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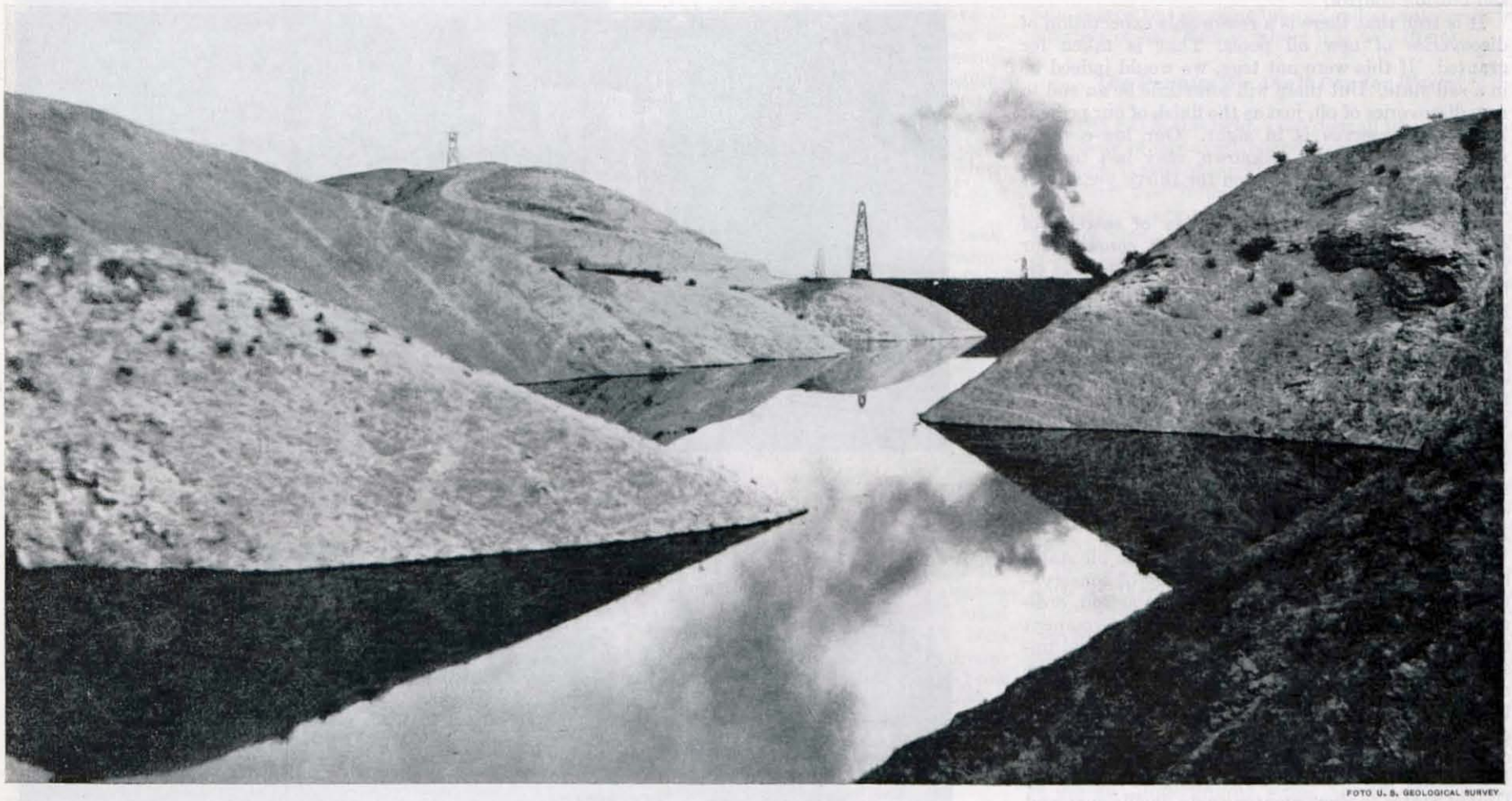


FOTO U. S. GEOLOGICAL SURVEY

AFTER THE OIL DELUGE, WHAT PRICE GASOLINE?

By HAROLD L. ICKES

Secretary of the Interior

IF A GANG of supercriminals, burrowing into the Mint, should steal away with a billion dollars, there would go up in this country such a hue and cry as the world has never heard. Every nook and cranny would be relentlessly searched. Our ports and borders would be vigilantly guarded, with lynching parties and posses patrolling the highways and byways. Extra editions of the newspapers would scream at us hour after hour with tales of the bandits' exploits, their loves, their hates, their misdeeds and their generosities.

The most daring and stupendous criminal enterprise of history would be dished up in lurid phrases because of the fabulous sum involved. One billion dollars is not an insignificant fortune even for the country that holds within its treasury most of the gold of the world. Yet the same people who would avidly scan tales of such a theft have permitted, practically unheeded, a loss in their oil resources amounting to much more than one billion dollars. But sob sisters do not write of burning oil wells, of hundreds of billions of cubic feet of natural gas escaping into the air, or of other staggering losses.

A nation that has complacently chewed its gum while our forests were being devastated is not easily to be diverted from the current divorce of a marriage-scarred movie queen by the simple statement that we have suffered and are continuing to suffer stupendous losses in the exploitation of our oil resources.

Although practically every American today admits that our national policy with respect to our forests has been little less than criminal and knows that we have had to dig deep into our own pockets to pay for their wasteful exploitation, we are just as indifferent about oil as our forefathers were about our forests, our plains and our streams. What if oil is being wasted? There will always be more oil; and even if it should, in time, give out, there will be plenty for our own needs in our own day. "May the devil take the hindmost" is still sound American doctrine. "Pollyanna" still describes our state of mind.

Every few days we blithely greet the filling-station helper with "fill her up," knowing we can again fill up when we have emptied the tank upon which we are constantly drawing. Just as steadily, America is from day to day draining her own underground tank in which is stored her total supply of crude petroleum from which gasoline is made. But, unfortunately for all of us, we cannot refill the national tank. That was filled by Mother Nature over a period of millions of years and, once drained, it cannot be refilled within the life span of the nation.

Because of the aggressive campaign for conservation in which THE SATURDAY EVENING POST is a valiant fighter, we are coming to appreciate America's folly in permitting such shocking exploitation of

our forest and other natural resources as has occurred in the past. But we have not realized that oil is the worst example of all. Given enough money and time, we can replant and regrow our devastated forests. Nature can, in a couple of thousand years, if let alone, rebuild a new soil covering to replace that eroded away because the protective forest and grass coverage have been destroyed. But oil and the natural gas that accompanies it are in quite a different category. When they are gone, they are gone forever. Nor can they be replaced. We shall pay dearly for our unheeding wastes in oil, just as we have paid dearly for our vanished forests through the increased cost of forest products and through the taxes levied to finance afforestation and flood and soil-erosion control.

It is true that there is a reasonable expectation of discoveries of new oil pools. That is taken for granted. If this were not true, we would indeed be in a sad state. But there will sometime be an end to new discoveries of oil, just as the finish of our present known oil reserves is in sight. Our low-cost oil resources, known and unknown, may last for ten years or twenty years or even for thirty years, but they will not last indefinitely.

Inevitably there will come a day of scarcity of cheap oil. We must, with prudent thrift, conserve our rapidly dwindling low-cost reserves. Numerous efforts to establish a sound oil-conservation program have been thwarted by the prevailing profit policy of "let us get ours while we can." First industry tried it, and then some of the states, with an occasional effort by the Federal Government. But there has been neither consistency nor uniformity. Only when the specter of business disaster confronted the giant petroleum industry in 1933 was there provided through the National Industrial Recovery Act and the Petroleum Code the machinery for the first real effort at rational control under the Federal Oil Administration.

Recognizing that the industry and the oil states have been unable to work out a policy of conservation in their own interest by collective action, ordinary common sense should demand a permanent national policy that will prevent profligate and unscientific methods in the production, manufacture and distribution of oil. We must abandon the aim of the past, which has been not to produce all that we can reasonably use, but to produce all that we are capable of producing, whether we can use it or not. I challenge any other present-day industry in the United States to show greater waste, inefficiency and mismanagement than seem to be inherent in the oil industry, whether of its own making or because of inadequate laws. These are grave charges, but they are less grave than the situation to which they relate.

A World That Runs on Oil

OUR oil supply is limited, although cheap oil is necessary to our personal peace and comfort and to our safety as a nation. There is no doubt about our absolute and complete dependence upon oil. We have passed from the stone age, to bronze, to iron, to the industrial age, and now to an age of oil. Without oil, American civilization as we know it could not exist. No wheel could turn, no machine could function. No part of our motorized transport system could budge. Our entire system of distribution, our very habits as individuals, float upon oil. Shut off our supply, and our cities would starve in the midst of plenty without facilities to move foodstuffs from the farms. If the trucks and engines of the nation were suddenly stalled, our factories would stand idle. Trade would be instantly at a standstill. Trade is the lifeblood of our nation and the oil well the heart that sends that lifeblood pulsing into every corner of the land.

Contrast for a moment the great rapidity with which we move across this vast country with the slow and difficult modes of travel prevailing in parts of Europe and in Asia. There petroleum can be afforded only by the very wealthy. Only by water, requiring more days than it would take hours with us, can goods in any volume be moved the 1000 miles from Shanghai to Hong-Kong. In India, the Near East and in parts of Europe, travel is so slow that even under a common flag peoples a few hundred miles apart have diverse customs and different languages. In America, with oil, we have annihilated distance. Gasoline has drawn our communities intimately together.

Oil, as gasoline, symbolizing speed and power, propels our automobiles, airplanes and motor launches. It is fuel for our homes, our ships, our locomotives. As kerosene, it lights the lamps of rural communities, drives our tractors and Diesel engines and fires the kitchen stove. As naphtha, it cleans our clothes and contributes to the manufacture of all rubber articles. As a spray, it kills destructive insects and protects our trees and crops. As paraffin, it waxes our floors and seals our jellies. As grease, it is used for medicinal purposes, to entice hair onto bald pates and as a base for cosmetics. Oil is alike indispensable for the delicate mechanism of a watch and for the rugged wheels of a locomotive.

An everyday necessity of our nation, oil has become of even greater importance as a vital means of defense. There are no substitutes for petroleum in a modern army and navy. Upon the battle front slower weapons may be destroyed, but oil-driven trucks and tractors, tanks and airplanes, battleships and submarines move on. There is hardly a coal-burning ship left in our entire Navy. Our submarines burn Diesel oil. There must be plenty of oil at the front and behind the lines. We can read a lesson from Great Britain's World War records. On one occasion she had only sufficient wheat for a few days, with plenty piled up at American ports awaiting transport. But the British also needed oil. The choice, of necessity, was "fuel oil for the fleet" instead of "food for the people."

In view of our dependence upon oil, each of us, as a matter of personal and national concern, should look into this business of oil. How do we stand as to our future supplies? How much have we consumed? How much have we left? How much longer will it last? How much shall we have to pay to make available what is left? How do we stand in relation to the rest of the world?

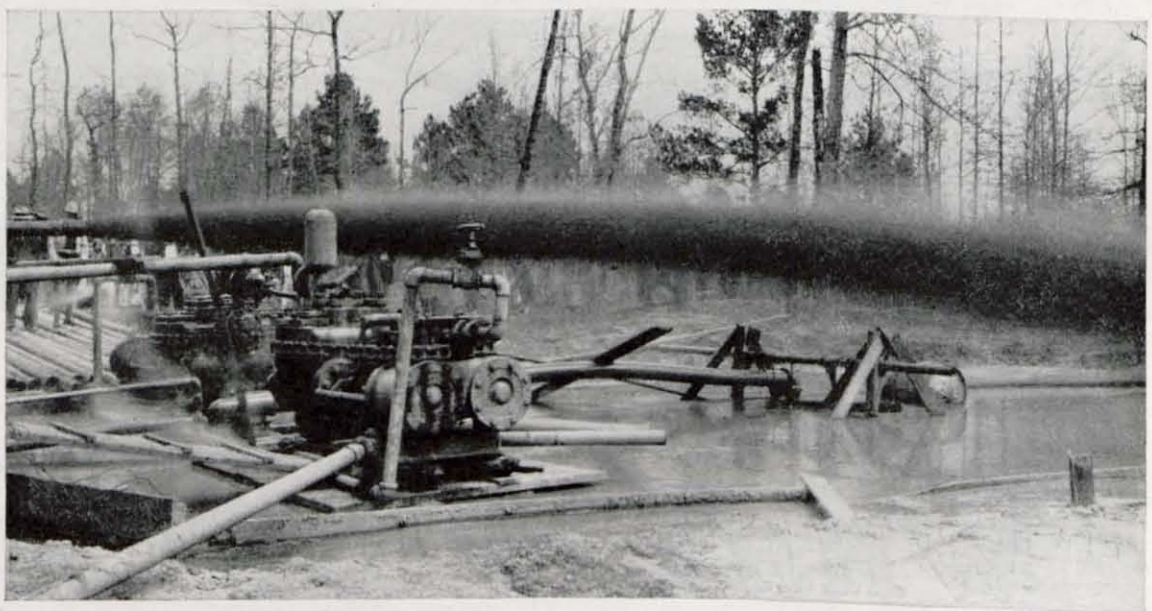
Even a casual survey of the world situation shows a heavy and brightly red balance against the United States.

By the end of 1934 we had produced approximately 16,000,000,000 barrels of crude petroleum, and reliable estimates definitely indicate that this total represents about half of our original available supply under present methods of production. The oil reserves of the United States are estimated to constitute only 15 to 20 per cent of the total world's reserves, whereas our production has consistently ranged between 60 per cent and 70 per cent of the world's total, Russia being next in line with a 10 per cent production. We have flushed our oil into the far corners of the earth and have flooded the foreign markets with it. We have been using up our oil reserves at a rate which is at least three times as rapid as that of the rest of the world, so that we bid fair to achieve the dubious honor of being the first nation to exhaust our readily available supplies.

Reduced to the simplest terms, we have proved our American initiative by producing about ten barrels out of every fifteen produced in the entire world, although we had to start with only one out of five. We are producing and consuming close to 1,000,000,000 barrels of oil a year. The most competent evidence now available is to the effect that we have but ten to fifteen years of known cheap supplies at the present rate of consumption. And since the

PHOTO, PETROLEUM ADMINISTRATION

A "Teakettle" Refinery in East Texas. It Can be Loaded on a Truck and Sneaked Out of Sight Almost Instantly



BRADLEY STUDIO, TYLER, TEXAS

An East Texas Gusher, Spouting a Solid Column of Oil With Terrific Force Toward an Earthen Pit

PHOTO CHARLES J. PAINE, TYLER, TEXAS

A "Teakettle" Refinery in East Texas. It Boils the Gasoline Off Crude, Leaving 10 to 12 Gallons of Gasoline in Each Barrel of Crude

first of 1933 we have consumed two and a half times as much oil as has been discovered in new fields, with the result that our oil reserves have been drawn upon daily to the extent of about 1,500,000 barrels. We have enough coal for thousands of years and metals for hundreds of years, but of oil, for which there is no known substitute at comparable prices, we have enough for only tens of years.

There are many ill-advised citizens today who think that the oil-bearing strata "reach on down to China," and that all we will have to do to get more oil is to drill a little deeper. Competent geologists will tell them that they are mistaken, because there is a limit to the depths at which we can find oil, no matter how deep we may be able to drill. Furthermore, the best geological information available today indicates that, at the most, oil probably will be found in only one-half of one per cent of the surface acreage of the country from which none is now being produced.

If you can, think of our known oil reserves as contained in a great underground tank holding many billions of barrels. But that tank is not filled up with easily extractable oil.

It contains a quantity of oil on top that can readily be skimmed off, and below, there is more oil clinging to rocklike sand, while still farther down in the tank there are coal and shale from which oil might be manufactured. When we talk about our oil reserves we have in mind that top part that can be skimmed off quickly and cheaply, so as to give you oil and gasoline at the prices you are accustomed to pay. More particularly, we are talking about oil that exists in its natural state in our oil fields, which may be taken out easily and at a minimum expense.

If we drive a hole into that tank, a certain amount of the very cheapest oil will flow out naturally from the top. When the natural flow has ceased, it becomes necessary to install pumps in order to draw out the oil that remains stubbornly sticking to the rocklike sand. This makes the crude oil cost more. When this is gone it is now customary to abandon an oil field. But it may become necessary, expensive though the process will be, to go down and dig out the oil-saturated rock to wring from it oil which no pumps will bring up. It may even become necessary, at a still greater cost, to go to the bottom of our tank and dig out our coal and shale, from which, if the consumer will pay enough, it is possible to process motor fuels. Already in many areas in the United States the cream from the top of the tank has been skimmed. The former great flush oil fields of Pennsylvania, Ohio, Kentucky, West Virginia, New York and Indiana are gone. Yet there is left, locked tightly in the earth, more oil than was ever removed from these areas. Once the oil flowed with the mere turn of a valve. Now it must be painfully pumped in ever-lessening quantities at an ever-rising cost.

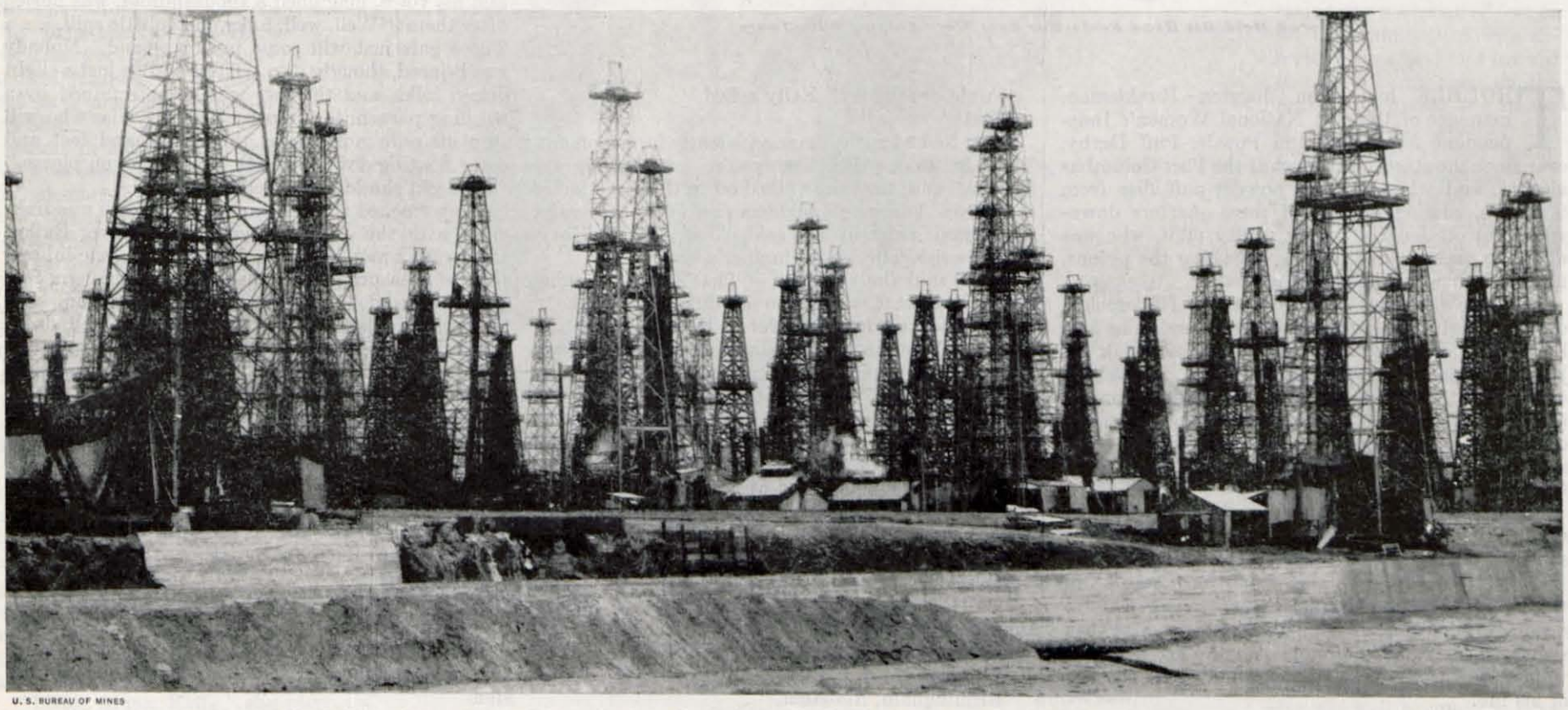
A favorite trick of those within the oil industry who may be seeking to confound the public is to indulge in fantastic estimates of the total content of the national oil tank. In large part they base their estimates on oil which might be obtained by the expensive process of mining oil sands, shales and coals and squeezing the oil out of them. Thus, with great glibness they talk of the total capacity of the tank, but carefully forget to tell us how much it would cost us for gasoline if we had to wring our tank dry. To the consumer, the cost at which oil may be secured in the future is the all-important thing. To the oil industry, cost is of no particular concern, since the higher the cost, the more the price to the consumer will be. Regardless of the cost to the industry, it will get its money back, with interest, from all of us who have to buy petroleum and its products. When that time comes, our gasoline bill per gallon may easily be quarters or half dollars where it is now dimes.

The Penalty We Shall Pay for Waste

VIEWED in this light, what does all this prodigious waste of our available oil resources mean to us? Gasoline, lubricants and fuel oils are so essential to all of us that they form an important basis of our cost of living. Every bill that a householder pays, every balance sheet a corporation issues, contains some charge for petroleum and its products. To increase that charge unnecessarily will raise our cost of living or lower our standard of living. The ingenuity of man may evolve an economical substitute for oil, but until this takes place we are in danger of going over the top of our civilization unless we can keep oil both plentiful and cheap. As the cream on the top of the tank is skimmed, we must dip deeper, with a consequent rise in the cost of a commodity that is part of the cost of everything we use. As consumers of oil, we are directly faced with the important question whether this business of producing oil is being conducted so as to recover from the national tank as much oil as possible at prices that we are able to pay.

In this regard, the record of the oil industry presents a rather sorry tale. Less than one-fourth of the oil in our known fields has been brought to the surface for our use. Many hundreds of millions of barrels which could have been recovered at a reasonable cost have been left in the earth until such time as we are compelled to pay the higher price necessary to recover it by highly expensive methods.

Crude petroleum is found in a porous rock generally called oil sand. Because of the propulsive force of gas and underground water, the crude oil moves along through the sands until it reaches some high place covered by a layer *(Continued on Page 39)*



U. S. BUREAU OF MINES

Not Too Much Oil, But Too Many Wells From Forests of Derricks. While the Photo Shows Orderly Development, Fewer Wells Would Mean Ultimately More Oil and a Longer-Lived Field

(Continued from Page 37)

"Minorah," said Kelly, "I was testing ships for KFG. I spun a model in from two thousand feet and went to the hospital for a month. When I came out I took up a new cabin job and the wing fell off. I was in the hospital for six months. The third time they would have taken me right to the morgue. I quit."

Minorah nodded. "Perhaps you're right," she said. "It is the Irish who are warned by friendly spirits. I thank you. I am sorry I bit you."

The pilot grinned and looked at his left wrist. The skin was broken.

"Kelly," said Minorah.

"Yes?"

"Up there, you spoke to me of love. To make me get back in. That was kind. Thank you. You may have your words back."

The pilot looked at this strange Kelly girl.

She had slipped her 'chutes and taken off her helmet.

"Minorah," he said finally, "it was the monkey wrench that made you get back in. Minorah, my dear, I can't touch you. I can't reach you. And yet I need you so much. I love you so terribly."

Minorah put the back of her hand to her mouth. "Ah, no," she cried softly, "not tenderness. Kelly—Kelly ——"

"Minorah!" cried Kelly, and suddenly knelt and placed his arms around her waist and his head close to her breast, because she was so very small. "Minorah, there is warmth. I did break through. I love you, Kelly."

Minorah held his head fast. "Tenderness," she said. "My dear man—my very dear man, I loved your strength so. But you were all strength"—her eyes were shining with tears—"until—until ——"

"Until I offered to lay you out with a wrench," said Kelly, and kissed her.

Runkleman, white and disheveled, drove up on the road bordering the field. An ambulance was close behind. He climbed the fence and ran over. "Gee!" he puffed. "Okay, eh? What happened?"

"Mrs. Kelly," said Kelly, "has made her last jump."

"Three strikes," said Minorah solemnly, as though pronouncing a sentence, "is out in any league."

Runkleman looked completely baffled. The ambulance driver turned around and went away.

AFTER THE OIL DELUGE, WHAT PRICE GASOLINE?

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of rock through which it cannot seep. There it is trapped under pressure and an oil pool is formed. A drill bites into the pool. The oil rushes to the surface, the flow dwindling as the gas and water pressure declines.

Think of an oil pool as a bottle of soda water. If a nail is driven through the cap of the bottle, the gas within will bring up the contents steadily and most of the soda water will come out. Yank the cap off and there's a "whoosh"; the gas is gone and, except for a slight spray of foam, most of the soda water is still inside the bottle. The same is true of an oil field, except that you cannot tilt an oil field up on end and pour out what the gas fails to bring up. You can pump out some of it, but the lack of gas pressure to force the oil through the rock permits much oil to cling to the rocks.

Let us assume that each of us has a well tapping an oil pool, 1000 yards apart at the surface. Each of us owns forty acres of the surface. We can fence off our property lines on top, but we cannot fence off our individual shares in the oil below ground. So long as each of us has one well, we will get about the same amount of oil. But suppose I drill a second well. I will immediately start taking twice as much oil from our common deposit as you can get. Furthermore, the suction around my well bottoms will set up a drawing force that pulls the oil out of the sand under your land. I am going into your safety-deposit box. The result is that, whether you wish it or not, in order to keep your oil from being stolen—because that is what it amounts to—you also must drill a second well.

To show how shrewd you are—and to be in absolute conformity with present-day practices in such matters—you put down a couple of more wells just a few yards from the edge of my property. You have put them there deliberately, knowing that they will draw up as much of my oil as they will of yours. Then, to protect myself, I bore a couple of holes, just for good measure, over by your fence. Thus we have offset wells to offset offset wells. We are off in a devastating race to see who can get the most oil out the fastest. We have literally yanked the cap off the oil field.

Here we have a simple illustration of why such enormous amounts of our good, cheap oil have been left in the ground, to be recovered later, if at all, only at exorbitant prices. Too rapid development has placed thousands of wells where hundreds would have given more oil at a lower cost.

Operating and legal principles now prevailing say, in effect, that whoever gets the oil out first owns it. This is the so-called law of capture. Actually, it is a lethal law of destruction. But as the law stands, all that any surface owner has is a right of access to an oil pool. He has no right of ownership in the deposit. Right of access is of no value unless used and is of most value when most quickly used. Hence the rush to pockmark the surface over a pool with a surfeit of wells. Coal or iron in your mine will remain there until you take it out, but oil will not stay when someone else has opened up a well through which it can escape. One operator can set the pace of drilling and the rate of production for everybody.

The Cream Skimmers

It may well be asked why this wanton waste of our cheap oil resources has not already been reflected in a higher price for gasoline. The answer is simple. It is not because we have too much oil, although we have had too many wells by far. In the wild scramble of all producers in each newly discovered field to see who could get oil out the fastest rather than to see how the field could be made to yield the most, each operator has had to resort to dumping his oil upon the market at any price.

As monuments to excessive production, our roadsides have literally spawned filling stations. We have "progressed" from more than 150,000 filling stations in 1929 to approximately 300,000 in 1934, and these figures do not include the thousands of garages and other outlets for gasoline which in their turn have reached maturity and spawned. So prolific have they become that it is possible to get into an automobile with a one-gallon tank and drive from New York to Chicago without running out of gas.

The great plethora of vulgarly garish service stations that stick out as sore thumbs in all directions is the self-expression of the cream skimmers who are intent upon getting their oil to market as gasoline before somebody else can do it. Anything to move oil out of the field before someone else! If this requires Moorish castles, Roman cathedrals or Greek temples to dispense gasoline and grease, they are built with no regard for the cost that the consumer will sooner or later pay, whether he chooses or not.

Still another reason why our wild outpouring of cheap and easily available oil stores has not yet made gasoline more expensive springs from the enormous volume of bootleg oil which has been dumped upon the market. A few of our states, realizing that some regulation was necessary if the greatest possible amount of oil was to be obtained cheaply, passed laws limiting the amount of oil which might be taken. Out of this situation was born the hot-oil operator, so called because he persists in producing more than his fair share from a common pool, thus violating, first, the state law and, later, both Federal laws and regulations. Adopting the vernacular applied to a stolen automobile, illegally produced oil became known as hot oil.

The object of the hot-oil racketeer has been to get out quickly as much oil as possible, from both his own property and that of his neighbors, and sell it for what he could get. The oil stolen from his neighbor, of course, cost him nothing, so that whatever he could sell it for was clear profit. Good-sized fortunes have been built up in the East Texas and Oklahoma City areas on such stolen goods. The territory that would not brook the cattle rustler has benignly tolerated the oil thief.

Federal efforts to drive the hot oiler out of business in East Texas were countered by a sly animal cunning with which it has been difficult to cope. All manner of legal and technical devices have been utilized. Operators regularly resorted to setting up fictitious ownership of properties, wells, pipe lines and refineries. They invented consignors and consignees. "Vest-pocket corporations" and fraudulent receiverships were common. Great fleets of trucks plied their trade at night, surreptitiously moving great volumes of hot oil. In and around the 120,000 acres of the producing area of this field there was constructed a colossal and intricate maze of secret pipe lines, hidden valves and illegitimate storage tanks—all for the purpose of handling hot oil. Small refineries, aptly described as "teakettle plants," were tied to producing wells by secret by-passes—the oil man's term for a pipe which taps other pipes or wells. Their sole objective was to boil hastily the stolen crude, so that it would be in some sort of condition for the market.

Openly defiant, in some instances even threatening to shoot Federal agents seeking to uncover their thieving practices, the hot-oil operators flourished for months. They wrote a lurid history of wasteful fraud and corruption that reached into official quarters. It is a story of fictitious, secret and frequently crooked transfers and shipments of oil. The tale is of the theft of at least 40,000,000 barrels of crude from this one field. Landowners were robbed of their royalty shares and the state and national governments of taxes due them.

The legal volume of oil was ostentatiously taken from the well mouths, while many, many more millions of barrels of illegal oil were run from the same wells through secret underground connections. Nor was all the grease that was separated out of the crude petroleum black in color. Some of it was green and had a curious tendency to stick to the palms of politicians, oil-company employes, officials and others charged with the responsibility of stopping the flow of hot oil. Until recently, there was a constant and heavy demand upon a bank in Texas for greenbacks in denominations of $100. Lately, after the Federal Oil Administration developed a means of checkmating the hot oiler, this demand fell off. Oil operators brought back the currency they had drawn out in large bills, saying that they no longer had use for currency of such size.

Five-and-Ten Oil

Because of wasteful overproduction brought on by excessive drilling and the practice of running wells almost wide open, the price of crude oil in the early part of 1933 sank to as little as five cents a barrel, hovered for days at a dime, and averaged about thirty-three cents for quite a period. The immediate cause was an inundating flood of crude from the giant East Texas field, and the immediate results were havoc and disaster in the other producing states. Pennsylvania, New York, Kentucky, Ohio, Montana, Colorado, West Virginia, Indiana, Illinois, Arkansas, Louisiana, Michigan, Kansas, Oklahoma, Wyoming, New Mexico and California suffered from prices which toppled to far below the actual average cost of production.

Thousands upon thousands of their small pumping wells were forced to close down. These contained in the aggregate several billions of barrels of recoverable oil which were being drained off at the rate of as little as a gallon and a half a day to a maximum of ten to fifteen barrels per well. They could not compete with the heavy, or "flush," production of new fields. Many were ruined by salt water, while heavy costs prohibited the reopening of others. Thus many wells were permanently lost, although producing in the aggregate thousands of barrels a day, and able to produce that quantity for many years to come.

Waste has been one of the outstanding characteristics of the production of oil in America since its nursing-bottle days in 1859. The round curses of salt-well owners in the early days greeted

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the appearance in their wells of the strange oily masses that flowed through with the brine. Salt wells were abandoned in disgust because they ran flush with oil which was drained off into the rivers and set afire as a holiday spectacle for the countryside.

Wasted Gas and Oil

In many instances the oil-well operator of today has the same attitude toward the gas that accompanies the crude oil that the salt-well developer in the beginning had toward oil. He unnecessarily allows the gas to pour its priceless energy wastefully into the air, in costly dissipation of untold power and potential wealth that is almost limitless. Gas is now burned as uselessly in many fields as the salt-well owners used to burn the unwanted oil. This waste persists, in appalling degree, while we dig deep into our pockets for taxes to finance local, state and national relief for the millions of our citizens who could not exist except for governmental bounty. The daily waste of gas and oil, if put to beneficial use, would give warmth and light to each of the estimated 4,500,000 families on relief rolls, and perhaps even a few dollars, besides, in cash. In the time it will take you to read this article, enough oil and gas will be wasted to keep at least 10,000 such families warm during the entire winter.

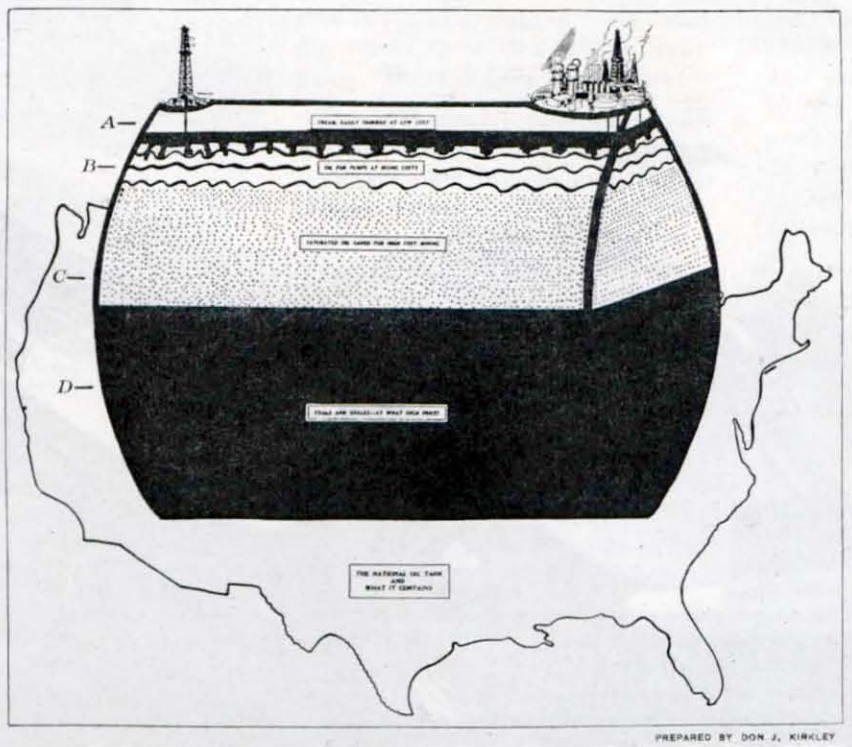
In the Panhandle of Texas, 1,000,000,000 cubic feet of gas a day go utterly to waste. Expert engineers estimate that the loss of this gas means that from 400,000,000 to 500,000,000 barrels of easily recoverable crude oil will stick in the sands. This is a direct loss of crude oil sufficient to supply the entire nation for approximately six months. From 200,000,000 to 250,000,000 barrels of gasoline could have been made from that crude oil. Enough is being lost in that one field to fill up every car in the country more than forty times. That would be a whole year's supply for many of us.

A year's output of that wasted gas, 365,000,000,000 cubic feet, represents as much heat energy as 62,634,000 barrels of fuel oil—enough to heat the average home 1,252,680 years, or, to turn it around, to heat 1,252,680 homes a year. The staggering total of 62,634,000 barrels of fuel oil is difficult for most of us to grasp. But it would heat every home in Cleveland for three years. Dallas, Texas—not so far from the Panhandle field as distances go in Texas—has 83,000 homes, every one of which could be heated for 132 months. Likewise every home in Atlanta, Birmingham, Indianapolis, Minneapolis, Portland, Oregon, Providence, Erie, Lansing, Topeka and Racine could be kept warm for a whole twelve months' year, not just the winter season. Yet in each of these cities are many families who are cold because they cannot buy fuel, while this tragic waste goes on unheeded and unchecked.

Measure this wastage by the military uses of oil and gasoline. The United States Navy consumes annually approximately 7,000,000 barrels of fuel oil and 500,000 barrels of gasoline, for which the Navy pays, in round numbers, $5,500,000 of the taxpayers' money. The Army each year uses approximately 1,750,000 barrels of oil and gasoline, for which the taxpayers dig into their pockets for $3,500,000. Yet this, 1,000,000,000 cubic feet of gas a day, hissing wastefully into the thin air of the Texas plains, represents in one year the energy necessary to keep our Navy afloat for seven or eight years and our Army on the move for an even longer period.

Gas waste in the prolific Oklahoma City field has been conservatively estimated at 300,000,000 cubic feet a day for the initial two years, 1930 and 1931. The waste there in 1933 has been estimated at approximately 1,500,000,000 cubic feet a day. The 1933 gas production in the Oklahoma City area is estimated at 430,000,000,000 cubic feet, of which approximately 90 per cent was wasted. Here was enough gas wasted to provide all the fuel for a city of 50,000 population for about seventy-five years.

Here, again, millions upon millions of barrels of oil have been allowed to become bogged in the earth's reaches, beyond cheap recovery, because of the loss of the driving pressure of the gas. By all of these millions of barrels we have been brought just so much nearer to high-priced gasoline; our national wealth has been dissipated by the extent of this waste.



A Graphic Chart of the Nation's Oil Tank

(A)—Cream, easily skimmed at low cost. *(B)*—Oil for pumps at rising costs. *(C)*—Saturated oil sands for high-cost mining. *(D)*—Coals and shales—at what high price?

Wells in the great Kettleman Hills field in California, while pouring a few paltry thousands of barrels of oil into pipe lines, have blown tens of billions of cubic feet of gas into the air. This great field was originally estimated to be good for 2,000,000,000 barrels of cheap oil. As the result of the colossal waste of gas and its potential energy, experts have estimated that these 2,000,000,000 have been cut in half. The other half is still there, 7000 or 8000 feet below the surface, but gone is the energy which would have lifted it cheaply to the top. Some of the early wells in Michigan were allowed to spew 18,000,000 cubic feet of gas a day, each, into the air. Visualize the worth of that gas if piped into Detroit or Lansing to make automobiles, or into Chicago for use as fuel. Just as a measuring rod, consider that our capital city of Washington consumes for domestic and industrial purposes approximately 7,000,000,000 cubic feet of gas a year.

There are other wastes besides that of gas. Great stores of oil aboveground generate waste in other ways. When too much oil aboveground permits the sale of crude at levels of from ten to thirty cents, much crude oil is boiled, so that only fifteen or eighteen gallons of gasoline are obtained from each forty-two-gallon barrel of crude, as contrasted with twenty-five to thirty gallons that result from more efficient processing. What is left is burned or may be sold for a song. In some cases it is just thrown away. When you are forced to pay higher prices—as you inevitably will be in days to come—it will be no consolation to you to remember that you and your fellows were content to twiddle your thumbs while this criminal waste was going on year after year. Our consumption, though it is held from day to day within generally fixed limits, is increasing from year to year, and we will ultimately be sorely in need of that extra ten to twelve gallons of gasoline at a reasonable price for a week-end trip.

The Federal Oil Administration has sought to prevent as much of the modern-day waste as it could by balancing production with consumptive demand, by ending the helter-skelter outpouring of the past and by providing for orderly development of new fields so as to increase the ultimate yield of the sands.

The Oil Administration had successfully stopped the interstate shipment of "hot" oil out of East Texas through the operations of the Federal Tender Board. However, a recent decision of the United States Supreme Court which held that Section 9 (c) of the National Industrial Recovery Act was invalid, gave the Administration a serious setback. This decision forced us to abolish the Tender Board which was established under Section 9 (c). The Court held in substance that Section 9 (c), which relates to interstate shipments of illegal oil, constitutes an invalid delegation of legislative powers by the Congress to the President. The Court did not rule on the issue of conservation, and seemed to indicate that Congress could, itself, regulate interstate shipments by specific legislation. Several Congressional proponents of effective oil legislation have already announced their support of legislative proposals to supply the means of stopping "hot" oil. There remains the Petroleum Code, which was not affected by the decision, and we will do our best with this imperfect instrument, to prevent further waste of this mighty resource.

I would be the last to attempt to maintain that the Petroleum Code has been a complete and unalloyed success, but I do say that a larger measure of stability and sanity in the industry has resulted from our efforts than has ever before existed. The machinery now in motion, faulty though we have found it to be in many respects, will expire next June unless renewed by legislation at this session of the Congress, and we will revert to habits which have little regard for the present and none at all for the future. So important is the question that a special committee of the Congress has just completed months of study of the problems involved.

My own opinion is that if the oil industry cannot control its affairs in the public interest, then the Federal Government, of necessity and to protect all the people, must take a hand. This business of oil is so important to all of us that private control must promptly and drastically mend its ways. We must, as a people, have oil, and plenty of it, at reasonable prices from our own wells. We cannot continue recklessly to pour this precious resource over the whole world. One can almost hear the sardonic laughter of nations, jealous of our prestige and covetous of our wealth, as they watch our headlong course toward national bankruptcy in oil while they count every drop of their own hoarded stores of this precious mineral.

Charting a Course

It is of paramount concern to the nation that a product without which our shores could not be successfully defended against an invading foe shall not be wantonly dissipated. As a people believing in the principle of private initiative, we would prefer to see those in charge of our oil resources put their own house in order. The Government does not want to undertake any greater burden than is necessary.

Some now are advocating a compact between the oil-producing states. I have no faith in this course. It has been tried in the past without success. The states have been unable to agree, or, agreeing, have not been able to enforce their agreements. To those who are crying for a compact between the states, I suggest that our Federal Government is the greatest and most successful compact between states since the beginning of time. There is at least some ground for the suspicion that some of the most vehement opponents of Federal control are proclaiming their belief in a state compact so as to draw a familiar red herring across the trail. They do not want Federal control and, by the same token, they do not want state control. They have no patience with any suggestion that the public has any interest at all in the oil business. They want the industry to run wild. So, with their tongues in their cheeks, they declare for a state compact, convinced, on the basis of past experience, that it cannot succeed.

If the oil industry would avoid the necessity of its being declared a public utility, it would show its wisdom by joining with the Federal Government in that degree of co-operative control that would leave it the greatest possible latitude in managing its own affairs consistent with the admitted public interest with which it is charged.