THE TEXACO STAR

SUMMER 1948


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THE TEXACO STAR

Summer, 1948

VOLUME XXXV NUMBER 3

CONTENTS

A PUBLICATION OF THE TEXAS COMPANY

For Stockholders and Employes

W. S. S. Rodgers, Chairman of the Board of Directors; Harry T. Klein, President; M. Halpern, B. E. Hull, J. S. Leach, R. Ogarrio, C. E. Olmsted, R. L. Saunders, James Tanham, and Torrey H. Webb, Vice Presidents; Oscar John Dorwin, General Counsel; W. G. Elicker, Secretary; L. H. Lindeman, Treasurer; Ernest C. Breeding, Comptroller, 135 East 42nd Street, New York 17, New York . . . Published by the Public Relations Department, Philip C. Humphrey, Manager; Wilfred B. Talman, Editor, Company Publications Division; J. Lawrence Filson, Assistant Editor; Ellis Prudden, Martin T. Gengerke, Associate Editors. Printed in the U. S. A.

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Brief AND TO THE POINT

★ Transportation's growth in the past 50 years is well illustrated by these comparative statistics covering New York City, which this year is observing the Golden Anniversary of the consolidation of its five boroughs into Greater New York: in 1898 there were 436 miles of streets—mileage today is 5,701; then, horse-drawn cars provided most local transportation—now, electric subways, motor busses, and taxicabs do the job; 50 years ago there were no motor vehicles registered—today, there are 837,235 . . . and in addition, today there are 1,986 traffic policemen in contrast to none in 1898.

★ An entirely new type of roller bearing lubricant has been developed by The Texas Company for use on locomotive, passenger, and freight car journals. Called 979 Roller Bearing Grease, the new lubricant is designed to replace the liquid oils which have proved not only expensive in themselves but boosted maintenance and inspection costs. Texaco's new product will increase time between periodical inspections, and will eliminate need for station platform journal inspections on passenger equipment and intermediate terminal yard inspections of freight car journals and boxes.

★ Driving at unnecessarily high speeds wastes gasoline, which is in greater demand today than ever before. Tests of gasoline consumption at various speeds, conducted by the American Automobile Association, show how wastage increases with speed: a car which gets 18.7 miles to the gallon at 30 miles an hour, gets only 15.8 miles to the gallon at 40 miles an hour, 13.3 miles at 50 miles an hour, 11.2 miles at 60 miles an hour, and 8.2 miles at 80 miles an hour. In addition to driving at moderate speeds, you can also conserve gasoline by using your car only when necessary, by avoiding excessive choking and "jack-rabbit" starts, and by keeping your car in good mechanical condition and having it serviced regularly.

THE COVERS

★ The Front Cover was painted in water colors and shows Texaco's Refining Department terminal at Bayonne, New Jersey. Bayonne Terminal is the Company's largest terminal on the Eastern Seaboard. In common with other Texaco terminals, it is a vital link in the transportation and distribution of Texaco products.

Texaco tankers, like the two in the painting, bring cargoes of refined products to Bayonne from The Texas Company's refinery at Port Arthur, Texas. Bayonne Terminal, in turn, ships Texaco products by rail, truck, and barge to other Texaco distribution points.

The Bayonne Bridge shown in the background spans the Kill van Kull and provides a route for vehicular transportation between New Jersey and Staten Island.

★ Pictured at the left are four familiar symbols of transportation: airfield windsock, railway semaphore, bell buoy, and highway marker. They impart necessary information to airplane and ship pilots, locomotive engineers, and car and truck drivers. Each represents the need, in all transportation, of traffic controls.

TRANSPORTATION —our great achievement

By W. S. S. RODGERS

Chairman of the Board of Directors

TODAY, our ability to travel wherever we choose in this country, whenever we want to go, is taken for granted. Similarly, sending goods to, and receiving them from, any part of the land presents relatively few problems. I sometimes wonder, however, if we tend to accept too complacently the vital rôle transportation plays in our lives.

Your Company, along with others in the petroleum industry, is intimately associated with transportation. This is primarily so because The Texas Company, in the course of a year, helps supply the many billions of gallons and millions of pounds of petroleum products that smooth the way and, to a very large extent, furnish the power for the many different modes of transportation available in this country.

In order to do this, your Company—the same as other oil companies—has made a direct contribution to transportation itself. Tank ships, railroad tank cars, tank trucks, pipe lines—all these forms of oil transportation, and many others besides, stem from an industry which has grown to its present stature serving transportation.

Right at this time, when the petroleum industry is in the midst of supplying the greatest demand in its history for both crude oil and finished products, it is timely to review—as we do in this issue of THE TEXACO STAR—the growth of transportation in this country and the relation of petroleum to this growth.

Transportation is one of the great achievements of our age. The part petroleum plays in fueling and lubricating American transportation may be expected to continue to grow apace with the further expansion and improvement of transportation facilities.

America

PART I

They're always moving on; never satisfied

BEHIND them they left the past. They fled from slavery, from tyranny, from persecution. They gambled on tomorrow and reckoned the future on the throw of chance.

In their pilgrimage they joined the historic flow of people moving to places beyond the known horizon.

They came to America from England and France, from Spain and the Lowlands and Sweden. The future was only a promise.

Behind them was the sea, ahead the New World. Beyond today's clearing was the forest of tomorrow. And beyond the forest were the mountains and the oceans of grass flowing under the wind into the future.

* * *

"Now, Son (the Old Man tamps his pipe gently and thoughtfully), when our people came to America they just flexed their muscles and pushed everything out of the way.

"They shot a big fist through the forests, hurdled mountains, and leaped the rivers. They got restless with coast and tideland, and they up and moseyed along. They went West any way they could.

"Why, Son (the Old Man looks into the dubious

. . . on the go

eye of memory and puffs softly on his pipe), they walked, rode horses, drove pack mules, rolled big wagons, floated rafts, and paddled canoes.

"Just wasn't a thing our folks couldn't do when they got that old urge to travel. And, man and boy, they sure loved to head out for parts unknown. Take Dan Boone and Kit Carson, or Zeb Pike and Lewis and Clark. Take Mike Fink or Paul Bunyan. . . .

"Always restless, Son, always restless. Clear the land, build a house . . . then, move on. Always on the move 'til they plumb got spread out all over the place."

Not quite history, and too mellow with affection to be entirely accurate. The Old Man, the eternal voice of time, tells his story to the people, and it comes out part legend, part fact—the fiction of truth.

Part of the legend is the lonely adventurer pushing his way through trackless wastes, hacking his way through dark forests, moving always into the unknown.

They nicked their tale with bowie knives in the bark of the massive forest which spread from the seaboard to the Mississippi.

"I'll tell you, Son, in those days a squirrel could've hopped from Jamestown, Virginia, to Kaskaskia, Illinois, without ever leavin' the trees."

But, long before the romanticized figure of the lonely adventurer set the pattern of American wanderlust, the buffalo had moved with pulverizing tread across the country. Stolidly they nudged their way along the life-giving rivers of grass which joined the seemingly endless ocean of grazing land beyond the Mississippi.

Following some ancient whim, the great herds of buffalo roamed the land, and their deeply-rutted paths left a mark upon the face of the continent.

The buffalo wisely selected courses that were direct and sure. To nearly the same extent that he influenced the trails of the Indians in ancient times, the buffalo influenced the white man's selection of trade and travel routes.

The modern road map is an accidental memorial to the long-vanished buffalo herds.

"I'll tell you what, Son. Next time you and your wife start out on a cross-country auto trip, you just settle all arguments about what routes you want to take by flipping a nickel. Make it a buffalo nickel and let the buffalo decide. A long time ago he decided the routes our people used to get along West. . . ."

The memory of America lives on the highways, and along the moving rivers which drain the sloping watersheds. Deep in the national memory is the story of movement—the living love of travel.

Wherever you reach in the past you touch the vital story of people pushing the frontier to its furthest margin. Out of this urge evolved the intricate web of American transportation.

Many of today's trade and travel routes in this country were selected centuries ago by herds of buffalo that roamed across the land

There were the wagons, the "prairie schooners"—the famous Conestoga wagon. At twilight the wagon train drew up and huddled against the terror of night, the plain, and the ubiquitous Redskin.

Sometimes the men would go to a small pool of strange black stuff which was thick enough to be gathered up on flat sticks. Then they would grease the burdened axles of the wagons. Men who had gone before had told them where to find the precious oil seeps.

After the explorers and the adventurers came the steady, glacier-like movement of the pioneers.

Migration in America came in three waves. First, there were the trappers and the Indian traders. The trails they made were often marked by the name given to a creek, by a notch on a tree, or by a crude grave. Cattlemen followed the intrepid hunters. Lastly, came the farmers. Each, in turn, pushed ever westward.

Wherever they went, they went with a flair that sooner or later drew others along with them. It was not easy. Drought and war cry, chinook and the icy trap of a mountain pass conspired against them. It was no game for the timid.

All the time that Americans were spreading out they were laying down the lifelines of progress, the lifelines of transportation which were to bind this massive sprawl of adventure into a single nation.

"We've broken the land and cleared it, but we're tired of where we are.
They say that wild Nebraska is a better place by far.
There's gold in far Wyoming, there's black earth in Ioway,
*So pack up the kids and blankets, for we're movin' out today!"**

*From "Western Wagons" in *Selected Works of Stephen Vincent Benét*, published by Rinehart & Company, Inc. Copyright 1933, by Rosemary and Stephen Vincent Benét.

PART II

I don't care what we go in, just so long as we get there

"TRANSPORTATION? *(The Old Man pulls at the lobe of his ear as though tugging an answer from his head.) Well, I don't rightly know how you would tell about it in a few words. S'pose, Son, that for the time bein' we say that transportation is simply gettin' from* here *to* there.

"We didn't invent it, but we might just as well have, 'cause we certainly perfected it. We get there faster, cheaper, and a sight more comfortably than anybody on this globe. . . .

"Say, you know, we really taught the Indian a thing or two about gettin' around."

* * *

The Indian took his cue from the buffalo. He moved with the season and traveled in tribes in search of game. He was a fair hunter, but the world's worst farmer. At first he traveled on foot and on rafts and canoes. After the Spanish *conquistadores* came, he used the pony as a conveyance. But the canoe, swift and stealthy, was the special product of the Indian's ingenuity and craftsmanship.

Later the more nomadic Indian devised the travois to transport his meagre belongings. It was simply two poles slung in parallel from a pony's side and joined by skins atop which the goods were carried.

More than 200 years before Columbus discovered America, a great speculative philosopher, Roger Bacon, in England said: "It will be possible to construct chariots so that without animals they may be moved with incalculable speed."

But the American Indian, creator of a distinguished culture, languished far behind the world in transportation techniques.

"What we taught 'em, Son, was the use of the

wheel. Can you imagine it, the Redskin—smart as he was—missed out completely on the wheel."

There were wheels in use in ancient Egypt, and splendid chariots carrying Ulysses and his cohorts flashed across the plain before the walls of Troy. The first wheel to turn on the American earth was wrought by the white man.

The pioneers made up for the Indian's transportation deficiency. Once the wheels started rolling, America didn't stop until it became the greatest of all nations in the art of moving its people and its goods on land, water, and in the air.

When the pioneer went West he posed three problems in transportation which were to determine American progress: he had to get himself and his family—together with household goods, tools, and food—to his new homesite; he had to be supplied from centers of manufacturing and distribution; he had to send back a portion, at least, of the fruit of his toil in exchange for things he needed. Broadly, two main trends developed: personal and commercial transportation.

* * *

During the 1800's, the transportation picture shaped up something like this:

Nearly all produce of the trans-Appalachian region was floated down the Mississippi to New Orleans in flatboats. These had been developed from the primitive rafts which had floated supplies to Lewis and Clark and which had transported the first settlers down the Ohio River to Marietta.

The Mississippi flatboat was a scow which was propelled by poles or drifted with the current. Lacking propulsive power of its own, it was generally broken up at the end of the voyage and sold for lumber. It was not worth while to struggle upstream by poling against the current.

In New Orleans the scow-load of flour, furs, and cured meat was sold and the boatmen started their long trek home. Sometimes they walked back, sometimes they journeyed on horseback in pleasant parties.

The pattern of colonial pioneering gives a clue to this early form of transportation. Settlements sprang up mainly along rivers and creeks, indicating that water transport was the normal mode of movement.

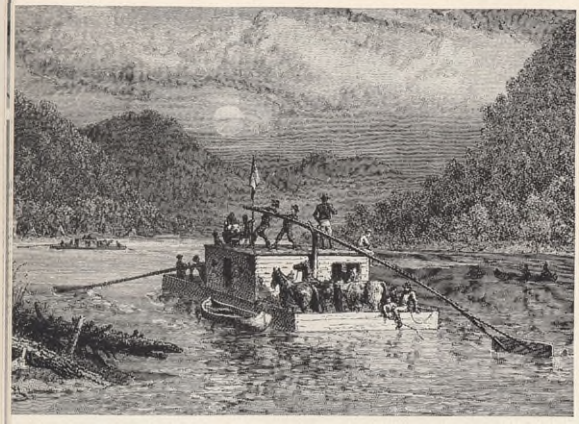
"I'm going to tell you somethin', Son, about how our folks got around in those days. (The Old Man smiles wryly.) Say you wanted to get from Fredericksburg to Richmond. Well, as the crow flies all you'd have to do was cross about 50 miles of Virginia countryside. That would be all right for you, but say you wanted to transport something pretty heavy. Well, Son, you had to send it by water down the Rappahannock and up the James. Two hundred miles in all, m'lad!"

Roads were a caution. Generally, they weren't much more than a slash of clearing through a woods. The burden of "road building" lay on the individual township. Most inland travel was done afoot or astride a horse through stump-dotted forest clearings.

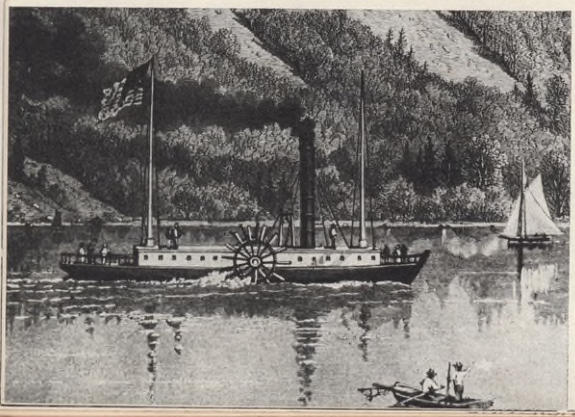
About this time, the forerunner of that symbol

"Across the Continent" was the title of this Currier & Ives print published in 1868. Before the days when the camera was used extensively, drawings such as these recorded America on the go

Westward-bound on the Cumberland Turnpike, "expresses" like this one had to stop at a Government toll gate



Many a flatboat-load of emigrants went down the Ohio. Fulton's *Clermont* (below) made history on the Hudson



of American enterprise—the traveling salesman—made his appearance. He loaded a wagon with articles needed by backwoods settlers, set out across the mountains, and made his way from settlement to settlement with his welcomed merchandise.

By the end of Washington's first term as President a little road building had been undertaken in the older, more populated areas of the seaboard.

Road building received its first great impetus from an idea brought over from England—the privately owned toll road. Just before the turn of the century the famous Lancaster Turnpike had been constructed in Pennsylvania. That toll road started a craze. By the end of 1807 there were 900 miles of toll roads in New York State alone.

The National Road—or the "Cumberland Turnpike," as the people preferred to call it—ran from Cumberland, Maryland, to Wheeling on the Ohio. It was immediately popular and contemporary travelers wrote that it "was crowded."

In 1817, 12,000 wagons arrived at Pittsburgh from Baltimore and Philadelphia.

New York began to lose ground in trade and industry as Baltimore and Philadelphia prospered greatly from the new road. But, goaded by competition, the merchants of New York came up with a scheme which was destined to restore that great community as the most important commercial center in the New World.

"Those New York fellows had their dander up. (The Old Man has that look in his eye again—his pride in the way Americans did, and still do, things always telegraphs his punch.)

"They looked up the Hudson River and then they looked West toward Lake Erie. Why not join the river and the lake? Well, Son, they built the Erie Canal—a mighty fine accomplishment."

The canal was the longest in the world—363 miles from Albany to Buffalo. After eight years a-building, the canal was opened to the public in 1825. On July 4, 1817, in a speech at ground-breaking ceremonies, Governor De Witt Clinton of New York had said, "As a bond of union between the Atlantic and the western states, this canal may prevent the dismemberment of the American Empire."

Railroads and steamships were yet to come. It appeared that canal boats, sailing vessels, horses, wagons, and stage coaches were the final answer to transportation problems—both personal and commercial.

Before the Erie Canal was built the freight charges on a ton of goods hauled overland from Albany to Buffalo amounted to $100; the cost of sending the

same load on the canal, including tolls, was about $12.

Of such has been the growth of American transportation: competition driving down costs.

As any inventor well knows, the public doesn't always take kindly to innovations. In spite of the fact that America was growing and thriving on water transportation, the steamboat—when it appeared—was laughed off as a sort of monster toy.

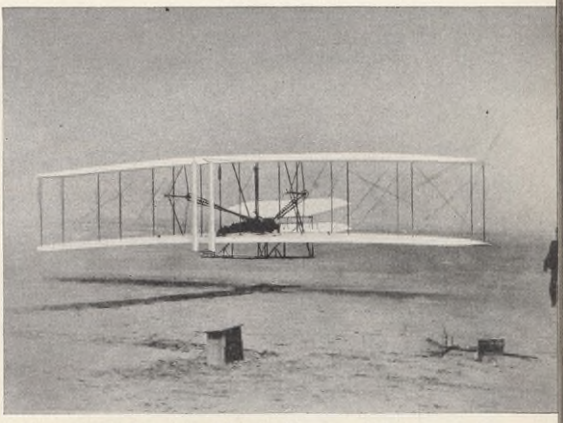
Robert Fulton ran his steam side-wheeler, the *Clermont*, up the Hudson to Albany from New York in 1807, but for years the public was indifferent to Fulton's achievement. Fifteen years previously, John Fitch's steamboat *Perseverance* made daily trips on the Delaware between Philadelphia and Burlington. Fitch failed—he could not persevere without revenue. The first Mississippi steamboat—forerunner of the glamorous stern-wheelers—did not appear until four years after Fulton had established daily service on the Hudson.

Almost 120 years ago the *Stourbridge Lion* got the polite brush-off from a public uninterested in the new-fangled huffing and puffing of a steam locomotive. The *Lion*, a tiny locomotive built for the Delaware and Hudson Canal Company, was shipped from Liverpool, England, on April 8, 1829, and on August 8 made its first run at Honesdale, Pennsylvania.

Peddlers stocked their wagons with a variety of merchandise that backwoods settlers eagerly purchased

The historic locomotive made two perilous two-mile runs on hemlock rails topped by wrought iron straps. In each instance the return trip was made simply by backing up for two miles.

But, in spite of first failures, the unheralded *Perseverance* and the doughty little *Stourbridge Lion* laid the groundwork for the great developments in steamboat and railroad transportation that were to contribute in such great measure to the growth of the American nation during the 19th century.



Transportation by means of heavier-than-air craft began in 1903 when this "machine" stayed aloft 12 seconds

"Well, Son, 'way back in the early days our folks set the pattern of transportation which made this one big country instead of several smaller ones. 'Bout midway in the 1800's, of course, railroads began to sprout in a big way. 'Course, as usual, the war pushed things along. Just before the turn of the 20th Century (the Old Man tugs his ear again, and again betrays in his eyes his surprised wonder at American ingenuity) those dang horseless carriages began to sputter along narrow dirt roads. But, that's another story. . . ."

* * *

By 1900, the second major phase of American transportation was well under way.

First, the restless pioneer had scanned the horizon and moved on until people were spread out all over the American map. Of course, there was inspiration aplenty to keep the westward movement stirring: the opening of Federal lands to homesteaders and the gold rush were prime motivating forces.

Second, once our people were spread out, the network of transportation drew them together and unified them as a nation. The automobile put the finishing touch on this second major phase. It brought the farmer to the city and helped "explode" the congested city past its former rural margin.

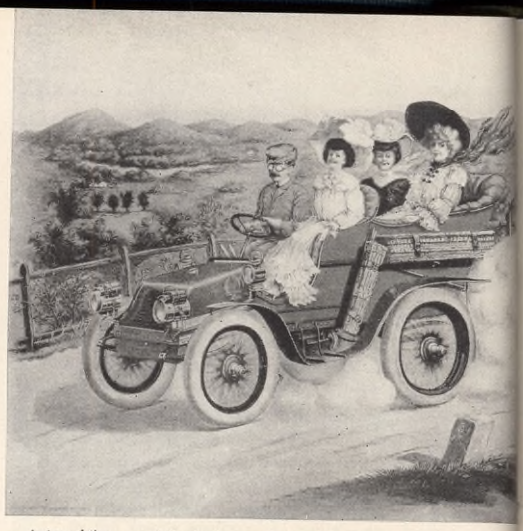
Then, in 1903, on the sand dunes at Kitty Hawk, North Carolina, a new sputter startled the quiet air. Orville Wright skittered into the air for a 12-second flight in a heavier-than-air craft.

For the first time in the history of the world

man succeeded in building a machine which would sustain him in flight, which was able to raise itself by its own power into the air and make flying—for man—a reality. This "flying machine" was capable of forward movement without reduction of speed, and could land at a point as high as that from which it had taken off.

Again, the public horselaugh. Again, the long step forward in progress. The automobilist and the aeronaut alike took the nettle of public scorn and kept chugging along.

And behind the story of growth and change from the Conestoga wagon to the airplane lay another story—the story of American oil which has given to transportation the vital impetus of fine fuels and lubricants to "make 'em get there and ride easy along the way."



Automobiles revolutionized travel in this country. The "Gasoline Age" saw Dobbin's gradual retirement

PART III

Fellow named Drake's diggin' an oil well out of town on Oil Creek

THE OLD MAN, our voice of history, is like Lot's wife—he is eternally devoted to the rearward view.

"Now, Son, if we're really going to understand what has made American transportation tick, we've got to take a long, hard look at the oil business.

"I'm told that you can find all sorts of references to oil from the days of the Bible on. Fellow told me once they'd been takin' oil out of wells dug by hand for several thousand years before we got going in America.

"Well (the Old Man relights his pipe and draws slowly), let's start with 'Colonel' Drake at Titusville. You might say that the American oil business started with the 'Colonel.' . . ."

* * *

On Saturday afternoon, August 27, 1859, William A. ("Uncle Billy") Smith, an old brine-well driller, stopped work for the week-end on a drilling job he was doing for Edwin Laurentine Drake and went home without any thought of having struck oil. Drake had come to Titusville, Pennsylvania, for the purpose of getting oil out of the ground by drilling.

Late Sunday afternoon, Uncle Billy visited the well. Looking down the pipe, he was startled to see a dark fluid burbling only a few feet beneath the derrick floor.

The first American "oil well" had come in.

In a world that was industrializing rapidly, lamps and machinery needed a cheap source of illuminants, fuels, and lubricants. That source was found beside Oil Creek, beneath Watsons Flat, by Drake—a retired railroad conductor—who was the first man to drill a well for the specific purpose of obtaining oil.

Drake's Folly—yes, the same old story of scoffing—started a rash of exploration and drilling. The familiar oil well derrick could be seen going up against the horizon in Pennsylvania, Ohio, Michigan, Illinois, Wyoming (where the Conestoga wagons had halted for precious lubrication), Colorado, and California.

Mass production, plus technological improvements, equals more than 37,000,000 motor vehicles in America

Then, Texas!

One day in 1901 near Beaumont, Texas, Charlie Ingalls saw something that disgusted his farmer's heart. He rode into town, spread the news:

"There's a blamed oil well just blew in on my land on Spindletop, and the dirty stuff's ruinin' my farm. Wish I could find a buyer. I'd sell the farm fer a dime."

That was the first announcement of the biggest oil strike in history—the fabulous Lucas gusher. It was also the beginning of The Texas Company, for there happened to be in the area one man shrewd enough to buy up a large part of the spilling flood of crude oil from Spindletop and store it.

J. S. Cullinan bought the crude at about three cents a barrel. He organized The Texas Fuel Company, which in 1902 became The Texas Company.

"He was a smart man, indeed. (The Old Man brushes some stray ashes from his old grey vest) . . ."

Well, Pop, we've troubled you about enough for one session. Maybe you'd like to rest and let us take up the modern part of the story, the part where Texaco and the oil industry build the great plants and devise the fine fuels and lubricants which keep modern American transportation humming.

This is kind of funny. You know, Pop, the year Texaco was started, a motorist was arrested in New York City for going 12 miles an hour.

You just can't think offhand of anything that moves today that doesn't utilize some product of the oil industry.

The automobile has become the epitome of American life. Henry Ford put the auto on the conveyor belt and built a good car at a low price. The oil industry kept pace with the growing auto industry by supplying Americans with good gasolines and good lubricants at low cost.

In a way, oil research has been "the eye that never sleeps."

Fractionating towers, catalytic cracking, hydrocarbon synthesis . . . these and other jaw-breaking names have become "names in the news" as far as science-conscious Americans are concerned. Each process, each technique in the art of refining has brought new progress to American transportation.

Busses, trucks, trains, power boats, ships, sleek airplanes . . . all run on the products of an industry which has long served transportation.

America has never stopped moving. Figuratively speaking, we are still pushing at our frontiers.

—J. T. M.

Progressive methods of making petroleum products have helped create better means of transportation

Aircraft speed aviation salesmen on cross-country trips

Boats bring crews and equipment to bayou drilling rigs

Switch engines play an important rôle at refineries

EVERY DAY IS

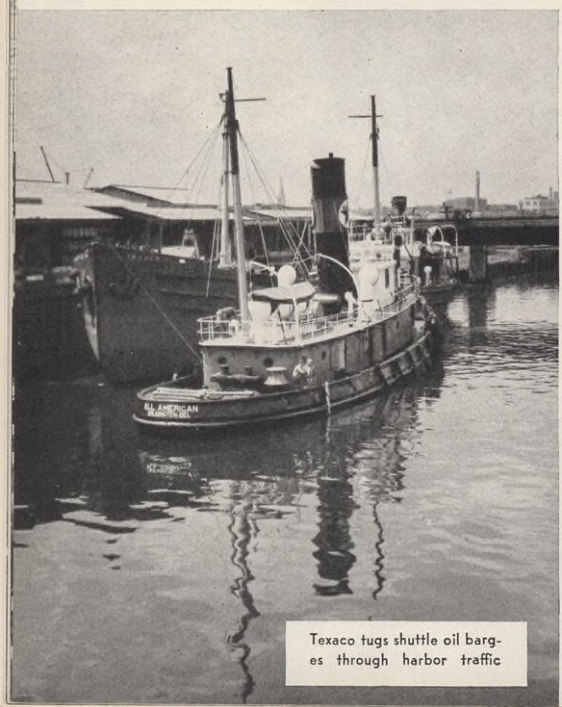
A MOTOR STARTS. A vehicle moves forward, slowly gaining speed. . . .

The throaty chuffing of a tug echoes over the water . . . the fluttering exhaust of a tank truck fades into the dark distance of the night . . . the strident whir of an airplane propeller greets the static calm of midday at a small airport . . . a switch engine at a refinery grunts heavily in the shadow of a "cat cracker". . . .

Texaco is on the go! Crude oil, intermediate products, finished products, personnel, supplies—all are on the move day and night. This much you can say for sure about Texaco and transportation: someone or something is always on the way somewhere for Texaco.

Tomorrow morning, soon after sun-up, a squat little launch will nudge its way through bayou waters to a drilling rig and deposit the day shift. At this moment Texaco tank trucks the country over are loading up at bulk stations with Sky Chief and Fire-Chief for delivery to service stations.

This afternoon a Texaco plane will drop in on an airport customer and out will step a representative of the Company's Aviation Sales Division. And



Texaco tugs shuttle oil barges through harbor traffic

This truck is used to service another carrier—a pipe line

Texaco tankers supply terminals on the Great Lakes


Oil barges glide along rivers where pioneer rafts floated

MOVING DAY

morning, noon, and night, an unseen conveyor—the pipe line—carries crude oil and Texaco products quietly and steadily to waiting refineries and distribution terminals.

On these pages you can get a glimpse of a few of the vehicles Texaco uses in its daily operations. This is just a sampler—a suggestion of variety and number. Texaco doesn't own all of the vehicles it uses; some are rented, some are utilized in contract operations. But, they are all engaged in the big job of moving Texaco's products and its people.

You might say that Texaco has a split personality. While it is making use of many different kinds of land-air-water transports, it is also providing the fuels and lubricants which power and facilitate smooth operation of such transports.

There have been shortage difficulties since the end of World War II in transportation. However, Texaco has met these problems with emergency measures in a constant effort to keep the country supplied with petroleum products.

Whether in the movement of its own personnel and supplies, or in lubricating and powering other transportation, Texaco is always on the go.


Highly *specialized* trucks help in search for new oil

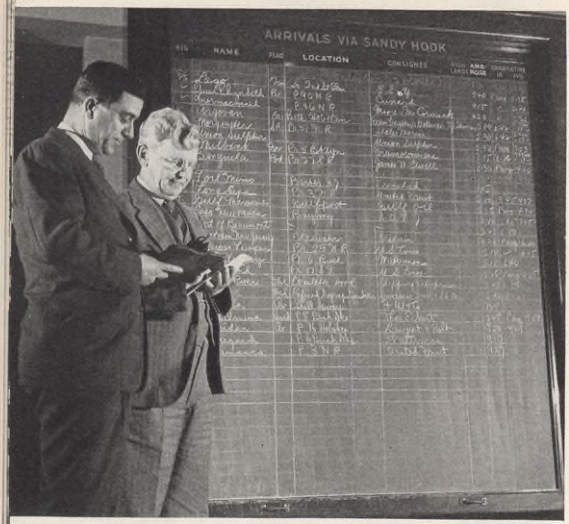
"Stake" trucks deliver products in drums and cartons

Gasoline transports are used in Texaco's supply system

"SMOOTH SAILING" EXPERTS

America's heritage as a great maritime nation is kept alive today by ships that depend on petroleum for "smooth sailing"

THE TEXACO MAN climbed the freighter's gangplank with swift, sure strides. Stepping over the gunwale onto the steel deck, he flicked a glance for'ard and saw a loaded cargo net plunge into the gloomy abyss of an open hold. Then, nodding to a Customs guard, he walked familiarly toward the chief engineer's cabin in the midship housing.



Two Texaco Marine Engineers plan calls to be made on ships at morning meeting in Maritime Exchange, New York

The chief was tired. He'd been up all night on an overhaul job, and the ship was due to sail at high tide that afternoon—outward bound from New York. But he smiled a greeting when he saw the visitor in the doorway, and beckoned to him to come in.

The Texaco man—a marine lubrication expert with years of personal experience as a chief engineer on merchant ships—didn't waste the chief's time. Pleasantries were quickly exchanged, and the Texaco engineer learned that there were no lubrication "problems" confronting the chief at the moment.

Before departing the ship, however, he descended to the depths of the engine room and obtained a sample of the Texaco oil in the lubricating system of the steam turbine. Before long, that sample would be analyzed in a Texaco laboratory, and a detailed report issued on the condition of the oil.

Modern cargo ships and passenger liners, driven by mighty engines, are a far cry from the days when sails dotted America's harbors and horizons. Steel hulls house vast arrays of complex machinery. Production of power for propulsion accounts for much of the mechanical "innards" of ships today. Auxiliary equipment—in great variety—makes up the remainder.

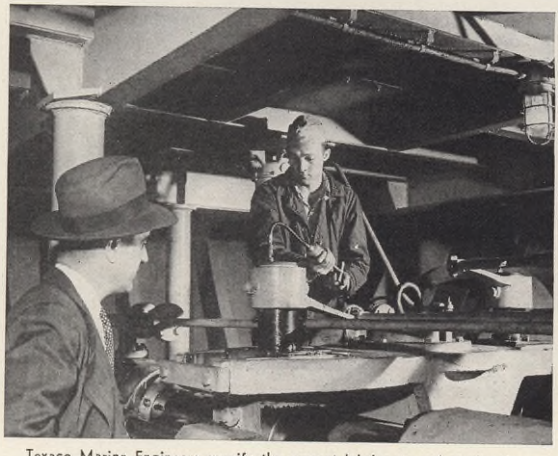
On water, as on land and in the air, transportation depends on petroleum. In New York, San Francisco, or New Orleans—or for that matter in any major port in the United States—Marine Engineers from Texaco's Marine Sales Division make regular service calls on board ships in port. They stand ready to

(*Please turn to Page 15*)

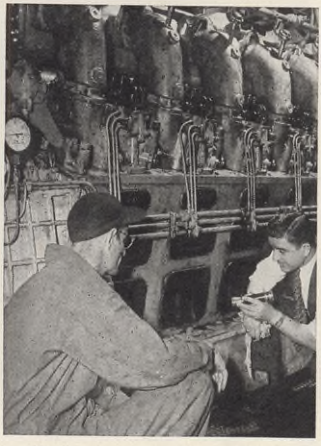
(Right) Texaco engineer and freighter's chief engineer discuss lubrication during engine room inspection


STAR
CLOSE-UPS

By keeping a close check on condition of oil in Texaco-lubricated vessels, Texaco helps ship operators get maximum usage. (Above) Marine Engineers take samples of oil regularly for testing



Texaco Marine Engineers specify the correct lubricants and application procedures for auxiliary equipment, such as this hydraulic steering gear



Diesel engine on this Texaco-lubricated tug was found "clean as a whistle"

STAR CLOSE-UPS

"SMOOTH SAILING" EXPERTS

(*Continued from Page 12*)

assist in the selection of Texaco Marine Lubricants for any type of vessel. "Trouble shooters," they will spend days, if necessary, aboard a ship helping to solve lubrication problems. Each engineer has one prime objective: to help ship operators obtain the highest possible efficiency from the Texaco products used in lubrication systems of engines and other machinery.

The circulating system of a marine-type steam turbine or Diesel engine holds an immense quantity of oil—thousands of gallons, in large engines. If the oil used to fill such circulating systems has the proper characteristics—and provided the oil is given proper care—it will last for an indefinite number of years.

No ship owner or operator wants to replace oil prematurely. For this reason, Texaco's Marine Engineers keep a close check on the condition of the oil in Texaco-lubricated vessels. They board ships in port and secure samples and "histories" of the oil in use. Samples are sent to the nearest Texaco laboratory by the fastest method—by air, railway express, or messenger.

Texaco's Technical and Research Division arranges for the analysis of the sample and then issues a report covering the condition of the oil. Clerks in the Atlantic, Gulf, and Pacific Coast offices of the division keep a running record of all analyses. In this way, regardless of the points where the previous samples were secured, any Technical and Research Division office is in a position to review an analysis report, since each office has a case history of every Texaco-lubricated vessel.

The chief engineer of the vessel, the owner, the Texaco Marine Engineer who secured the sample, and the Sales Department division offices concerned receive copies of the laboratory report. Should a question arise at any time regarding the condition of the oil, a Marine Engineer at the port where the vessel is berthed makes a special call on the ship.

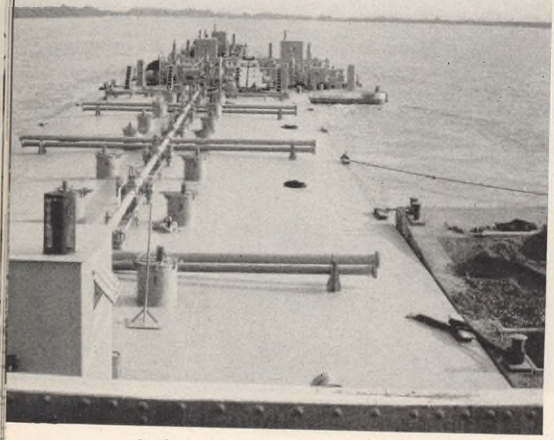
Ships plying coastal waters and overseas lanes are important in the story of transportation in America. Texaco figures in this story in two ways: first, it makes and markets quality petroleum products for all marine lubricating purposes; secondly, it has a staff of experts who make "smooth sailing" their business.

"Know how"—combined with "show how"—makes friends in the engine rooms visited by Texaco Marine Engineers

Laboratory analysis of oil sample is reviewed with "chief." At left is the vessel's Texaco-prepared lubrication guide

OLD MAN RIVER'S BUSIER THAN EVER

Oil barges on inland waterways have helped revive an old form of transportation in this country



Big bend ahead! A tow of Texaco barges, as seen from the towboat, follows Old Man River's twisting course

"QUARTER *less twai-ain. . . . On the mark twai-ain.*"

The leadsman bellowed through his megaphone to the towboat pilothouse. His call spanned the string of barges and boomed out hollowly along the river. For a moment only the suddenly hurried puffing of the towboat remained to disturb the pleasant Summer quiet of the valley.

"On the mark twai-ainnnn. . . ."

Again the leadsman sang out the depth reading. And again his lifting drawl reached the pilothouse above the roar of the engine exhaust.

The tow headed gradually into the bend as the snub-nosed lead barge slid easily with the fast-flowing current. In the pilothouse skilled hands and keen memory put the long tow around the bend, past the treacherous shadow of shoal and sandbar.

Once around the bend, the snorting of the towboat lessened into a lazy, monotonous chugging. Pushing its string of barges ahead of it, the towboat blended into the distant haze of the valley. Like a ghostly sigh, its echo died in the trees and hills beyond the river bank.

This scene may suggest to you something out of Mark Twain. It may awaken the busy train of remembrance and recall the days of packet races on the Mississippi, of calico and showboats, of a mighty traffic moving along rivers and canals during the last century.

Even though it stems from a tradition rooted in the history of pioneer travel along inland waterways, this scene may have taken place along "The River" during the few minutes it has taken you to read this far. And in that few minutes another tow load of Texaco Fire-Chief or Sky Chief has moved forward on its long journey from oil field to market.

The river? Well, most everyone would think of the Mississippi when you talk of barges and packets and showboats. Old Man River, the Father of Waters, by whatever name you call it, the great river which drains the broad back of the continent has played an important part in shaping the story of America.

Today, Old Man River and its kin are once more playing a vital part in American life as the basis of inland waterway transportation. The tow of barges described above might be moving along the Cumberland, or the Tennessee, or the Ohio, or along the "Big Miss" itself, for Texaco's inland waterways transportation system, in operation since 1940, has fanned out along the network of mid-continent rivers.

For a long time America moved itself and its goods principally along canals and rivers, but by the 1870's this old form of transportation became outmoded. The "iron horse" had shouldered its way onto the transportation scene with a fiery burst of speed. The railroad probably was the main cause of Mark Twain's plaint:

"Mississippi steamboating was born about 1812; at the end of 30 years it had grown to mighty proportions; and in less than 30 more it was dead! A strangely short life for so majestic a creature."

Even earlier, the canals, which had been built in a rush of enthusiasm after the immediate success of the famous Erie, fell into disuse. Reedy growth came to clog canal locks and to hide once busy river landings.

Had the beloved creator of Tom Sawyer and Huck Finn lived just seven years longer he would have seen, in 1917, a complete rebirth of inland waterway trans-

portation, which would have gladdened his heart even though this development was initiated by war. He would have been more pleased had he been able to witness the growth of inland water transportation between wars, when many of the oil companies returned to the rivers and canals for the movement of their products.

Texaco launched its inland waterways transportation program at the end of the 1930's. The principle of the system starts with the water itself as it runs in rivers and canals past towns and cities. Large steel barges are used to carry refined Texaco products, generally gasoline, to river terminals. Basically, a river terminal consists of an unloading dock, large storage tanks where the product can be "stocked," and loading platforms where the product can be sent inland by truck or rail from the terminal to smaller bulk plants and service stations.

The terminal, then, is the kingpin of a modern distribution system which is actually as "old as the hills."

Of course, you have to have a starting point. Texaco has three: its refineries at Port Arthur, Texas; Lockport, Illinois, and Lawrenceville, Illinois. These are the points of origin of refined products that are fed to the Company's Sales Department terminals on inland waterways. Barges load at Lockport Works on the Chicago Drainage Canal, which connects with the Illinois River; at Port Arthur Terminal, adjacent to Port Arthur Works; and on the Ohio River at Mt. Vernon, Indiana, 56 pipe line miles from Lawrenceville Works. Refined products from Lockport Works also go via pipe line to East Chicago Terminal, where Texaco's Great Lakes tankers load.

Rivermen say that the barges are "towed," and refer to a group of barges lashed together as a "tow." To a landlubber, the barges are pushed. The towboats which do the pushing, or towing, are square-ended like a barge, and have "knees" in front which shove against the last barge.

It's quite an art to nurse a long, low tow of Sky Chief around a hairpin bend.

During World War II, Texaco's inland waterways system, like that of others in the oil industry, proved a great boon to the nation during the off-shore submarine crisis. And in the post-war period it has helped facilitate distribution during the greatest demand ever experienced.

Today, Texaco has inland waterways terminals at more than two dozen points from the Gulf of Mexico to Tonawanda, New York, on the Barge Canal. Overall plans call for a total of 36 such terminals for the distribution by inland waterways of Texaco products. Every day sees the arrival of a tow of Texaco high quality gasoline at some point like Cincinnati, Nashville, Memphis, St. Louis, Chattanooga, or Minneapolis.

At present, Texaco's program for the development of its waterways system is progressing rapidly. At the beginning of 1947, there were 20 Texaco waterways terminals in operation. During the year eight more were placed in operation. Four more will be completed this year. The Company has terminaling arrangements at four other points. In addition, Texaco has 91 other waterfront terminals and bulk plants, exclusive of terminals which accommodate ocean-going vessels. This gives the Company a total of 127 distribution points on inland waters.

At the heart of the program is economy—an old mode of transportation in modern dress enables Texaco to get its products to Mr. and Mrs. Motorist, as well as to all other users, more economically. It is an important cog in the machinery of bringing the finest possible products at the fairest possible price to the American consumer.

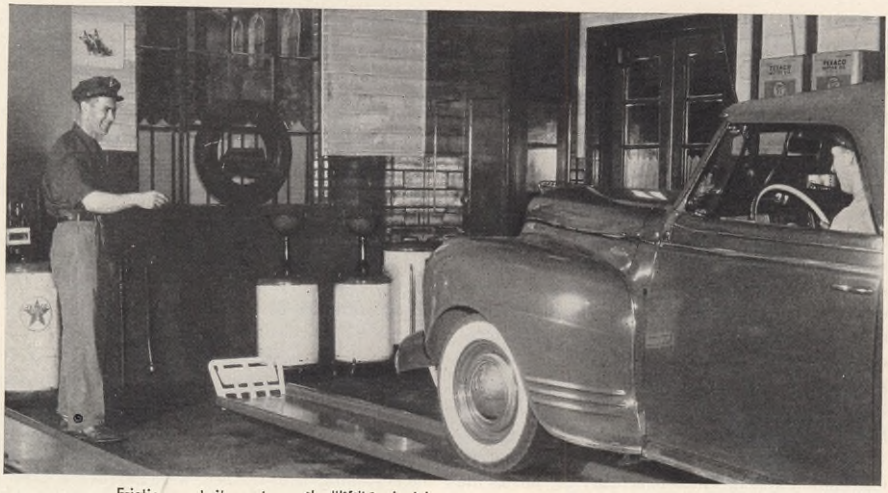
Texaco has been teaching Old Man River and his kin some new tricks.

"*Mark quarter less twai-ain. . . . On the mark twai-ain. . . .*"

Here comes Texaco 'round the bend.

Let 'er flow. Loading lines are "flanged up" and gasoline goes ashore to storage at inland waterways terminals

Biggest of Texaco's network of inland waterways terminals is this new St. Louis, Mo., site on the Mississippi



Friction meets its master on the "lift" in the lubrication department of this Texaco service station

". . . Were It Not for Lubrication"

SOUNDS OF FRICTION are loud in the land. On an average city street the rough voices of friction rise in a chorus of attrition. Shoes scuff dryly along the sidewalk, wearing holes in soles. The corduroy trousers of hurrying schoolboys whistle their lives away with a tune of depreciation.

To do its job satisfactorily, the oil in your car's crankcase should always be at correct level and renewed periodically

And in the street, automobiles, trucks, and busses growl and squeal with a hundred inward frictions while their tires engage the pavement in a contest of mutual wear and tear.

The sound of friction is an intimation of mortality. It reminds us that all moving things—shoes, trousers, pistons, gears, and rubber tires—will rub away, grind away sooner or later.

Friction is a condition of life. If you want to move you have to have traction, and when you have traction you get friction.

In order that the rubbing and grinding away of the shoes and clothes belonging to most people may be later rather than sooner, they choose durable items from these categories.

When friction does its worst you can resole your shoes, patch your trousers. You may do this fairly often, but it doesn't cost a great deal.

However, if you allowed the hundreds of abrasive motions of your automobile's engine and chassis to scrape away with a free hand, you and everybody else would soon have to walk. There just aren't enough spare parts in the world to replace those that would be retired by the unimpeded actions of friction. Besides, even if there were, automobile parts and the labor to install them are expensive.

It was outraged thrift which early in the chronicles of transportation led vehicle owners to seek a

means of slowing down the processes of friction on their machines.

In the days when values were based on labor and man-hours rather than money, some builder-owner of a lumbering two-wheeled cart got nettled about the way his axle had of chafing the wooden wheels of his painfully constructed conveyance.

He sat down to think the matter over, and the solution that he found puts us forever in his debt.

He reasoned that since his feet slipped on cooking grease just as they slipped on ice, the cooking grease might be applied to the axle so that the wheels would slip around the axle.

So he rendered some fat, rubbed the grease by-product on the axle, and thereby wrote the first chapter in the history of vehicular lubrication.

This history remained a book of just one chapter for many slow-paced centuries. No really fresh entries were made until the mid-1800's, when engineers of the young Machine Age learned that malodorous and corrosive tallows and vegetable oils could not meet the demands presented by the lightning revolutions and super-frictions of their new engines.

Again, the thrift impulse and a by-product provided an answer. Prudent petroleum refiners had been seeking a use for residue left in their stills when other products had been boiled off. After experimental processing they offered it to the engineers as a lubricant.

Trial and error brought recognition of its superiority, and the needs of the Machine Age stood sponsor at the birth of the modern lubricating-oil industry.

The research and experiments of lubrication scientists continued into the infancy of the internal combustion engine, and continue still. The technologists found in that device new problems of speed and destructive friction. Had they failed in their solutions, the internal combustion engine could not have been improved over its basic model.

The ratio of friction to movement controls the advance of transportation—and lubrication controls friction.

Looking at the bared chassis of an automobile you will notice its family resemblance to that crude prototype of all wheeled vehicles, the aforementioned wooden cart. Were it not for lubrication, we'd be bumping around in hot-axled wooden carts today.

It is to insure smooth action and long life in the chassis and all the complex anatomy of our modern automobiles that Texaco has developed motor vehicle lubricants of superior performance qualities, and standardized methods for their use.

Texaco's New and Improved Havoline Motor Oil, Texaco Motor Oil, Texaco New Universal Gear Lubricant, and Marfak, Texaco's famous chassis lubricant, are among the products of Texaco refineries that are specially designed for car care. Texaco's Marfak Lubrication Service is a system followed in the application of these products.

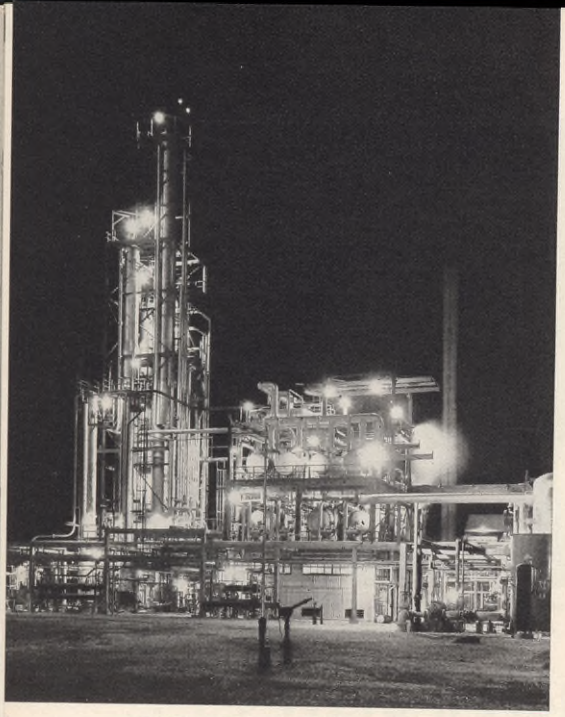
The service is featured by Texaco dealers. It entails precision lubrication of the automobile chassis, and a thorough examination of the car for evidence of former inadequate lubrication. Marfak lubrication and a check-up every 1,000 miles help forestall expensive breakdowns by calling faulty elements to the car owner's attention in time for preventive overhauls. At periodic intervals, the crankcase oil should be drained, and the crankcase flushed and refilled with fresh oil.

In order that no lubrication point will be overlooked, Texaco dealers who give Marfak Lubrication Service have been provided with a Texaco Automobile Lubrication Guide. This is a detailed manual of directions for the correct bumper-to-bumper lubrication of every standard-make American automobile.

Marfak—and the system of applying it and other Texaco lubricants to motor vehicles—is but one of many Texaco contributions to transportation lubrication. In this instance, Texaco's coördination of research, manufacturing, and scientific methods of product application has helped forge an important implement for the service of American motoring.

The modern lubricating oil industry grew out of man's effort to temper the friction of turning wheels. Were it not for lubrication, those wheels would long since have ground to a stop.

Key to application of Texaco lubricants is the lubrication guide this Texaco dealer is showing to a car owner



Bright as a Hollywood première, the purification section of Jefferson's ethylene unit lights up for a night shift

JEFFERSON CHEMICAL BEGINS PRODUCTION

Ethylene glycol for a new Texaco product —Texaco Permanent Type Anti-Freeze— is now being made at Port Neches, Texas

NEAR Port Neches, Texas, five miles from Port Arthur and in the heart of Jefferson County, the plant of Jefferson Chemical Company, Inc., is in full commercial production of important chemicals, officials of that organization recently announced. Jefferson Chemical is an affiliate of The Texas Company and American Cyanamid Company.

This newly-constructed unit of the Gulf Coast's swiftly expanding chemical industry is manufacturing ethylene glycol, ethylene oxide, ethylene dichloride, and other basic chemicals from refinery gases piped from Texaco's huge refinery at Port Arthur.

It is expected that the new plant's production of ethylene glycol and ethylene oxide will relieve substantially a current shortage of both these materials.

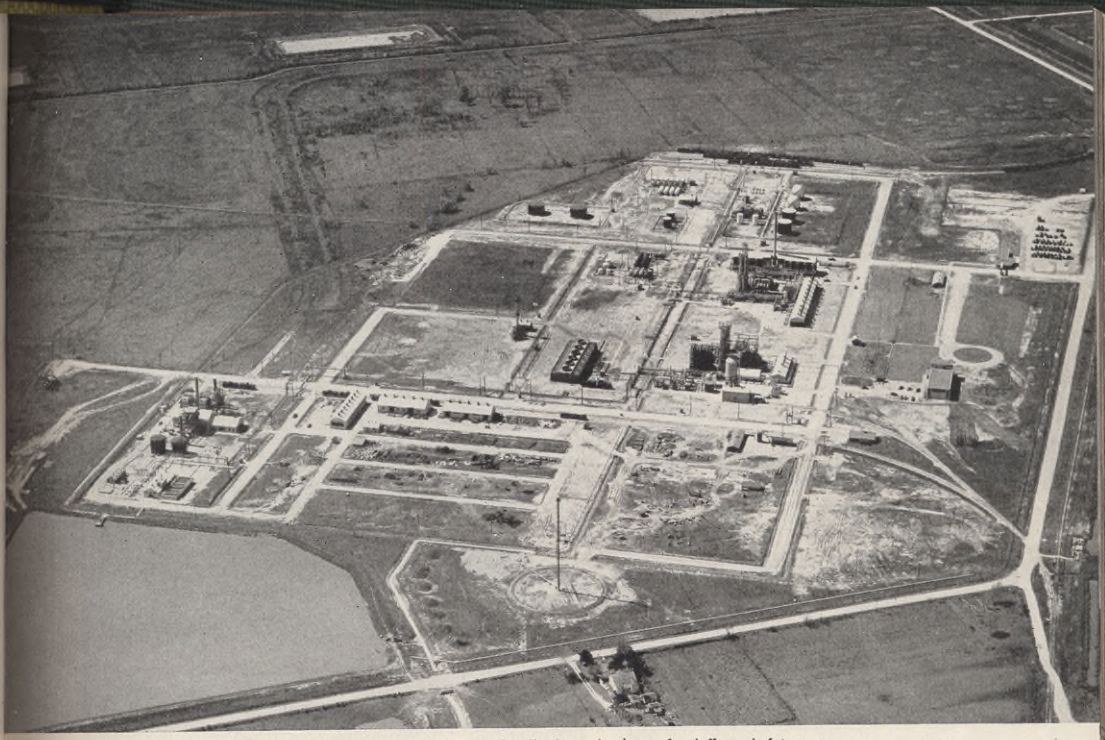
Familiar as the main ingredient of an anti-freeze, ethylene glycol is also used in the manufacture of explosives, resins, cellophane, in processing textiles and tobacco, and as an ingredient in brake fluids.

A new, permanent-type automobile anti-freeze scheduled to make its début at the stations of Texaco dealers this Fall contains Jefferson ethylene glycol as its basic component. Called Texaco Permanent Type Anti-Freeze, the product's quality is implicit in its trade mark.

Ethylene oxide is a chemical intermediate employed in making solvent-resistant synthetic rubber, household and commercial detergents, plastics, and various other products.

Jefferson, operating as an independent organization, was formed as a joint-ownership corporation in November, 1944, by The Texas Company and American Cyanamid Company. With its own technical and research, engineering, sales, accounting, and general administrative departments, the company is engaged in broad laboratory and pilot-plant investigations and purposes to engage increasingly in the manufacture of intermediates and bulk chemicals from petroleum.

Directors of Jefferson are: W. B. Bell (president, American Cyanamid Company), chairman; W. S. S. Rodgers (Chairman, The Texas Company), vice chairman; R. J. Dearborn (former President, Texaco Development Corporation), P. M. Dinkins (director, American Cyanamid Company), R. C. Gaugler (vice president, American Cyanamid Company), M. Halpern (Vice President, The Texas Company), Harry T. Klein (President, The Texas Company), W. E. Kuhn (Manager, Technical and Research Division, The Texas Company), L. C. Perkinson (treasurer, American Cyanamid Company), W. M. Stratford (President, Texaco Development Corporation), R. C. Swain (vice president, American Cyanamid Company), and M. C. Whitaker (former vice president,



The outline of service roads shows graphically the scale chosen for Jefferson's future expansion. Water for plant uses is pumped from the 18,000,000-gallon reservoir at left

American Cyanamid Company). Mr. Dinkins is president.

Chosen after thorough engineering studies, the site of the Jefferson plant affords many industrial advantages. It is situated on a tract of approximately 1,100 acres on the Neches River, which affords deep-water transportation to the Louisiana-Texas Intercoastal Waterway and the Gulf of Mexico.

Additional advantages of the site are its proximity to excellent facilities for land transportation, the availability of labor in the area, and the ready supply of fresh water, power, and fuel gas.

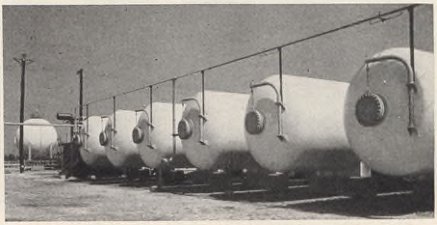
The present plant occupies about 100 acres of the company's tract. Its design allows ample provision for expansion. The processing units are located centrally between the two main roads and can be extended, when necessary, for about a mile.

In the design and construction of the plant's operational equipment are embodied the most progressive standards of economy and performance. An example of the tight-reined planning that went into Jefferson is seen in the installation's water-treating system.

The plant's processes involve the use of large quantities of chlorine purchased in tank cars. The chlorine used for water treating is contained in large storage tanks located in the plant's regular tank storage area, eliminating the need for purchasing chlorine in small cylinders at much higher cost. So far as is known, this is the first time that tank car chlorine has been used for the treatment of water.

Chlorine also figures in a further wedding of efficiency and economy: it is evaporated for its water-treating function by waste heat from one of the chemical operating units.

The strategic location, flexibility, efficiency, and the cost-conscious administration of Jefferson typify the intelligent planning and considered direction characteristic of American industrial operations. The development of petrochemical production on a large scale in this country should be materially advanced by the activities of Jefferson Chemical Company, Inc.



These large, white storage tanks contain chlorine for water treatment as well as for process use at the Jefferson plant

TELEVISION

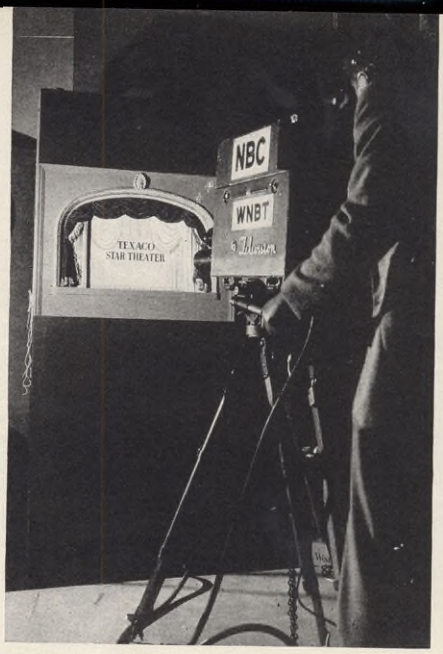
Opening Night

Pictured on these pages are scenes from the dress rehearsal and performance of Texaco's first television show on June 8

THE FIRST one-hour, network television show to be sponsored by an oil company was presented by the Texaco Star Theater on Tuesday evening, June 8, over the full East Coast television network of the National Broadcasting System. Marking the Company's recognition of television's fast-growing importance as an information and entertainment channel, it was a noteworthy milestone.

Long and careful consideration of television's potentialities preceded the Company's decision to adopt the new medium. In view of television's rapid "coming of age," Texaco decided now was an appropriate time to extend the scope of the Texaco Star Theater to include television. From now on, telecasts will be in addition to the Company's broadcast programs, which will continue to be presented for radio listeners.

This see-and-hear program is the newest addition to a long line of outstanding Texaco radio entertainment features. Called "Vaudeville in Television," it is being telecast each Tuesday evening from 8 to 9 p.m., E.D.T., from WNBT, New York; WNBW, Washington; WPTZ, Philadelphia; WBAL-TV, Baltimore; WRGB, Schenectady; WBZ-TV, Boston; and WTVR, Richmond, Virginia. As more television stations are added to the NBC television network, they will be added as outlets for Texaco telecasts.



"Texaco Star Theatre....Presents....'Vaudeville in Television.' " On viewing screen, model stage looks full scale

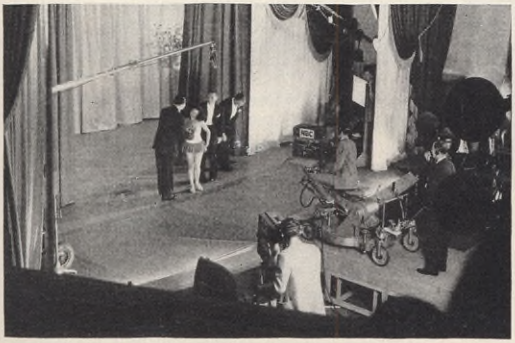
For its first television venture, Texaco has adopted the old format of vaudeville. Each week brings a star-studded bill of entertainers before the cameras and microphones of the National Broadcasting Company.

Television stations in Cleveland, Buffalo, Toledo, Detroit, Chicago, Milwaukee, and St. Louis are scheduled to join the NBC hook-up in the next few months.

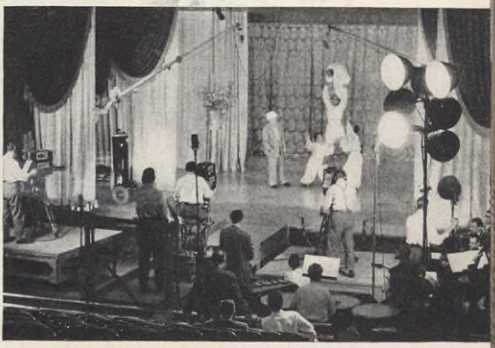
Texaco's General Sales Manager (center), Advertising Manager (right), advertising agency executive confer

Last-minute changes are decided by director of show and aides after rehearsal. Cameras are opened for cooling

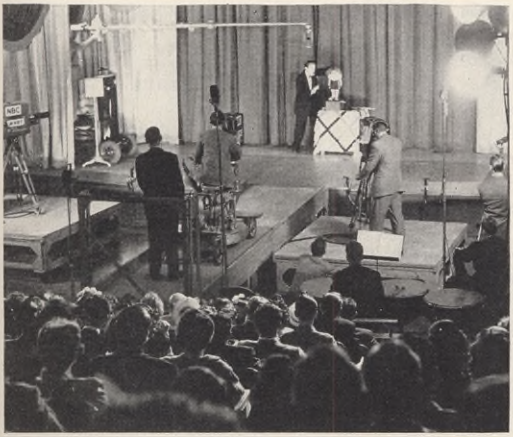
Rosario and Antonio—youthful and vivacious Spanish dancers—were among the performers who appeared on the opening night of the Texaco Star Theater's television show



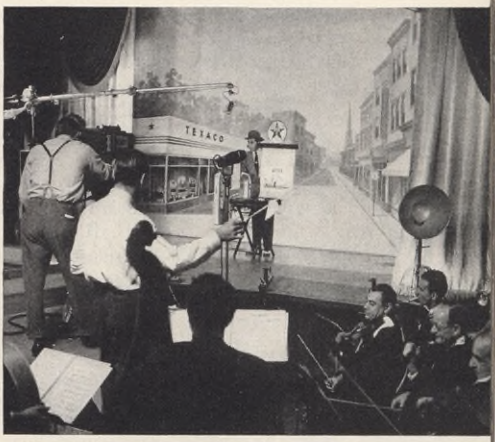
Master of ceremonies Milton Berle (left) is on hand while The Andreas—adagio dance stylists—take bow at end of their act



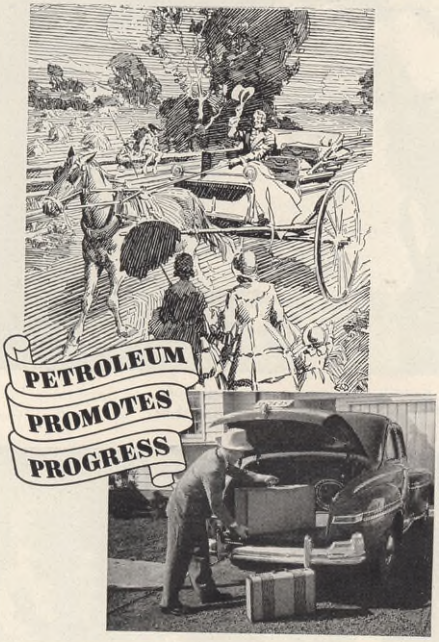
Dress rehearsal: Berle provided the comedy, The Moroccans the acrobatics in this scene



Specialty of Señor Wences was ventriloquism. In all, eight acts were presented in an hour program styled after vaudeville in its heyday



Something new in commercials came into view on television with appearance of Sid Stone



McColl-Frontenac Now Subsidiary of Texaco

McColl-Frontenac Oil Company Limited, a Canadian company, is now a subsidiary of The Texas Company. McColl-Frontenac, in which the Company for a number of years was a minority stockholder, issued to stockholders in January, 1948, subscription rights to new common capital stock. The Texas Company exercised its rights and now owns approximately 54 per cent of the common stock outstanding.

McColl-Frontenac manufactures, and markets throughout Canada, products of Texaco quality, and during 1947 adopted generally the Texaco signs and trade marks.

Members of McColl's board of directors are: A. A. Magee, chairman; H. H. Bradburn, J. H. Gundy, Harry T. Klein (President, The Texas Company), The Hon. E. L. Patenaude, J. M. Pritchard, R. L. Saunders (Vice President, The Texas Company), E. P. Taylor, G. R. Taylor, H. W. Thorp, T. C. Twyman, L. O. P. Walsh, and W. Zimmerman. Officers are: J. M. Pritchard, president; T. C. Twyman, executive vice president; G. R. Taylor and Air Marshal W. A. Bishop, vice presidents; T. V. Anderson, treasurer and comptroller; and Fred Hunt, secretary.

Texaco Acquiring Four New Tankers

Four oil tank vessels, which will be among the largest in the world, are to be built for The Texas Company by the Bethlehem Steel Company, Shipbuilding Division, Quincy, Massachusetts.

The keel for the first ship will be laid early this Summer. The first vessel is expected to be in service by about the middle of next year, with the other three following along shortly thereafter.

These four tankers, each of large capacity, are designed for crude oil service, and will probably move required crude oil into the United States from foreign fields.

Particulars of the vessels include: length, 623 feet overall; displacement, 36,250 tons; deadweight, 28,000 tons; capacity, 240,000 barrels or 10,080,000 gallons; power, 12,500 horsepower; speed in service, 16 knots.

Some idea of how large Texaco's new tankers will be may be gleaned from a comparison with the American war-built T2-SE-A1 type tanker, which is about 16,600 deadweight tons and has a capacity of about 135,000 barrels or 5,670,000 gallons.

The world-wide demand for petroleum products, plus extended lines of supply, have made the tanker the fastest growing unit in the merchant fleets of the world. Tankers represent one out of every five tons of new construction today, according to the American Merchant Marine Institute.

Texaco's four new tankers will be a big help in supplying the ever-increasing demand for petroleum products in this country.

Petroleum Prices Low Compared With Others

Every once in awhile you read a statement to the effect that the oil industry is profiteering at the expense of the consumer.

Actually, the record does not substantiate such claims.

Although subjected to the increasing cost factors prevailing today, petroleum prices, compared with prices for other commodities, are still low. According to the United States Department of Labor wholesale commodity price index, which uses 1926 as the base year, the average wholesale price for all commodities had at December 31, 1947, increased 63.2 per cent over 1926, while the average price for petroleum and all refined petroleum products had only increased 12 per cent above the 1926 price.

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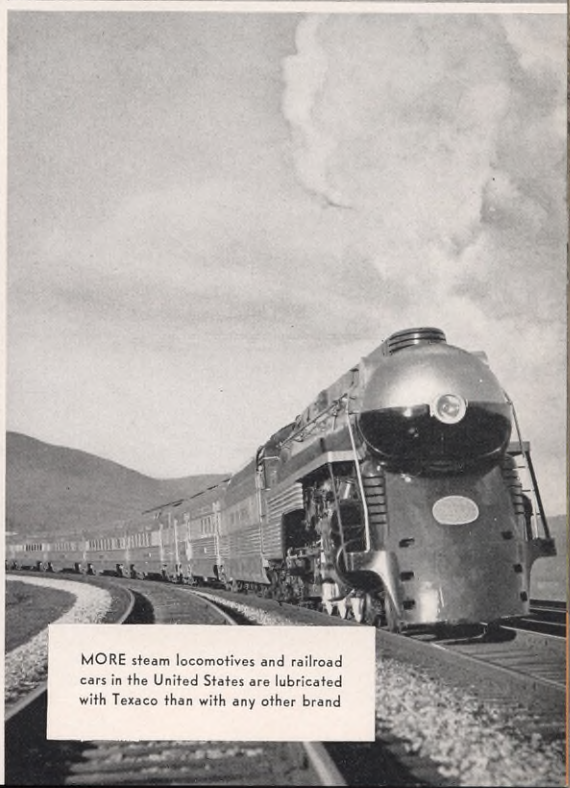
MORE Diesel locomotives in the United States are lubricated with Texaco than with any other brand

MORE revenue airline miles in the U. S. are flown with Texaco Aircraft Engine Oil than with any other brand

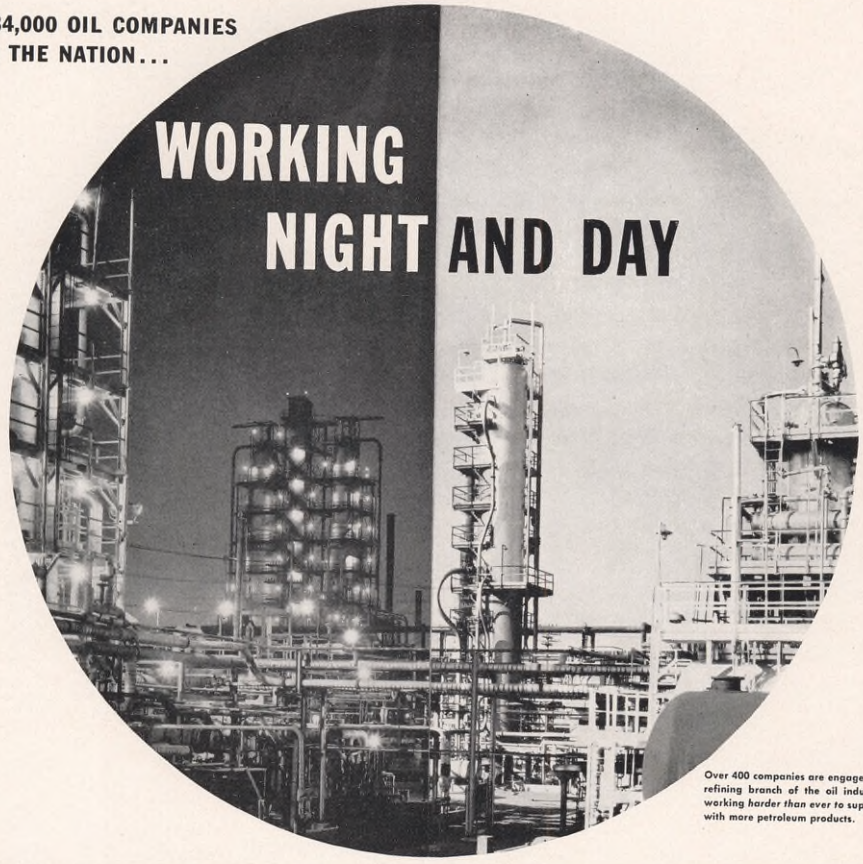
MORE bus chassis in the United States are lubricated with Texaco Marfak than with any other brand



MORE steam locomotives and railroad cars in the United States are lubricated with Texaco than with any other brand

HOW 34,000 OIL COMPANIES SERVE THE NATION...

WORKING NIGHT AND DAY



Over 400 companies are engaged in the refining branch of the oil industry... working *harder than ever* to supply you with more petroleum products.

SUPPLYING ENOUGH PETROLEUM to meet your needs is a round-the-clock job. Yes, we're working night and day to fill the nation's demands for more and more oil.

From these efforts has come the greatest supply of oil America has *ever* had—over 200 million gallons *daily*—a flow of petroleum products greater than that maintained during our peak war year.

But we're using more oil all the time! This year, nearly 36 billion gallons of gasoline will be used to power the nation's cars, trucks and busses... this year over 31 billion gallons of fuel oil will be required for homes, schools, hospitals, factories... and almost 4 billion gallons must go to meet huge Army-Navy requirements. Add to this the tremendous quantities of oil needed to keep farm machinery and industrial equipment, planes, trains and ships in motion—and there's the biggest job the oil industry has ever faced.

With a trillion-gallon underground reserve as backlog, over 34,000 individual oil companies strive to supply you with *more* and *more*. Every branch of the oil industry—production, refining, transportation, marketing—is stepping up the pace in 1948... working to supply America's ever-increasing needs.

More petroleum products will be delivered this year. Be sure to use them *efficiently*. Oil is energy for America. Oil means more comfort, better health, greater convenience—for *you*.

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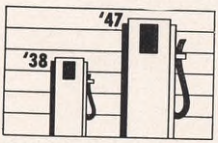
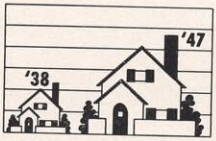
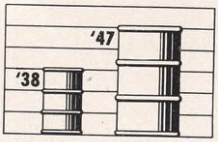


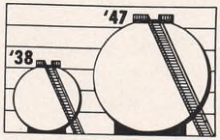
GASOLINE: America's huge motor fleet now numbers over 37 million vehicles. That's 7 million over 1938. Cars average about 730 gallons yearly... trucks, busses use even *more*.



DOMESTIC FUEL OIL: Demand for fuel oil has skyrocketed since 1938. Today, over *twice* as many oil burners are used in heating our homes, schools and hospitals.



LUBRICANTS: Farms, railroads, mines and factories require ever increasing quantities of lubricants. Production of lubricants has increased 68% since 1938.



REFINING: Oil refineries handled 77 billion gallons of crude oil last year—with facilities expanding, refineries will soon top this mark ... deliver even *more* oil products to you.