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

Parable of The Stones

One day as the Master walked with his disciples Peter and John, he observed that their pathway in one place was made rough by stones, and a little beyond passed downward through the mud of a swampy place. He remarked that, if each traveler who passed along the way would pick up one of the rocks and carry it to the mire, soon the entire pathway would be made smooth and dry.

Immediately the beloved John picked up a large stone and carried it in compliance with the Lord's suggestion. Peter did likewise but, feeling weak for lack of bread, carried a rock only large enough to fill the hollow of one hand.

As the three came to the mire, John turned to ask where they might drop the stones to best advantage. But Jesus answered, "Eat of the stones instead," and straightway transformed both of the rocks into bread. Thereupon John found himself with a large loaf to eat, whereas Peter frowned upon a small crust.

Another time, as the three walked this way again, the disciples once more picked up stones from the pathway and bore them toward the mire. However, Peter's hunger was great and he carried as large a stone as his strength would endure. When they reached the muddy place, John cast his burden down at once. But Peter turned wearily toward the Lord and inquired: "Shall I drop this loaf too, Master?"

The Master answered: "Yea, Peter, cast thy burden into the mire."

- As retold by Gibson A. Condie

By Alton Ketchum

IT ALL STARTED when Junior looked up from his homework: "It says here America is great and powerful on account of the American economic system. What's our economic system, Dad?"

Dad put his paper down and appeared to be thinking hard.

"I'd like to know, too," Mother put in. "All this talk about Democracy and Communism. I think in these times every American ought to be informed about such things."

things."

"Well, I could give you all sorts of answers," Dad said. "But maybe we ought to get the story straight from the one who knows it best."

"Who's that?" asked Junior.

"You'll recognize him all right," Dad said. "Let's go!"

So they did . . .

Junior gasped. "Gee whiz-I know him!"

"Uncle Sam," Dad began, "my boy here wants to know what makes America great. You know—our economic system and all that. Fact is, I guess we all do."

Uncle Sam smiled. "All right," he said. "Couldn't have come to a better place. Let's start at the beginning.

"How do we make a living?...

"That's what economics is, you know. The study of how men make a living. Let's go back to the early days:

"Well, like all people in a new country, we Americans needed food, clothing and shelter. At first, each pioneer family supplied nearly all its own needs. It was a hard life. As long as we lived apart, we had to work from dawn to dark to build houses, raise food and weave cloth. "But when we began to gather in groups of several families, we found it was easier for each man to do just one thing and do it well. One could build houses, another could raise food, a third could weave cloth. Then the whole group could have more of everything because each man could produce better and faster."

"Weren't most of the early settlers poor people?" Sis asked.

"Yes, by our standard today," said Uncle Sam. "But for that matter, the greater part of the human race has been poor for ages. In most countries, famine and want are always just around the corner. Yes . . . even in America

"the good things of life used to be scarce.

"Only a very few rich people could enjoy them. They cost more than the average man could afford. Why? Because everything was made by hand—slowly. There was little progress.

"It was a hard life."





"We developed new kinds of power."

"This had been true for thousands of years. Just think—George Washington couldn't travel a bit faster or more comfortably than Julius Caesar did. The daily output of the metal-worker or wood-worker was so low that they had to charge high prices for their products.

"Then came the American Revolution, closely followed by the French Revolution and the series of South American revolutions which won independence for a dozen nations. Everywhere men were seeking a new freedom to think and act as they pleased. They wanted a new economic freedom, too. And especially here in America, the land of opportunity, millions found it.

"You can't stop a really free people when they put their minds to a problem. This time the problem was: How could we get more of the things we needed—make them faster and at lower cost?

"First, we developed new kinds of power.

"In the early days, men and animals did most of our work. We even used the wind to run our machines. Then we began to use water power to turn millstones and run looms. But in some places no water power was to be had. We needed something better. Our inventors and business men kept testing and trying. There would be big rewards for reliable power that could be used anywhere.

"At last we had it—thanks to an ingenious English man, James Watt. He invented an engine driven by steam made from coal! Later still Americans developed engines run by gasoline and electricity. Now we're looking for ways to use atomic power.

"Today we use nearly 29 times as much power as we did a century ago. Even in 1900, half the work of America was still done by sweating, straining animals and men. By 1944, the horse had nearly vanished from our streets. Animals supplied only 2 per cent of our work energy, men only 4 per cent. Power driven machines had taken over more than 90 per cent of the burden!

"Year after year, more and more power has been used to run our machines. The cheaper and more efficient that power becomes, the more we can use it and the greater is our production each hour!

"Second, we invented and used new machines.

"Americans have always been an inventive people. When they realized that they were free to shape their own destinies, they began as early as the 1700's to devise machines which multiplied each man's work power.

"In 1799, Eli Whitney, inventor of the cotton gin that did 50 men's work, made history with an order for muskets awarded by the U. S. Army. Instead of building each gun separately, he turned out standard parts which could be used interchangeably on any gun.

"We invented and used new machines."



"Hearing of this, the clocksmith Eli Terry started to make clocks on the same principle. With all the laborious fitting eliminated, he found that he could sell clocks for \$10 apiece instead of the regular \$25. In three years, he and his partner, Seth Thomas, sold 5,000. Eli Terry saw that if he cut his costs by mass production, and distributed a bigger volume more widely, he would benefit more people and make more money. And it worked out exactly that way!

"Pins had long been made by hand, selling as high as 20 cents each. Then a Connecticut man perfected machines to make two million pins a week! Down through the years, Americans invented hundreds of thousands of work-saving machines.

"Of course, it costs money to make and install those new, labor-saving machines in factories—more money than any one man could afford. So the owner took in many partners—men and women who received stock in exchange for their money. All these partners joined to form a company which they owned together.

"With new kinds of power, work-saving machines and ways of financing them, the American economic system was on the march. But we added still another ingredient . . .

"Third, we became more skillful at our jobs."

"The same new freedoms that made Americans ingenious and inventive made us better and better workers—no matter what our jobs.

"The planners and managers of industry found new and improved ways of designing factories and work flow—so that goods were turned out more quickly and cheaply. They found new and better ways to get those goods from the factories to the stores and into the homes.

"And the individual worker became steadily more skillful at his job. He realized that the more he could produce during the hours he worked, the more he would increase his own value. When many workers did that, it added up to national prosperity!

"Labor unions and the principle of collective bargaining strengthened the worker's sense of security. The result is that America gradually acquired the greatest group of trained, highly-skilled labor the world has ever seen.

"New power—new machines—plus constantly increased skill on the job began to turn scarcity into abundance."



"We became more skillful at our jobs."

"How have power machines and greater skills affected prices?" Mother asked.

"Let's take one example," Uncle Sam said. "Back in 1839, William Underwood made tin 'canisters' or cans by hand-soldering at the rate of about six per hour. These were so expensive that they were saved and reused many times. Today, one automatic machine can produce up to 21,000 cans per hour. So they cost only a fraction of a cent apiece. That's the way it went. With better machines, more use of power and greater skill, each machine worker could raise his productivity per hour.

"The more units the worker could make per hour, the lower the cost, and the more people could afford to buy them!"

"What have these things done to wages and hours?" Dad wanted to know.

"The hand-worker usually had to toil 12 to 16 hours a day to make a living," Uncle Sam replied. "But with machines, he could make products worth much *more* in



"In the long run, machines make jobs!"

a lot less time. So now he only has to work eight hours a day to make a much better living than the hand-worker ever knew; Better machines have made it possible to raise wages and shorten hours over the years."

"Do machines take away jobs?" Sis inquired.

"No indeed!" Uncle Sam declared. "In the long run . . .

"Machines make jobs!

"When the Industrial Revolution began, it went ahead so fast that some hand-workers did lose out to the machines. This usually happens when machines come in. But it's only temporary. Soon thousands of new jobs open up! Because that's what always happens in the long run.

"For instance, a million jobs in the horse and buggy business have been replaced by an estimated 6,380,000 new jobs in making, selling and servicing automobiles. Today there are more people just making machines than were engaged in all manufacturing a hundred years ago. In the past 70 years, of all the new industries which have sprung up, just 14 of them give employment, direct or indirect, to an estimated 13 million workers.

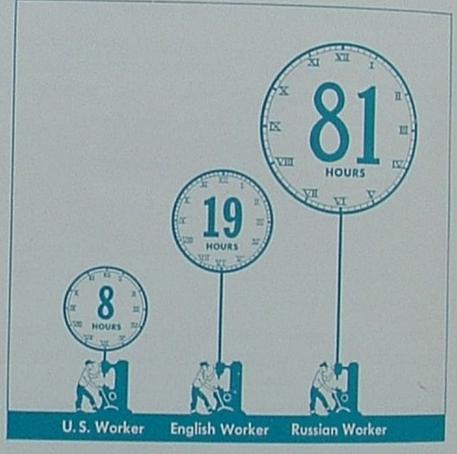
"In older industries, the number of workers has in creased, too. In the period from 1870 to 1930, jobs multiplied by 6½ times in the glass industry—almost 5 times in the food industry—over 2½ times in the textile industry—and over 5 times in the lumber and furniture industries . . . while in the same period, population barely doubled.

"Today, most people know that the machine isn't an enemy, it's a friend—and that anything which helps us to turn out more work adds to our strength and prosperity. So, you see," Uncle Sam went on, "the main spring of the American standard of living is

"Productivity!

"And because we Americans produce so much better, we earn more and can buy more for every hour we work.

"This chart shows how many hours a worker has to put in to earn \$10 worth of goods in the U. S. A., Britain and Russia:



". . . and the end is not yet. We have learned that in the long run

"When output per hour goes up, prices drop, so more people can buy and all of us gain.

"But when output per hour goes down, prices rise, so fewer people can buy and all of us lose.

"Of course, there are unusual periods when these principles don't seem to work—times when business is far above or far below normal. But over the long pull you'll find that these rules of productivity do apply. On the average, productivity has increased in the United States almost one-fifth every 10 years since 1850. We topped this in the 20 years 1920-1940, and we can do it again!"

"Can we keep right on doing it?" Dad asked.

"We certainly can!" Uncle Sam replied. "If everybody who plays a part in making things will team up to do it, we can raise productivity so far and so fast that we can share the benefits and have real security for all our people.

"Real Security comes only with Freedom," Uncle Sam asserted.

"Men follow two great impulses-to be politically free and to be economically secure. In America we have won freedom and we are winning security. Dictators promise security if the people will give up freedom. But experience shows that freedom and security must grow together. The history of the United States proves it.

STANDARDS OF LIVING OF THE WORLD'S LEADING COUNTRIES

"The things they are able to buy with what they earn.)

U. S. A.		
Canada		
New Zealand		
Great Britain		
Switzerland		
Argentina		
Australia		
Netherlands		
Eire		
France		
Denmark		
Sweden		
Germany		
Belgium		
Norway		
Austria		
Czechoslovakia		
Greece		
Finland		
Hungary		
Japan		
Poland		
Egypt		
Italy		
Yugoslavia		
U. S. S. R.		Note: The chart at left
South Africa		based on prewar condition
Bulgaria		Latest post-war figures sh
Rumania	-	that the American stand of living has arisen unti
India	_	is now about 10 times hig
China	CONTRACTOR OF THE PARTY OF THE	then that of Soviet Rus

est standard of living ever enjoyed by any people in all history. This is no mere boast. It is a statement of thrilling fact-that men can raise their level of living by greater productivity if they are free to do it! "We take abundance for granted,"

"Today the American way of life provides the high-

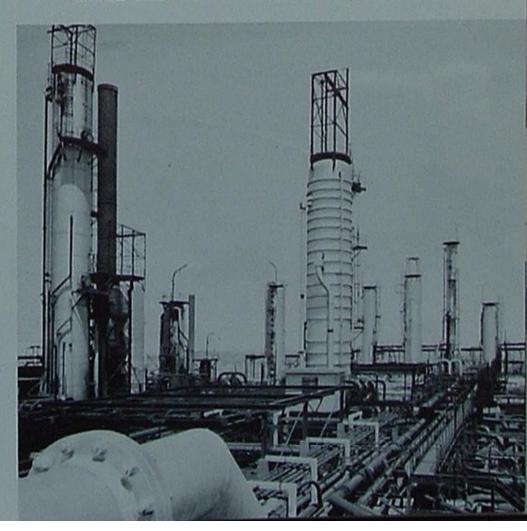
Uncle Sam said.

"We know that even in the depths of a depression, the people of the United States have more security than is enjoyed by millions in other countries during normal times. Electricity, running water, central heating, one house or apartment per family, are quite general in America. To the Russian or Chinese worker, whose whole family is often crowded into one room, with no private kitchen or bath and no central heating, our homes would represent dreams of luxury.

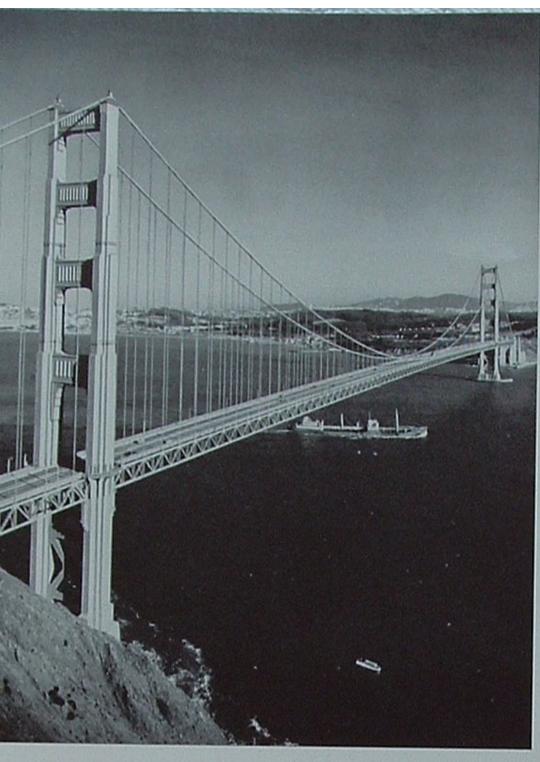
"With only one-fifteenth of the world's population, and about the same proportion of the world's land area and natural resources, the United States has more than half the world's telephones, telegraph and radio networks -more than a third of the railways-more than threequarters of the world's automobiles-almost half the world's radios-and consumes more than half the world's coffee and rubber, two-thirds of the silk, a quarter of the coal and nearly two-thirds of the crude oil.

"The best measure of what the average American gets of this is in what one hour's labor will buy. First let's see how much labor an average factory worker had to give to earn some typical products in 1914, compared with how much it took to earn much better products in 1948:

"America uses two-thirds of the world's oil."



ON TOUR



Photo, courtesy of Redwood Empire Association
"Such improvement is a law of life in America."

	1914	1948
MEN'S WORK SHOES	9 hours	3 hours
BABY CARRIAGE	41 hours	151/2 hours
ELECTRIC LIGHT BULB	102 minutes	12 minutes
ELECTRIC FAN	49 hours	4 hours

"Such improvement is practically a law of life here in America. We assume that in the long run things will get better and cost less.

"Now let's summarize," said Uncle Sam, "and I think you'll agree

"This is Progress!

"The American System has:

"1. Increased the real wages of American workers (wages in relation to prices) to three and a half times what they were in 1850.

"2. Reduced hours of work from an average of about 70 hours a week in 1850 to around 40 today.

"3. Increased share of the national income paid out in wages and salaries from 30 per cent in 1850 to about 70 per cent today. "4. Increased number of jobs faster proportionately than the growth of population. In 1850 out of each thousand persons fewer than 320 were gainfully employed. Today, this has risen to 420 out of each thousand.

"5. Raised national income (the total of what all Americans take in) from about 7 billion dollars in 1850 to about 215 billion in 1944 (figured in dollars of today's purchasing power).

"How? Well, the average worker can produce about five times as much per hour as in 1850 without expending any more energy than he did then. That's why net output of goods and services increased 29 times from 1850 to 1944, though working hours were much shorter and the population only six times greater.

"If we were still producing at the 1850 rate per hour, we would need over 300 million workers, each putting in 43 hours a week, to produce as much as we did in 1944!

"Even so, we should never get over-confident," Uncle Sam continued.

"Our system isn't perfect

"Maybe that's because it's geared to human nature, which isn't perfect either.

"But it is because our American System is realistic—because it satisfies so many deep-down human needs—that it is so successful. True, we still have ups and downs of prices and jobs. We have a housing shortage. Poverty is still with us. But we can solve those, as we have solved so many other big problems.

"Little by little, we are learning more about leveling our business booms and depressions. We've found ways to cushion the swings. We try to keep people from buying on credit more than they can pay for. We make jobs on public works for the unemployed. We've built up a big fund of social security money that will help to keep buying power from drying up. And there are other ways. We'll find them. We're not afraid of better methods.

"Change is our middle name!

Dad looked up at Uncle Sam. "Well, you sure answered all our questions. And I know we're going to be better Americans now that we know what we've got and how wonderful it is."

"The main thing is—to make it work still better,"
Junior said.

"That's right!" Uncle Sam agreed, "And the more our people understand it, the better it will work—now and in all the years to come. In fact, the kind of future we make for ourselves depends on how well management and labor and all the rest of us learn to work together.

If we do that, there's just no limit to how far we can go!
"The better we produce, the better we live.

Challenge of the Future

"Our system has given us many wonderful things," Uncle Sam said, "but we still have a long way to go before every man, woman and child of us can count on what we dream of for everybody—a job, a decent living and a sense of real security. Even if we do no better in the future than we have in the past, the record of our actual performance shows that

"IF we have no major depression, IF we are at peace, IF we go on increasing our productivity (and sharing the benefits) as we have in the past

"WE CAN HAVE BY 1960:

"MORE JOBS-about 65 million Americans at work.

"SHORTER WORKING HOURS—average work week, 38 hours in a five day week.

"MORE AND BETTER HOUSES-over 15 million new bomes built. "MORE VACATIONS—at least two weeks' vacation for every employed person.

"HIGHER INCOME—income per person in buying power more than 40 per cent higher than in 1940.

"BETTER SCHOOLING—at least two years of high school for every child in America.

"MORE AND BETTER FOOD—better average diets: more milk, fruits, vegetables.

"GREATER SECURITY—Three and a half times more money available for old-age and unemployment insurance than in 1941.

"But we ought to be able to do even better in the future than we have in the past—if we all work together to increase our productivity and to spread its benefits. We can do this through increased wages, lower prices, shorter hours, more jobs and better collective bargaining, as well as more income to owners. Only in this way can we hope to level off the ups and downs of prices and jobs, avoid depressions, lessen industrial disputes and enjoy the good things for all which our economic system can give us!"



Photo, courtesy of Times-Mirror

"There's no limit as to how far we can go!"





A. E. Lyon Executive Secretary, Railway Labor Executives Association

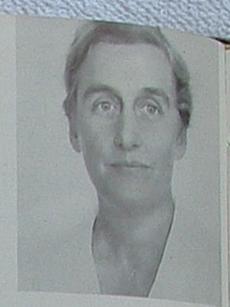


Elmo Roper Marketing Consultant



Alan Gregg, M.D. Director of Medical Science, Rockefeller Foundation

THE ADVERTISING COUNCIL



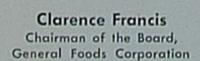
Miss Helen Hall Director, Henry Street Settlement; President, National Association of Consumers



Dr. Sarah Gibson Blanding President, Vassar College



Herbert H. Lehman ormerly Governor of New York nd Director General of U.N.R.R.A.





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Quite as important as any information we receive are the wisdom, integrity and purposes of our informers. For that reason, ON TOUR is pleased to present the men and women who comprise this Council.

The Advertising Council is a non-profit, non-political, non-partisan organization formed to utilize advertising in the public service. Organized shortly after Pearl Harbor, the Council helped plan and prepare, without charge, advertising for such government wartime campaigns as War Bonds, Food Conservation, Scrap Salvage, Paper Salvage and some 100 others. Today, they are conducting many information campaigns in the interest of a better America for all, among which are U. S. Savings Bonds, Better Schools, American Red Cross, Chest X-Rays, Reduction of Group Intolerance, etc.

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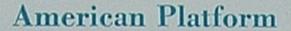
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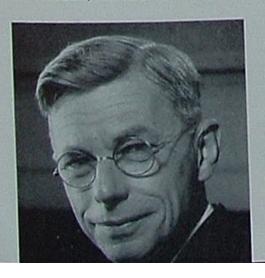


Evans Clark, Chairman, Executive Director, The Twentieth Century Fund

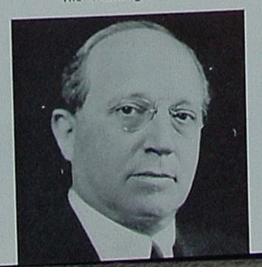


- 1. Freedom of the individual to work in the callings and localities of his choice.
- 2. Freedom of the individual to contract about his affairs.
- Freedom of the individual owner of property to start and manage an enterprise, to invent and profit, to invest, to buy and sell in a free market—insofar as this freedom does not conflict with public interest.
- 4. Freedom of the individual to speak, to inquire, and to discuss.
- 5. Protection for the individual—by public or private means—against the basic hazards over which he may have no control.
- Government action in economic affairs when necessary to ensure national security or to undertake socially desirable projects when private interests prove inadequate to conduct them.
- 7. Freest possible competition consistent with the public welfare.
- Free collective bargaining—the right of labor to organize and to bargain collectively with employers.
- 9. Expanding productivity as a national necessity. American experience has proved that it is in the long-run interest to all: (a) to pay labor progressively higher wages in relation to prices; (b) to do this by progressively increasing productivity per manhour through the application of constantly greater mechanization, power, efficiency and skill in the processes of production and distribution; and (c) to reduce hours of labor and improve real income while increasing the volume of production and distribution.
- 10. Increased recognition of human values as a prerequisite to better living. As a technological society develops, it inevitably produces a varying amount of industrial displacement and unemployment. While no solution of this problem has been found, the American people have sought to deal with it, not through compulsory assignment of laid-off workers to other tasks but through such devices as unemployment insurance, employment services, vocational retraining, public works, community employment projects, and family welfare programs. But much more remains to be done.

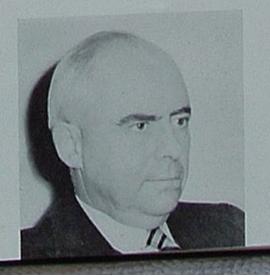
James B. Conant President, Harvard University



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President, Federal Reserve
Bank of Saint Louis



Allan L. Swim

Publicity Director, Congress of Industrial Organizations



Mrs. Olive Clapper Journalist

Dr. Reinhold Niebuhr Professor of Applied Christianity Union Theological Seminary





trucks is moving between 12 and 15 million gallons of gasoline each month to more than 600 service stations

Gauger R. F. Potter is obliged to hold the self-closing valve open as gasoline flows into truck compartment at loading rate of over one-thousand gallons a minute.

ON TOUR

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and 50 large commercial buyers. If and when double that volume is required, the new facilities will be found adequate.

Rosecrans, which heretofore has played an important Company role as an oil field and absorption plant location, proved to be an excellent terminal point for several reasons. It is located well outside the congested area of Los Angeles, yet is ideally situated in relation to the total area being served. Sufficient property was available to permit uncrowded installations and future expansion if needed. The land also was favorably zoned, contoured by Nature to provide flood and fire protection. and located just outside the coastal fog belt. Such utilities as gas, water and electricity were available. Only a few blocks of private Company-constructed highway was needed to connect the terminal with public truck routes proceeding in all directions. Ten and one-half miles of

VAN NUYS BURBANK HOLLYWOOD LOS ANGELES PUENTE CULVER CITY VERNON MONTEBELLO MONICA WHITTIER HUNTINGTON INGLEWOOD SANTA FE SPRINGS VENICE SOUTHGATE HAWTHORNE MANHATTAN BEACH HERMOSA BEACH SAN PEDRO

The all-steel loading rack accommodates four transports at once and is more than capable of supplying the metropolitan area above with over 12 million gallons of "76" and "7600" now consumed there monthly.



ON TOUR

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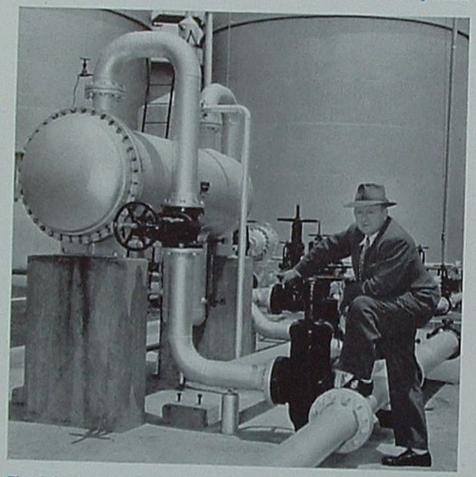
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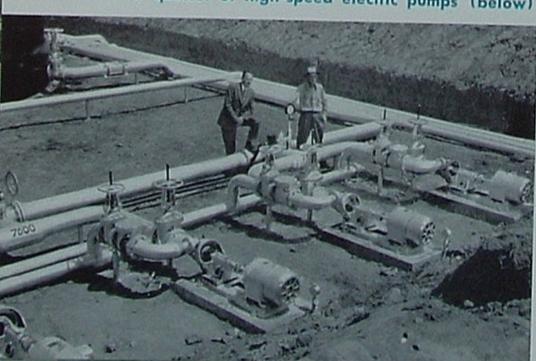
City.



Dispatcher W. H. Roberts holds telephone communication with over 600 service stations and relays orders to loaders and drivers via an intercommunication system.



Final inspection of testing equipment at end of 6-inch pipe line is made by L. D. Leeper, construction supervisor (above), while Frank Lord and A. G. Turk look over a quartet of high-speed electric pumps (below).





Ingenious meters, said to be the largest ever installed, measure each load of gasoline and record gallonages on truck loading tickets with this printing mechanism.

new pipe line, added to four miles of existing line between Los Angeles Refinery and Torrance Tank Farm, was all the piping needed to serve the project.

The principal economy effected is that of reducing transport mileage between refinery and service stations. To begin with, our fleet will travel 45,000 fewer miles per month, thus reducing delivery costs and helping to ease traffic congestion. This and other economies will amount to net savings of over \$125,000 a year.

Several hundred employees and visitors who participated in the terminal's official opening were impressed with the Rosecrans installations and operating plan:

All gasoline shipments from refinery to terminal will be handled by our Pipe Line Department, whose personnel also constructed the new line. The gasoline, after a careful testing procedure, is placed in four 10,000barrel tanks, each equipped with a floating-type roof and mechanical gauging equipment.

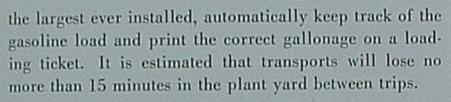
Two electric pumps for each gasoline commodity are capable of pumping into trucks at 1500 gallons a minute. However, a loading speed of 1000 gallons a minute will fill our largest trucking unit in less than 10 minutes, which is considered fast enough.

The loading rack is a model of excellent equipment and convenient arrangement. It will accommodate four trucks at a time with service-station ease. Loaders need to take only a short step from rack to truck top for the filling operation. Within easy reach from a quick-closing valve controlling the flow of gasoline are two starting buttons that govern the two manifolded pumps. Meters,

ON TOUR



A. A. McDougal, stock control clerk, Betty Burry and Mildred Carstensen, comptometer operators, appreciate the light, comfort and cleanliness of their new office.



Adjoining the loading rack at second-story level is the dispatcher's office. This nerve-center of the system is in contact by telephone with all marketing outlets and by public-address system with practically all employees on the grounds. The dispatcher may relay instructions and messages without having to leave his desk.

The separate office building is bright and modernistic. It contains a commodious general office, a private office for the superintendent, a conference room where drivers may be plied with reason or coffee, tiled restrooms, and even a semi-glassed patio with lawn chairs, table and umbrella. It brings transport operations just about up to a country-club status.

And to your right as you enter the broad paved yard is the Automotive Department's garage. Here the big trucks are regularly fueled, lubricated and kept in repair. Also under design and construction is a washrack where the fleet will be kept in advertising trim with daily shower baths. Since these hard-working vehicles are kept on duty round-the-clock, a parking strip is the only storage space needed.

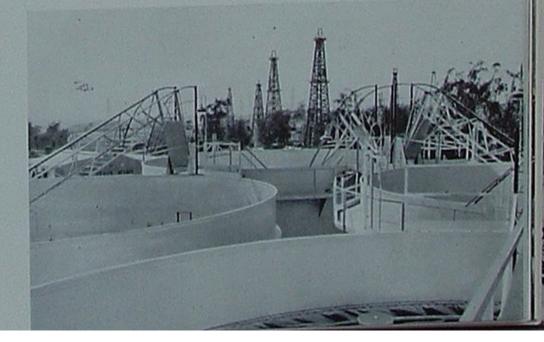
Altogether, Rosecrans Terminal is proof of sound judgment and engineering skill on the part of those who conceived and built it. To Southern Californians it is evidence that Union Oilers have again beaten the future to the punch.



M. S. Imes, terminal superintendent, H. M. Schafer, assistant Territory manager, and L. D. Leeper survey results after many months of building responsibilities.



Four storage tanks, holding 10,000 barrels each, receive gasoline via 15 miles of pipe line from Los Angeles Refinery. Their floating roofs (below) rise and fall with stock levels, thus minimizing evaporation losses.



INTERIOR SECRETARY KRUG PRAISES SHALE RETORT

Secretary of Interior Julius A. Krug has inspected our shale oil pilot plant at Los Angeles Refinery and publicly described it as a "definite step toward national security insofar as the United States fuel supply is concerned."

MR. KRUG toured the 50-ton experimental plant on May 13, as the guest of President Reese H. Taylor and other Company executives. On hand to explain the mechanics of our process were Dr. Clyde Berg, supervisor of Process Development, and Homer Reed, chief process engineer, both of whom have made important inventive and engineering contributions to the plant's success.

Turning to a dozen newspapermen who were present, Secretary Krug explained that a single mountainous area near Rifle, Colorado, contains vast layers of shale from which an estimated 200 million barrels of oil can be recovered. This volume gives the country a domestic reserve sufficient for several hundred years, based on present rates of consumption, and could prove invaluable in the event a war cuts us off from Middle East oil sources.

However, the Secretary emphasized, our problem has been to find economical methods of mining the rock and converting its content of kerogen into a refinable type of crude oil. Government experiments at Rifle have gone far toward solving the mining problem. And the Union Oil retorting process—which permits continuous flow operation, requires no water, and utilizes the shale's own content of carbon for fuel—appears to be ideal for oil extraction purposes.

Upon pronouncing the Company's process superior to the Government's own batch plant now being used in Colorado, Mr. Krug invited Union Oil to transfer our pilot plant to the mining site.

Mr. Taylor not only agreed but indicated the Company intends to carry the experiments further toward perfection. Several changes are contemplated to make the retort even more efficient.

It long has been the contention of Company scientists that oil shale offers better possibilities than coal as a



A number of newspapermen were on hand at Wilmington to learn first-hand how the Interior Secretary (R) would respond after viewing our shale oil pilot plant. He was most optimistic in his replies.

(L-R) W. L. Stewart, Jr., and Reese H. Taylor escorted Secretary Krug through our experimental shale oil refining unit also, while Homer Reed and Dr. Clyde Berg explained the techniques of this promising method.

source of synthetic fuels in case crude oil becomes too scarce or too costly. They reason that, unlike the coal process, it is unnecessary to convert shale materials into synthesis gas. Instead, the shale yields liquid hydrocarbons that are more economically refined. Despite a number of attempts to make coal competitive with crude oil as a source of petroleum products, it appears that the shale oil theory is gaining ground. At any rate, there are no "For Sale" signs on the Company's 20,884 acres of shale holdings in Colorado.

The distinguished visitor was also shown a method of shale oil refining that has been developed by Manufacturing Process Division in cooperation with the Research Department. The method is new and will require construction of a new refinery when it comes time to begin commercial production. Samples of refined shale oil produced in this experimental unit were shown to demonstrate that the project is well beyond theory.

At the present stage, based on Bureau of Mines and Union Oil pioneering, several conclusions have been reached: The world's greatest known reserve of oil lies untapped in the shale beds of Colorado, Utah and Wyoming. The shale can be mined as economically as coal. Our retorting process can strip oil from the shale at a very reasonable cost. We have developed and tested an efficient refining method. The refined oil can be distilled into high quality jet fuel, diesel fuel and gasoline, or can be cracked into a variety of hydrocarbons.

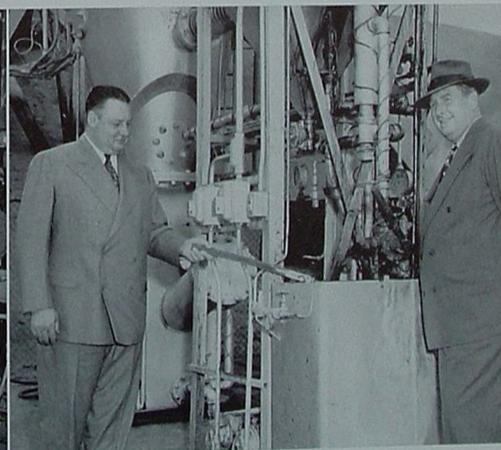
In other words, shale oil in great quantity is here if we need it or if economic conditions invite its use.



This 50-ton-per-day experimental unit developed by Union Oil is the affirmative and best-yet answer as to whether oil can be extracted from shale economically.

Secretary Krug, who towers above mere six-footers, found his match in President Taylor. They happily agreed to U. S.-Union Oil cooperation during further experiments at the oil shale mining site in Colorado.







LAWRENCE WOLFF Executive Assistant to Vice President



ROY LINDEN Manager General Sales

Reorganization...

J. M. OWSLEY Manager Wage & Salary Administration



A PPOINTMENTS, effective June 1, of LAWRENCE WOLFF as executive assistant reporting to A. C. Stewart of Marketing, and of J. M. OWSLEY as manager of Wage and Salary Administration reporting to W. C. Stevenson, have resulted in a series of other promotions and transfers principally affecting Northwest Territory.

Succeeding Wolff as manager of General Sales, Head Office, is ROY LINDEN, former manager of Northwest Territory, Scattle. F. K. CADWELL leaves the district sales manager's spot at Tacoma to replace Linden, and is followed in Tacoma by W. I. MARTIN, formerly manager in Riverside.

The promotion of Owsley, who has served as manager of Sales Services, Seattle, since 1946, prompted other changes among district sales managers. T. G. WISE of Salem is the new manager of Sales Services, Seattle. P. H. BOYD of The Dalles moves to the Salem assignment and is replaced by D. B. HAYES, whose preceding job was retail representative at Bend.

Promotions were realized also by J. S. FOSTER, former Southwest Territory personnel representative, who replaces Martin as district sales manager, Riverside, and by JOHN W. CHAPMAN, who advances from assistant to the responsibility of personnel representative.



FRANK K. CADWELL Manager Northwest Territory, Seattle

A glance at the employment records of these men offers some interesting comparisons. Wolf and Linden, whose service records are the longest, came to work in 1912 and 1916 respectively. Both entered the Company in minor sales jobs and progressed steadily through many marketing assignments at subordinate levels before attaining their present management status.

Without exception, the other appointees have also won their promotions through years of indoctrination, experience, training and hard work. All joined the Company between 1927 and 1934. Five—Owsley, Martin, Hayes, Foster and Chapman—started as service station salesmen. Cadwell was first an assistant stock clerk; Boyd, a warehouseman and clerk; Wise, a tanktruck salesman. They are working proof of the value being placed by industry upon qualified men, regardless of name or pedigree.

D. B. HAYES
District Sales Manager, The Dalles

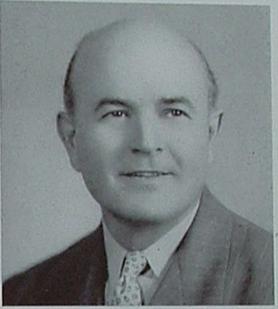


JOHN W. CHAPMAN
Personnel Representative, Southwest
Territory





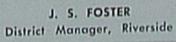
T. G. WISE Manager Sales Services, Seattle



P. H. BOYD District Sales Manager, Salem



W. I. MARTIN District Sales Manager, Tacoma







Minute Man Supply Sold to Wilco Company

• MARKETING

On July 1 the inventories and other assets of Minute Man Supply were purchased by the Wilco Company, who for some years have manufactured the chemical line of automotive specialty products sold through our retail stations. This move follows the Company's policy of transferring specialized non-petroleum functions to independent concerns.

The establishment of Minute Man Supply in 1941 resulted from the need for more efficient procurement and distribution of the non-petroleum merchandise handled by our service stations. This included supply or use items as well as resale merchandise and satisfied the desire of our dealers for a single supplier of all their requirements. In the critical period of shortages during the war years, Minute Man Supply did yeoman duty in keeping our dealers supplied with many items most needed by Union Oil customers.

Due to their manufacturing and distribution facilities and sales experience in this field, Wilco Company is in an excellent position to continue the sales and service policies which have proven so acceptable to dealers.

Several good completions have been obtained in California. Frazier-Trust No. 15-24 in the Gosford area is flowing 200 barrels of 34 gravity oil through 9/64-inch bean. Sansinena No. 19 in the Southern Division, also a flowing well, is producing about 300 barrels per day of 26 gravity oil. Callender No. 117 at Dominguez has been completed for 1,000 barrels per day, but is now beaned back to approximately 200 barrels.

Our Moxa exploratory well in southwestern Wyoming has reached a depth of 11,200 feet.

F. C. Boyd, drilling superintendent, who has been in charge of our Washington operations, was taken seriously ill. To take his place during this illness, A. G. Hilton has been transferred from the Coast Division. State No. 3 on the Ocean City Prospect in Washington is drilling at 5,401 feet.

The annual Coast Division picnic held on Sunday, May 29, on Orcutt Hill was highly successful. Employees and their families turned out to the tune of 2,500.

- During the month of May we completed installation of approximately four miles of six-inch pipe, with suction lines and shipping pumps to handle Stevens Zone production purchased from the Navy in the Naval Petroleum Reserve at Elk Hills. The pipe line was laid from Standard Oil Company's Buena Vista Tank Farm, where the Navy has leased storage, to our existing pipe line system in the Midway field.
- COMMUNICATIONS

 A telephone switchboard and instruments have been installed in the new Union Oil Company building at Bakersfield and are scheduled to be in operation before July 1.

Bids have been requested for the rehabilitation and improvement of the Company's telephone lines between Avila Tank Farm and Orcutt field office. Specifications have been completed for the rehabilitation and improvement of all Northern Division main lines, and it is expected that construction will be under way by July.

Ouring the first two weeks of May the SS A. C. RUBEL made two round trips from Aruba to the Canal Zone, and on May 18 loaded a third cargo at Aruba for Chile, arriving at Antofagasta on May 31. The SS SANTA PAULA made a delivery of fuel oil from Oleum to San Jose, Guatemala, and the SS VICTOR H. KELLY transported cargo from Los Angeles to the Alaskan ports of Whittier, Juneau and Ketchikan during the month.

Tonnage requirements eased sufficiently during the month to permit the scheduling of three ships for dry-

docking and voyage repairs. The SS L. P. ST. CLAIR underwent only routine maintenance, whereas the SS OLEUM and SS SANTA PAULA, both built early in 1945, were required to undergo the first of special surveys as required by the classification societies.

MANUFACTURING

Revamping of crude stills at Oleum Refinery for the at Oleum Refinery for the at Oleum Refinery for the been placed in operation. The capacity achieved is even greater than anticipated. Other units of the new Triton project are being placed in operation as rapidly as completed.

From Management Bulletin of May 12

FUEL OIL DEMAND OFF, GASOLINE SALES STRONG

California crude oil production is aver-

aging 950,000 barrels per day, and inventories of heavy fuel oil are being accumulated at rates substantially in excess of the market demand.

With existing refinery operations and facilities, as the crude oil runs are increased to meet the increased demand for gasoline and the lighter products, an additional supply of heavy fuel oils results. Furthermore, a substantial portion of the crude oil being run in refineries comes from lower gravity production, which yields a greater percentage of heavy fuel oil.

In the face of this increased yield, the market for heavy fuel oil has been severely weakened. First, the switch by the railroads from steam to diesel operation has resulted in the railroads' liftings decreasing from 126,000 barrels per day in 1945 to an average of 91,000 barrels per day in 1948. Second, is the importation of natural gas by the recently completed pipe line from West Texas to Southern California. Natural gas currently being imported by this line is equivalent to 51,000 barrels per day of fuel oil and the Federal Power Commission has approved a \$103,000,000 project to bring additional natural gas from West Texas to Central California and the Bay Area.

We are faced with the problem of converting our surplus of fuel oil into the products for which there is an increasing demand. And for some little time, engineering as well as economic studies have been under way to determine the best methods of solving this problem.

Our engineering studies have now reached the point where it is apparent that most of the technological problems involved are well on the way to being solved. There are alternate courses that might be taken and different procedures that might be used. But it is evident that with its present knowledge, the Company will be able to increase its yield of gasoline, diesel oil and other light products by more than 50 per cent, using available crude oil.

A program of this nature is costly and ambitious and the job of financing it presents every bit as serious a problem as do the technical difficulties. There are many alternate methods that might be used—the issuance of additional common or preferred stock, borrowing the money, a bond issue, and so on. The decision as to whether or not the job should be undertaken and how it should be financed can only be made after a complete and careful analysis of anticipated financial and business conditions over the next several years. For the economic soundness of the project is in a large measure dependent upon these conditions.

Events of recent years and the estimated future demand for some petroleum products support the belief that there will continue to be a healthy petroleum market in our marketing area. Since 1941, the California population alone has increased by almost 2,700,000 persons. The number of cars and trucks on the roads has increased 28 per cent, while almost double the amount of mechanized equipment is being used on farms and a large number of new industrial plants have moved into the area. Since 90 per cent of all forms of power used on the Coast is supplied by the petroleum industry, this population and industrial growth offers ample evidence that there will continue to be a strong demand for those products other than fuel oil.

DETAILS OF NEW RESEARCH BUILDING

A \$5,000,000 research plant to be located near Brea, California,

25 miles south of Los Angeles, will be built by the Company to replace its present Wilmington research plant. Including 12 buildings having a total of approximately 120,000 square feet of floor space, the new facilities will occupy a tract of approximately 100 acres.

Final drafting of plans have been placed in the hands of the architectural firm of Austin, Field, and Fry. The plans, now nearing completion, represent the culmination of several years of preliminary study by the Research Department. Construction of the buildings is scheduled to begin in September of this year. It is estimated that they will be ready for occupancy by September, 1950.

The 12 main units will include administrative offices, three unitized research laboratories, an analytical laboratory, a hazardous operations laboratory, a warehouse, a combined power house and repair shop, a library, and a snack bar and recreation room.

The structures, single story throughout, reflect advanced thinking in design. Not only are the buildings

functional, but from the standpoint of appearance, reflect that function in adequate lighting, ventilation and general orientation.

When this new plant is completed, our Company will have one of the finest laboratories in existence. It is planned to centralize all of the research activities of the Company at the new site, including the broad fields of oil field production research, petroleum products and processing, and research in the field of petroleum chemicals.

EXPLORATORY WELL IN SANTA CRUZ COUNTY

Company geologists have located a site for the drill-

ing of an exploratory well in the Aptos area of Santa Cruz county in the search for crude oil or natural gas bearing formations.

We have approximately 13,000 acres under lease in a block extending from the Corralitos Creek northwesterly beyond Hinkley Creek. The well will be located approximately halfway between Aptos Creek and Bridge Creek in Section 19, Township 10 South, Range 1 East, which is on the lands of the Loma Prieta Lumber Company.

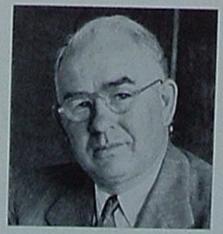
Our geologists have spent approximately four months in this region where detailed studies have been made of structures and a drilling location was selected on the basis of these studies. It is not yet possible to determine the depth to which the well may be drilled as this will depend upon the underground formations discovered as the drilling progresses.

There have been several attempts made to find commercial production in the general Watsonville-Santa Cruz area over a period of many years.

Refinery Promotions

The appointments of E. B. Palmer to the new position of assistant manager at Los Angeles Refinery, and of H. C. Meiners to the similarly new assignment of assistant manager at Oleum Refinery, have resulted also in the promotion of M. S. Thomson to superintendent of

Cracking and Frank Van Acker to assistant superintendent of Cracking, Los Angeles Refinery. . . E. B. PALMER, who graduated from University of Southern California in 1918 with a degree in chemistry, was first employed at Los Angeles Refinery in 1920 as a chemist. He served in Research for a number of



E. B. PALMER Los Angeles Refinery Assistant Manager,

years and in 1933 was appointed a chief chemist. Other steps in his Union Oil record include the assignments of supervisor of Testing & Control Laboratories in 1936, assistant superintendent of Operations in 1943. His promotion to assistant manager, effective June 10, was scheduled to be a post-vaca-



H. C. MEINERS Assistant Manager, Oleum Refinery

tion surprise. . . H. C. MEINERS graduated from Oregon State College as a chemical engineer, then attained his Doctor of Science degree in three years at Massachusetts Institute of Technology. Following several summer vacation jobs with the Company, he accepted permanent employment in 1942. Prior to becoming assistant man-



M. S. THOMSON Superintendent of Cracking, Los Angeles Refinery

ager, Oleum, he has served as assistant engineer in the Plant Process Group, Process supervisor at Oleum, and superintendent of Cracking at Los Angeles Refinery. . . M. S. THOMSON, who replaces Henry Meiners as superintendent of Cracking, is a chemical engineering graduate of Purdue. He joined the Company in 1940 as a technical trainee at Los

Angeles Refinery. Subsequently he was appointed assistant engineer at Oleum, Plant Process engineer at Los Angeles, and in 1946 assistant superintendent of Cracking, Los Angeles Refinery. . . FRANK VAN ACKER graduated from Stanford as a chemical engineer. Coming to work as a technical trainee in 1942, he served

later in an engineering capacity in the Plant
Process Group and Cracking Division of Los Angeles
Refinery. He now succeeds
Thomson as assistant superintendent of Cracking . . .
The appointments of Elmer
Palmer, Stan Thompson and
Frank Van Acker became
effective at Los Angeles Refinery on June 10. Henry



FRANK VAN ACKER
Assistant Superintendent of
Cracking, Los Angeles Refinery

Meiners was scheduled to join Herb Hemmen, manager of Oleum Refinery, on July 1. All are outstanding technical men.



Union Oilers on the Burbank and Honolulu FAIR extremes of our merchandising counter were prompt to take advantage of early summer fairs.

Dick Carrington, resident manager who placed Southwest Territory's portable exhibit in "Burbank on Parade," met 400,000 prospective customers, the prettiest of whom were (L-R) Selma Jung (Miss Personality),



Camille Williams (Miss Burbank), and Connie Hubbard (Miss Beauty).

In Honolulu, Barney Schwalm, Ben Ono, Tom Black, and Makoto Murakami built a slick exhibit (right) for over 105,000 spectators; but erred comparatively by modestly revealing neither themselves nor some of Hawaii's gifts to feminine pulchritude (cheesecake).



BIRTHDAY AWARDS

JULY, 1949

Thirty-Five Years

Faustino, Geo. D., Nor. Div. Pipe Line Worsley, Robert C., Central Amer. Balboa

Thirty Years

Carner, Irvin W., So. Div. Field Johansen, Hans F., Oleum Rehnery Mrg.

Twenty-Five Years

Cowan, William L., So. Div. Field Larsen, Leslie E., Northwest Territory Sinclair, James W., H. O. Automotive Truesdale, Thomas E., Nor. Div. Pipe Line

Curnane, Walter E., Southwest Territory Dana, Wesley E., L. A. Refinery Mfg. Drake, John D., Nor. Div. Pipe Line Feldman, Lewis A., Central Territory King, Monte J., Southwest Territory LaFleur, John A., H. O. Comptroller's Ludden, Raymond W., Oleum Refinery Mfg. Miller, Reymold R., Southwest Territory Neil, George S., Oleum Refinery Mfg. Newman, Stanley G., Oleum Refinery Mfg. Niceley, John L., H. O. Comptroller's Wyman, Gerald D., Northwest Territory

Fifteen Years

Bell, Eleanor F., H. O. Traffic Buchannan, Clarence E., Coast Div. Field Ascherin, Charles A., L. A. Refinery Mfg.
Cabral, George W., Oleum Refinery Mfg.
Clark, Roy F., Oleum Refinery Mfg.
Coombs, Robert L., Southwest Territory
Compt.
Compt.
Carter, Russell P., Southwest Territory
Cassell, Geo. H., L. A. Refinery Mfg.
Conrad, Harry K., Southwest Territory
Cowan, Sidney B., Southwest Territory
Davidson, James, Head Office Compt.

Easton, Milan A., So. Div. Field
Eaves, James M., Nor. Div. Pipe Line
Haire, Robert E., L. A. Refinery Mfg.
Hilton, Alfred G., Coast Div. Field
Hoag, Charles M., Northwest Territory
Hollister, Axial W. Head Office Count Hollister, Aziel W., Head Office Compt.
Moulton, John H. Jr., Foreign Sales—Japan
Phillips, George H., Southwest Territory
Roberts, John D., L. A. Refinery Mfg. Rose, Rupert C., Oleum Refinery Mfg. Wright, Ronald R., L. A. Refinery Mfg.

Ten Years

Counter, George I., Northwest Territory Elliott, Reginald, Valley Div. Field Franklin, Helen, Southwest Territory Ostler, Cecil H., Southwest Territory
Ostler, Cecil H., Southwest Territory
Palmer, Comly S., Southwest Territory
Penn, William S., H. O. Sales Service
Seefeldt, Cora W., Cut Bank, Montana
Starke, Rauol H., Cut Bank, Montana



THE AMERICAN WAY OF LIFE

Political and Economic Rights

which protect the dignity and freedom of the individual

Right to worship God in one's own way.

Right to free speech and press.

Right to assemble.

Right to petition for grievances.

Right to privacy in our homes.

Right to habeas corpus—no excessive bail.

Right to trial by jury - innocent till proved guilty.

Right to move about freely at home and abroad.

Right to own private property.

Right to work in callings and localities of our choice.

Right to bargain with our employers.

Right to go into business, compete, make a profit.

Right to bargain for goods and services in a free market.

Right to contract about our affairs.

Right to service of government as a protector and referee.

Right to freedom from "arbitrary" government regulation and control.

Constitutional Government

Serve the People

FUNDAMENTAL BELIEF IN GOD

Each of these rights
carries an obligation
for all of us to see
that our words and deeds

support our belief in them.