


THE TEXACO STAR

MID-SPRING 1960

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DRILLING IN LOUISIANA: THEY RIDE TO WORK IN BOATS



THE TEXACO STAR

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AN EYE ON TIDELANDS OIL

Framed by pipes, a pumper at Caillou Island, Louisiana, concentrates on the maze of dials and gauges that control the flow of Texaco oil from tideland wells into a battery's manifold system. Caillou Island's wells are divided into 19 batteries, ranging from three to 51 wells to a battery. Each battery is interconnected by a network of walkways that give the pumpers and maintenance crews easy access to every wellhead. Oil from 51 wells runs through this particular manifold, and the pumper's assignment is to see that it keeps flowing on the long journey inland without a hitch.

Texaco petroleum has been coming out of the Louisiana tidelands for over 30 years; today, the Gulf Coast marshlands are the Company's largest domestic producing area, supplying over a third of its total domestic production. Now, drilling crews are busy looking for more oil deep beneath the bays and bayous of Louisiana to help push production figures even higher. Much of this activity and Texaco's drilling operations on the tidelands are described in "Bays, Bayous, Barges—and Oil," beginning on Page 4 of this issue.

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THE TEXACO STAR

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THE COVER PHOTO: With split-second precision, a drilling crew breaks a section of drill "stem" aboard a big Texaco drilling barge in the Louisiana tidelands. Everything must be either flown or towed to these tideland fields from inland depots, because the entire area is under water and no roads exist. The story of Texaco's tideland operations, particularly in the Lake Barre-Caillou Island fields, begins on Page 4.

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Income tax rates are too high for healthy should be relieved by . . . TAX

BY OSCAR JOHN DORWIN

SENIOR VICE PRESIDENT, GENERAL COUNSEL,
AND DIRECTOR

THE FEDERAL GOVERNMENT'S budget for 1961 is nearly \$80 billion. As taxpayers we must provide this amount in the form of taxes—\$43.7 billion in individual income taxes, \$23.5 billion in corporate income taxes, and the balance in the form of excise and miscellaneous taxes. Reliance upon income taxes for ever-increasing amounts of revenue has inevitably produced inequities; and the high rates have handicapped our nation's economic growth.

High Individual Rates During the depression of the 1930's individual income tax rates were increased and were used as a means of redistributing income. With the advent of World War II, emphasis necessarily shifted to obtaining maximum revenue through taxation, and the rates were further increased. The postwar period has brought no abatement in demands for Government spending, and no reduction of consequence in tax rates. Individual income tax rates today range from the 20 per cent basic rate on the first \$2,000 of taxable income to the virtually confiscatory rate of 91 per cent.

High income tax rates have tended to destroy incentive for the relatively few taxpayers in the upper income brackets. At the same time, inflation has aggravated the

tax burden of all taxpayers—particularly those in the lower income brackets—as the level of consumer prices has risen 77 per cent since 1942, while individual tax rates have stayed about the same as in 1942.

Consider the situation of a married couple in 1942 with no children and with an income of \$3,000. They would have paid an income tax of \$269 for the year. An adjustment of the couple's income, equal to the rise in consumer prices, would put their 1959 income at \$5,310. On this amount, their taxes for 1959 would have been \$716. Consequently, while their income rose by 77 per cent, their income tax liability increased by more than 166 per cent.

There is a prevailing illusion that our high progressive tax rates (those in excess of the basic rate of 20 per cent) are necessary to raise revenue. This is not true. Actually the higher rates produce a relatively small portion of total individual income taxes collected. The basic 20 per cent rate applicable to the first \$2,000 of all taxable income produces about 85 per cent of total individual income taxes collected. The higher rates produce relatively little revenue and their harmful effects are enormous. They encourage tax avoidance; they penalize and retard individual thrift; and they operate to dry up the flow of new investment funds so necessary to support a dynamic economy and promote desired industrial expansion.

High Corporate Rates Corporations are subject to tax at the rate of 30 per cent on the first \$25,000 of taxable income and 52 per cent on the amount in excess of \$25,000.

A corporate rate as high as 52 per cent has long been

growth and have created burdens which

RATE REFORM

recognized as excessive. Ours is one of the few countries with as high a corporate rate. Corporate profits are a major source of new venture capital, particularly now since high personal income taxes have drastically limited the supply of capital from individual investors. Corporate earnings are materially reduced by the 52 per cent tax rate, and it is becoming increasingly more difficult to generate new capital to meet the requirements of our industrial enterprises.

In the Revenue Act of 1951, Congress, recognizing the damaging effect of high corporate tax rates, approved a reduction of five per cent, to take effect April 1, 1954. This reduction has been postponed each year since 1954 by extending the 52 per cent rate "for another year." In addition, corporations have been required to speed up their income tax payments and now actually prepay half of their income tax during the taxable year. The effect of this speed-up over the past five years was equivalent to an increase of 10 per cent in the corporate tax rate during each of those years.

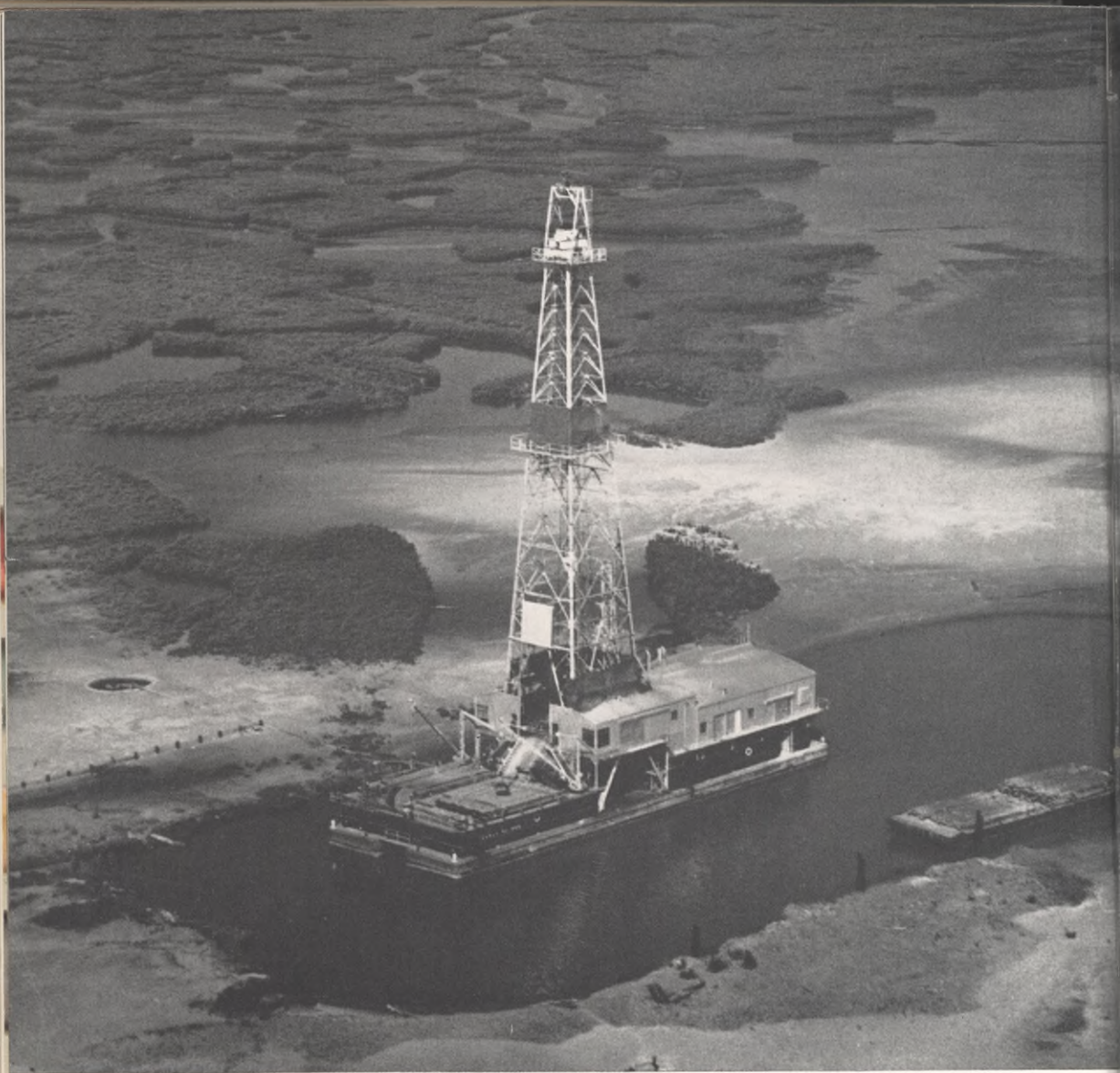
The Administration has now recommended that the five per cent reduction in corporate tax rates scheduled to become effective on June 30 of this year be postponed for still another year.

Herlong-Baker Bills Congress should, during this period of economic prosperity, attack and solve the problem of excessive tax rates. The Herlong-Baker Bills (H. R. 3000 and H. R. 3001), now before the House Committee on Ways and Means, offer a reasonable and sound basis for doing so.

These bills would accomplish rate reform by orderly reductions of corporate and individual rates over a period of five years. The corporate rate of 52 per cent would be reduced one percentage point each year for five years, bringing it down to 47 per cent. The basic individual rate of 20 per cent would be reduced one percentage point each year, reducing it to 15 per cent. Higher individual rates would be correspondingly reduced, with the top individual rate of 91 per cent reduced to 47 per cent over the five-year period. Sponsors of the legislation say that enactment would give individual taxpayers at least a 25 per cent cut in Federal income taxes.

This program is an eminently reasonable one. In recent years the average annual growth rate measured in gross national product has been a little less than three per cent, but with the economic incentives provided by tax rate reductions the increase should run as high as four or five per cent. Estimates indicate that a growth rate of only three-and-a-half per cent would be sufficient to offset completely the revenue losses resulting from such reductions.

In introducing their bills, Representatives Herlong and Baker said, "It is our opinion that reform of the tax rate structure is of such urgent, overriding necessity in the national interest that it must not be further delayed for any reason." These bills represent real rate reform, and the reform would be accomplished without shifting tax burdens from one taxpayer to another. If enough support is manifested, these sorely needed rate reductions may be achieved in the foreseeable future. •



Snugly anchored at the head of a channel in the Louisiana tidelands, Texaco's diesel-powered drilling barge Gibbens lies protected from the Gulf

BAYS, BAYOUS, BARGES —AND OIL



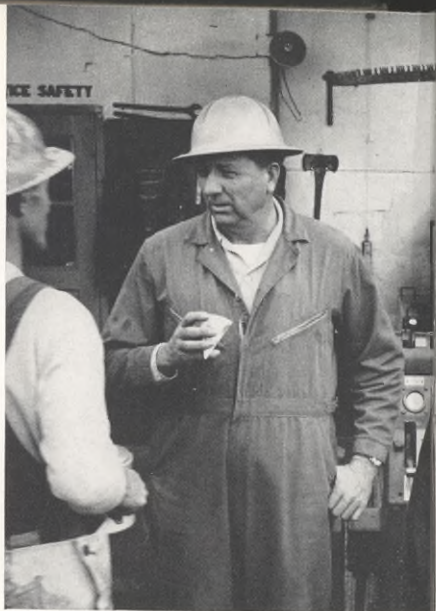
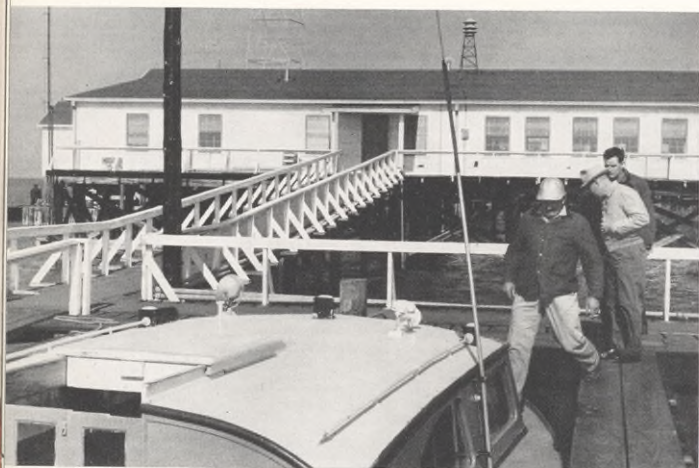
of Mexico's treacherous waters by a sandy island. The Gibbens is one of three Company-owned barges now drilling in the Caillou Island field.

ALONG THE RIM of the Gulf of Mexico the marshlands of southern Louisiana stretch from the Mississippi River delta westward to the Texas border. This is the land of Tabasco sauce and chicory coffee, moss-bearded bayous—and oil.

Some of America's richest petroleum deposits lie beneath this area, trapped in the prolific oil sands around the Gulf Coast salt domes. Along the flat coastline, the steel Christmas trees of producing wells stand in clumps of marsh grass or in shallow bays, channeling thousands of barrels of crude

oil daily into the pipe line system that links the fields to inland storage depots and refineries. Many hundreds of those wells are Texaco's.

The Company's interest in the region dates back more than 30 years. By the late 1920's sizable petroleum deposits had been proved on the salt domes of the Texas Gulf Coast and several were known to be along Louisiana's Gulf shore. Texaco—interested in Louisiana as a promising area for exploration expansion, and aware of the oil discoveries to the west—believed there was oil here too. *CONTINUED*



The relatively small area of South Louisiana has

Preliminary tests and reports by Company geologists and engineers were highly encouraging. From this early knowledge the Company recognized the tremendous potential of the area and approached the Louisiana Land and Exploration Company which owned and controlled vast tracts of land in southern Louisiana. In 1928, Texaco concluded a contract with the LL&E covering exclusive oil, gas, and sulphur rights under about one million acres in South Louisiana and was among the first to move into the coastal marshes.

Operations of the newly opened fields were placed under the supervision of the Company's New Orleans Division (then known as the Louisiana-Arkansas Division; division headquarters moved to New Orleans from Shreveport in 1941). Eventually, the area was subdivided into three producing districts, with headquarters at Harvey, Houma, and New Iberia. Actually, the New Orleans Division today includes several coastal counties in Mississippi and Alabama, and the Atlantic Seaboard states, excluding New York except for Long Island, all the way up to Maine. For current drilling and production purposes, though, South Louisiana is the division.

Today, the division—with 135 wells that have each produced a million or more barrels of oil—supplies approximately 35 per cent of Texaco's total domestic crude oil production. Over one-fourth of the division's production comes from two fields—Caillou (rhymes with bayou) Island and Lake Barre. The Company is Louisiana's leading daily producer and even under current allowable restrictions accounts for almost 22 per cent of the coastal area's prolific production.

Much of this area is rich in natural gas and sulphur, too. In fact, the first producing well completed by Texaco on acreage covered by the 1928 LL&E contract was a gas well. The division now has three plants to handle the flow of gas from these coastal fields: two natural gas cycling plants—one at Erath, another at Bateman Lake—and a natural gasoline plant at Paradis. Texaco supplies the gas requirements of about a dozen of Louisiana's industrial companies.

Under agreements with Texaco, the Freeport Sulphur Company is mining sulphur at its Garden Island Bay mine, near the mouth of the Mississippi River.

But oil, like cotton a century ago, is still king. "There probably is a greater concentration of oil and gas potential right down here in South Louisiana than anywhere else in the country," according to Texaco's New Orleans Division Manager Harry X. Bay. "This relatively small area has become Texaco's largest oil-producing operation on the North American continent."

DIVISION HEADQUARTERS, a gleaming glass and aluminum structure, stands on Canal Street in midtown New Orleans. Here, in addition to the Domestic Producing Department, are offices of Texaco's Domestic Sales, Legal, and Comptroller's Departments. From the top floors, you can look across the rooftops and see the Eighteenth Century buildings of the Vieux Carré, the city's French Quarter.

The man directly responsible for drilling and production in the division is James H. Gibbens, general superintendent of these activities, who keeps in direct contact with the dis-



A few miles north of Caillou Island lies Lake Barre, Texaco's oldest field in the tidelands. It's by motor launch, far left, that tool pushers like this one at Barre make their routine inspection tours or get somewhere in a hurry when trouble comes. As drilling and production foreman, the tool pusher is responsible for the field's entire operation. Lake Barre's "top dog," center, gets a quick rundown on drilling progress from a driller aboard the barge Rhodes. Left, after 12-hour work shift, field crews dig in at Caillou Island's dining hall. Menus at all campsites: simple, sturdy, staple.

become the Company's largest domestic producing region

trict offices. Field foremen ("tool pushers") get their instructions through the district offices. "We do a little drilling down here," he says wryly, pointing to a stack of daily drilling progress reports he receives from all over the division. "About 40 per cent of the drilling rigs presently operated by the Domestic Producing Department are right here in South Louisiana. Many of the rigs are on drilling barges or piling foundations because most of the fields are covered with several feet of water or are marshy areas."

These water operations have a way of developing situations not covered by the rule book. "It's uncanny," remarks Gibbens, "how many problems come up at night, when the district offices and division headquarters are closed. The tool pusher must know what to do immediately; he can't run to a book and turn to Page 15. A rig costs about \$100 an hour to operate; when trouble comes, a capable tool pusher handles the situation himself, because he knows it's imperative that they be shut down as little as possible."

As the drilling and production foreman, the tool pusher is responsible for the maintenance and operation of every drilling and workover rig and other equipment in his field. His job is to produce oil and gas as efficiently as possible, keeping costs down and production up.

In the field, the head tool pusher is called "top dog" and Caillou Island's "top dog" is Frank C. Brewer. He is assisted by Joseph L. Begue, Jr., and S. E. Oden. As a team, these three tool pushers run Texaco's most prolific domestic field (it covers an area roughly six by eight miles). More than 200 men are on the job there.

"Oil flows out of here just about as fast as we can find it," says "Red" Brewer. "We have eight drilling rigs working now; three are ours, five are under contract. Those crews don't waste time. As soon as one well is completed, they're off and drilling somewhere else."

EVERYTHING that comes into the area—from a can of beans to a drilling rig as big as a good-size warehouse—has to get there by water because there are no roads.

Amphibian planes shuttle between the fields, district headquarters, and New Orleans, with supervisory personnel. In emergencies—and they are frequent—these planes carry urgently needed supplies or small pieces of equipment.

Drill pipe and casing used to penetrate the Gulf's salt domes come in 30- and 45-foot lengths. A derrick's traveling block can be nearly the size of a small automobile. The derricks themselves perch atop barges that are towed to the drilling site, sunk in the shallow waters, refloated when the well is completed, and towed to the next location. In many cases, special channels must be dredged to get barges like the one pictured on Pages 4-5 into position.

At Caillou Island, one rig located behind a sandy coastal island is drilling a directional well. The hole, drilled at a predetermined angle rather than perpendicular, will be bot-tomed deep underground over half a mile out in the Gulf.

Each drilling rig has its own supply launch and, every other day, these launches plow inland through the shallow bays and bayous to pick up supplies and equipment ordered by radio from the main warehouse in Houma. Refrigerated

barges bring a week's supply of food at a time to the field kitchens at the camp sites, and drinking water has to be brought in by special barge. The sites themselves—groups of buildings containing a radio room, foreman's office, dining hall, and crew's sleeping quarters—stand over the water on wooden pilings.

"I'd spend my life on a boat getting from one place to another," says tool pusher Begue, "if we didn't have our radio setup. Somebody is always looking for me at both ends and in the middle of this field at the same time, and it takes time to get around in one of those 'beetle boats.'"

Drilling is only one phase of Caillou Island's complicated operations. The field has more than 350 producing wells which are produced into 19 tank batteries, ranging from three to 51 wells per battery, many of them connected by walkways which total about 21 miles. Pipe lines from each well run into a central manifold, bristling with dials and gauges. Pumpers carefully control the flow from each well to keep it within the assigned daily allowable production figure.

The accumulation of crude oil from each battery is funneled through an underwater pipe line system, laid beneath the waters and marsh bottoms, into a tributary of The Texas Pipe Line Company on shore. From there, the oil is carried farther inland to the main storage tanks and, eventually, to Texaco's refinery at Port Arthur, Texas.

A pumper's life is a rather solitary one, but he has occasional visits from the field's maintenance crews who come chugging up in blunt-nosed boats, called "luggers." Headed by a gang pusher, the roustabout crews handle a multitude of mechanical jobs: removing paraffin that forms on the inside of the tubing, because the oil temperature drops as it nears the surface; installing separators to separate the natural gas that is brought up along with the crude oil; repairing damaged, worn, or broken sections in the field's underwater pipe lines; laying new lengths of pipe line along the walk-

ways to tap new wells as they are brought in, and beneath the bay waters to carry more oil inland.

At Caillou Island the natural gas is separated from the crude oil and piped into one of the field's three gas compressor barges. These huge, semipermanent structures are equipped with giant compressors, having a total of 7,920 horsepower, which apply enough pressure to the gas to force it through the pipe line to the Paradis Gasoline Plant, over 50 miles away. These three barges can handle some 52 million cubic feet of gas daily, and it's the job of the compressor operators to see that the equipment operates properly so that the gas is kept moving along the line to the Paradis Gasoline Plant where the natural gasoline, butane, and propane are extracted and sold.

Some of the Company-owned barges working at Caillou Island are workover rigs. Often, workover crews come in and coax waning wells into more production. Gas injection is one of the more common methods: natural gas is separated from the crude oil and reinjected into the annulus between the casing and tubing, forcing oil up to the surface.

For the most part, over-all operations at Texaco's nearby Lake Barre field follow the same general pattern described for Caillou Island, but on a somewhat smaller scale. Lake Barre was the Company's first oil discovery under the LL&E contract (it came in during 1932, a year before Caillou Island's first strike), and Lake Barre Unit 44 Well Number 1, Texaco's deepest producing well in the world, reaches over three miles down for oil.

During the 1940's, production at Lake Barre dwindled to a discouragingly low level. Then, instead of moving north, which was the direction in which production had been developing, geologists turned south and a new producing area was discovered. Today, Lake Barre is second only to Caillou Island in daily production; the stretch of about one to one-and-a-half miles that separates the

Nerve center of Caillou Island's complex drilling and production operations is a cluster of buildings, far left, containing the tool pusher's office, radio room, dining hall, and sleeping quarters. From this island camp site, radio system keeps the tool pusher, left, in direct contact with the field's battery pumpers and drilling barges, such as the steam-powered rig silhouetted at twilight, in photo at right.







During Summer and Fall, the weather

two fields has yet to be developed, but oil may be there, too.

Three tool pushers, Porter Castleberry, Herbert J. Carlos, and J. T. Dick, supervise over 170 Company employees and drilling contractors' crews who work the Lake Barre field where many of the 97 wells are deep and under high pressures. One of the rigs now working at Lake Barre, the drilling barge *Rhodes*, is the biggest in the Company fleet (it was used to drill Unit 44 Well Number 1). Her derrick is 186-feet tall and the rig can pull pipe in four sections (120 feet) instead of the usual three (90-foot) lengths. "In fact," says Herb Carlos, "everything on her is about the largest they make."

The deep, high-pressure wells are always dangerous, although they are equipped with an intricate system of blow-out controls. Teamwork is needed, in addition to mechanical help. The roughnecks constantly check the return flow for gas bubbles or other tell-tale signs of growing pressure.

One factor that affects every phase of these operations is the weather. From the first of June to mid-November, the whole coastal area grows tense. Roughnecks search the horizon for signs of dark clouds; and even veteran fishermen sniff the air more than usual. This is the hurricane season.

Many of the fields lie open and unprotected from the "small, tropical disturbances" native to the Gulf of Mexico,



Breaking "stem," or drill pipe, aboard the barge Gibbens, left, roughnecks wait for excess water and mud to run off — a standard procedure in the early stages of tidelands drilling. The intent driller, above, is responsible for all activity on derrick floor.

er creates a special set of problems for drilling crews

which often whip up without warning and may take off in any direction. These storms can play havoc with costly equipment. And there are no weather stations—only an occasional report from a fishing boat, ship, or offshore rig—between the fields and the Gulf's great air mass that spawns these storms. In an effort to obtain better weather information, Texaco some years ago enlisted the services of a consulting meteorologist who has turned his knowledge of the Gulf's capricious weather behavior into a valuable business venture. He has proved quite helpful.

Winds play a large part in these operations, particularly transportation. Some of the drilling barges ride low in the

water, and winds over 30 miles an hour might kick up waves that could swamp them. Wind direction, too, makes a difference. A north wind can blow the water almost completely out of the area's shallow sloughs and lakes, leaving the barges stranded high and dry. A strong southwesterly wind, on the other hand, can whip up waves high enough to flood the rigs. And there is always the threat of the thick bayou fog, so dense the bow of a launch is invisible from the cabin.

But these annoying, sometimes dangerous, conditions can be found almost anywhere that men look for oil; it's just that things seem more concentrated where there is a lot of water, a lot of problems, and a lot of oil. ●

ASPHALT'S THE ANSWER

*It gives the taxpayer more
and better roads for his money*



FROM THE VERY FIRST YEAR Americans began using automobiles in quantity, thanks to the mass production miracle which put an auto within most people's reach, the nation has had the problem of providing enough good roads for its motorists.

Fortunately, almost from the start petroleum asphalt has been available—and over the years, this versatile material has proved to be the most economical of any paving product. Now, with the Federal Government launched on its \$40 billion interstate highway system, the advantages of asphalt take on new importance: by using asphalt, the nation can keep paving costs to a minimum.

The need for adequate roads was not felt too widely at the beginning of the century, because in 1900 there were no trucks or buses, and only 4,000 automobiles were sold in the entire country that year. Less than a decade later, though, over 180,000 automobiles and more than 6,000 trucks and buses were being sold annually. As the number of car owners kept growing, our new mobility began to clog in a bottleneck of inadequate highways. It became obvious that the country would need more and better roads if we were going to get the most good out of the auto.

For Texaco, this need for more highways meant an important market for its first product — petroleum asphalt. It went into the market in 1903 after a group of sharp-eyed oilmen in Texas had noticed that a black residue remaining after the refining of certain crude oils bore an interesting resemblance to asphalt. With preliminary tests and experiments, they found it not only looked like asphalt, it *was* asphalt. And a purer grade, too, than lake asphalt, which contained quite a bit of foreign matter. Today, petroleum asphalt has almost completely supplanted natural lake asphalt—because of its relatively low price as well as because points of manufacture are closer to markets; and currently the Company is one of the world's largest asphalt producers.

Although asphalt is one of petroleum's most versatile products, highway construction remains its principal use. In the early 1930's it gained great popularity. Today, it is America's leading highway building material. According to the latest Bureau of Public Roads figures, over 94 per cent of all paved mileage constructed by state highway departments is surfaced with asphalt.

About 70 per cent of Texaco's asphalt output goes into the construction and upkeep of state and county roads, and city streets. The remainder finds its way into roll roofing and asphalt shingles, linoleum, floor tile, electrical insulation, waterproofing and rust-preventive coatings, automobile battery boxes, telephones, rubber tires, garden hoses, and a long list of other products.

Natural asphalt was a popular surfacing material in large cities before the automobile arrived. Asphalt from Trinidad's Pitch Lake was used in 1876 to put down the first pitch pavement on Pennsylvania Avenue in Washington, D. C.

But the high cost of importing natural asphalt, and lack of proper storage facilities once it got here, put it in a price bracket beyond the financial reach of most communities. It was used almost exclusively for the heavy-duty requirements of big city streets, where its resiliency made it an ideal surface to withstand the punishment from steel-rimmed wheels and solid rubber tires.

When the automobile came along, and brought with it a speed and travel range to stagger the buckboard owner's imagination, the nation's rutted dirt roads and narrow, twisting highways became obsolete almost overnight. The motorist, who could make better than 12 or 15 miles an hour, lost patience with choking Summer dust and bogging Winter mud he had endured for years in his horse and buggy. What was needed was a low-cost, long-lasting surfacing material. Concrete roads were too expensive to build for most community budgets.

To meet the increasing demands for Texaco asphalt, the Company operates the world's largest refinery devoted solely to the manufacture of asphalt at Port Neches, Texas. Five other plants — at Lawrenceville and Lockport, Illinois; Casper, Wyoming; Marcus Hook, Pennsylvania; and Providence, Rhode Island — provide customers with high-grade asphalt for a number of uses.

From Port Neches, asphalt is transported by Texaco tankers and barges to storage terminals along the East Coast from Florida to Connecticut, or to Company-leased storage depots strategically located along the Cumberland, Ohio, and Mississippi Rivers which serve Midwestern markets. One barge, operating out of Bayonne, New Jersey, delivers from four to five million gallons of asphalt annually to customers in New York harbor and in Connecticut.

Tulsa, Dallas, Buffalo, New York, Houston, Chicago, El Paso, Philadelphia, and Boston all have constructed over one million square yards of Texaco asphalt paving. (The Company does not sell roads. It sells asphalt to road building contractors, who combine it with other materials to produce the ultimate road pavement.) New York's La Guardia Field used over three million gallons of Texaco asphalt in the construction of runways, parking areas, and some of the hangar aprons.

Motorists on the new Providence and Philadelphia bypass systems ride on Texaco asphalt; so do visitors to Colorado's spectacular Air Force Academy and sight-seers along Virginia's Skyline Drive. New Jersey and New York motorists on the Palisades and Garden State Parkways hum along on asphalt bought from Texaco. Recently, several sections of the Franklin Delano Roosevelt Drive, aside New York's East River, were refinished with Texaco asphalt.

But it is within the framework of President Eisenhower's National System of Interstate and Defense Highways, one of the most ambitious undertakings in the realm of public works, that asphalt has come into its own. Involving an

expenditure of about \$40 billion, the new highway system will lace the entire country with 41,000 miles of expressways and secondary roads. About one-third of the project has been completed, but most of this mileage represents already existing highways that have been integrated into the national system—such as the Ohio, Connecticut, and Pennsylvania Turnpikes and the New York State Thruway.

Although the Federal Government is putting up 90 per cent, and the states 10 per cent, of the funds required to build this new interstate network, actually the motorist is bearing substantially all of the cost through Federal excise taxes imposed on automotive and petroleum products — a large part of this as taxes on gasoline. The motorist now pays four cents Federal tax on each gallon of gasoline purchased, and there are proposals in Washington to raise this to four-and-a-half cents. If all Federal highway user taxes collected went into the highway program, as they should, there would be no need for increasing the gasoline tax. (Inefficiencies, too, have raised costs far above original estimates. See "Rising Costs Delay Superhighway System," Page 17.)

More and more, asphalt is becoming the predominant paving material on each additional link in our chain of highways. This move has been made not only with an eye for economy, but also because asphalt is the best material for the job. Motorists have long been familiar with asphalt's smooth-riding, glareless, skid-resistant features. State highway administrators like asphalt's heavy-duty performance. It meets all kinds of weather, durability, and safety tests, and costs less to construct and maintain — a major consideration. The entire New Jersey Turnpike was surfaced with asphalt at a saving of \$50,000 a mile, or over \$5 million for the entire job.

The Richmond-Petersburg Turnpike in Virginia is another example of asphalt's growing popularity. When the original bids were opened, the Turnpike was divided into five sections, and bids for both asphalt and concrete surfacing were accepted for the first two sections. Asphalt won. By the time Virginia was ready to take bids on the three remaining sections, only asphalt bids were accepted because of its proved economies.

In every state, the citizen has a potential influence on the economy and quality of the roads his state government builds — an influence that can and should be exerted through communication with his state highway commission. For Texaco stockholders and employees, this means a unique chance to boost one of the industry's products while they insure themselves of the best possible roads.

America today enjoys the highest standard of living of any country in the world. It's no accident that we also have one of the world's finest transportation systems. The Interstate and Defense Highways will help strengthen that position even more, and asphalt — much of it Texaco's — is literally paving the way. •

SCHOOL FOR UN-UGLY

Now international business executives are training to improve this

WHEN AMERICAN YOUNGSTERS play games involving heroes and villains and different nationalities, the American is almost invariably the "good guy." The foreigner is not necessarily bad; it's just that we tend to take our goodness for granted.

This is not always the way people in other countries look on us, as American business executives have found in their dealings overseas since World War II. As our involvement and responsibilities in foreign areas have grown, the United States businessman often has been surprised to learn that the rules of the game have, in many places, been switched. Suddenly, he is chagrined to find, the American is a semi-villain—not particularly liked, frequently misunderstood, often unwanted. The image of America and Americans in a disturbingly high percentage of overseas areas is not a pleasant one.

Since the Fall of 1959, American executives enrolled in an intensive four-week course conducted by the Business Council for International Understanding, in Washington, D. C., have been working to improve that image. The course is designed to do something positive about the vital need for better preparation of Americans responsible for foreign business relations. The program not only acquaints businessmen with the social, political, and other conditions in countries in which they will work, but also tries to help them understand people in foreign countries; to see how their views differ or coincide with those of Americans, and why.

At the end of the war, the United States began assuming unaccustomed international responsibilities, both political and economic. At the same time, American business began a new and rapid expansion overseas, in response to economic opportunity and necessity. Both Government and industry were rudely awakened, early, to their unpopularity in some foreign areas.

Because foreign attitudes toward us can weaken or strengthen the position of Government and business, President Eisenhower in 1955 requested an influential group of business leaders to meet and think through what actions industry might take to help remove misconceptions abroad and help build positive understanding. One result of this meeting was the organization of BCIU and, four years later, the introduction of its overseas training program.

The BCIU's Training Program for Overseas Business Executives, implemented through The American University's School of International Service, was begun last Fall to strengthen company foreign operations. The program was developed by the BCIU Committee on Training, headed by Texaco's Board Chairman, Augustus C. Long, who

also serves as a member of the Council's Policy Board.

The Council's program enjoys the full cooperation of the Department of State and other Government agencies. Members from these agencies often lead discussions during the run of the course, and make themselves available for private consultation with businessmen interested in obtaining more detailed information about their selected areas.

The wisdom of President Eisenhower's request was underlined by Vice President Nixon, who witnessed violent anti-American demonstrations throughout his tour of Latin America in 1958. Conferring with several BCIU members in Washington shortly after his return, the Vice President warned, "If we are to meet effectively the total effort the Communists are making in the non-military area . . . our efforts must be total . . . this means not only Government, diplomatic, military, and economic teamwork, but it means that the great private segment in our economy—which, in many cases, makes the major impact abroad—must take the major share of this responsibility."

THE RESPONSIBILITY Mr. Nixon spoke of is a great one. A wave of nationalism is sweeping through many foreign countries. The American businessman overseas, possibly unaware and probably unprepared, is in danger of being engulfed. In a distressingly typical situation, open distrust, increased taxation, complicated controls, and excessive social responsibility are heaped on his and his company's shoulders before he knows what has happened.

With the possible exception of Western Europe, a growing number of foreign governments have shown that they are willing to risk economic chaos under nationalism rather than continue ventures supported by American capital and technical skill. Often this attitude is due to Communist activity; the Kremlin is always ready to move in and support a nationalistic group in its battle for "freedom" against "capitalistic oppressors." But too often the attitude is due to American inactivity—or indifference.

With few exceptions, the American businessman has operated in foreign countries honestly, diligently, fairly, and with the best intentions. But it is usually the exception that makes the headlines. Some businessmen, either through naiveté or laxness, operate with aloofness and a parochial North American outlook that disregards local customs and problems. They often believe that, because they are citizens of the United States, they are well-liked automatically.

Ten Texaco executives have attended the four BCIU courses offered so far. These men, together with representatives from other American corporations, each spent a total

Y AMERICANS

his nation's image in foreign areas

of six weeks improving their knowledge of the customs and language of the countries with which they will be dealing. (The course comprises a basic four-week program, and an optional two-week language study for those who want it.)

They learned a great deal about their own country, too. They were briefed on overseas views, heard expert observations on foreign assessment of the United States; studied our foreign policy, the image of America abroad, the U. S. Mutual Security Program. They were told of current trends in international communism; listened to talks on American civilization, and discussions of cultural relations, communications, and sociological change. A limit of 25 trainees to a class enabled each man to receive careful, personalized guidance.

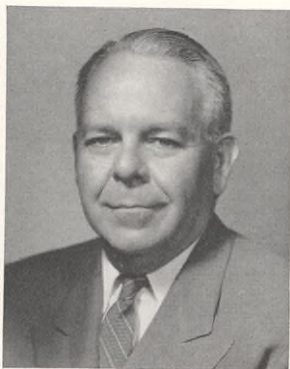
A special program is offered to wives, whose attitudes and behavior can greatly influence the success of their husbands' work in foreign areas. During the course's final week, they are given orientation talks that cover a variety of subjects with which they will have to deal. They learn why the program is needed; discuss America's foreign policy; analyze cultural differences around the world; improve their knowledge of American institutions—political, social, economic, and cultural.

Through invitations to some of Washington's many international gatherings, the wives learn something of the role of an international hostess. Chats with women who have returned from abroad, or who are familiar with the areas to which they will be going, give them valuable tips on how to establish a household, make social contacts, entertain, contribute to community life.

Obviously, the BCIU program cannot give a man and his wife the answers to all the problems they will encounter while they are working and living out of the country. What it attempts to do is start them thinking the way the foreigners with whom they will be dealing think. As one participant put it, "This training has really started us talking the language, both literally and figuratively, of those with whom we must deal in our overseas assignments. It could mean the end of the overseas misfit."

Last Fall, the Overseas Training Program was initiated to help American executives function more effectively in work with foreign countries. Top, during an impromptu seminar, four executives exchange ideas and suggestions about a problem they have been assigned to solve. Wives, center, join the group during the final week for briefing and discussion sessions. Right, language courses are a valuable tool; cover basic conversation necessities.





WILLIAM G. COPELAND

ELECTED REFINING VICE PRESIDENT

Election of William G. Copeland as Vice President in charge of the Domestic Refining Department, effective March 1, was announced by Board Chairman Augustus C. Long.

Mr. Copeland, former General Manager of the department, succeeds Frederic H. Holmes, who has retired under provisions of the Company's pension plan after 32 years' service with Texaco.

The new Vice President, after graduating from Rice Institute with a degree in chemical engineering, joined Texaco in 1927 as a Chemist at the Port Arthur Plant laboratory. He served as Assistant Superintendent at the Lawrenceville, Illinois, Plant; and as Superintendent at the Sunburst, Montana, and Westville, New Jersey, refineries.

In 1954, Mr. Copeland was named General Superintendent of the Port Arthur Plant. Two years later, he was promoted to Operations Manager in the Refining Department, and was appointed General Manager in 1957.

DOUBLED OIL SUPPLIES SEEN NEEDED BY 1975

If the United States hopes to raise living standards and compete successfully with communism, it must double its supplies of petroleum by 1975. That was the main point of a recent address given by Texaco Vice President Kerry King before the Alumni Association of New York University Heights Colleges.

"Russian crews are working day and night with the full economic and social might of the government behind them," said Mr. King, speaking as Chairman of the American Petroleum Institute's Committee on Public Affairs. "By 1965, oil and gas will become the primary suppliers of energy in the USSR, replacing coal."

Already, Russia has given top priority to oil and gas production in its plans for the next seven years. "Only with assured supplies of abundant, low-cost petroleum energy," Mr. King said, "can we even hope to hold our own in the Cold War."

Economic experts believe America's energy needs will nearly double in the next 15 years; domestic uses alone will require twice as much petroleum as is now provided. Although imported oil will be increasingly required to meet this demand, the U. S. must also develop its domestic reserves to their full capacity.

"This is an especially formidable challenge," Mr. King pointed out, "because of the very nature of the petroleum industry. We cannot increase our productive capacity simply by buying more plants, or by hiring more people . . . we have to find more oil and gas, and we have to explore for it against odds which would stagger people in most lines of business. Eight out of nine exploratory wells in this country are bone dry. Only one in 49 finds a commercially profitable pool."

Even with those odds, America has developed an unfailing supply of oil,

gas, and petroleum-based products. This has been possible because of free competition. The same competition, according to Mr. King, "that spurred oilmen to take greater risks in exploration; to develop quicker and cheaper means of transportation; to perfect refining methods; to innovate new and better products; and, finally, to market these products at the lowest possible price, with the consumer passing judgment on the result."

FUELS PROPOSAL HOLDS END-USE CONTROL

A free market in which consumers may choose according to price, quality, and convenience has been the very foundation of our economic system. Such proposals as the new national fuels policy not only are unnecessary, but also are a threat to that system.

Currently, certain groups, including representatives of the coal industry, are promoting the notion that the country faces the threat of running out of its most important energy source—petroleum—and that controls on its consumption are needed.

During the last session of Congress, a group of U. S. Senators proposed a national fuels policy through a resolution to establish a Joint Committee to ". . . give consideration to . . . the optimal allocation of the various fuels and energy resources to their most productive economic uses, including . . . the geographic distribution . . . and the development of balanced and interrelated regional fuel economies." In other words, end-use control by the Government.

But the fact is we are definitely not running out of petroleum. Oil and natural gas reserves are higher today than ever before in our history.

At present, estimated proved reserves stand at about 31 billion barrels of crude oil and 254 trillion cubic feet of natural gas. And these are just minimum estimates of the industry's

current petroleum inventory known to be in the ground. The Geological Survey estimates total oil reserves to be about 300 billion barrels, and many sources—vast reserves of oil-bearing shale, for example—haven't been tapped yet. The same Survey, while proving that petroleum reserves are rising, records a steady decline in coal resources (1.7 trillion tons of coal were economically recoverable in 1918; by 1958, only 906 billion tons).

Just last year, the coal industry itself vigorously opposed controls of any sort. In a letter to the Senate Interior Committee, the National Coal Association said: "Any effort to allocate a specific amount of energy . . . means control in all of its phases by the Federal Government."

END OF TAX CREDIT FOR DIVIDENDS SOUGHT

Six years ago, in recognition of the fact that dividend income is taxed twice—once as earnings of the paying corporation and again when it is received by stockholders as dividends—Congress introduced in the income tax laws provisions exempting the first \$50 of dividends received in a year (\$100 for a couple, if each draws at least \$50 in dividends) and allowing as a credit against taxes four per cent of the balance of dividends received during the year.

It has been proposed that Congress eliminate the four per cent credit allowance. In fact, such a proposal passed the Senate last year, but was dropped in the process of settling differences in legislation passed by the House and the Senate. Undoubtedly, the proposal will be raised in the Senate again this year.

By adding provisions in 1954 to give some slight relief from double taxation of dividends, Congress took a step in the right direction; to repeal the credit provision now would reverse this. It should not be done.

RIISING COSTS DELAY SUPERHIGHWAY SYSTEM

With only one-third of the nation's ambitious \$40 billion interstate highway building program completed, complaints of waste and poor planning are pouring into the special subcommittee of the House Committee on Public Roads. Disputes have arisen over routes chosen for the superhighways; high prices have been paid for right-of-way property; excessive use of expensive consulting engineers has been charged. One major fiasco was the construction of bridges and overpasses two feet too low for the truck-mounted Atlas missile to clear. Raising already completed structures and building new ones two feet higher will add about a billion dollars to the cost of the program.

Congressional investigators are busy sifting through charges of other expensive mistakes that may slow completion of the 41,000-mile network of highways far beyond the target date—1972. Among them:

In little over a year, a bridge approach on one highway section has sunk 12 feet. Estimated cost of reconstruction: one million dollars.

If built, a dam proposed by a Federal agency would promptly flood a \$10 million portion of a newly constructed highway section.

Last year, motorists were hit with an increase costing them an additional \$500 million a year in gasoline taxes — which provide the major share of funds for the highway project. Now, the Administration is asking for another half-cent-a-gallon tax hike, a proposal that would place an added unfair burden on motorists. One reason: only two-thirds of last year's special taxes collected on motorists went into the highway trust fund. The other third (probably adequate to finance the road program deficit, if costs were kept in line) was sidetracked into the U.S. Treasury's general fund.

WITHHOLDING FROM DIVIDENDS PROPOSED

The Internal Revenue Service has been conducting an aggressive campaign to remind shareholders of the Federal requirement that dividends be reported. Some members of Congress, however, do not feel that the Service's campaign will result in full reporting (the Revenue Service has estimated that \$1.4 billion of dividends are unreported annually).

The Senate Finance Committee staff is drafting legislation to require corporations to withhold income tax from dividend payments. Three previous attempts (in 1942, 1950, and 1952) by the House of Representatives to pass a dividend withholding law were blocked by the Senate Finance Committee.

Each time, the Committee pointed out that withholding would place too great an accounting burden on corporations, and that taxes withheld from low dividend-income taxpayers would have to be refunded.

It is now argued that ways have been found to overcome most of the major objections in the past. Under the present proposal, the corporation would withhold a specific percentage (a flat 20 per cent is proposed) of the total dividend payment and forward it to the Internal Revenue Service. A simple formula, applied on the individual's income tax return, would tell him how much tax was withheld, and what his total dividend was before withholding was done by the corporation.

There is growing support in Washington for some withholding on dividends in order to collect the estimated \$300-400 million in taxes now escaping collection. If Congress requires withholding, it should make every effort to enact a law imposing only minimum additional burdens on the corporations which would withhold the taxes and pay them over to the Internal Revenue Service.

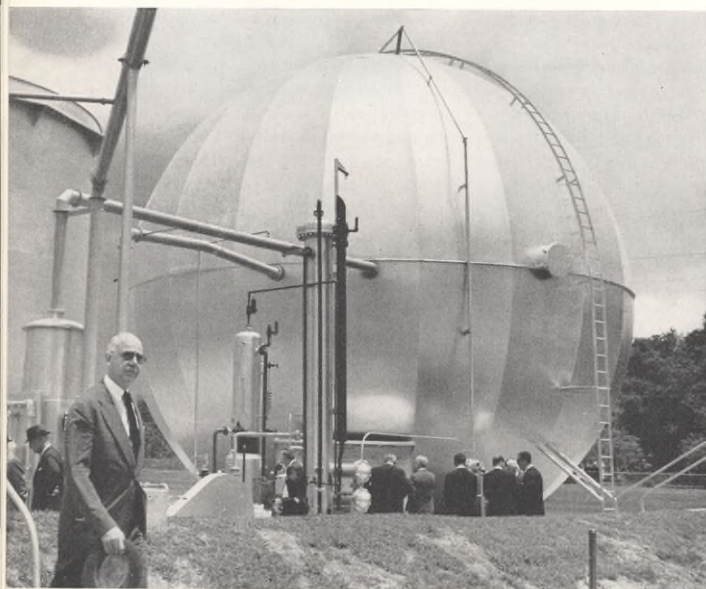
DIRECTORS VISIT SOUTHWEST

Among the questions asked by stockholders at Texaco's Annual Meetings in past years is this one: just how much of the Company's business do members of the Board of Directors actually get out and see for themselves?

The answer: quite a lot. In fact, in just the past two years Texaco Directors have visited and inspected Company operations from Canada to Trinidad, Boston and New Orleans to Los Angeles and Puget Sound. This Spring, Board members combined their attendance at the Annual Meeting of the Stockholders, held this year in Houston on April 26, with an inspection of the Houston-Port Arthur area.

The photographs on these pages show the Directors observing, listening, questioning, and absorbing many of the complex activities in one of the most important areas of the Company's operations.

During the tour on April 25 and 27, the Board was briefed on operations throughout the Southwest and particularly within the Houston-Port Arthur



area; went through the newly opened 16-story addition to the Texaco Building in downtown Houston, saw the Electronic Data Processing Center, and visited offices there of the Domestic Producing and Refining Departments, the Domestic Sales Department's Southern Sales Region, and the Comptroller's Department. Other highlights of the inspection tour:

A visit to the Company's Houston Sales Terminal and other marketing installations, as well as offices of The Texas Pipe Line Company; a flight from Houston to Port Arthur to see Texaco's largest refinery and, while there, to look at a model of planned new research laboratories; a briefing on the complexities of pipe line transportation, and research and technical facilities at the Port Arthur Plant and nearby Port Neches Works; a tour of the Port Neches installations of three Texaco affiliates: Jefferson Chemical Company, Inc.; Texas-U. S. Chemical Company; and Neches Butane Products Company. This trip and those that have been made in the past help give Texaco Directors a broad first-hand knowledge of Company operations.



Opposite page: Director Langbourne M. Williams leaves a battery of storage tanks at Houston Sales Terminal. In the background, examining a completely automated vapor recovery system, are other Directors and Company officers. At right, Chairman of the Board Augustus C. Long alights from chartered bus used to take the group around Houston area. Group's schedule was tight, accounting for driver's apparent concern with time. Above, members of the inspection party are shown a scale model of new research facilities planned for construction in the near future at the Port Arthur Plant. At left, the group is impressed by the good housekeeping at storage facilities for packaged goods in the Houston Sales Terminal.

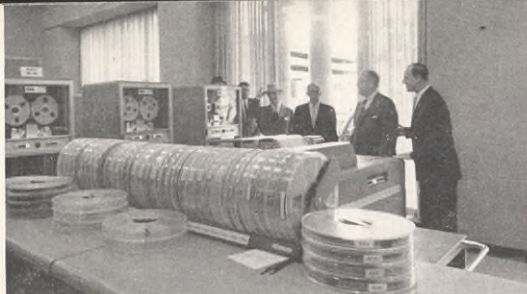
DIRECTORS VISIT SOUTHWEST



In the auditorium of new Houston office building, above, group was briefed by Senior Vice President C. B. Barrett, chief executive officer at Houston, on Company's growth and operations in the Southwest. Above, right, Chairman Long makes a point to members of the Board.

Work went right on as usual during inspection visits. Right, an employee fills tank truck at Houston Sales Terminal while the visitors make their rounds.





In the computing center on the ground floor of the Houston office building, Texaco has in operation one of the largest electronic computing systems in the Southwest. At left, members of the group watch as the system is put through its intricate paces. Photo at the bottom shows Directors Oscar John Dorwin and Lester J. Norris scanning processed data.

In front of Houston headquarters, below, Directors and executives from left to right are: S. T. Crossland, Vice President, Finance and Economics; C. L. McCune, Director; W. H. Mitchell, Director; J. W. Emison, President, The Texas Pipe Line Company; L. J. Norris, Director; M. J. Epley, Jr., Vice President and Assistant to the Chairman of the Board; Dwight P. Robinson, Jr., Director; James W. Foley, President and Director; Ogden Phipps, Director; Henry U. Harris, Director; Kerryn King, Vice President, Employee and Public Relations; J. S. Leach, Director; Augustus C. Long, Chairman of the Board of Directors; James H. Pipkin, Vice President; R. C. Shields, Director; W. S. Gray, Director; G. W. Humphrey, Director; J. H. Rambin, Jr., Senior Vice President, World-wide Producing; H. T. Dodge, Senior Vice President, World-wide Sales; T. A. Mangelsdorf, Senior Vice President, World-wide Refining; Oscar John Dorwin, Senior Vice President and General Counsel, and a Director; Langbourne M. Williams, Director; C. B. Barrett, Senior Vice President and Director; R. R. Kibbe, General Sales Manager, Southern Region; R. G. Rankin, Comptroller; Wallace E. Avery, Secretary.



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C/S

Oil producers never can be sure where they will hit oil, but they have learned to gauge certain geologic signposts as promising. One is the salt dome. Where salt domes occur, the producer's chances have historically been better. Beneath the Gulf Coast, domes like the one diagrammed below are common; and about one-third of Texaco's domestic production comes from discoveries on salt dome structures in the area described in "Bays, Bayous, Barges—and Oil," beginning on Page 4 of this issue. The domes don't eliminate the risk of a dry hole, but they are welcome signs to the oilman. Geologists believe they were caused when great masses of salt left in the earth by the evaporation of inland seas, numberless years ago, were pushed up through sedimentary rocks—faulting the rocks and creating traps in which petroleum has accumulated.

