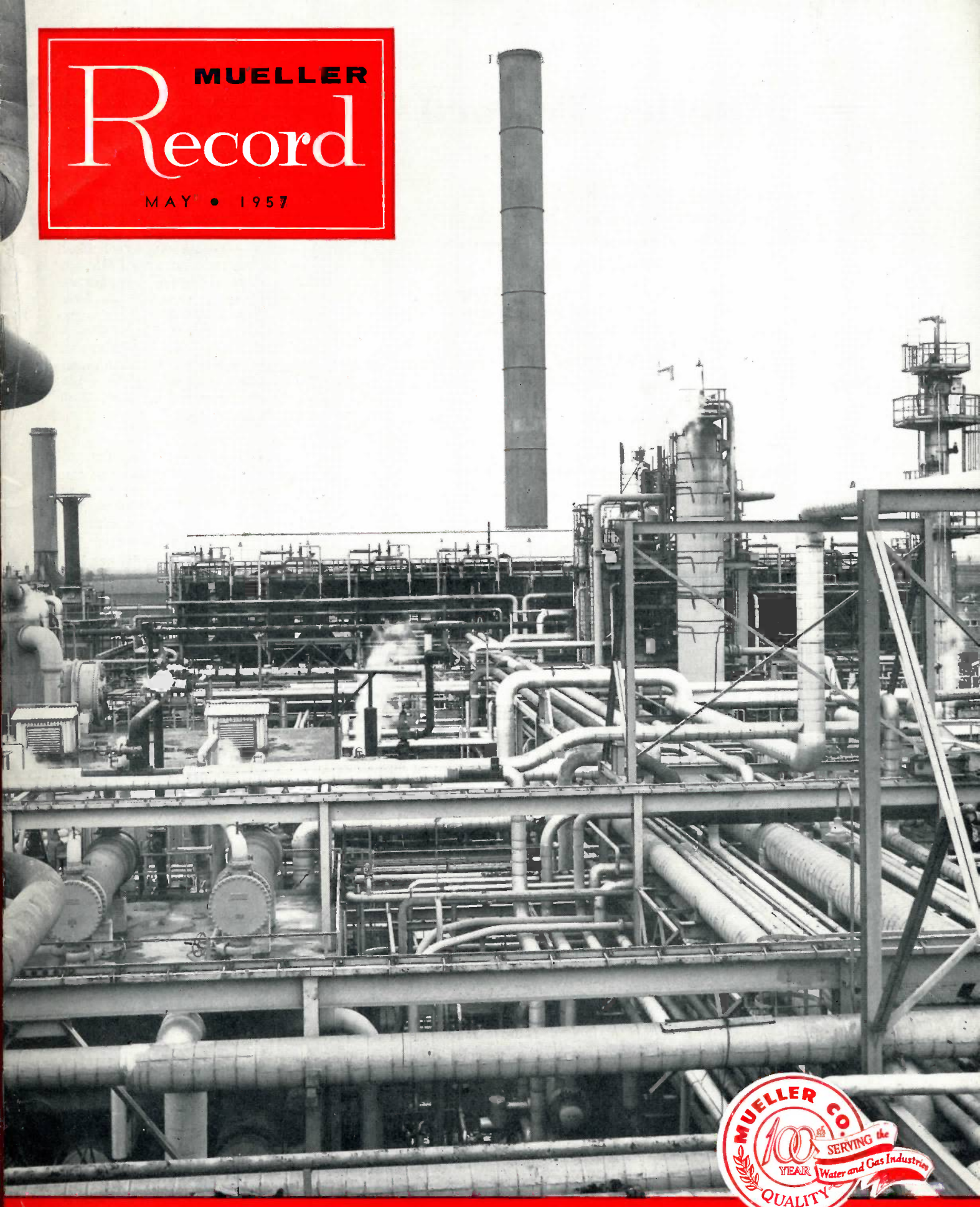
MUELLER Record

MAY • 1957



"Profile of Progress" . . . . - - See Page 16

Mueller Record

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SALES OFFICES
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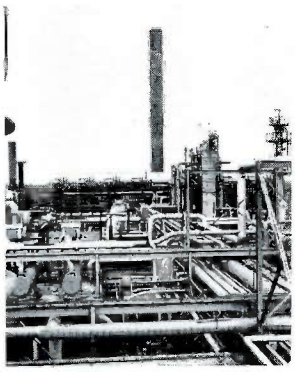
Our Cover



This towering smokestack and maze of pipes herald a comparative newcomer in the field of petrochemicals. Although National Petro-Chemicals Corp. is in its infancy, it has already become one of the nation's largest industries in this field. Only color could do justice to this scene . . . hundreds upon hundreds of pipes of green, gold, silver, blue and yellow. National Petro is an awsome sight, rising from the flat Illinois prairie-land near Tuscola, Illinois.

Recording Our Thoughts

It is particularly heartening to receive letters from RECORD readers . . . letters containing kind words for our efforts, and letters containing bits of advice or wisdom. Such a letter was received recently, and the fine material contained therein is printed elsewhere in this issue. It is our opinion that we all could use a little prodding such as that espoused in "Beatitudes of a Leader." We most like the next to the last beatitude: "Blessed is the leader who has his head in the clouds, but his feet on the ground."

* * *

The country is being swept by a storm . . . a *BRAINSTORM*. It has, in a short time, achieved a position of respect in business and industry. "Brainstorming," as this method is called, allows ideas to flow forth in abundance. No man who is taking part in such a session need be afraid to state his idea, no matter how silly he thinks it may sound to others. If just one good idea emerges from such a session, the time has not been wasted.

Ideas make men great. When a boy in Scotland, Andrew Carnegie had a litter of rabbits . . . and nothing to feed them. But, he had a brilliant idea. He told the neighborhood boys that if they would pull enough clover and dandelions to feed the rabbits, he would name the animals in their honor. The plan worked like magic. Years later, Carnegie used the same psychology in business. He wanted to sell steel rails to the Pennsylvania Railroad. Mr. J. Edgar Thomson was railway president at the time. So, Carnegie built a huge steel mill in Pittsburgh, and called it the "J. Edgar Thomson Steel Works." Mr. Thomson was delighted, and it did not take much persuasion to get him to order his steel rails from the company that bore his name.

* * *

A good deal is said these days to the effect that surely no man can be poor in a country as rich as America. Another RECORD reader, who chooses to remain anonymous, sends us his ideas on poverty.

"A man is poor when he has lost the confidence of his friends; when people who are nearest to him do not believe in him; when his character is handicapped by deceit and punctured by dishonesty. He is indeed poor when he makes money at the expense of his character, when principle does not stand out supreme in his ideals. When ideals are clouded, he is in danger of the worst kind of poverty. To be in the poorhouse is not necessarily to be poor, if one has maintained his integrity of character and stands foursquare to the world. If one has not bent the knee of principle to avarice, he is not poor, though he may be compelled to beg bread."

* * *

Let's hear from you, Mr. Reader! If you have any "quotable quotes" or bits of inspiration that have meant a great deal to you throughout your life, send them in. Remember: the joys of life are as much to be shared as the troubles.

—:—

MARY: "John, that woman next door has a hat just like mine. What'll I do now?"

JOHN: "I suppose you'll buy another, knowing you."

MARY: "Well, dear, that would be cheaper than moving."

CONTENTS

. . . NEXT MONTH . . .

ON THE BOARDWALK: Join with us in a pictorial review of the 1957 American Water Works Association Convention in Atlantic City. There will be facts and figures galore, as leaders of the industry gather in this convention city for a week of meetings and peeks into the future. Look for familiar faces in our "panorama of pictures."

THE SOYBEAN CITY: We journey to Decatur, Illinois . . . Soybean Capital of the World. This is a progress report on a "city in transition" . . . a city which has put its man-made lake to its best use as a source of water supply. See how Decatur plans to implement Lake Decatur with Big Creek Reservoir to meet the needs of a growing population.

Long Beach, California

The sky-line of Long Beach presents a beautiful panorama of sunshine and white stone to thousands of visitors each year.

Beauty—Everywhere . . .

This City of Sunshine Hosts

The Annual Miss Universe

Beauty Pageant

THE CITY OF LONG BEACH, California is similar to many other American cities in one respect; it has experienced growing pains. Here, though, hard-and-fast lines begin to fade, and a new picture manifests itself . . . a picture of a magnificent harbor, thriving industry, and progress. And, recent years have brought new fame to Long Beach. The annual Miss Universe Beauty Pageant turns Long Beach into the city of beautiful women.

Residents of the city are justly proud of their harbor, with its accessibility and calm waters. They are proud of the mighty industrial district, which encompasses Douglas Aircraft, Long Beach Naval Ship Yard, Proctor and Gamble, and a number of major petroleum production and refining companies.

Progress is ably represented on the scene by the Long Beach Gas Department. From the introduction of gas service in 1900 to residents of the city, until the year 1957,

when the number of active meters in the field approached 103,000, the history of natural gas service in Long Beach has been a pageant of growth.

Domestic gas service was first introduced to the people of Long Beach in 1900 by the United Electric Gas and Power Company, predecessors of the Southern California Edison Company of today. United delivered manufactured gas from a small, 20,000 cubic foot per day gas works to about 160 active customers. Population of Long Beach in 1900 was approximately 2,250.

Another concern, the Long Beach Gas Company, was organized in 1900, and by January of 1901 they, too, were delivering manufactured gas to local residents. Their product was a gas generated from crude oils, and their distribution system covered much the same territory as did that of United.

By 1905, even though the total population was only 15,000, and the available consumers numbered less than 4,000, a third company, known as the Inner Harbor Gas and Electric Company, was chartered. Their distribution system served the same area as the other two companies.

Naturally there was strenuous competition between the three businesses, and it soon became apparent that the cost of such close competition was not justified by the gross revenue received. In addition, the growth of the city failed to live up to expectations of real estate developers, and numerous main extensions to subdivisions lay useless. Thus, through numerous mergers, sales and consolidations, the inevitable happened. Out of the chaos arose a single company . . . the Long Beach Consolidated Gas Company, which was incorporated in July, 1910.

The manufacturing of gas was now centered in the original plant of the Inner Harbor Gas Company; the other two plants were abandoned, and their useful equipment was transferred to the main plant. The population of the city at this time was estimated at 17,800, and the number of active gas consumers of the combined companies was approximately 4,600.

Through this entire early period, the consumers of gas in Long Beach

Mr. Leonard L. Bendinger

Superintendent

Municipal Gas Department

Left: an aerial view of the Port of Long Beach and the area known as Marine Stadium, home of speedboat racing and other water sports. Center: Long Beach and its industry. Notice the size of the transport ships and naval vessels in this excellent harbor.

had used only manufactured gases; but, in 1912, outside gas was contracted for with the Southern California Gas Company of Los Angeles. The product was a mixture of one-half manufactured gas and one-half natural gas. This gas, mixed with the gas then being manufactured by the local company, raised the heat value of the delivered gas from approximately 550 B.t.u. to around 800 B.t.u. It was subsequently raised to over 1100 B.t.u. in 1915, when straight natural gas was introduced to the area with the construction of transmission lines from the Fullerton Oil and Gas Fields.

The last phase of private ownership began on May 22, 1916, when the Southern Counties Gas Company purchased the properties of the Long Beach Consolidated Gas Company, and continued to operate them until the time of public ownership in 1924.

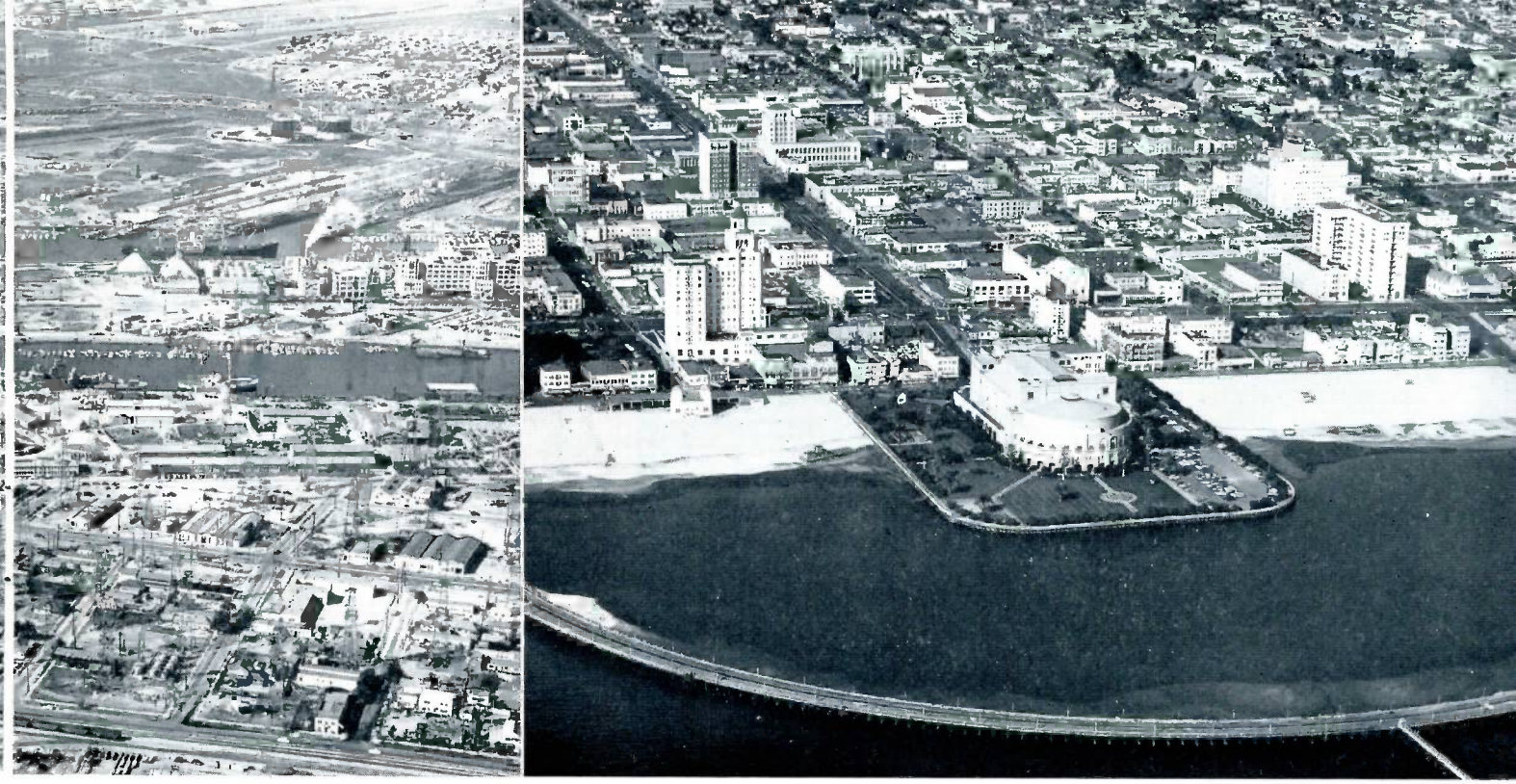
A great deal of excitement was generated in 1921, when the great Signal Hill Oil and Gas Field came into being. Suddenly, there were enormous quantities of natural gas and oil, and considerable public attention was directed to the field because of its proximity to Long Beach, and because of the heavy gas production which, during the early part of 1923, amounted to over 125 million cubic feet per day. By 1924, this figure was destined to increase to a maximum of about 415 million cubic feet per day.

Of this total gas production, about one-third was being utilized by the oil operators for field purposes or sold to gas companies having facilities for the transportation of dry gas to points of consumption, and the balance was being burned in the air.

At the beginning of the oil excitement in Signal Hill, the city of Long Beach took advantage of several large city-owned tracts in the heart of the proven areas by leasing certain properties for oil and gas development. The city retained, however, the right to all gas produced over and above that required for field purposes should the city at any time decide to enter the gas business on its own. Gas production from the Long Beach leases soon reached toward 25 million cubic feet per day.

Certain public-spirited citizens firmly believed that this gas could and should be delivered to local residents at a cost much less than that being charged for this same gas by the privately-owned utility. This utility was then paying eight cents per 1,000 cubic feet for the gas, and was delivering it to Long Beach customers for one dollar per 1,000 cubic feet. The City Council finally succumbed to public opinion and passed an ordinance calling for a special election in 1923, at which election $3 million in bonds were voted for acquisition of the local gas properties.

In late 1923, after many attempts had been made to agree on a fair price, the city ordered the construction of a competing gas system which would provide facilities for the distribution of 50-cent gas to Long Beach residents. Work was begun immediately, and by March, 1924, all consumers along the route of the new city mains were being served as promised. The end of a privately-owned utility was near. On May 26, 1924, the city took over complete operation. By this time, they had an investment in plant and system of approximately $3 million, new feeder mains from Signal Hill to the storage plant, new



Right: an aerial view, showing Long Beach Municipal Auditorium in the foreground. The sandy beaches and other water-front amusements entertain the residents of the city in a year-round holiday atmosphere.

installations throughout the downtown district, and material and supplies on hand which were necessary to carry on the work of reconstruction and new business.

The operating report for the first year of municipal ownership showed eight billion cubic feet of gas sold, a total amount of mains in the system of 306.48 miles, a total of 25,525 services, and 32,145 active meters in use.

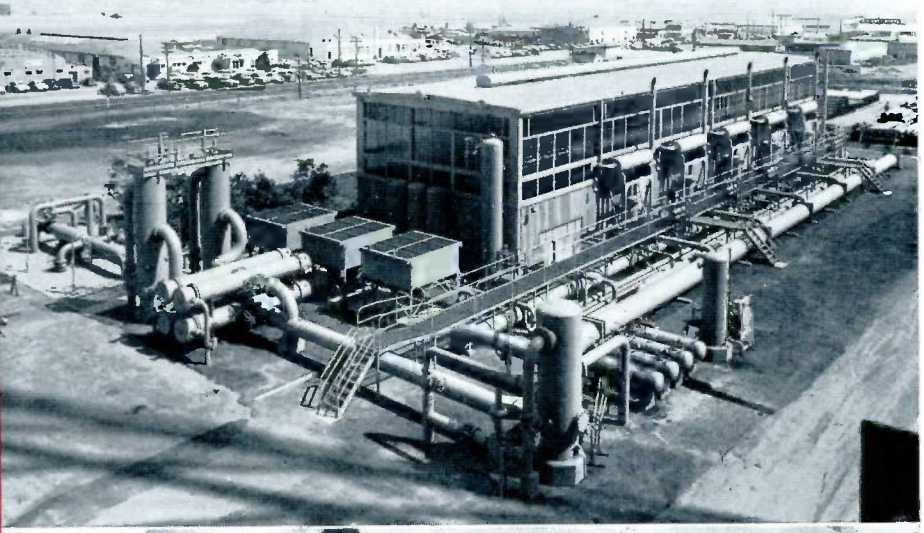
The furnishing of adequate supplies of natural gas over peak demand days is the dominant problem of the natural gas business. The Long Beach Gas Department had ample supplies of gas available from city-owned properties when it went into the gas business; however, this supply was soon insufficient to meet peak demands and, since the private companies owned the underlying contracts for most of the other gas produced in the Signal Hill field, the city had to look elsewhere. In January of 1925, mains were installed to the Dominguez and Rosecrans Fields, and gas was taken from these sources for about two years. By November, 1926, due to the decline of available gas in these fields and the increased demands within the city itself, it became evident that a much larger and more constant source would have to be contracted for. This need was satisfied by contracts for supply from the Ventura Oil Field. This source continued as the major one until December, 1935, when a contract was signed with the Industrial Fuel Supply Company for gas gathered from various California oil and gas fields. From 1938 until 1952, practically all gas used by Long Beach came from the Wilmington-Long Beach Harbor Field, with the harbor royalty available reaching as high as 72 million cubic feet per day in February, 1951.

Trouble soon developed, however. As is so often true of fields which develop too rapidly, this available gas soon started dropping off; during the winter of 1951-52, it could be seen that the department would again have to seek outside sources to meet peak demands of the following winter. In June, 1952, the invitation for bids was answered by the Signal Oil and Gas Company for gas to be delivered at their facilities in Huntington Beach. A pipeline was constructed by the department during the early winter months and, by the first of February, 1953, the city was receiving gas from this source.

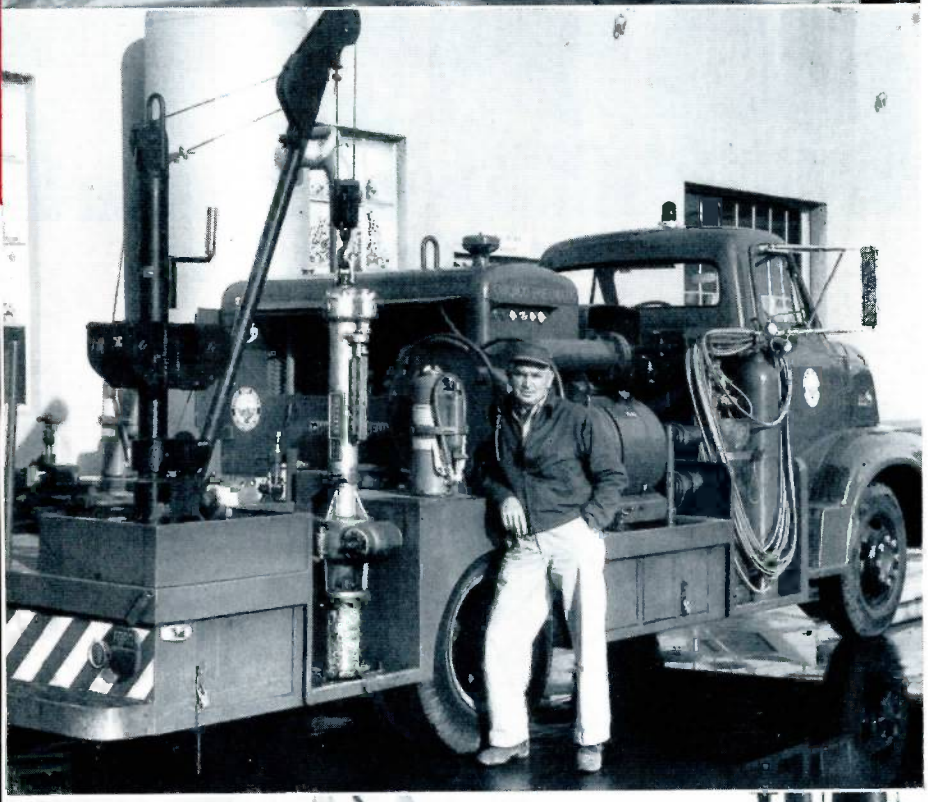
During the spring of 1953, a repressuring program was started by the Harbor Department as an aid to increased oil recovery in the local field.

Since the population of Long Beach has grown from 255,000 in 1952 to over 350,000 in 1956, there has been little time to devote to any project other than providing gas service to the new residents. This task has been ably accomplished by an excellent staff, headed by Gas Superintendent Leonard L. Bendinger. Mr. Bendinger was appointed Assistant Superintendent of the Long Beach Gas Department in June, 1950, after several years of operation and experience in the pipeline contracting field, succeeding Mr. E. S. Bryant, who retired after 27 years of service. In February, 1951, Mr. W. H. Partridge retired, and Mr. Bendinger succeeded him as Superintendent, the position he now holds.

Mr. Bendinger has been the recipient of expert assistance from



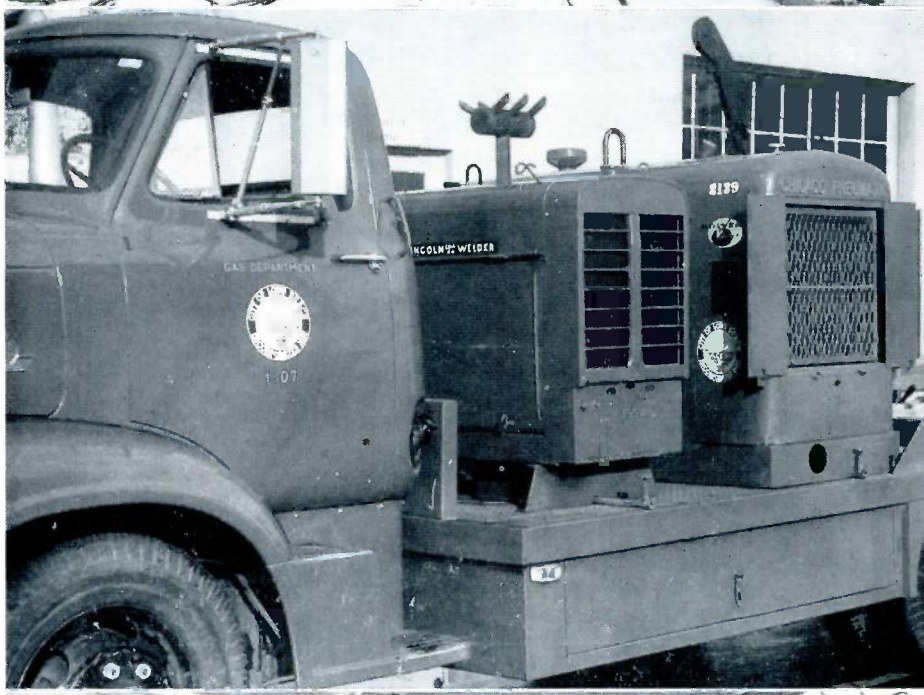
A view of the completed Plant #4. The background shows the busy Municipal Airport and Douglas Aircraft facilities. The front of the plant is beautifully landscaped, and will present a perfect view to the new freeway which is soon to be constructed.



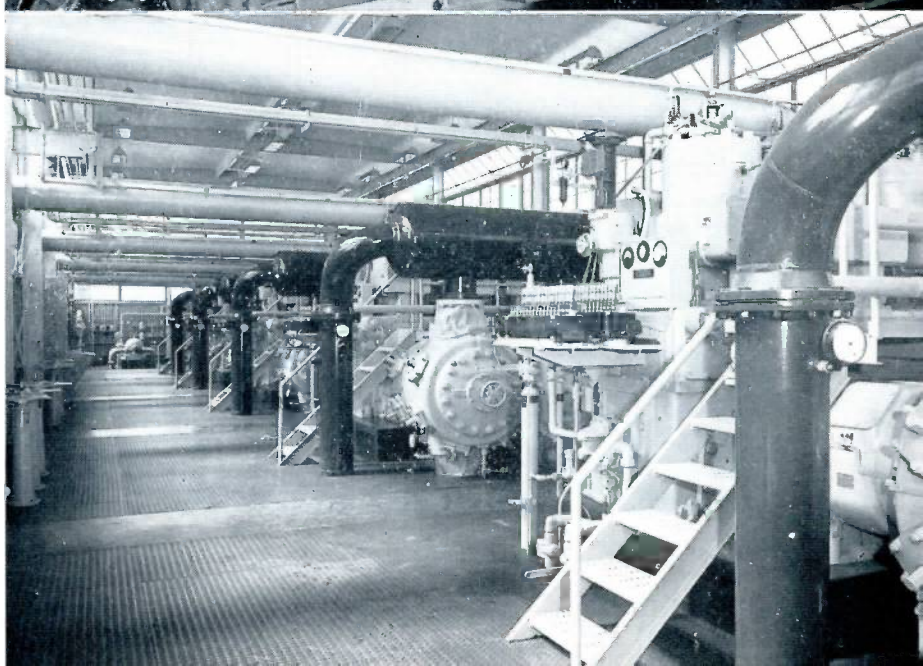
Ray Ficklin is justifiably proud of being in charge of the "P. C. Truck."

The Mueller C-1-36 drilling machine, gate valves and stopping machines are solidly in their normal places when the truck is in transit.

Mr. E. C. Wright, Gas Engineer, and Mr. S. L. Spencer, Superintendent of Production, on one of their inspection and supervisory tours of the facilities.



Side view of the P. C. Truck, showing the built-in space, under the compressor and welder, that carries shell cutters, pilot drills, rubber stoppers, and other Mueller NO-BLO equipment.

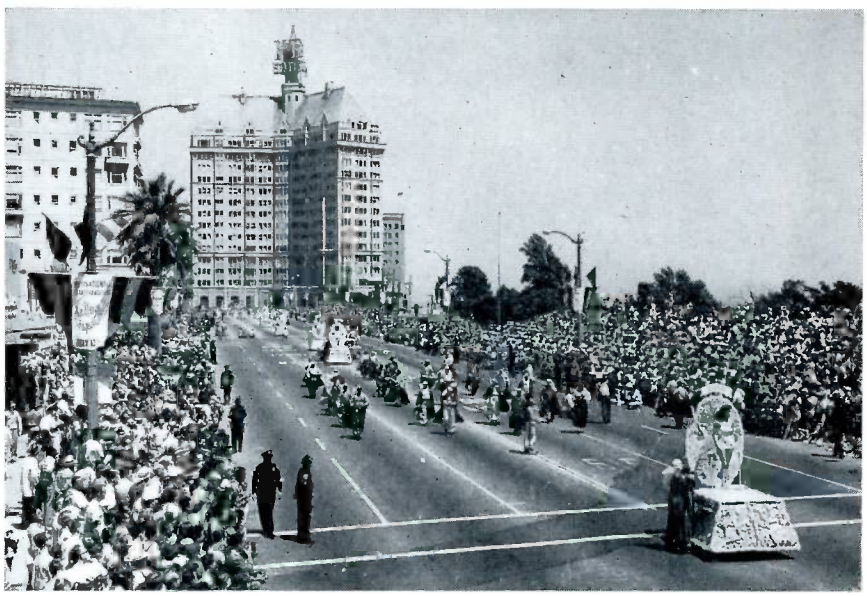


Interior view of Plant #4, showing gas engine-driven gas compressors.

Contestants arriving at Long Beach Airport represent many nations, including Canada, Australia, Japan and Italy. Miss Universe of 1955 is in the center.

"Oh to be in Long Beach!"

This parade is one of the high-points of the Miss Universe Beauty Pageant. Thousands of people line the streets to view the array of beauty.



N. E. Savidge, Assistant Superintendent; E. C. Wright, Gas Engineer of the Engineering Division; J. M. Brejcha, Superintendent of the Construction Division; P. F. Taylor, Superintendent of the Distribution Division; J. B. Mosher, Engineer of the Measurement Division; S. L. Spencer, Superintendent of the Production Division; and W. M. Ramsell, Office Manager of the Commercial Division.

Increased demand for gas service and maintenance equipment led to the purchase, in May of 1955, of a Ford "Big Job" three-and-one-half ton Cab-over truck with a special body built by the Long Beach Municipal Garage at a total cost of approximately $6,800. On this truck was installed a Chicago Pneumatic Rotary #125 Compressor, and a Lincoln 200 Amp. Welder. Included also was a 1500-pound capacity hand crane. This truck was built solely for the purpose of transporting Mueller No-Blo equipment from job to job, and was co-designed by Mr. Wright, Gas Engineer, Mr. Harry Olson, Engineer, and Mr. Brejcha, Construction Department.

The Long Beach Gas Department's new compressor station was placed in operation on September 15, 1956. It consists of five gas-engine-driven gas compressors of 2450 rated horsepower. The units are direct-connected, and have a total capacity of 1,120,000 standard cubic feet per hour at 50 pounds per square inch gauge pressure.

Since the auxiliary equipment in the station is electric-driven, the new plant features a standby gas-driven electric generator to take over automatically in the event of service disruption. A unique feature from an operational standpoint is the grouping of the most modern miniature controls in one location on an instrument panel, from which the operation of the plant can be visually, automatically and manually controlled.

Yes, the residents of Long Beach, California, have good reason to be proud of their city; and they have good reason to be proud of the Long Beach Gas Department and its fine record of efficient and progressive service to the public.

Crawford Promoted—Tinsley Joins Mueller

Mr. Warren D. Crawford has been named Western Sales Manager of Mueller Co., according to Mr. W. H. Hipsher, Executive Vice President of the company. Mr. Crawford succeeds Dan R. Gannon, who was recently named Field Sales Manager, with headquarters in Decatur. *Mr. Phillip R. Tinsley* has joined the company as Sales Representative in the Houston, Texas, area.

Mr. Crawford joined Mueller Co. in 1952 as Sales Representative in the Houston area. A veteran of World War II, he is married and the father of three children. The Crawford family will reside in the Los Angeles area.

Mr. Tinsley has been associated with a large manufacturer of waterworks supplies on the west coast, and joined Mueller Co. on April 15. He was All-American at Georgia Tech in 1943, and was graduated from UCLA in 1949 with a degree in Industrial Engineering.

Tinsley served in the Civil Engineers Corps in the Philippines during World War II. He is married and has two children. The Tinsley family will take residence in Houston. He is also a member of the American Water Works Association.

Seevers Receives 40-Year Award

Mr. Harry V. Seevers, who joined Mueller Co. in 1917, received his forty-year service award on April 5. Seevers started with the company as a Sales Representative covering the state of Kansas.

His forty years with the company were broken only by five months in the Infantry during the First World War. After forty years, he is still traveling in the same Kansas territory.

Mr. Warren Crawford, left, and Mr. Phillip Tinsley chat during a recent meeting of sales representatives at headquarters in Decatur.

Beatitudes of A Leader . . .

Blessed is the leader who has not sought the high places, but who has been drafted into service because of his ability and willingness to serve.

Blessed is the leader who knows where he is going, why he is going, and how to get there.

Blessed is the leader who knows no discouragement, and who presents no alibi.

Blessed is the leader who knows how to lead without being dictatorial; true leaders are humble.

Blessed is the leader who seeks the best for those he serves.

Blessed is the leader who leads for the good of the most concerned, and not for the personal gratification of his own ideas.

Blessed is the leader who develops leaders while leading.

Blessed is the leader who marches with the group, and interprets correctly the signs on the pathway to success.

Blessed is the leader who has his head in the clouds, but his feet on the ground.

Blessed is the leader who considers leadership an opportunity for service.

—*Anonymous*

—::—

Having been married 25 years a couple decided to celebrate their anniversary by taking a little trip. While talking over their plans one evening, the husband now and then glanced into the next room where a little old lady sat knitting. "The only thing is," he said in a whisper, "is that for once I'd like to be by ourselves. I'd like to take this trip without your mother."

"My mother!" exclaimed his wife. "I thought she was *your* mother!"

—::—

Little Johnny: "Daddy, why can't I go out and play like the other kids?"

Father: "Shut up and deal."

—::—

Middle age is when you feel on Saturday night the way you used to feel on Monday morning.

Jo Ann Liese, daughter of Commonwealth Oil Company president G. Burton Liese, is shown cutting the ribbon, officially commissioning the offshore industry's first specially-built pipe-laying barge, the "Magic."

Of Things and People . . .

"MAGIC" RIDES THE WAVES planned to revolutionize activities of the offshore industry.

The "Magic," Commonwealth Oil's specially-designed pipe-laying barge, can work fifty miles from land, and can lay 2000 feet of large diameter or 5000 feet of small diameter pipe in a twenty-four hour period. The barge was built at an estimated cost of $750,000, and becomes a new part of the Gulf Coast's multi-billion dollar offshore oil and gas industry.

The vessel boasts the very latest machinery and equipment, and has air-conditioned quarters for its skilled personnel and crew. The "Magic" is 260 feet long and 50 feet wide, and is towed to each project by a tug.

Normal crew and personnel for the barge will be 46 men, headed by Albert Cohen, Pipe Superintendent, and W. C. Hanson, an assistant superintendent.

The "Magic" will be part of a unique, sea-going fleet which is

* * *

KLEIN SPEAKS

Julius Klein, president of the GAMA, stated that while consumer debt of around 34 billion dollars has attracted widespread attention, there is little recognition that consumer durable goods now in use are worth, even allowing for depreciation, some 190 billion dollars. Addressing a directors' meeting which opened the GAMA annual convention, Klein urged manufacturers to intensify their emphasis on the savings aspect of home improvement projects.

The gas appliance leader hailed the gas pipeline and utility industries for expanding their construction programs, expected to total nearly two billion dollars in 1957 alone. These expenditures, plus those for exploring for natural gas and developing reserves, enhance the quality of the home owner's investment, Klein said.

EXPANSION

Gulf Interstate Gas Company, of Houston, Texas, has received temporary authorization to construct natural gas facilities at an estimated cost of about $24,500,000, which would boost its designed delivery capacity to 575,000,000 cubic feet per day. Gulf Interstate's existing service consists solely of the transportation of natural gas for United Fuel Gas Company, of Charleston, West Virginia, and delivery to United Fuel at Means and Leach, Kentucky.

The facilities for which temporary authorization was granted include the addition of 69,000 horsepower in ten existing main line compressor stations; a 300 horsepower compressor station at East Mud Lake Field in Louisiana; and approximately 10 miles of gathering pipeline from Erath Field.

The Federal Power Commission has authorized El Paso Natural Gas Company, of El Paso, Texas, to make certain changes in the construction of facilities previously authorized which, the company estimates, will effect a saving of over two million dollars. El Paso said the changes will increase the operating efficiency and flexibility of its system.

COONS ELECTED

Clifford V. Coons, executive vice-president of Rheem Manufacturing Co., New York, was voted president-elect of the Gas Appliance Manufacturers Association at the trade group's 22nd annual meeting in White Sulphur Springs, West Virginia in April. Coons will take office in October, succeeding Julius Klein, president of Caloric Appliance Corporation, Philadelphia, as head of the group whose 600 member companies account for more than 95 percent of the nation's output of residential, commercial and industrial gas appliances and equipment.

Mr. Coons joined the Rheem organization in 1934. He was elected vice-president in 1948, a director in 1950, and executive vice-president in 1956.

The Magical Blue Flame

The story of the magical blue flame of natural gas contains some astounding figures. Since World War II ended, great things have happened to the gas business, transforming it into one of the fastest-growing industries in America.

Today, upwards of thirty-eight million customers use the blue flame in forty-eight states—in homes, industrial plants and commercial places of business. It takes over 1,250 individual companies to quench the national thirst for natural gas. About 100 transmission companies supply gas to distributing utilities and main line industrial users. Bottled gas is produced and transported by thousands of other companies to customers beyond the reach of utility gas mains. In twelve years, the natural gas industry has become an essential element in our economy. The gas industry's gross assets have almost tripled in a single decade. One million users annually increase total sales nearly ten percent each year.

The gas utility industry provides over 73 billion therms a year to its customers. The amount of energy represented by this figure is equivalent to that produced by more than 550 Hoover Dams!

In 1900, gas accounted for about three percent of the total energy needs of the nation; coal, 89 percent; oil, five percent; and water power, three percent. In 1920, natural gas and natural gas liquids provided only 4.4 percent against coal's 80.7 percent, oil's gain to 13.3 percent, and water power's 3.9 percent.

At the beginning of 1956, natural gas and natural gas liquids were supplying about 26 percent, coal 29 percent, oil 41 percent, and water power 4 percent.

The gas story is rich in history. In 1800, William Murdock, an engineer in England, lighted a factory with gas distilled from coal. The first gas company in the world came into being with the granting of a Parliamentary charter in April, 1812.

In 1816, the Baltimore City Council passed an ordinance permitting the great artist, Rembrandt Peale, and others, to manufacture gas, lay pipes, and contract with the city for gas street lighting. Thus began the first gas company in this country.

Other American cities followed suit. By 1853, nearly 300 companies had been formed to produce and distribute manufactured gas to about five million consumers. At that time, that was about one-sixth of the total population of the country.

The name of George Washington figures prominently in the discovery of natural gas. In his diaries, he recorded the sighting of a "burning spring" on the banks of the Kanawha River near Charleston, West Virginia.

Natural gas was first produced in 1821 from a 27-foot well drilled near Fredonia, New York. In 1858, the first natural gas corporation was formed near the same place. Two other important developments were the completion, in 1870, of a long-distance wooden pipeline—25 miles long—from West Bloomfield to Rochester, New York, and, two years later, the first long-distance iron pipeline, from Newton Well to Titusville, Pennsylvania.

But the real story of growth begins in 1920 with three main factors: the development of high-tensile-strength, thin-wall, large-diameter transmission pipe; the demand for a superior fuel; and the low cost of gas in relation to other fuels. From 1920 forward is recorded the great progess of the industry, until, at the beginning of 1957, the industry had 524,800 miles of pipelines—enough to circle the earth 21 times!

In 1816, gas had one use—the lighting of streets. Today, natural gas has seven uses in the home, and nearly 25,000 uses in industry. The seven home uses are gas cooking, gas water heating, gas space heating, gas refrigeration, and more recently, gas air-conditioning, gas laundry-drying, and gas incineration. Today, three-quarters of our entire population depend on gas service in their homes. More than 95 million gas appliances are now in use!

Industry has put gas to work as an efficient processing tool. Natural gas today plays an important part in nearly everything we use in our daily lives. It is needed for metal production and fabrication, food processing, printing, textile manufacture, production of electronics, plastics, paint and countless other industrial products. Gas has become a vital ingredient in many chemical processes. Nearly 200 U.S. and Canadian companies have entered the petrochemical field, and gas and oil-derived chemicals are being used in nearly 3,000 chemical substances.

And what of the future? It looks increasingly bright. By 1960, the gas industry's gross assets are expected to reach $24 billion—compared to around six billion in 1945. The AGA Bureau of Statistics estimates that, with vigorus promotion and product development, nearly 300 million gas appliances could be sold by 1974. This is more than three times the total number of gas appliances in use today!

* * *

Officer (to recruit): "Where are all your shots going? Every one has missed the target."

Recruit (nervously): "I don't know, sir. They left here all right."

* * *

Customer: "This steak is awful. How was it cooked?"

Waiter: "Why, it was smothered in onions."

Customer: "Well, it sure died hard!"

* * *

Patient: "Doctor, I'm scared. This will be my first operation."

Doctor: "I know just how you feel. This is my first operation, too."

* * *

Little boy: "Dad, I wish you would let Mom drive. It's more exciting."

Milwaukee County Stadium, home of the Milwaukee Braves baseball team. The Stadium is "all-gas" for player and fan comfort and operating efficiency.

"All-Gas" Ball Park

By

ANDREW M. GALVIN

Assistant to the President

Milwaukee Gas Light Co.

GETTING INTO HOT WATER, as the Milwaukee Braves did during the waning days of the 1956 season, is nothing new for the team. They've been doing it, comfortably too, for four years now in their Milwaukee County Stadium home with the help of versatile natural gas.

Hot water, at the rate of 3,000 gallons per hour, is supplied for the sweaty heroes, whether they win or lose, by six multi-coil heaters, fired, of course, by the faithful blue flame of natural gas.

This ocean of comfort flows inexhaustibly, as it must, to cover the towering frame of Joe Adcock and the brawny back of an Eddie Matthews. Sore and knotted muscles,

and there were plenty of them during the '56 season, are kneaded back to usefulness in whirlpool baths that also draw their warm, fluid magic from the heaters.

Natural gas, however, is by no means limited to the bat boy chore of heating water at the County Stadium—the senior circuit's most modern ball park. Gas performs like a champion in myriad ways for the comfort and convenience of the players and the Braves' fans—fans who have become the talk of the baseball world because of their loyalty and exuberance.

Offices, player locker rooms, the club houses, supply rooms, public rest rooms and general areas of the County Stadium are heated with natural gas. Chilly early and late season nights, and the off-season use of the stadium for Green Bay Packer football games and other events, make space heating a must. A total of 12 duct heaters, 27 unit heaters and three steam boilers, all fired by gas, do the job.

The throngs of fans who have set baseball attendance records since the Braves came to Milwaukee surely must have set some gastronomic records as well. On an average day, for example, the Braves concessions manager reports that the fans consume 20,000 hot dogs, 3,000 bratwurst (this is Milwaukee), 300 hot corned beef sandwiches, 1,200 hamburgers, and 500 gallons of hot beverages.

All 22 refreshment units at the Stadium are equipped with fast, efficient natural gas burning units for food preparation. There are 38 one-burner ranges for steaming hot dogs, 12 large, gas-fired grills for preparing other sandwiches, and 30 bun-warmers. The main coffee room on the middle deck houses the largest gas coffee-making equipment in the city—five 50-gallon coffee tanks and a 300 gallon stand-by tank. Six units with storage tanks supply piping hot water for coffee and for general purpose uses.

The private dining room for the families of Braves players is equipped with gas appliances—an eight-burner range, grill and broiler, a combination steam table with a warming-oven top, a dish-washing machine, and a hot water unit.

A dairy bar—after all, Wisconsin is the dairy state—sports two gas ranges, a large grill, two steam tables, and a 100 gallon hot water heater. Even the popcorn machines are gas-fired!

The 104-year-old Milwaukee Gas Light Co., which is as enthusiastic about the Braves as the Braves are about the natural gas, is the distributing utility that serves the Stadium.

Milwaukee Gas Light, one of the oldest enterprises in Milwaukee—the Braves, one of the newest—and Mel Justman, of Perfection Industries—all teamed up to provide a final touch of player comfort at the modern-as-tomorrow Stadium. The Braves found that raw April and May nights in Milwaukee produced chills after the players raced from the field into the dugout for their turns at bat.

The dugout chills were banished with gas-fired Perfection infra-red heating units that warmed the players without heating the air. The infra-red units are used in the bull pen to help pitchers "warm-up" when needed.

"I need a job, Senator," said the man from the home state.

The Senator thought a moment. "Well, I'll tell you," he said, "there aren't any jobs, but here's what I'll do. I'll get up a committee to investigate why there are no jobs, and you can be the head of that committee, with a salary beginning at ten thousand a year."

The administration building of National Petro faces Route 36, leading into Tuscola, Illinois. The breezeway at extreme right joins the building with a modern, beautiful cafeteria.

Profile of Progress . . .

National Petro Appears

On The Illinois Prairie

A GIANT WAS BORN in the middle of some of the richest farm land in the United States! Yes, that's the story of National Petro-Chemicals Corp. and its birth in Central Illinois, near Tuscola. The story of National Petro is a story of success in industry, and impetus in the lives of Tuscola residents. It is rich in scientific process and human interest. Above all, it is the very substance of progress.

In July, 1951, Petro's first employee was hired. Two years later, in 1953, the company became a 50 million dollar reality on the rich, flat farm land along U. S. Highway

36, west of Tuscola. Location of this giant operation was no accident. Transportation facilities were excellent; Tuscola is served by the Illinois Central, Chicago and Eastern Illinois, and the Baltimore & Ohio railroads. Two major highways cross in the city—U.S. Route 45 north and south, and U.S. Route 36 east and west. The Kaskaskia River flows west of the town and joins the Mississippi.

Of prime importance, however, was a compressor station of Panhandle Eastern Pipe Line Company, which pumped natural gas from fields in northwest Texas, Oklahoma and Kansas. In this distribution system, the flow was enriched by gas from East Texas and Louisiana. Best of all, this compressor station was located diagonally across the highway (Route 36) from the flat land which was to provide the foundation for Petro.

In New York City, wheels began to turn. Executives of National Distillers Products Corporation and Panhandle Eastern decided that a fast-growing market for basic intermediate chemicals produced from petroleum derivatives called for action. Technicians arrived at complex processes by which hydrocarbons are removed from natural gas and split into a number of basic components. Some of these hydrocarbons are salable without additional processing. Others go through certain steps resulting in the intermediate chemicals called petrochemicals.

Then came the decision—National Distillers and Panhandle Eastern joined forces to form National Petro-Chemicals Corporation, owned 60 percent by National Distillers and 40 by Panhandle Eastern, and to be operated and managed by National Distillers. Petro acquired nearly 500 acres of land, the first contract for work on the plant was let in the early summer of 1951, and Tuscola heard the whistling drills, workmen's banter, and the lion-like roar of earth-moving equipment.

Processing of the natural gas from Panhandle Eastern follows a definite pattern. Time - saving, money-saving efficiency is a synonym for National Petro's operations.

Extraction. The maze of pipes begins at the southwest corner of the Petro plant, where natural gas is pumped from Panhandle Eastern, at the rate of over 400 million cubic feet each day. Here rises the complex unit of Hydrocarbon Extraction. The gas moves through this unit, and the desired hydrocarbons are removed. These are liquefied under pressure and pumped to Fractionation to be separated and purified. The natural gas, still excellent as fuel, is returned to Panhandle.

Fractionation. The six slender fractionating columns of the Fractionation unit rise east of Extraction, and are separated from it by a battery of water cooling towers. Through these columns pour over 700,000 gallons of mixed hydrocarbons each day. These are predominantly ethane and propane, with lesser amounts of butanes and natural gasoline.

Now the fractionating towers go to work, separating the components of the liquid gas and purifying them at the same time. The propane and butanes are salable as liquid fuel without further processing, and both are known as Liquefied Petroleum Gas. Propane is used ever-increasingly as a motor fuel. Butane finds wide use for heating and cooking purposes, as well as providing long-life fuel for automatic cigarette lighters. Natural gasoline is used as a blending agent for motor fuel.

All these components are pumped directly from Fractionation to the hydrocarbon storage areas.

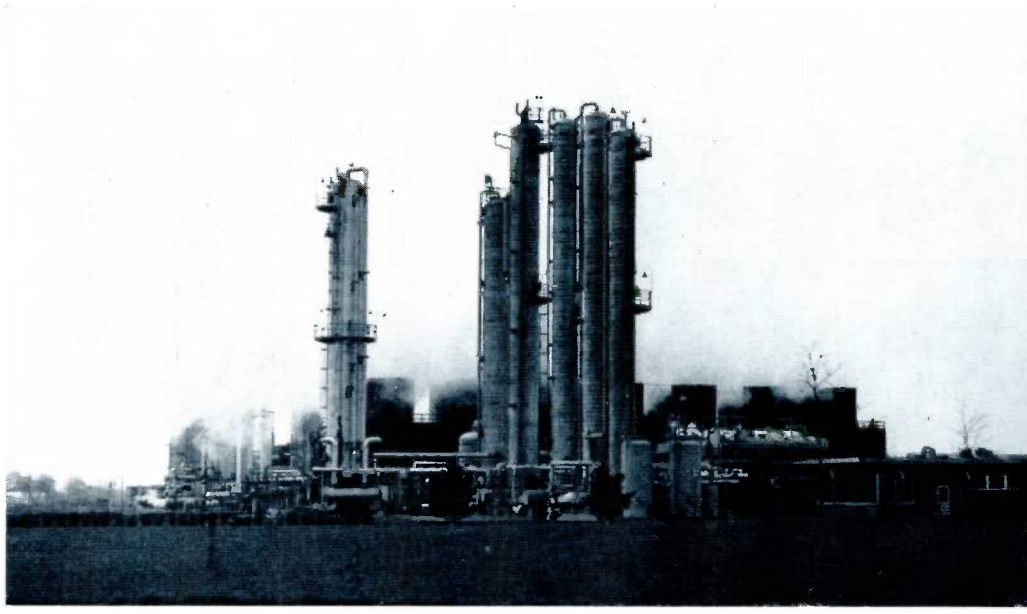
Hydrocarbon Storage. Great horizontal tanks for storing liquid propane, each 110 feet long, are grouped by fives. Each of these tanks was transported from the East on three flat cars. The speed of trains hauling them was restricted to 25 miles per hour on straightaways, and 10 miles per hour on curves, and the trains moved only during daylight hours. Each tank was a month or more in transit.

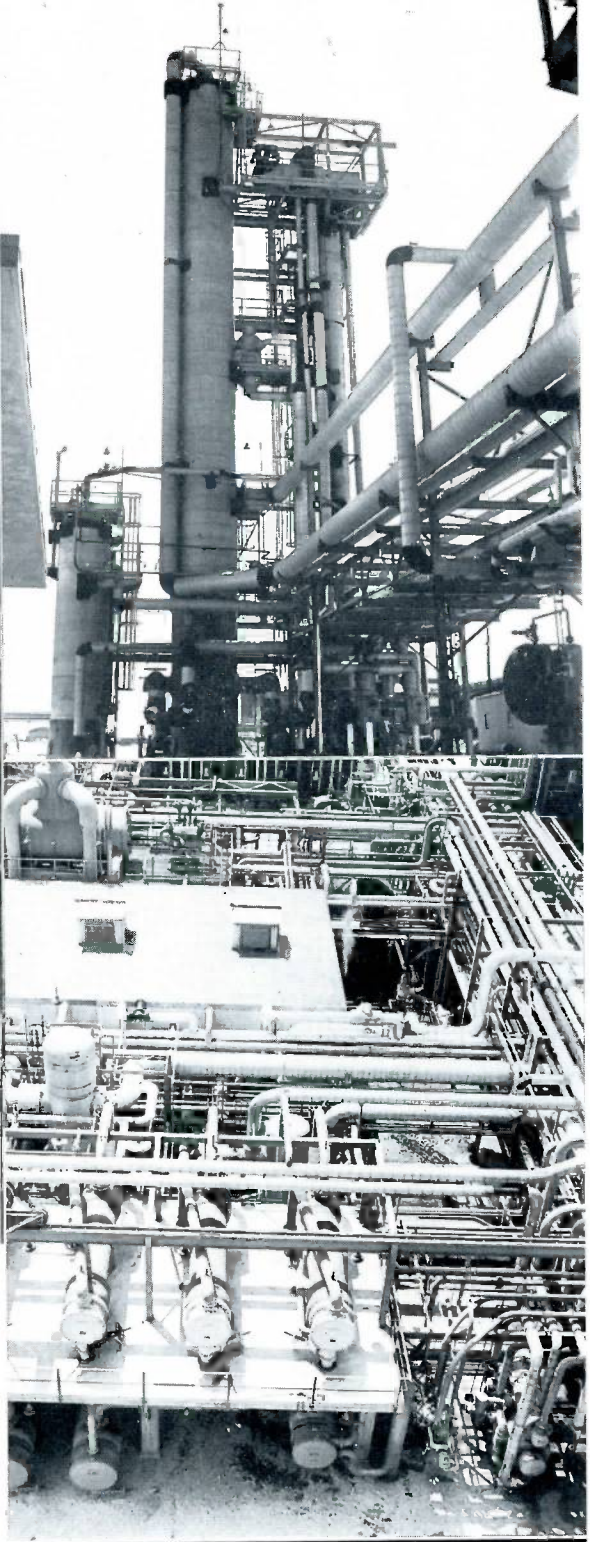
Over three and a half times larger are the man-made caverns underground, where 6.3 million gallons of propane can be kept at a capital expenditure one-third that of comparable surface storage. These caverns are located in a limestone stratum eighteen feet thick. These underground facilities are believed to be the second-largest of their kind in the world.

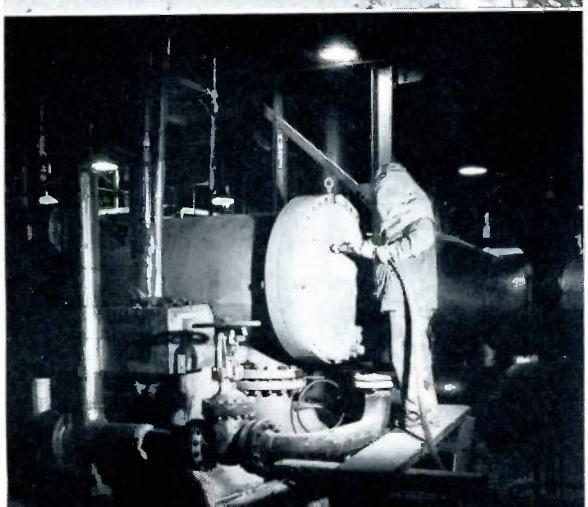
The other hydrocarbons—isobutane, normal butane, and natural gasoline—are kept in globular tanks called Hortonspheres. A small amount of natural gasoline is also stored in horizontal tanks.

Hydrocarbons Move Out. A 40-position loading rack loads one day's hydrocarbon production into tank cars in eight hours. All 40 outlets are used for propane; five also double for isobutane, eight for

Tall, slender, silvery towers rise through the mists of this flat Illinois farmland . . . progress in the midst of stable tradition.







normal butane, and three for gasoline. Motor trucks load 24 hours a day from a three-island rack providing six propane positions and three each for the butanes and gasolines.

Ethane to Ethylene. The main chemical pipeline runs northeast from Fractionation to the Chemical Units. Every day, ten million cubic feet of ethane flow into the Ethylene Plant, a maze of pipes, columns and furnaces—the largest unit ever built for production of ethylene. Here the ethane is heated to 1500 degrees F. and converted by "cracking" into ethylene and hydrogen. Ethylene production exceeds 200 million pounds a year. Hydrocarbons and benzene are also recovered in this unit as by-products.

The ethylene is then purified by distillation at temperatures that reach 32 degrees F. below zero, a minor chill compared with the 275 degrees F. below zero to which the hydrogen is subjected to remove impurities.

Ammonia. The hydrogen is doubly useful. A small amount goes directly to the Ethyl Chloride Unit, and the balance goes to a synthetic ammonia plant adjacent to Petro. Some of the ammonia is converted to nitric acid at the plant, and then into ammonium nitrate. In turn, the ammonium nitrate is used to produce "nitrogen solutions," used extensively in the manufacture of fertilizers.

Synthetic Alcohol. The Ethyl Alcohol Unit takes in several million cubic feet of ethylene each day, mixes it with sulphuric acid and water under controlled conditions, and turns out 125,000 gallons of 192-proof alcohol—one-quarter of all synthetic alcohol produced in the United States before Petro came upon the scene. A co-product of the alcohol is ethyl ether. Petro's full production of this valuable chemical has been disposed of under long-term contract.

Two storage tanks, each 100 feet in diameter, hold 3.5 million gallons of refined alcohol. From these tanks, the alcohol is pumped to a tank car loading rack where cars can be loaded at a rate of 3,000 gallons a minute. Government regulations restrict alcohol loading to daylight hours. Industrial Alcohol is used chiefly as a solvent or as a chemical raw material. The former use involves toilet preparations and perfumes, drugs and pharmaceuticals, paints, and varnishes. The latter use is for products ranging from acetaldehyde to vinegar. End products include cellulose acetate rayon, plastic and film, insecticides, synthetic rubber, and anesthetics.

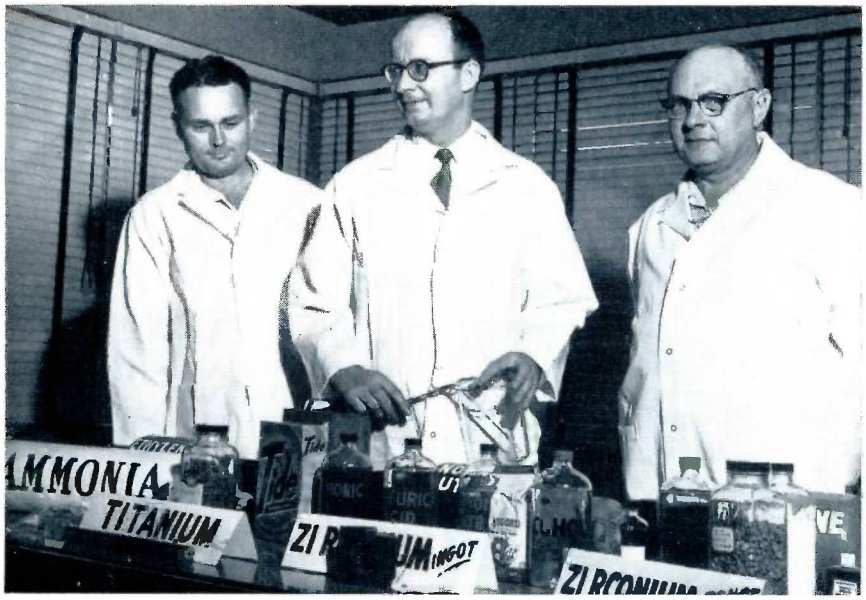
You can now clearly see the complexity of processes at National Petro-Chemical. There are a wealth of interesting facts about the plant. For instance, Petro plans to increase its production of valuable polyethylene plastic to 100 million pounds next year. Two tons of water are removed from the gas stream in the Extraction Unit each day. The temperature range in the various units of the plant is from over 1500 degrees F. above zero to around 298 degrees F. below zero.

Ironically enough for an industry whose basic raw material is natural gas, fuel for the Power House seven months a year is bituminous coal. Panhandle Eastern's commitments to industrial users farther along the line preclude the use of gas for Petro power during peak periods.

Transportation figures are staggering! Each year, tank car loads of chemicals make more than 20,000 trips from the loading racks. In the same period, motor truck trips total 15,000 or more. The trucks move out around the clock, destined for the plants of consumers within a 150-mile radius.

These, and many, many more facts tell the story of national Petro. A sound, progressive research department works constantly to develop new processes by which other by-products of natural gas may be utilized. Enough space has been provided around each unit to allow for sizeable new installations. All buildings were plan-

The first two photographs show well, as does our cover, the maze of pipes found in the various processing areas of this industrial giant. The bottom photo depicts the around-the-clock maintenance crew so essential to an operation of this size.



Petro personnel demonstrate the various end products or uses of their processing of natural gas.

ned so that additions can be made easily, and without major structural changes.

Thus, a giant was born on this Illinois farm land in 1951, and has developed in its infant years to a point of leadership in the chemical industry.

And what of Tuscola—the quiet Illinois town just east of National Petro? Here, too, certain facts are startling. In 1870, Tuscola's population was 2,863. In 1950, it was 2,967. Today, it nears 4,000!

The name Tuscola is generally thought to be of Indian origin. It is the county seat of Douglas County, named for the fiery orator, Stephen A. Douglas, who vied so many times with Abraham Lincoln. Tuscola's charter is dated 1859, and it is on land originally owned by the Illinois Central Railroad.

Throughtout the years, the city has served primarily as a trading center for the surrounding rural area. It has boasted a stable economy, good schools and churches, a spacious park, modern streets and utilities.

Despite industrial development just outside the city, Tuscola has not experienced a "boom," and hopes not to do so. It does expect to grow considerably, and this expectation is based on two things: proximity to Petro, and other industrial influx.

It is expected that as Petro employees seek and gain security, they will move closer to their place of employment. Recent statistics show this to be the case. Approximately 64 communities contribute workers to Petro. Yearly checks show a decrease in population of some cities farther from the plant, and an increase in Tuscola, Arcola and other nearby places.

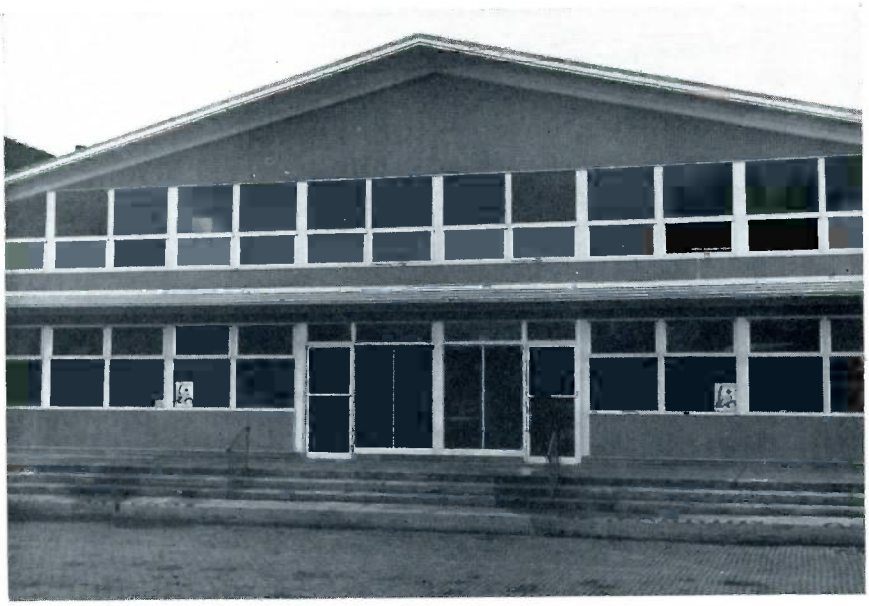
Then, too, it is expected that industries using Petro's basic products will erect plants near their

Douglas County Court House in Tuscola is the hub of diversified governmental activity.

Mrs. Rosemary Butkovich is Secretary of the Tuscola Chamber of Commerce. This town of approximately 4,000 is proud of its 100-member Chamber, and the efficient business enterprises it represents.

Tuscola Heralds a New Era

The new, $80,000 Community Building is the focal point of local pride. Citizens of Tuscola donated the funds, and actual construction was done with the craftsmanship of Tuscola builders and contractors.



source of supply. This, of course, will bring additional wealth and population to this once-peaceful town. All these "ifs" are big in the minds of Tuscola merchants and other members of the Chamber of Commerce.

Petro has made extensive channel improvements along about 25 miles of the Kaskaskia River, and has improved the river condition by pumping underground water into the Kaskaskia during dry spells. All wastes from the plant are completely neutralized and purified in a modern, multi-million-dollar treating plant.

Atmospheric contamination from noxious gases or dirt is also completely avoided through the use of the most modern and costly fume and dust eliminators.

So, the people of Tuscola have come to be proud of National Petro, and rightly so. Industry has stimulated civic awareness, according to Mrs. William Butkovich, Secretary of the Tuscola Chamber of Commerce.

Mrs. Butkovich, or Rosemary, as everyone calls her, is an affable woman who makes the Chamber a full-time job in her life. Her husband, Bill, is the football coach at Tuscola's new million-dollar high school. Mrs. Butkovich says there are approximately 100 members of the Chamber, and a current membership drive is expected to increase that number considerably.

In addition to two major, attractive housing developments and other new buildings, perhaps the most interesting project has been construction of a new $80,000 community building, which houses city offices. This building also contains a 70-by-70 foot assembly hall designed to seat 500 persons. This seems quite an accomplishment when you remember that the total population of Tuscola is approximately 4000. Even more significant of the awakening of the people is the fact that this beautiful new community building was 100 percent community-donated and constructed.

And that's the story of Tuscola and the industrial giant on its doorstep—a story of hard work, extensive research, an experiment in co-operation—indeed, a profile of progress.

A.G.A. News

P. R. AWARD

The first annual competition to recognize outstanding public relations achievement in the gas industry has been established under the PAR Public Information Program of the American Gas Association. All A.G.A. member companies are eligible to compete for the new "A.G.A. Public Relations Achievement Award."

T. H. Evans, chairman of the Association's General Public Information Planning Committee, announced that a handsome trophy will be presented annually for outstanding achievement in solving a specific public relations problem. The winning activity must have contributed to the development of better public opinion and understanding of the company, gas service, or of the gas industry.

Accompanying the trophy will be an engraved certificate of achievement citing the winning company's name and the public relations accomplishment. Certificates of merit may also be granted to other member companies with deserving entries, at the discretion of the judges. Presentation of the award will be made during the A.G.A. Annual Convention in October.

* * *

PARKES NAMED

Ed Parkes, executive vice-president of United Gas Corporation, has been named chairman of the American Gas Association Committee on Natural Gas Reserves. He succeeds N. C. McGowen, chairman and president of United Gas, who had served as chairman of the committee since its inception in 1946.

Mr. Parkes has been associated with United Gas for nearly 30 years. He was named executive vice-president last year after having been a vice-president since 1947. A University of Arkansas alumnus with a Bachelor of Mechanical Engineering degree, he is also president of Union Producing Company and United Gas Pipeline Company, subsidiaries of United Gas Corporation.

The Committee on Natural Gas Reserves is composed of leading geologists and petroleum engineers affiliated with the principal gas producing companies in the United States.

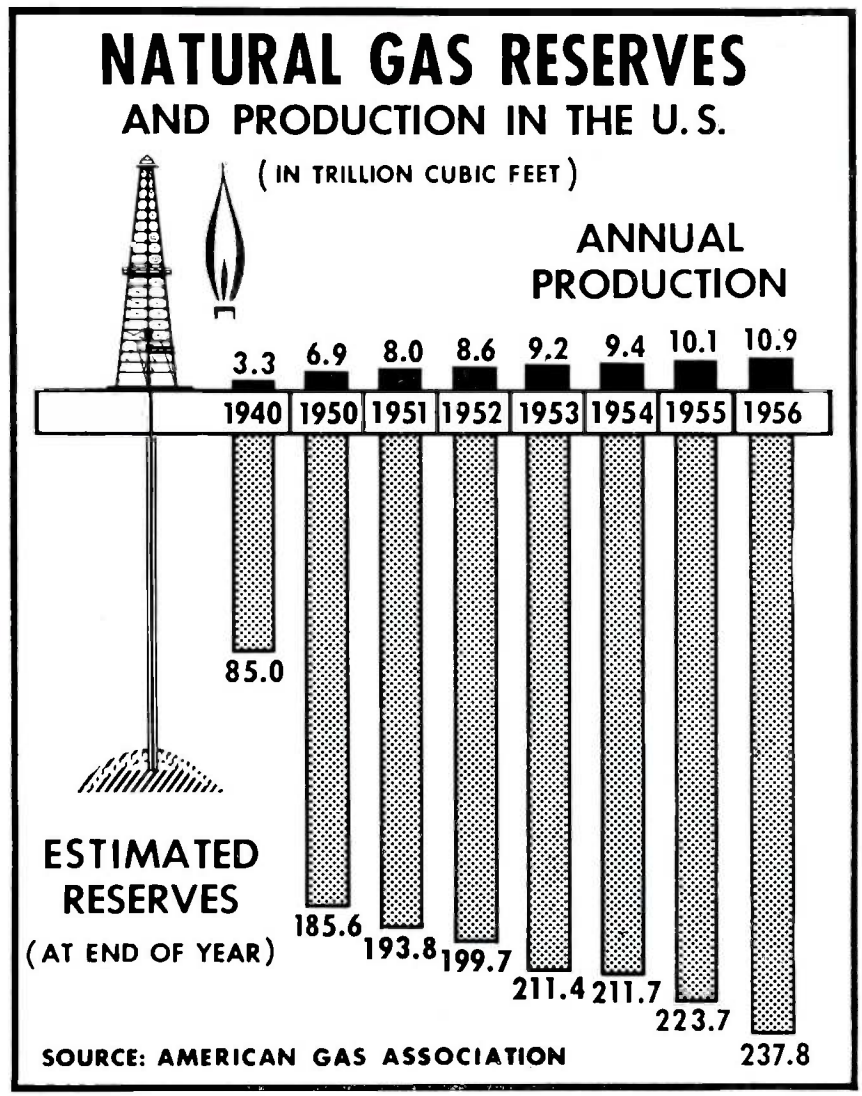
* * *

TAX HIKE

The 1956 tax bill of the gas utility and pipeline industry was nearly 31 percent greater than net income available for distribution to stockholders and for expansion to meet consumer requirements. Gas utility sales to customers produced revenues of $3.837 billion in 1956, an advance of 11.8 percent over the 1955 figure.

STOCKS RISE

Natural gas common stock prices, recovering from February's decline, regained ground during March, and at month's end were within one percent of the all-time high price of $41.71 per share established late in January. Transmission company common stocks closed the month at $54.60 per share, 17.9 percent higher than a year earlier. Distribution company common stocks show an annual dividend average of $1.49 per share, up 7.2 percent from last year. The current index price is $28.76 per share.



NATURAL gas reserves in the United States climbed to an all-time high of 237.8 trillion cubic feet at the start of 1957. Production during 1956 hit a record of 10.9 trillion cubic feet but additional proved recoverable reserves amounted to 25 trillion cubic feet. This resulted in a net gain of 14.1 trillion cubic feet, the greatest one-year advance recorded by the American Gas Association.

MUELLER®

control corrosion

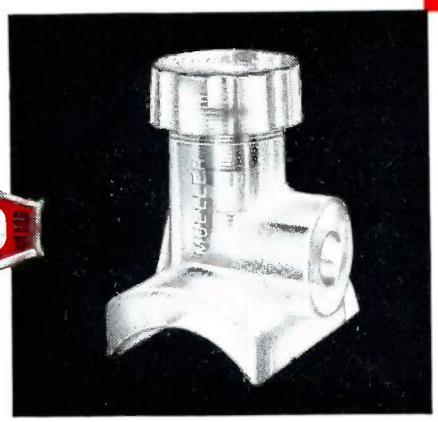
At the main.

Three different types of tees with a choice of welding or threaded (internal or external) inlets, can give you positive control of corrosion at the main. Mueller NO-BLO® Service Tees, Valve Tees or Curb Valve Tees are available in a complete range of sizes with insulating coupling outlet to fit steel or type "K" copper pipe. Inlets may be welding, outside I.P. or inside I.P. thread.

At the curb.

Mueller Inverted Key Curb Stops can effectively insulate the service line at the curb. Available with insulating couplings to fit steel or type "K" copper pipe. Or if you wish to replace inoperative curb stops or make a new installation in an existing line, use the Mueller cutting-in type Curb Stop with insulating coupling.

MUELLER NO-BLO ®



With plastic pipe.

The Mueller Plastic Tee permits safe, simple service connections to plastic pipe. Tee is solvent-welded to main and service line. Service is actuated by drilling into plastic main under pressure with cutter which is built into the tee. Coupon is retained in cutter. "O" ring seal in completion cap prevents leakage.

Convert to Insulating Couplings. *The Mueller H-11499 Insulating Adapter Gasket permits tees or stops with Dresser Couplings for steel pipe to be converted to insulating couplings for type "K" copper pipe.*

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Since 1857

LOOKING BACKWARD

We here begin a new column, one designed to arouse your interest and humor, as well as to let you know what was taking place in "the good old days."

November 15, 1910: "This little paper will grow. It is going to be a benefit to you now. It will be a greater benefit to you as it develops. We want to make the MUELLER RECORD a sort of clearing-house for all beneficial news. It's a place of exchange."

February 1, 1911: "We have received an order for two reducing and regulating valves for the new Grand Central Station in New York City."

You have all heard the National Safety Council's slogan: "If you drink, don't drive; if you drive, don't drink." Well, we found this similar, thought somewhat more amusing, entry in the MUELLER RECORD, issue of *July 1, 1911:* "A good rounder is apt to be a bad roadster."

Shades of Jesse James! We here reprint a story entitled "Poor Willie," which appeared in the RECORD, issue of *August 1, 1911:*

"Saturday, July 22nd, Willie sallied forth for Kansas City (on business). He had fifty dollars expense money, and Monday morning he wired to say he had lost that and a check for fifty dollars. We sent him more money. Of course Willie could not help it. He has been advised, while in the state of the James boys, to stay away from theaters, and to go to bed immediately after supper. With the new expense money, we sent a porous plaster with directions to place the money next to his body and cover it with the plaster. If he does this he is certain not to lose the money unless he loses himself, and no one can pry him loose from it."

A little further along, we found this tribute to Willie, a Mueller sales representative:

"Once upon a midnite dreary
Willie pondered weak and weary,
He was broke and he was leary,
Of the Wild West he was skeery.

"Sad, oh sad," he bawled in sorrow,
"I must wire the firm tomorrow—
What will they think of the story,
It's so old and very bory.

"But it's the best that I can fake,
And I trust that it will take.
It's so simple that it's funny,
To tell them that I've lost their money.

"Dear good friends won't you relent
And not ask me where it went?
You with hearts so full of pity
Surely won't suspect the 'kitty'!"

—by Wilbur Simpson

January 17, 1912: "Over west of Elk City a half a mile, the Missouri Pacific maintains a pumping station operated with a blind mule. The mule is left alone all day and goes round and round, pumping water. When the big tank is full the water splashes out on a zinc platter, and this makes a noise that is the signal for the mule to stop. When a train comes along and stops, the mule starts up again, and goes and goes until the water splashes out on the zinc. This has been going on for fourteen years. It is probably the only horse power engine in Montgomery County, and that is the home of crude oil. Henry DuMonde, who owns the mule and gets paid for its services, got out and worked last spring to beat the bonds at Elk City to build waterworks, because the construction of waterworks there would throw him and his mule out of work."

In these days of industrial influx, we are all aware, on occasion, of the appearance of a new factory in our town. We today, however, are much more reserved in our enthusiasm than were the people, places and things mentioned in the RECORD, issue of *December 25, 1912:* "We have come to the conclusion that the people of Sarnia appreciate the fact that we have established our factory there, and they seem determined to celebrate it on every possible occasion.

The day that Mr. Oscar Mueller arrived in town to carry on the final completion of the work, there was a little private celebration by the Imperial Oil Co., which has a large refinery at that point. They were so enthusiastic over his arrival that they blew up one of their oil tanks.

Then, just to show that there were no hard feelings, in that same week the Sarnia Electric Light and Power plant was burned down which, we think, was a very good way of showing their friendship, as it gave us a pyrotechnic display second to none.

Of course, there were other companies who did not care to go to this extent in celebrating, but we will have to hand it to the Sarnia Bridge Company. They were working on our foundry building and were drawing near the end of their riveting, when they determined that the men could work a little harder and go without the riveting machine. So they ran up the pressure in the air tank, and there was an explosion which was heard all over Canada.

We are now prepared for almost anything!"

Many of us have run into some crazy situations during vacations over the years. Here is an amusing incident recorded in the RECORD, issue of *April 19, 1913:*

"A gentleman in Europe engaged a courier. Arriving at an inn in Austria, the traveler asked the servant to enter his name in accordance with police regulations of that country. The man replied that he had already anticipated the order. 'But how did you write my name?' asked the master.

'I can't exactly pronounce it, but I copied it carefully from your luggage, sir,' said the servant.

'But my name is not there,' was the reply. 'Bring me the register book.'

The register was brought, and revealed, instead of an English name of two syllables, the following portentous entry: 'Monsieur Warranted Solid Leather.' "


In the Interest
of our Future