
For several years, the Chamber of Commerce of the United States has campaigned to bring about a better understanding between the two, and it found a means to this end in Business-Education Day.

A day on which business firms invite teachers to see them at work, B-E Day was the brain child of Carl M. Horn of Michigan State College.

Since 1950, local Chambers of Commerce have sponsored B-E Days in their communities, and each successive year has increased the participants.

The basic idea of the program is one of public relations, and its main objective is to acquaint the thought-

At Port Arthur Works, visitors get a look at vacuum pipe stills (*left*), and jolly schoolmarm pretends to bite into Texwax (*above*)



This Texas educator is fascinated by machinery

TEACHERS GET AN OPPORTUNITY TO SEE INDUSTRY AT WORK

leaders of the community with the operations and aims of industrial plants and business firms from which the city or town draws its economic sustenance. The leading firms in an area invite local teachers to call upon them for the purpose of touring the plant, asking questions, participating in panel discussions, and seeing them as they are.

The program is not merely a tour of the larger industries, but a study of the free enterprise system from the neighborhood pharmacy to the largest manufacturing plant employing thousands of workers.

On B-E Day the local schools close and the teachers spend the day as guests of the management. They meet the firm's top executives and key personnel. Tour directors guide the group through the premises and explain the function of each department or division.

In large plants, the teachers learn such interesting facts about business as the cost of machinery and how and what it produces, the number of people engaged in the industry and in each of its departments, the costs and amounts of raw materials needed to produce the products, "hidden operating costs," and the processes employed in production.

Equally as important, the teachers see the conditions under which employes work. They see the good lighting, the cleanliness, the modern equipment, the safety devices, and other conveniences and conditions that are part of today's business.

At a luncheon given by the management, the teachers get to know company officials, who explain their particular part in the plant's operations.

Later, there is a discussion period in which business lets its hair down and answers the questions the visitors ask. Often there are motion pictures that show the company's operations. Charts and visual aids, company publications, and displays of material all aid the teachers in understanding the viewpoint of business.

The Texas Company has, at several of its refineries, been host to teachers, and has found the program one of the most successful ways to tell its story.

Last October, during Oil Progress Week, 87 teachers of Port Arthur, Texas, visited Texaco's refinery there. After the visit, the superintendent of schools wrote: "Business-Education Day was a wonderful occasion for our schools. We think that teachers will do a better job of teaching Port Arthur to young Port Arthurans, whom we expect to become integral parts of our community's life in the near future."

The principal of an Oklahoma school, having toured Texaco's West Tulsa Works, wrote the plant superintendent that "Business-Education Day will develop into the best means for spreading understanding and appreciation of the problems we have, not only in our own business, but in the business of others. When we have reached that understanding we will be able to do a much better job in working together."

At other Texaco installations, teachers expressed similar approval of B-E Day, and many of them invited business to see education at work.

Unquestionably, there is no better way for business to make friends and create good will than by showing those who teach tomorrow's business personnel what today's business is about. **END**

Texaco Sidelights

BACK TO NORMAL

Due to the time and personnel required over the past 18 months to ready production of the forthcoming 50-year history of The Texas Company, *The Texaco Story*, THE TEXACO STAR has not appeared as frequently as in previous years. However, it is expected that distribution of *The Texaco Story* will be made to stockholders and employes in the near future, and THE STAR's editors hope once again to present the magazine regularly.

This year, incidentally, marks THE TEXACO STAR's 40th anniversary.

BROADWAY MELODY

Back in 1901, liquid gold changed the quiet Texas prairie town of Beaumont into a bedlam, and nearby Spindletop, site of the first great American oil gusher, was a magic name.

There is every possibility that Spindletop will be a magic name again when it becomes the subject of a proposed Broadway musical.

The contemplated production will be based on the recent Random House book, *Spindletop*, "the true story of the oil discovery that changed the world," written by Texans James A. Clark and Michel T. Halbouty.

To the knowledge of the editors of THE TEXACO STAR, the musical play will be the first to depict the colorful and exciting beginning of the modern oil industry, though motion pictures and literature have frequently used the background.

For the record, it was Spindletop that eventually led to the formation of The Texas Company, prominently featured in the book and to which the authors expressed appreciation for a portion of their material.

CONCLUSIVE EVIDENCE

Results of a three-year study undertaken for the Oil Industry Information Committee of the American Petroleum Institute reveal that there are more than 200,000 oil businesses in the United States.

Of these, 44,602 are engaged in production, refining, transportation, and wholesale distribution of petroleum and petroleum products, and 188,253 are service stations, 95 per cent of which are independently owned or operated by local businessmen.

Totals for various segments of the industry, apart from service stations, are: producers, over 12,000; petroleum refiners, 270; manufacturers of lubricants and greases not made in refineries, 243; pipe line companies, 54; tank ship companies, 42; tank car companies; 61; barge line companies, 174; for-hire tank truck contract carriers, 1,063; petroleum bulk stations and terminals, more than 14,000; fuel oil dealers, over 11,000; bottled gas dealers (LPG), 5,500.

The figures—which were compiled from the files of such authoritative sources as the Bureau of the Census, Bureau of Old Age and Survivors Insurance, Bureau of Mines, Corps of Engineers of the Department of the Army, the National Petroleum Council, and the American Petroleum Institute—reveal conclusively that, with so many thousands of businesses and businessmen competing for supplies and markets, the oil industry is among the most competitive in the whole world.

PUBLIC RECOGNITION

Awards of two George Washington Honor Medals to The Texas Company by Freedoms Foundation, Valley Forge, Pennsylvania, have been announced. One of these will go to Texaco's employe publication, *Texaco Topics,* for a series of articles on Company operations and employe families.

The other will be awarded for Texaco advertisements in national magazines in connection with the Company's 50th anniversary last year. Freedoms Foundation is a non-profit organization which gives public recognition to those who contribute to a better understanding of the American way of life.

PIPE LINE FOR CANADA

The Trans-Northern Pipe Line, a 440-mile system that transports refined products from three Canadian refineries at Montreal (one of which is the refinery of McColl-Frontenac Oil Company Limited, Texaco's Canadian refining and marketing subsidiary) and from another refinery at Clarkson (Ontario) to Toronto, Ottawa, Hamilton, and other intermediate points, went into operation November 1, 1952.

Owned equally by McColl-Frontenac, British American Oil Company, Limited, and Shell Oil Company of Canada, Limited, the new pipe line makes possible dependable, year-round deliveries. Formerly, transportation was a major problem as products were shipped by tankers on the Great Lakes, closed to navigation five months of the year.

Although the pipe line was designed to have an initial capacity of 40,000 barrels daily, the addition of more pumping stations can increase this capacity to about 75,000 barrels daily.

Construction of Trans-Northern Pipe Line was carried out under the direction of A. N. Horne, a Texaco employe on leave to serve the Canadian company as president and general manager.

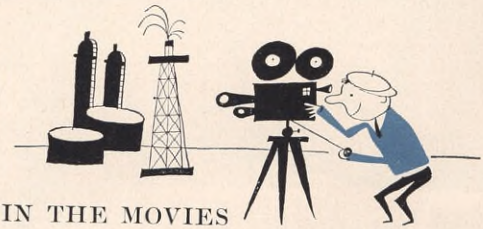
WATER PROOF

A simple test — revolving a grease-packed bearing in several inches of water — may save car owners a lot of costly repair bills.

Most drivers are unaware that the water they churn up when driving on a flooded street can wash out the lubricant from bearings beneath the car and very likely start a train of rust damage leading to expensive repair and replacement.

The new test, initiated at Texaco laboratories at Beacon, New York, was designed to aid in the solution of the problem and is continually revealing data which will reduce the high cost of hydroplaning in the family car.

Following the severe washing conditions it undergoes for six hours, the grease-packed bearing is next placed in a high-humidity cabinet to measure rust formation. From reactions, technicians hope to develop new and improved lubricating greases.



TEXACO IN THE MOVIES

By no means is The Texas Company attempting to compete with Hollywood, but the making of educational films has been an important part of our Industrial and Public Relations program since 1941.

Deep Horizons, the story of bringing in a new well, was the first in a series of Texaco films produced to create better understanding of the Company's operations. To date, it has been seen by considerably more than a million people at more than 12,000 showings here and abroad, placed in the archives of film libraries at leading universities, and sponsored by the Department of State as an illustration of American industry at work.

Also on the Texaco film shelf are *Masters of Molecules* (the story of refining), *Research—Pattern for Progress,* and *Tank Ship* (an exciting trip on a Texaco tanker). In addition to these, there are *Desert Venture* and *A New Frontier,* produced by Texaco's affiliate, the Arabian American Oil Company.

All of the films are available for showing by clubs, lodges, churches, and other civic and social groups, and may be obtained upon request at any Texaco division sales office.

Texaco Sidelights

continued

NEW DIVISION

The uses for liquefied petroleum gases have been rapidly increasing. Liquefied petroleum gases are used in large quantities for household heating and cooking, as motor fuel for buses and tractors, in the chemical industry, and as an ingredient in gasoline.

For these reasons, primarily, The Texas Company has created a new division with headquarters in Houston. Under the management of M. J. Adams, formerly Assistant Division Manager of the Gas Division, Domestic Producing Department, the new LPG Purchases and Sales Division will market all of the liquefied petroleum gases and natural gasolines from gasoline and cycling plants operated by the Producing Department and any surplus liquefied petroleum gases available from our refineries. It will also arrange for seasonal storage and will purchase any light hydrocarbons required by our refineries. J. J. Rasor, formerly Assistant Superintendent of the West Tulsa Works, will act as Assistant to Mr. Adams. The division will report to G. R. Bryant, Vice President in Houston.

THE SMALLER THEY COME

At Texaco's Beacon Laboratories, Chemists Morris Dundy and Ervin Stehr have designed a microcombustion train for the direct determination of oxygen, supplying the Company with an important new research tool.

For a number of years petroleum laboratories have sought a reliable method for actually determining the amount of oxygen present in the industry's products. The Dundy-Stehr method provides such accuracy and is of particular value in analyzing minute samples—often the only amounts available.

PROJECT FOR PROGRESS

Better aviation fuels, increased know-how for the burgeoning petrochemical industry, expansion of synthetic detergent facilities, greater availability of jet fuels, low-cost synthetic fibers and plastics, more abundant explosive components, increased industrial productivity throughout the free world—these are some of the many benefits derived from Research Project 44, begun 10 years ago by the American Petroleum Institute.

In brief, API 44—toward which Texaco contributes—is concerned with identifying the more than 5,000 chemicals that make up what we commonly call oil. It has assembled in an orderly fashion most of the known physical and thermodynamic data on the different hydrocarbon compounds in petroleum—how they look and how they act, both by themselves and in company with each other and under varying outside influences such as heat and pressure . . . even to the extent of knowing how long it will take them to behave or misbehave.

Such information, too lengthy to write, is coded on 36,000 cards which, when processed by a "mechanical brain," reveal in minutes rather than days or weeks the correct answer to any problem within the scope of the project.

Dr. Wayne E. Kuhn, Manager of The Texas Company's Technical and Research Division, is currently a member of the project's advisory committee, of which he was chairman until recently.

URANIUM HUNT

The petroleum industry, which already plays a vital rôle in our national defense, may be of yet further aid to the country's security.

At the request of the Atomic Energy Commission, a plan has been devised by the three major geological societies whereby the oil industry would seek scarce uranium (the raw material of atomic energy) in its normal explorations for oil. Initiators of the plan believe that the slight additional expense would be justified by the possibilities of worthwhile profits for the industry.

The Advisory Committee on Radioactive Mineral Exploration has been formed to develop the plan further. One of its members is Gerhard Herzog, Director of Research in Texaco's Domestic Producing Department.

WHAT ARE THEY WATCHING? Pausing on a Sunday drive out from Glendive, Montana, to observe a rig drilling a well for The Texas Company, this young man is fascinated by the rig's whirling kelly (1), and by the swivel (2), hook (3), and traveling block (4). His father is equally impressed.

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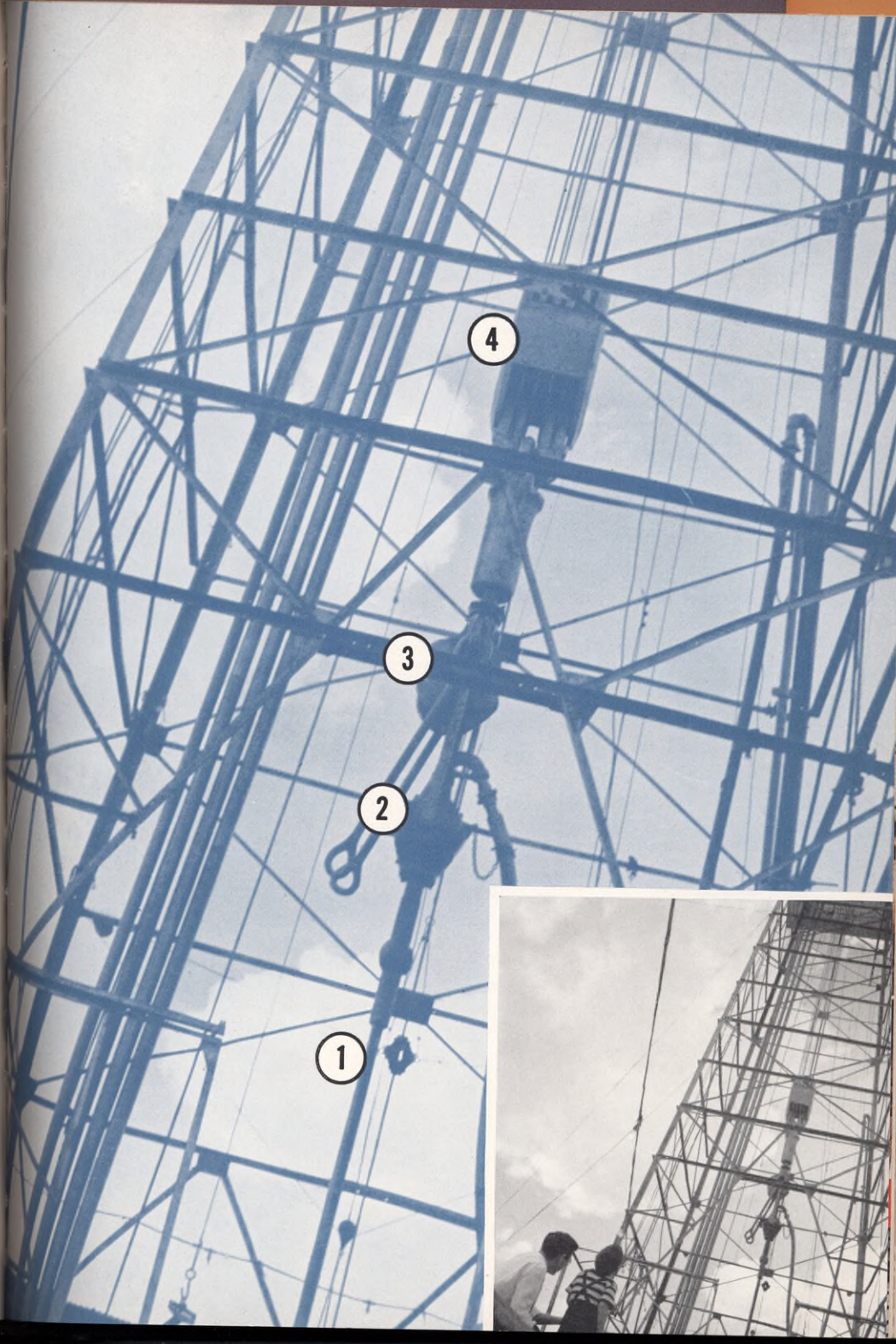
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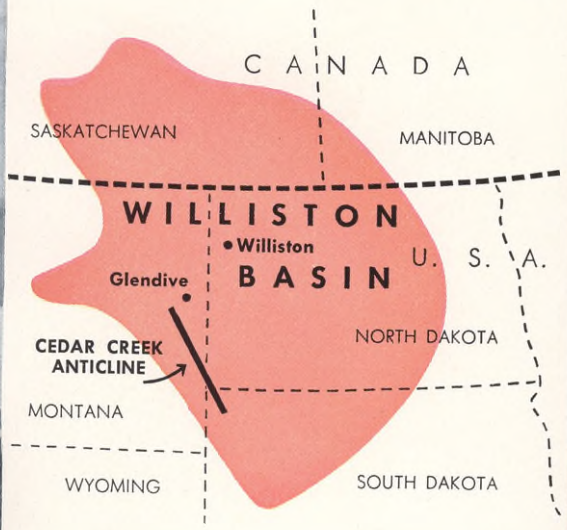

NEW OIL RESERVES FROM AN OLD FRONTIER

Perched on an eroded bluff overlooking the Yellowstone River, a drilling rig under contract to The Texas Company probes the Cedar Creek anticline for oil southwest of Glendive, Montana. In the approximately 118,500 square miles of the Williston Basin, Texaco holds substantial acreage in the United States portion of the basin. Substantial reserves of crude oil are indicated by the discoveries the Company has made thus far in Montana. The Company's geologic and seismic exploration for likely oil-bearing formations is going forward vigorously. Present indications amply support opinion that the Williston Basin will be a major producing area in the future.