

SEVENTY SIX

March/April, 1981



Seven Days in the Vermilion Field

Photographs and story by Sergio Ortiz

RAIN IN THE GULF OF MEXICO comes as naturally as dew on a New England morning. It's a matter of fact, a natural happening that falls almost unnoticed when it's dawn just this side of morning and disappears with the first rays of sunlight.

While the rain mists in this gray morning in the heart of Cajun country, a crew of men begins to gather at the Union Oil offices in Intra-coastal City, a bustling industrial center in the edge of Louisiana's Vermilion Bay.

The crew is a "shift" preparing to relieve co-workers who have spent the last seven days aboard an offshore platform some five miles from shore. This new crew will remain there—aboard the structure known as Vermilion 26C—for the next week after which they, too, will be relieved.

Before this rainy dawn is over the crew will have boarded a helicopter for the 30-minute trip over the coastal tidelands crisscrossed by canals and streams which empty muddy waters into the Gulf, over open waters and eventually land on the pad atop Vermilion 26C. This Vermilion field has quite a record.

The platform and the surrounding offshore structures are all named after the tract in the Gulf called Vermilion. The first significant offshore discovery was made there in the 50's in the 14 block of the tract and continues unimpaired to this day.

In October, 1951, Pure Oil—which was acquired by Union Oil



C. L. Lastinger and his famous gumbo.

in 1965—made a discovery in what was then called the Rollover field now called Vermilion 39, off the coast of Louisiana. This first platform consisted of four gas-condensate wells located on a steel piling platform about eight miles from the nearest land off Vermilion Parish.

The Pure Oil discovery well was drilled in May, 1949, at a true vertical depth of 7,600 feet. Today, however, the picture has changed drastically.

Flying to Vermilion 26C the scope of the ensuing 30 years of production are evident by the scores of structures that loom over the warm Gulf waters. There are platforms of all sizes and shapes, production facilities that work non-stop tapping the huge reserves beneath the sea.

In the 26 block of the Vermilion tract alone there are over 30 Union

Oil platforms and offshore structures and the workers aboard 26C service and maintain all of them.

At this time, there are 40 workers living on 26C, but only 14 of them are Union Oil employees. The rest work for a company contracted to expand the pipeline system which carries the platform's production to shore.

Paul Presley LeBlanc, a Union employee for 18 years, is the production foreman at Union's Intra-coastal City offices. He explains, "This (26C) platform is mostly a gas-producing facility where the crew works on 12-hour shifts for seven days a week. Currently," he continues, "our production there is about 243 million cubic feet of natural gas per day. There is also a considerable amount of condensate—some 4,300 barrels—that is handled at 26C."

The condensate is piped to North Fresh Water Bayou where it is stored before being transported to the Forked Island Terminal from where it's barged to the Union Oil refinery in Beaumont, Tex. The natural gas eventually winds up in Pennsylvania.

That, of course, does not mean that the platform's six wells produce that amount. Twenty-six C serves as a gathering point for 60 other wells in the area.

"The production of 26C is 17 million cubic feet of natural gas per day," LeBlanc explains, "but only four wells are flowing at this time, since some have been shut off while the pipeline expansion is being done." ➤➤➤

What is life like aboard one of the Union Oil offshore facilities in the Gulf of Mexico?

The 14 Union Oil employees and the contract workers currently on 26C are a friendly crew that goes out of its way to welcome visitors to their midst.

Bill Johnson, who has worked 26 years in the Gulf and who claims to have seen it all—"hurricanes, drilling, production, more drilling, you name it"—is one of the self-proclaimed "last survivors of the Pure Oil platforms in the area at Vermilion 39.

"I was here," he says, "when there was nothing in the Gulf. I saw the first gas-producing platforms built and I am still here."

Typical of the veterans of a long-gone era, Johnson still refers to the area as the Rollover field and he is the first to offer a visitor a "cup of good Cajun coffee, if you can stand it."

The area where Johnson works is an air-conditioned world apart from the main activity of 26C. But the place is a sensitive nerve center that monitors all relevant activity in the Union structures of the area.

Johnson works at the control room of the platform, a miscellany of gear, charts, logs and books existing amidst a cacophony of sound—ringing telephones, the constant hum of powerful engines, the clap clap drumming of helicopters and, above all, the charmingly soft and lilting echoes of the French-Creole accent of the workers.

Once the crew has arrived at 26C, it settles to a routine established for maximum production. Johnson enters the office where he serves as operator two. Almost at once the radio begins to drone. There are calls for repairs, maintenance, boats and for supplies

and helicopters from platforms in the Gulf.

Johnson and LeBlanc handle all this with tremendous ease. "That damned radio," someone says, "is always either too loud or too soft. You guys can never get it right."

From the room next door, a television continues to blare as it does on what it appears to be 24-hour shifts in the room that sits 12 and serves as a theatre for workers after their shifts. "There's always someone watching," Johnson explains. "It's Donahue now in the morning, the game shows come on next, then the soaps, then the news, and finally the movies at night."

In the anteroom for the control center and the television room, there is a game room for the crew. It's a large, airy place that affords an ocean view from three sides

where the workers can engage in a little pool, cards or checkers.

If the control room is the nerve center for 26C, the game room is where the crew can unwind.

A group of men who have just come off the night shift wanders in and begin to rack up the pool balls. What follows is no billiards game at a men's club salon. This is the rough and tough cut-throat game preferred in back country beer bars.

Generally, here in the Gulf, this is a world of Levi Garrett chewing tobacco, steel-toed boots and country music, but it's not all banter and pool playing.

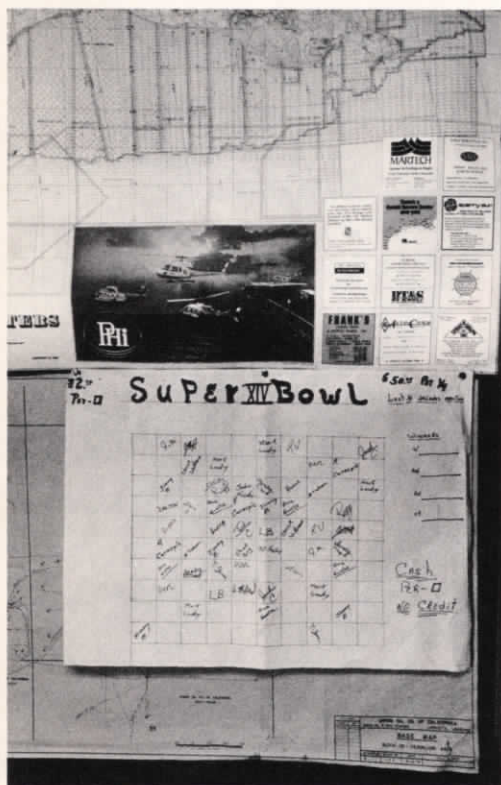
On hand is the delicate task of making things work and the production of hydrocarbons is the foremost task for the 14 platform workers, a pilot, one cook and one galley hand that comprises a



It's the platform's galley that serves as the social center of the structure.



Scores of structures and platforms of all shapes and sizes loom in the horizon tapping the huge reserves beneath the Gulf.



Football pools amidst production figures.

typical offshore crew.

The week-long confinement leaves little time for leisure, but still one finds football pools tacked on the same bulletin boards as maps showing drilling blocks and production figures.

The command structure of a platform usually follows rigid lines that are not seldom breached. In charge of the entire operation is operator one. Then there is one electrician, one mechanic and one safety equipment tester, all of whom have detailed responsibilities to make the operation run as smoothly as possible.

At 26C, underneath the helicopter landing pad, there is a set of cubicles serving as warehouses and work rooms. Here Mike Langlinois, a Union Oil employee of four years, works with everything that has to do with electricity.

"They say that we (electricians)

work with anything that has to do with wires," Langlinois says, "but that's not necessarily so. Sometimes we have to rewire entire systems, while other times we have to reassemble condensate pumps or electric filters for the wellheads."

Langlinois makes the round between five large offshore platforms and 30 satellites inspecting and repairing electrical equipment. He is linked to 26C by a two-way radio. A helicopter flies him to wherever the work is needed.

On the other side of the platform, Huey Thomas, the mechanic on this particular shift, is busy changing a hydraulic line on a crane needed to lift the welders' equipment to the working area. He originally planned to have a piece of equipment arrive by helicopter, but now is running behind schedule because the helicopter has been rerouted.



"Why doesn't someone tell the pilot I need my generator in a hurry?" he says into a radio. The crackling response is that the chopper is on its way. "Damn it. That's what they said two hours ago," Thomas says.

Actually, 26 C is two platforms in one. On one side is the production platform, designed to produce natural gas and condensate alone. Here, pumps, wellheads, and valves are housed. The other platform consists of the living quarters, various workshops, warehouses, control room, galley, and game room.

Although women were rare in the platforms a few years back,

this offshore facility today has female workers as part of the normal shift. Separate quarters are used to house the female personnel.

It's the galley, however, that serves more than any other section as the social center of the offshore structures. Here is where normal banter is exchanged three times a day.

Even before any of the regular meals is served, the aroma of food begins to permeate over the platform and the workers begin to talk about food.

Some 200 yards from the support platform, welders are making a pipeline connection when some-



Mike Langlinais, fixes an electric pump.



Twenty-six C is two structures in one. One side serves as production center, the other houses control rooms and living quarters.

one says, "That old cook sure is dishing out the hush puppies." Gradually, the men begin to relate stories about fabled cooks in the Gulf who have gained notoriety through their skills.

This is definitely not a world of low cholesterol or diets as C. L. Lastinger, the cook at 26C, will admit. "The crews eat as hard as they work," he says.

Lastinger is one of many contract personnel who serve on the Union Oil offshore platforms in the Gulf. "I've been cooking nine years and the meals never change," he says, dipping a piece of fresh fish in a tub of batter and then putting it in a large deep fryer. "You can't get too fancy or no one will eat your food."

Even if Lastinger got too fancy the crew would certainly finish the daily huge vat of gumbo for which Lastinger is famous.

This is some gumbo. Thick as Texas crude, the soup has chunks of shrimp and fish floating in it while large vegetables add a consistency to the brew hard to find anywhere else.

The platforms are a world in themselves which could support life almost indefinitely. Some workers have a tendency to go fishing after their shift, while others retreat to their bunks or to the game room.

Potable water is brought by boat from the mainland, eliminating the need of "Navy showers." Communications are excellent in case a worker needs to contact someone on shore, and transportation is available at the touch of a dial.

But no matter how romantic life aboard a platform may appear, to the men and women of the Gulf the structures offer nothing but hard work and sometimes monotony. Seven days aboard a platform can go a long way. It's

like being stranded on a steel island where even after hours one can hear the routine language of that world all night long.

Over the hum of motors and television movies late at night, one hears voices engaged in the production phase of the oil industry. "We ought to accentuate well number 30."

"Go ahead."

"I am gonna bring 14 in."

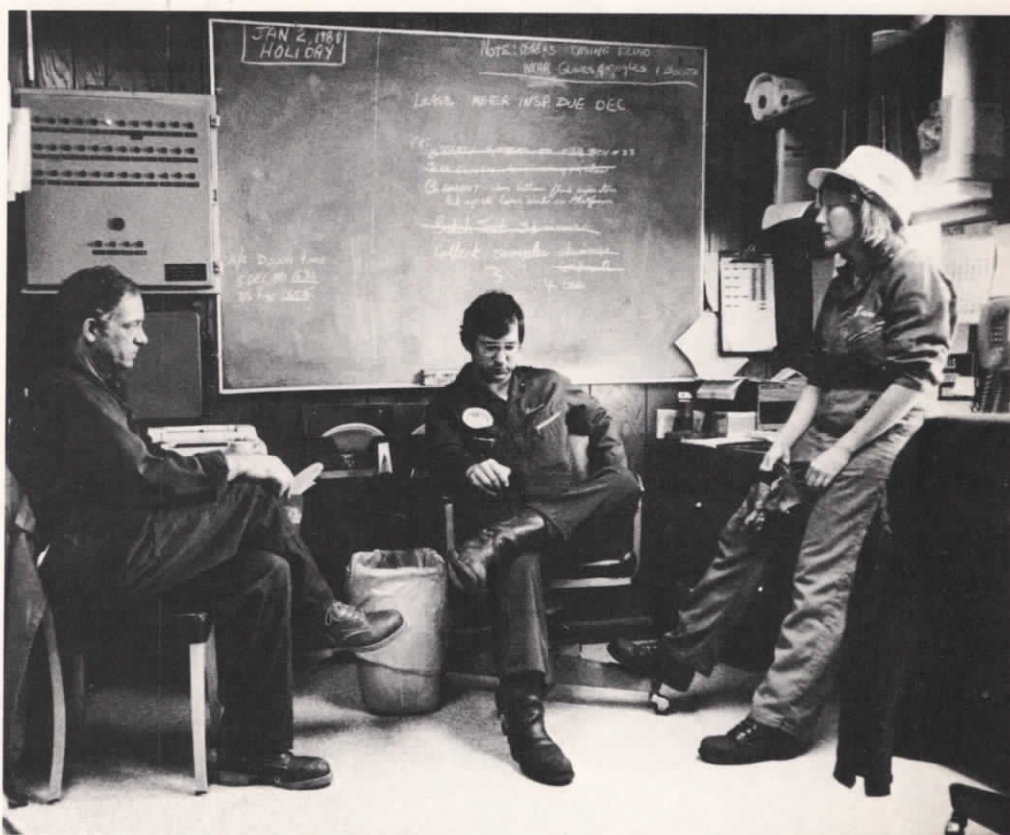
"Okay. Bring it in."

And so it goes all night long until one knows it's morning because the late-late movie has been replaced by the morning prayers on television.

But the oil dialogue continues uninterrupted alongside the crackling of radios.

Soon, the smell of bacon fills the platform and a sleepy group files in to have breakfast.

After a week, there is a sense of relief when the helicopter lands on the pad over the structure to transport crew back to Intracoastal City. Men with the 1,000-yard stare who arrived a week before are now being replaced with a fresh crew that will live aboard 26C in a pseudomonastic existence, surrounded by sophisticated equipment that wrestles hydrocarbons from beneath the ocean floor. 76



Donald Stouts, (C) operator one at 26C, discusses the day's work with a crew.



Invest in the future:

Adopt-a-School

WHEN PROPOSITION 13—a statewide tax-reducing measure approved by California voters went into effect a few years ago—everybody was talking about the fate that would befall schools and the numerous cutbacks the initiative would cause. The cutbacks were substantial in some cases, but someone is now doing something to ease the pressures of the Proposition 13 reductions within the Los Angeles Unified School District.

Large firms and small businesses as well, have moved to help the schools with contributions, personnel and, most importantly, by showing a fresh and keen interest in the students.

It is a new program, an innovative concept in education called the Adopt-a-School program. Initiated on a smaller scale within the Los Angeles Unified School District even before Proposition 13 ever became a reality, "the program not only helps students learn in the classroom, it also gives them opportunities to rub elbows with people from all over town who do jobs with which the young people might not be familiar," explains Dr. Robert Loveland, a Hollywood physician who along with Bruce Schwaegler, president of a chain of department stores helped start the program. "The people from industry appreciate their jobs more when they are seen through someone else's eyes, when these professionals explain what it is they do and how they do it," Loveland adds.

Adopt-a-School is considered a good investment in the future, while offering people from various areas of business and industry an opportunity to become more involved with the education process.

At Canoga Park elementary school, a businessman helps a youngster with his counting exercises. At

White Point elementary school in San Pedro, Marineland provides animals for the school's aquariums—and even has its employees change the tank water every two weeks and answer students' questions. At Grant high school in Van Nuys, a petroleum engineer from Union Oil explains to a science class the problems and progress being made in the exploration of oil.

Union Oil has been active in the program since May last year when the company "adopted" Grant. The school has an enrollment of 3,200 with 800 students being bused in from the downtown area near Union's corporate headquarters.

One of 80 companies helping 87 schools, Union has provided Grant with five speakers to lecture on subjects ranging from the seeking and securing of employment in the oil industry to explaining the sciences of petroleum and chemical engineering.

The speakers are given time off from their jobs to visit the school and speak to the students. Union Oil has also given the school some laboratory equipment and specimens of petroleum products for the school's science department. Elsewhere at Grant, Union has sponsored an art gallery and donated tables and chairs for the teachers' lounge.

According to R. R. Cowan, Union's vice president of marketing, Western Region, who originated the involvement in the program, "Union first took interest in Adopt-a-School through our activities with the Los Angeles Chamber of Commerce. That's when I realized that the program had great potential."

To date, the students have been visited by Union employees who have talked on a wide range of subjects. These include Tyler Brinker, regional drilling manager for Union's Oil and Gas Division, Western



Region who talked about the production phase of the company's operations; Stan Zwicker, coordinator of environmental programs, who discussed the Clean Air Act; and Carl Bowden, manager of employment services, who explained many of the opportunities available in the industry.

"It's a people orientated program," explains Wayne Carlson, director of the Adopt-a-School program for the Los Angeles Unified School District. "Each school has a different set of needs and the participating companies offer various opportunities for the students. We have a real diversity of activity," he continues. "If a company does only one thing, it's one thing more than we had. Usually companies invariably become more involved. Employees also leave feeling better about their own job, the school system and kids in general."

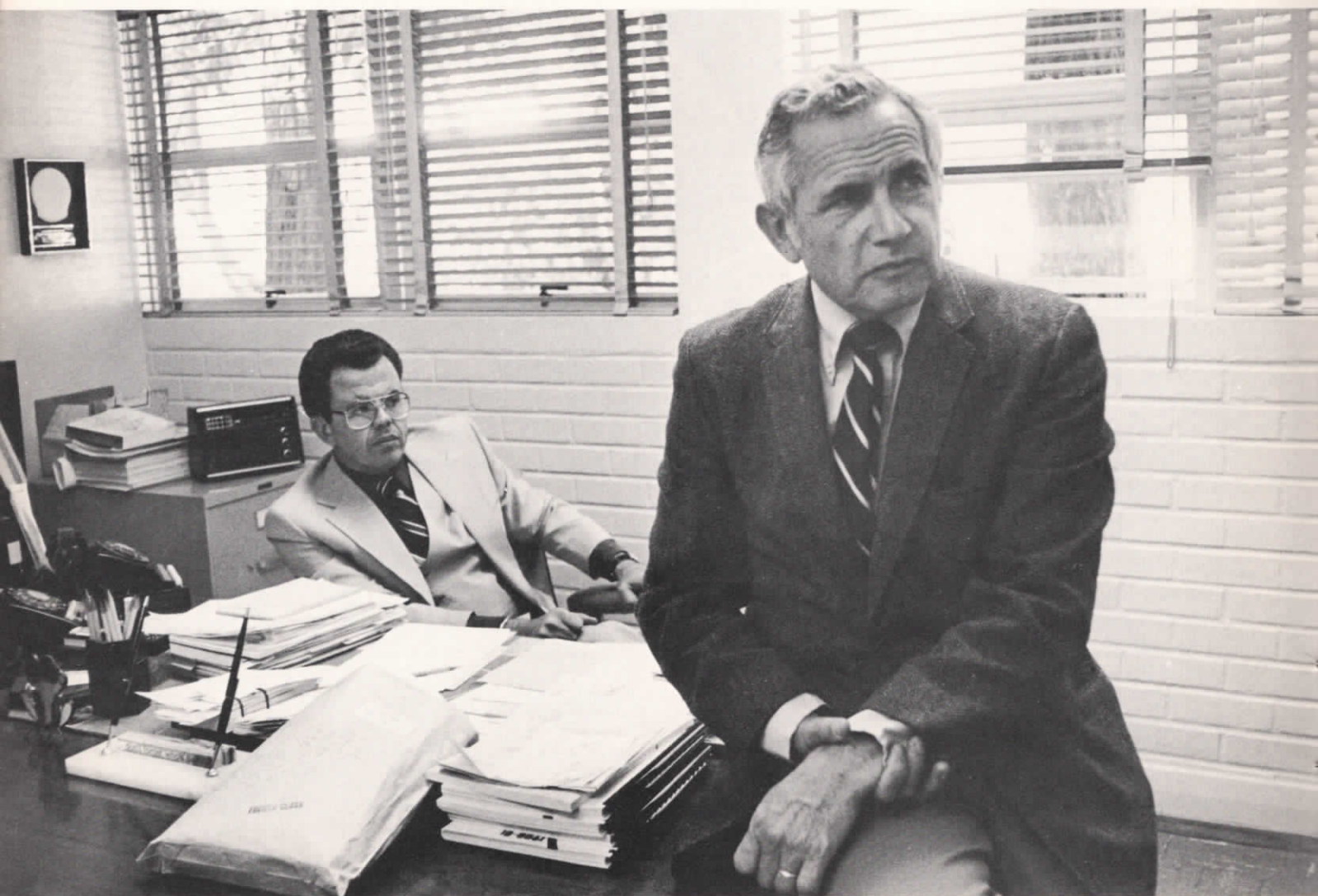
Some of the activities where business and industry become involved in education include student tutoring. In this phase of the program, employees take time off from their job to tutor elementary or secondary

students in one or a number of subjects.

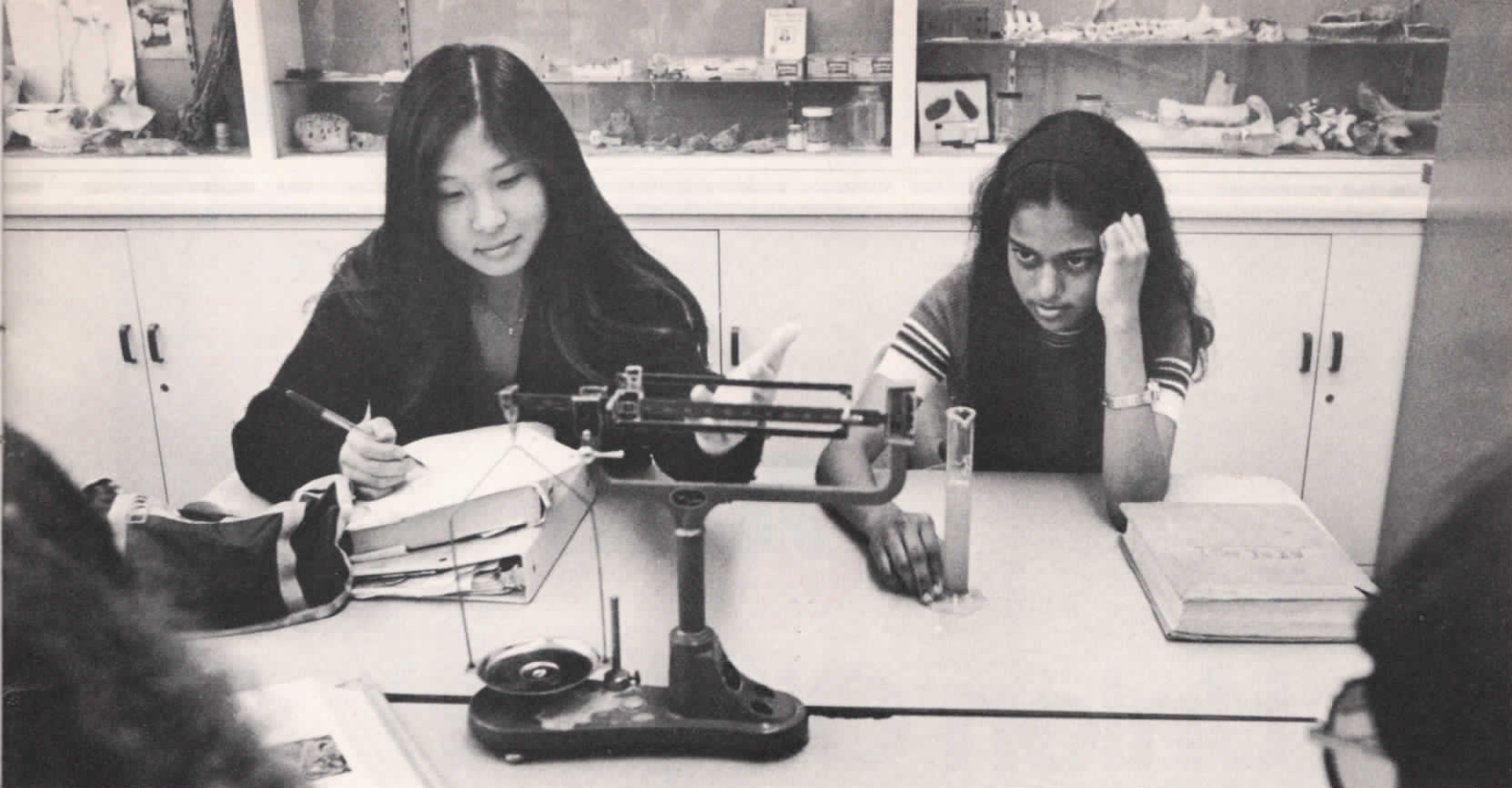
Another facet of Adopt-a-School is an in-service program that provides an opportunity for students to spend time observing and learning the operations of business firms and the career implications found in the outside world.

Some employees teach mini-courses in various areas of interest such as astronomy, ballet and sculpting. Incentives and awards providing prizes, certificates and plaques to students for outstanding accomplishments are provided by companies. Other projects include innovative sponsorship of scout troops. Participating business firms have thought of the parents by encouraging better parent-community rapport through school-centered activities for parents such as health clinics and economic awareness workshops.

Companies find themselves useful in providing in-service education in their areas of expertise such as management training, economics, computer instructions and business education by allowing teachers to attend company seminars. Funds for special motiva-



Don Isaac (L), principal at the school and Lou Barak, coordinator of Union's program at Grant, are satisfied with program's success.



Chinsun Lee (L) and Maria Desouza, Grant 11 graders, use one of the Union Oil Scales and beakers during a science class.



Fred Garcia, Karen Adams and Teresa Brennerman.

tional and instructional activities as well as school scholarships are provided by some of the larger corporations in addition to their employee involvement. For students who are seeking employment out of high school, some companies are able to provide a job placement service with the school's work experience coordinator.

Many employees of the participating businesses and corporations are finding special satisfaction in helping students. "I think the concept of the program is exceptional," says Dodger president Peter O'Malley. "It gives our personnel the opportunity to step outside the boundaries of a professional corporation and to have some input into the educational process. It's an eye opening experience for us." The Dodgers "adopted" the sixth grade from the Solano Avenue school to give them guidance in career awareness.

"When requests are made of the companies in the program, they have come through," explains Lou Barak, coordinator of Union's involvement with Grant high school. "At a time when many people are turning their backs on the schools, it's good to have a company like Union Oil offer help."

Barak, who is a career advisor and a teacher of business and government at Grant, continues, "If we had to rely on our budget resources for a similar program we would have to wait a long time. Our access to equipment and field trips has been cut back and Union's assistance has helped."

Barak feels that it is encouraging for students to know that a large company like Union Oil cares and is giving something to them.



Union Oil Defined

THE LAST DECADE has been a turbulent one for the energy industry. What with changes, new outlooks, the upheaval in the economy and the heavy dependence on foreign oil on the part of the United States, the life of the nation has been put to a strenuous test.

For example, in the seven years immediately after the first oil embargo in 1973, the world market price of a barrel of crude oil jumped from \$3 to over \$32.

What this means to the lifestyle of the United States is obvious. The country's thirst for oil must be quenched only by developing new domestic energy sources while holding a tight rein on all conservation methods. It is apparent that once ignored innovative sources of energy must be re-

viewed in the immediate future.

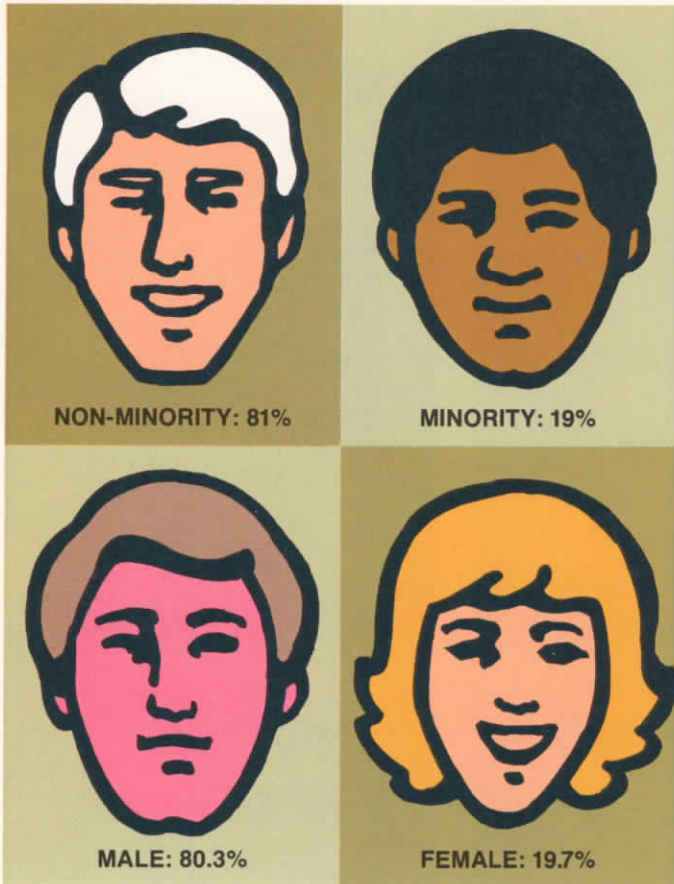
This means that radical changes must be made while the country learns to adapt in order to maintain our way of life.

And those working in the oil industry will be the ones most affected by the coming changes. Who are they?

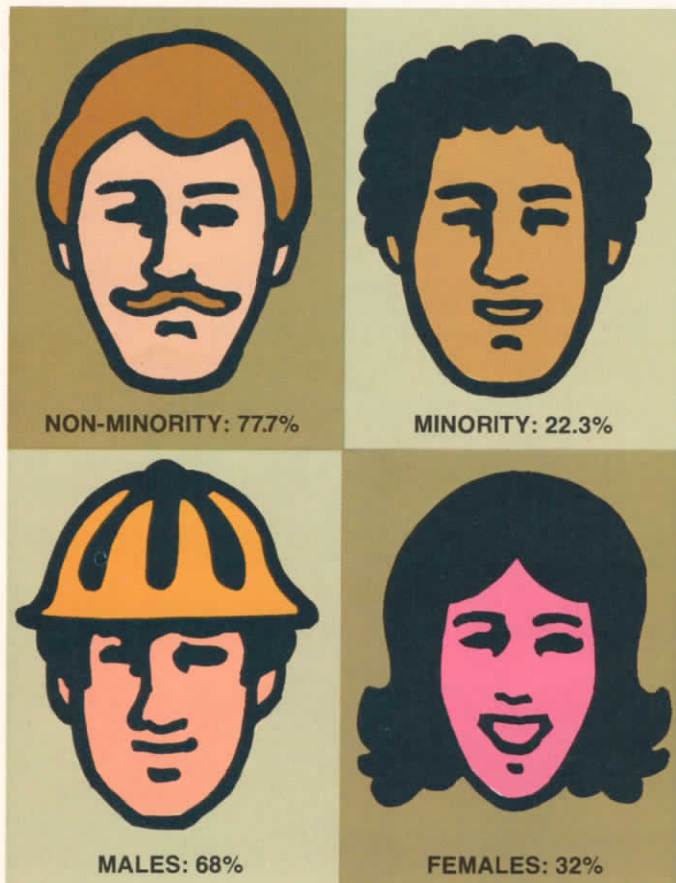
They are the typists, engineers, refiners, executives, service workers and researchers who have made Union Oil a strong company in the energy market.

Following is a break-down of those individuals who compose the firm known as Union Oil Company of California and its subsidiaries including Pure Transportation Company, Molycorp Inc., West Coast Shipping Company, Moreland Development Company and others.

TOTAL EMPLOYEES:
17,995



NEW HIRES IN 1980:
2,057



TOTAL ANNUITANTS:
6,862



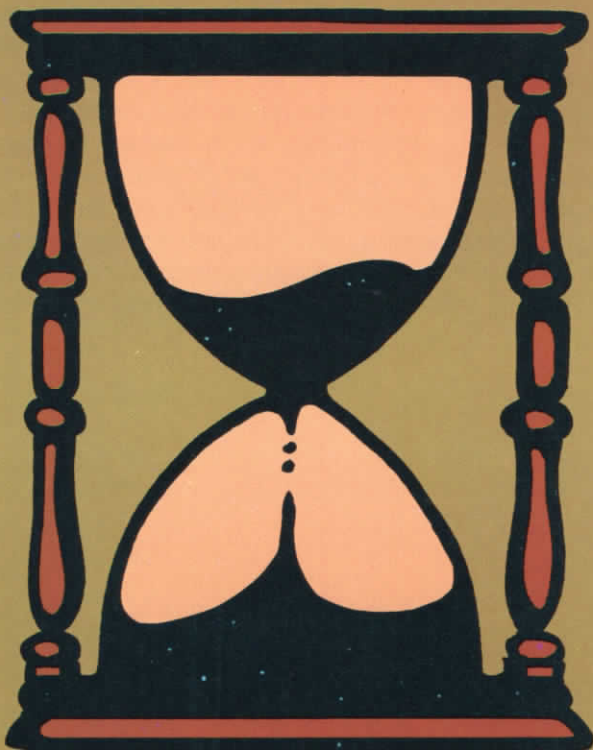
RETIREMENTS IN 1980:
346



PERCENT OF WORKFORCE:
2.3%



AVERAGE YEARS OF SERVICE:
12.15



AVERAGE AGE OF EMPLOYEE:
38



DISTRIBUTION BY JOB CATEGORY:

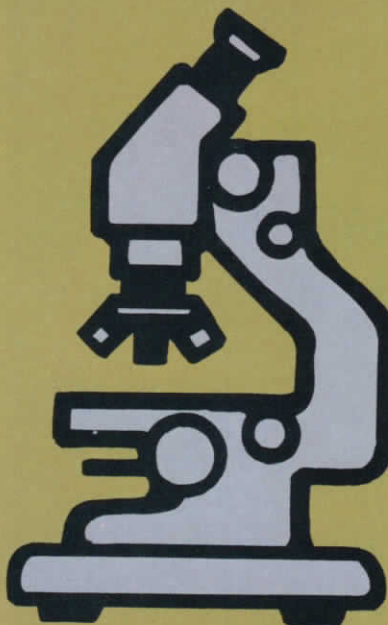


LABORERS:
8.4%



SEMI-SKILLED: 14.7%

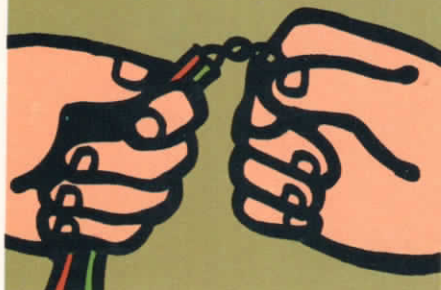
PROFESSIONALS: 12.0%



OFFICIALS & MANAGERS: 13.5%



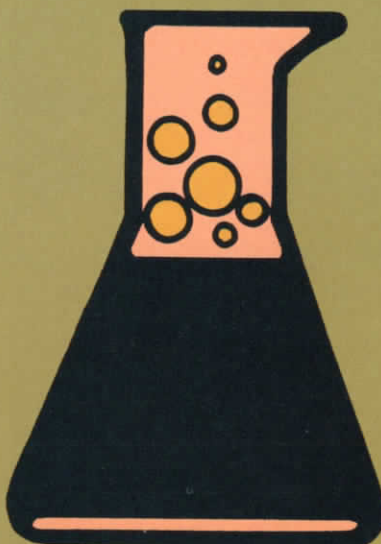
CRAFTSMEN: 22.9%



CLERICAL: 17.5%



TECHNICIANS: 7.8%



PRODUCT SALES: 2.6%



SERVICE: 0.6%



AGE DISTRIBUTION:



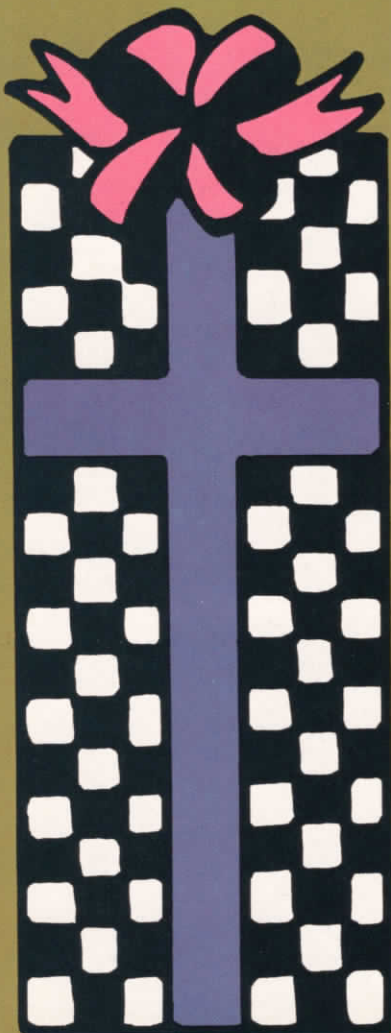
17: 13



18-24: 2,864



25-34: 3,307



35-44: 4,950



45-54: 3,791

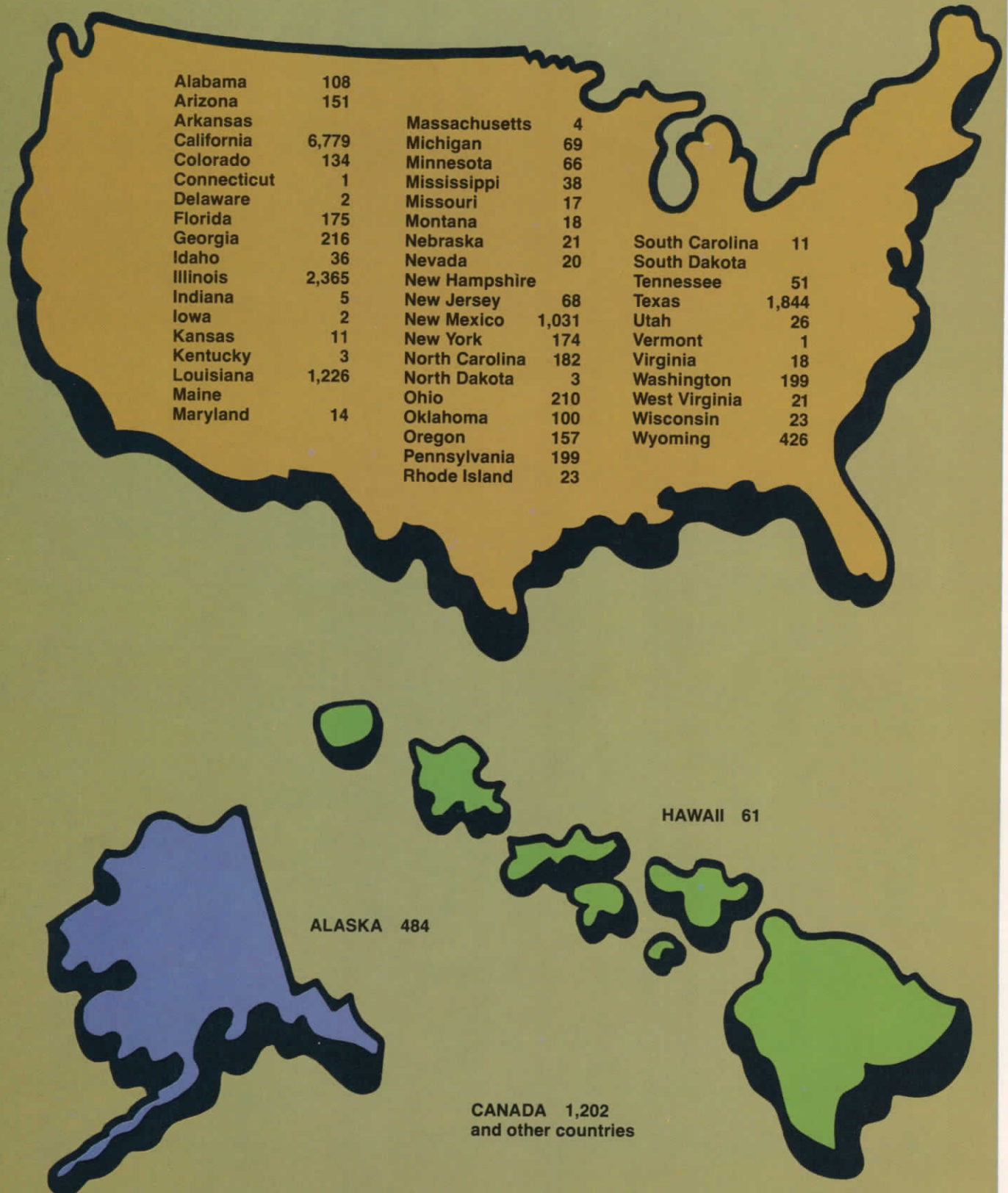


55-64: 3,005

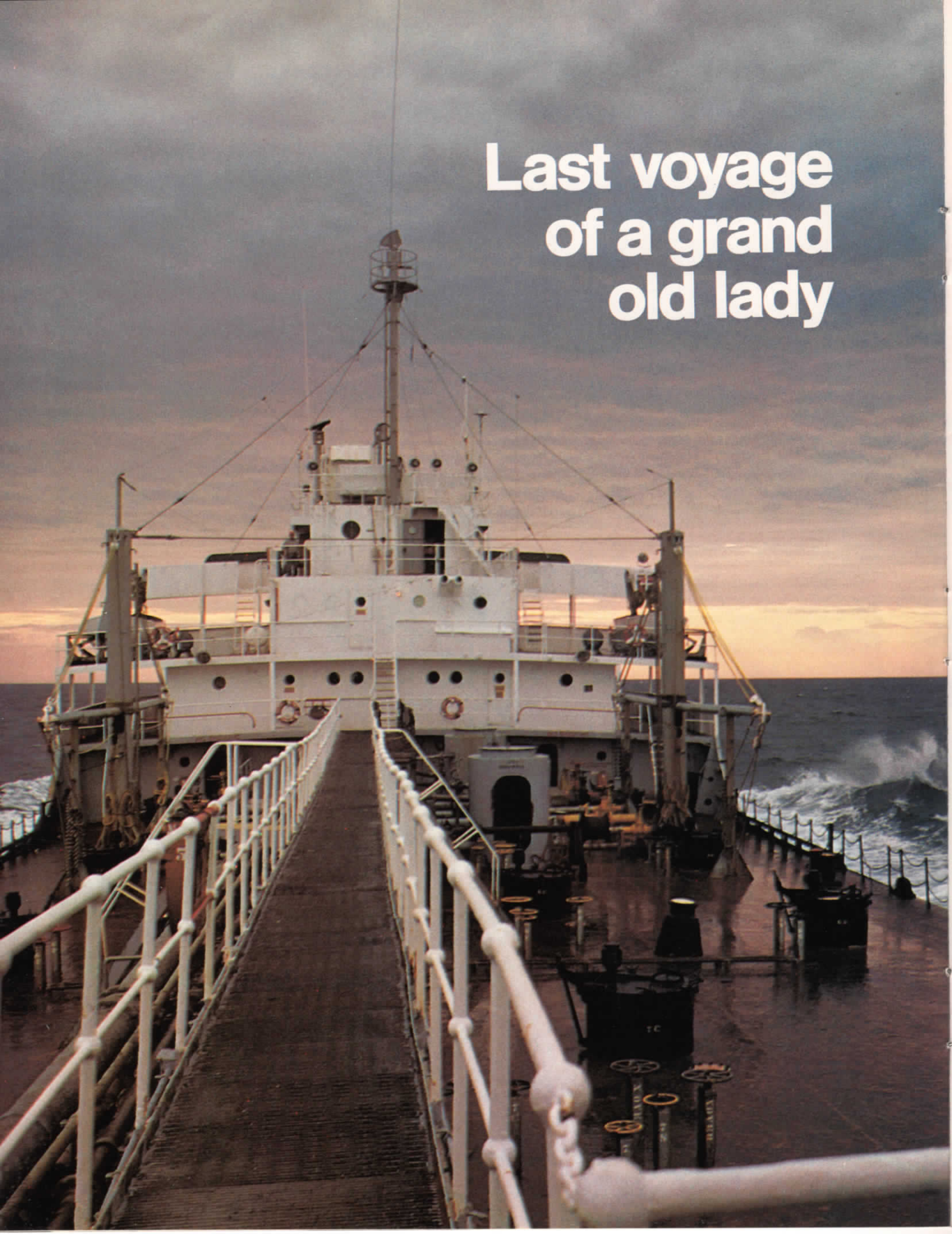


65 & OVER: 65

DISTRIBUTION OF WORK BY LOCATION



Last voyage of a grand old lady



SHE'S A TIRED OLD LADY," says Captain Richard H. Rodgers. And he should know, because he has been one of her masters for the last ten years—almost one-fourth of the S.S. *Pure Oil*'s sealife. The *Pure Oil*, an old T-3 style tanker carrying only 10,000 gross tons of fuel products, is a workhorse—not a pretty dapple-flanked mare, or a mighty Clydesdale of a ship, but a nondescript plow horse doing her duty.

For years, the crew of the *Pure Oil* has had a reputation within Union Oil Company, who acquired the ship when its owner company merged with Union in 1965. The *Pure Oil* has always been "that ship." You know, the one whose crew painted her stack with a ten-foot smiling face honoring her 1,000th voyage in 1973—a record number of trips few vessels can boast. The same ship which wore stars and stripes on her stack as she plied the waters of the Gulf of Mexico in 1976 is also known for a captain and officers who, in fair weather, jog around the stack—not to mention a chief engineer who rigged up a tennis "wall" to practice hitting a few balls.

Sailors up and down the East Coast and throughout the Gulf, where she regularly sails to and from her home port at the Union Oil refinery in Beaumont, Tex., know her almost perpendicular bow and smile when spotting the "Old Lady" chugging along at sea. Ships ten years her junior already have outlived their service or long since perished in the scrap yards.

But now, after 36 years, the ship's working days for Union Oil are drawing to a close. Like the wonderful One-Hoss Shay, the *Pure Oil* has worked faithfully up until the end of her service.

Standing ashore under rain-grey skies on the edge of the Sabine river at the dock in Port Arthur, Tex., even landlubbers marvel when today's swift supertankers (lightened at sea to decrease their draft, enabling them to navigate the shallow channel) sail past the stubby, 500-foot long *Pure Oil* pumping gasoline in her holds.

Rust stains mar her black hull as she waits her trip to Tampa, Fla. Soon, the silence is broken as the S.S. *D.D. Irwin*, a tanker owned by Union salutes her flagship as she passes bound for Savannah, Ga., loaded with chemicals and lubricating oils. Solemnly, the crew at the bridge of the *Pure Oil* returns the salute.

One feels the gangway rocking gently as the *Pure Oil* teeters over loading lines beneath it. Men monitor the decks as the cargo is piped on board. This is not a modern, computerized tanker. It relies heavily on the muscles and legwork of the crew.

Built in 1945 as one of a group of six large (for those days) tankers, the *Pure Oil* first sailed under charter to

the War Shipping Administration, although operated by the Pure Oil Company. On an overcast July 28 morning Mrs. Joseph V. Blake, wife of the *Pure Oil*'s marine department manager, sponsored the vessel without fanfare, saying "I christen you, the S.S. *Pure Oil*."


Gliding into the water, the launching was deemed successful. Sadly enough, the ship's maiden voyage was not to be as smooth. While berthed at a refinery in Marcus Hook on the Delaware River, the vessel was rammed amidships and almost cut in half by another ship. Extensive repairs were needed before the tanker could begin its intended career.

The *Pure Oil* sails the route she was designed to run best—from Beaumont across the Gulf of Mexico to Tampa, around the Keys and following the coast north sometimes as far as Boston. The ship's 32-foot draft makes her well-suited for the shallow waters she navigates.

Occasionally, she went on longer voyages to Puerto Rico, and during her career the vessel has called on ports in Germany, Newfoundland, Bermuda and even Halifax. But mostly she stayed in the Gulf, winding her way between offshore platforms to the open sea.

"When they first told me I'd navigate by platforms," says Captain R. D. Bryan, "I thought it was a joke." Bryan, like Rodgers and the other officers, serves as captain of the vessel for a 60-day stint. This was Capt. Bryan's first day back at sea after a 30-day leave.

The oil platforms are lighted at night, he explains, and are also readily visible during the day. They make good "street signs" and are nicknamed for their various attributes: "Big Red" with its long bridge between two red structures, and "Old Yellow Legs" or "Daddy Long Legs" are all familiar navigation aids.

A crew of 38 officers and hands is needed to load cargo, work the engine room, do maintenance, prepare food and man the bridge. "The chief mate, who is responsible for cargo," says Capt. Bryan, "must be on deck during loading—regardless whether it's raining, sleeting or snowing. He may be wrapped up like a bear when he goes out to gauge the tanks, to slow down pumps or go into the pump room and start moving ballast from one tank to another." 

The S.S. Pure Oil, a Union Oil tanker with a rich history, will be retired from service in the immediate future. To grasp what it felt like to live and work on board the vessel, Karen Saunders, former editor of Seventy Six Magazine, sailed aboard the ship on a trip from Port Arthur, Tx., to Tampa, Fla.

Jim Pennino, chief mate on the *Pure Oil* during the 1,294th voyage, says "I first went to sea in June of '41, and I've been working for Union Oil for two years."

Pennino explains that he is responsible for the cargo, ballast, loading and discharge. "This ship is a good training ground for new officers," he says. "It's a continuation of their schooling. We have to solve problems they might not often face on a newer ship. On a tanker you always have to be careful and take precautions. If a person learns his skills on a ship such as this one, he will have a better understanding of what is really happening when they transfer to a more modern vessel."

Pennino admits preferring to sail on older ships. He comments, "I've sailed on three new ships. There are always wrinkles to iron out. I'm familiar with older ships and like them. This is the oldest ship I've been on which has run continuously and been productive. It's

really amazing. It probably knows its own way around the Gulf and the East Coast—with or without crew."

Tom Bontemps, third mate, agrees with Pennino's comments about the ship being a learning ground. "When you are out there actually turning the valves and running from bow to stern on the ship you are learning what is happening—or fixing it. After that, you have the ground work to build upon."

Currently Bontemps is studying to earn his chief mate's license. Each officer is a graduate from a maritime academy and must obtain a license before serving in that position at sea. "You need one year of sea time in order to take the next higher license test," says Bontemps. The exams are rigorous and take four days for the chief mate's, or even longer for a master's or captain's license which must be renewed every five years. The test covers loading, discharge, math formulas to calculate draft, naviga-



Stormy seas spill over the deck of the *Pure Oil* in the Gulf.



Capt. Bryan explains how he uses oil platforms as navigational aids while guiding the vessel on its way across the open sea.

tional problems, chartwork, safety and pollution," says Bontemps. Like most other officers, his goal is a master's license and to eventually sail as captain. "That's the pinnacle," he adds.

The *Pure Oil*, like the *D.D. Irwin*, is a dear ship to its crew. One reason is the relatively short routes she sails along the coast. Bruce Arnold, second mate, says, "Every two or four days I am offshore and can call home. Most cargo ships are at sea for weeks." Chief mate Pennino seconds that opinion. "I've sailed all over the world. The novelty has worn off. As a kid when I was adventurous, it was different. With a coastways ship like this one you are connected with life."

At night the ship is quiet.

The "Old Lady" is rocked by the sea. Between shifts, the officers retreat to their cabins to sleep or read and write letters. The only sound is that of waves crunch-

ing against the hull, spattering a gravelly spray against the portholes.

Each wave is different — some sound like a powerhouse slamming into the ship's metal skin. Others are soft and caress the vessel.

Morning brings a wake-up call from one of the officers and the offer of hot coffee on the bridge before walking back across the catwalk for breakfast in the officer's salon.

A sign over the mirror reminds every person on board "You are looking at the world's greatest safety device." It is always taken for granted that the *S.S. Pure Oil* is a working oil tanker.

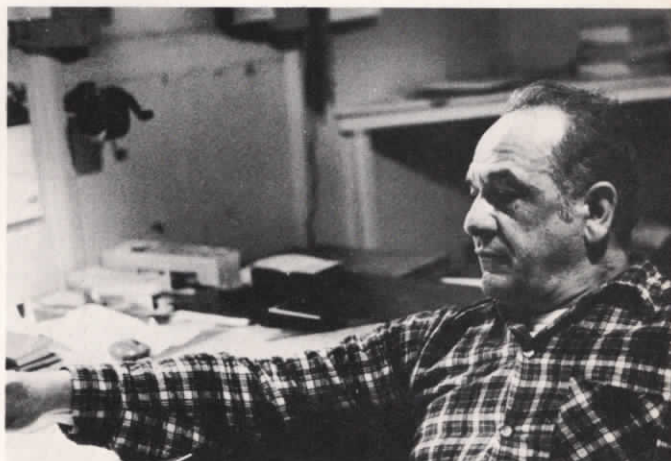
During meals the officers tell jokes and remember tales from other ships. They discuss the new postings to see who has been assigned to the *Blue Ridge* and study a fuzzy photocopy of the new ship in drydock. Quickly the conversation is directed to Charles Cooley, chief



Crewmen man the bridge of the 500-foot long "Old Lady."



Charles Cooley, chief engineer demonstrates the ship's inert gas system on a model he has devised.



Above: Jim Pennino, chief mate, a sailor for 40 years.
Left: Crewmen check pumps upon docking at Tampa.

engineer, as to when his model will be ready.

"I've put together a model of the principles of how the new ship's inert gas system will work," Cooley explains. "The mates will need to know how the gases, water pressures and liquid levels work. Understanding the model will help them visualize what the valves do."

The model, made from bits and pieces of aquarium equipment and items from Cooley's laboratory, is an example of the chief engineer's ingenuity. When not on board he writes poems, plays the violin and works as an inventor. Some of his devices—like the inert gas model—have become essential in the ship. "Ken Casson, the other chief engineer, and I have built several gadgets to keep the Old Girl running. Facing that challenge is a lot of fun. The ship could have worked without my inventions, but they do help us. They make our job just a little bit safer and save us manhours."

Cooley feels every ship has its own spirit. "I enjoy the camaraderie here, and that's a thing you don't often have on board. Many ships are just humdrum. If you can get on a ship like the *Pure Oil* where everybody is pulling together it's more fun. I like that."

Cooley admits, he, like others on board, is looking forward to the new ship, "but I'll miss the Old Girl. It's almost like a home. I'll be glad for the new ship, but I'll look back on the *Pure Oil* with fondness."

In a quiet moment, Capt. Bryan reflects on the retirement of the *Pure Oil*.

"Anyone who sees a vessel leave service after it has done glorious work, always leaving port with a full cargo and arriving with a full discharge and a minimum loss of time.... I have to review it with some sadness. It's a good ship, it's always done the job."

Touring the cabins and rooms of the beige and battle-



The Savannah bound S.S. D.D. Irwin (R), also owned by Union Oil, salutes the *Pure Oil* in a Port Arthur channel.

ship grey interior is a curious sight to a non-sailor expecting the romance of a sea voyage.

Rooms are quiet. Taped pictures add brightness to bulkheads, and a handmade afghan reminds one officer of the loving hands which knitted it. Well-worn, overstuffed chairs mended with tape give a homey, used air to the cabins and stereo tapes offer respite from all the sounds of the sea.

One officer is doing his wash in one of the wringer Maytags, explaining, "The *Pure Oil* is an old ship—DC current only." Clothes dry on lines strung across the laundry room.

Through the night the fog horn hoarsely warns approaching vessels of the *Pure Oil*'s position. Pre-dawn brings a warning in the crackly voice of the cabin speaker that the Tampa Bay pilot has boarded and the ship will dock in the next hour.

Flashlights blink on deck as seamen scramble down ladders. Walky-talkies allow the captain to command from the bridge. Gently, the ship eases into the Union Oil dock as tugboats nudge her into position near the bank of fuel lines. Flashlights are put away when dawn erases night.

The *Pure Oil* has delivered one more load of gasoline and diesel.

After seeing the *Pure Oil*—sometimes the brunt of jokes based on her age and ill-look is overemphasized—one agrees that she may be a rusty scow, short on length and capacity, but definitely long on dependability.

It's a little of what T. J. "Tom" Kerans, Union Oil's manager of marine operations in Beaumont, replied when quizzed by a sailor about what ship will be the flagship of Union's fleet when the *Pure Oil* retires?

Kerans answered slowly, "the *Pure Oil*, of course." ☾



Noting grey skies, third officer T. Bontemps (L) and Charlie Bumbgarnel discuss ensuing weather.



Bruce Arnold, second mate on the *Pure Oil* (L) and a terminal operator gauge oil tanks at Tampa.

Two energy futures

During the 70's, the price of foreign crude oil jumped more than 1,000 percent... Last year, America's bill for imported oil rose to \$80 billion.

DURING THE 1950s and 1960s, America had secure energy supplies which fueled unprecedented economic growth and rising standards of living for all Americans.

The decade of the 70s, however, was a period of transition, a change to uncertain times. America's oil and natural gas production began to fall while at the same time demand increased, making the country increasingly dependent upon foreign oil supplies. Imports rose from 3.4 million barrels per day in 1970 to 8.2 million barrels a day in 1979.

This increased dependence carried a high price tag for America. In 1973, the Arab oil-exporting nations embargoed oil shipments to the United States, throwing our nation into economic turmoil. More than one-half million workers were laid off, and the nation experienced the worst economic recession since the 1930s.

In 1979, the revolution in Iran caused a shutoff of six million barrels of oil per day, and once again our energy thirsty industrial complex suffered.

During the 70s, the price of foreign crude oil jumped more than 1,000 percent. America's oil import bill skyrocketed from three billion dollars in 1970 to more than 60 billion dollars in 1979. This drain on our balance of payments slowed America's Gross National Product growth rate from better than four percent a year in the 1960s to less than three percent a year in the 1970s. Last year, America's bill for imported oil rose to \$80 billion, up one-third from 1979. This occurred despite impressive conservation efforts and reduced consumption.

The choice is clear. America can continue the course set in the 1970s and export its wealth to pay for even more expensive foreign oil, and the nation will be increasingly subject to the goodwill and stability of Middle Eastern countries.

The alternative is to do things differently: to increase energy production in this country, continue to conserve and, in the end, regain some of our lost energy security. Along the way, we can reduce oil imports significantly, perhaps cut them by 50 percent in 1990 from our current level.

America is fortunate in having enough domestic energy resources to meet expected growth in energy demand while at the same time reduce oil imports. And the energy industry in this country is developing the technical know-how to make the country's vast resources.

The United States has more oil, natural gas, coal, uranium and geothermal energy potential within its borders than has been produced so far in the history of our nation. These energy sources can carry us not only until synthetic oil and gas are available from oil shale and coal, but also until solar power and fusion and other non-traditional energy forms are developed.

Given the proper economic and political climate, we can make great strides toward energy security within the next decade.

We can stop the decline in U.S. oil production. Government and

The alternative is to do things differently: to increase energy production in this country, continue to conserve and regain some of our lost energy security.

industry studies indicate that we have—in this country—about 150 billion barrels of oil that we can produce in the future.

We can maintain or increase our national gas production. Domestic reserves are estimated to yield about 800 trillion cubic feet of natural gas, equal to another 142 billion barrels of oil.

We can double coal production in the United States. America's recoverable coal reserves total at least 250 billion tons; equivalent to about 1,000 billion barrels of oil, more than three times our recoverable oil and gas resources combined.

We can triple energy supplied by nuclear power. America's reserves of uranium—in its concentrated form—add up to some 700,000 tons. That is equal to more than 25 billion barrels of oil—enough to meet the nation's nuclear power needs well into the next century.

The synthetic fuel potential—oil and gas from coal, tar sands and oil shale—is enormous. For example, oil shale deposits in the United States could produce as much as 600 billion barrels of oil—twice as much as America's current resources of oil and natural gas.

Finally, in the long run, we can expect significant contributions from renewable energy resources



America is fortunate in having enough domestic energy resources to meet expected growth in energy demand while at the same time reduce oil imports.

Whether we, as a nation, will achieve these goals will depend upon some positive government actions. Four crucial steps are required by government if America is to reduce its dependence on foreign oil.

such as solar power, wind and biomass.

These are things which can be accomplished. Whether we as a nation will achieve these goals will depend upon some positive government actions. Four crucial steps are required by government if America is to reduce its dependence on foreign oil.

The first step involves getting more energy from public lands. The Federal government owns about one-third of all land onshore and all of the nation's lands offshore beyond state jurisdiction. In recent years, actions by the government have closed more and more of this Federal land to energy exploration and development. Today, about two-thirds of these lands are formally closed, or severely restricted to energy activities. To put this number in perspective, these closed or restricted lands are nearly five times the size of the state of California.

The energy potential of these lands is enormous. Federal lands contain an estimated 37 percent of America's undiscovered oil resources, 43 percent of undiscovered natural gas supplies, 40 percent of America's remaining coal supplies and more than 80 percent of the nation's oil shale reserves.

The obvious answer is to expand and accelerate development of

these vital energy resources in a sound and careful way. Already the Reagan Administration has taken actions which may open previously closed offshore California areas to energy exploration. This is a step in the right direction.

The second step for energy security is to achieve a balance between America's energy needs and our environmental goals and objectives. While we have achieved dramatic improvements in air quality over the past years, the environmental laws have created a procedural maze which has slowed progress toward development of needed energy supplies.

The goal of preserving our environment should not be changed; we need to concentrate on streamlining rules and removing unnecessary roadblocks.

The third step is to make timely

Federal lands contain an estimated 37 percent of America's undiscovered oil resources, 43 percent of undiscovered natural gas supplies, 40 percent of coal supplies and more than 80 percent of oil shale reserves.

decisions on nuclear growth in the United States. By completing those plants which have already received governmental permits, America can triple the nuclear contribution. The nation should adopt a safe and rational approach to nuclear power, adhering to the standards now in place to ensure safe operation.

The final step is to increase reliance on free market forces for pricing and supply. President Reagan's decision to accelerate decontrol of domestic crude oil prices was a bold step in the right direction.

The evidence shows the free market works. With higher gasoline prices, consumption has dropped by seven percent from 1980, and Americans are demanding more fuel efficient automobiles while reducing their overall driving.

The higher prices of crude oil are also having a positive impact on energy development. In February 1981, more than 3,400 drilling rigs were working in the United States, up 30 percent from a year before and the highest level in 25 years.

These four steps—opening public lands, balanced environmental goals, expanding nuclear power and reliance on the free market—can lead America toward a more secure energy future.

Union Oil Company has already

made its commitment to developing America's energy resources. In 1981, the company proposes to spend more than \$1.5 billion on capital and exploration projects in the United States.

The Union Oil and Gas Division is aggressively exploring for new oil and gas reserves in California, Oklahoma, Texas, Louisiana, New Mexico, Alabama, Mississippi, the Gulf of Mexico and Alaska. In addition it will be bringing on new production.

The Union Geothermal Division is continuing its search for geothermal resources throughout the western United States as well as expansion of production facilities at The Geysers geothermal field in northern California and further development work in California's Imperial Valley and in New Mexico.


The Union Energy Mining Division is proceeding with construction on the first phase of a 50,000 barrel per day oil shale project in the Parachute Creek area of western Colorado. Operations are expected to begin in 1983.

America faces a choice between renewed energy security or continued energy dependence. Union has already made its choice. We are moving ahead, developing America's resources. 70

America faces a choice between renewed energy security or continued energy dependence.



Saving energy through emission recovery

At distribution terminals, vapors previously escaped every time a tank truck was filled at a loading rack. In 1954 Union Oil developed a method to control this, patented the process and subsequently turned the 



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patent over to the public for widespread benefit.

At service stations, vapors were lost in deliveries as new gasoline was added to existing quantities. The Los Angeles Air Pollution Control District recommended installation of an aluminum sleeve in the fill pipe in 1964. This enables tank trucks to discharge product under the surface of the gasoline liquid already in the tank—one more energy and air quality savings.

However, another vapor problem at stations re-

mained until Frank Lord, now Los Angeles terminal superintendent, patented a method to overcome it.

For every gallon of product pumped into a station's underground tank, a gallon of gasoline vapor was being lost into the air from the tank's above ground vent. Lord's development captured the vapors in the tank truck, closing the loop.

The final stage of control over product is the service station dispenser. A new system—in use today in much of California and a few other locations—recovers vapors and prevents emissions during automobile fill ups. Union Oil was instrumental in the conversion to the balanced system it now uses for this vapor control. This system returns the vapors back into the underground tank.

Union's efforts in improved vapor recovery involved considerable research over many years by many people, including that made by Fred L. Hartley, president and chairman of Union Oil. He presented "The Smogless Automobile," a paper based on research conducted by him, C. C. (Dinty) Moore, and J. B. Gregory, at a June, 1959, meeting of the Air Pollution Control Association.

This paper pointed out that "if today's regulations governing industrial emissions were applied to the automobile, one would not be permitted to operate the vehicle. This is because today's automobiles have, as a result of their design and operating characteristics, five openings—or holes—which permit hydrocarbons to escape to the atmosphere."

The study delved into an automobile's fuel system and suggested means to reduce or prevent evaporative emissions by either plugging external vent holes—such as those in the carburetor and gasoline tank, or by design modifications.

One such modification offered was a system to drain fuel in the carburetor bowl back into the gasoline tank immediately when the car was shut off. This would prevent evaporation caused by heat stored by the engine.

Continuing research led to Union's Dr. James L. Keller developing a process for a gas tank installation that operated on the same principle as the floating roof tank. After further work, a patent was issued to Union's Davis A. Skinner in 1971.

In addition to auto makers, Union has worked closely with equipment manufacturers on various vapor control projects, including improvements to automatic shutoffs for service station gas pump nozzles.

FROM CONCEPT TO REALITY

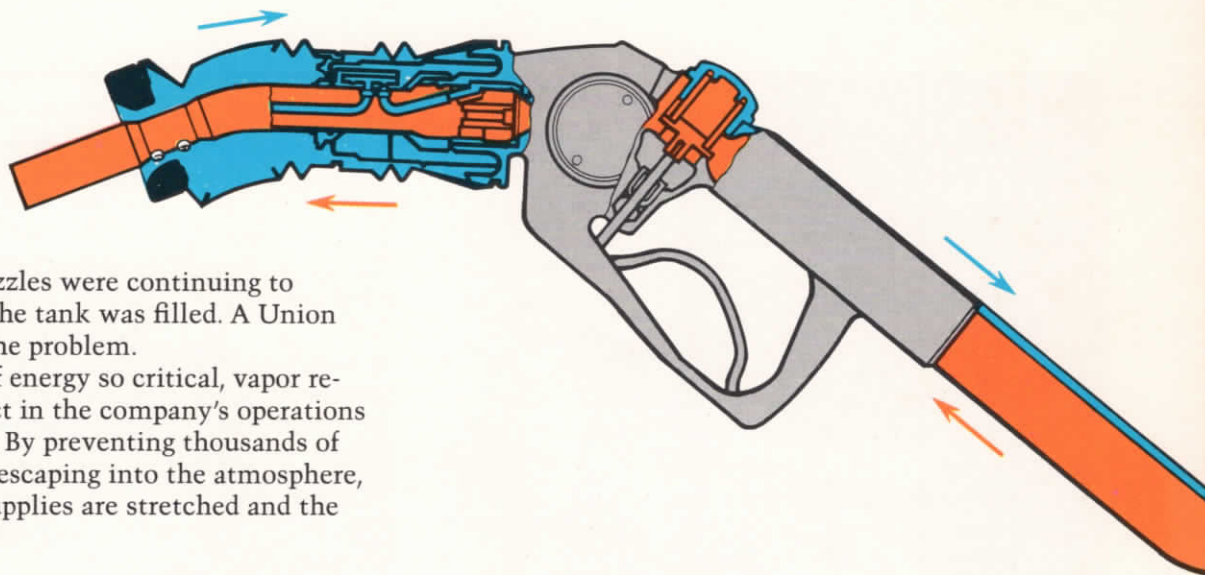
"The idea was so simple and logical that I was surprised no one had ever thought of it before."

That's how Frank Lord, Los Angeles terminal superintendent, describes his concept to capture gasoline vapors that were being vented into the air from underground tanks during filling at service stations.

"I was driving home from work one night ten years ago and the idea hit me. When I walked in the door, my wife could tell I was on an emotional high. I immediately sat down and drew a crude sketch of a system to vacuum gasoline vapors into the tank truck," Lord explains.

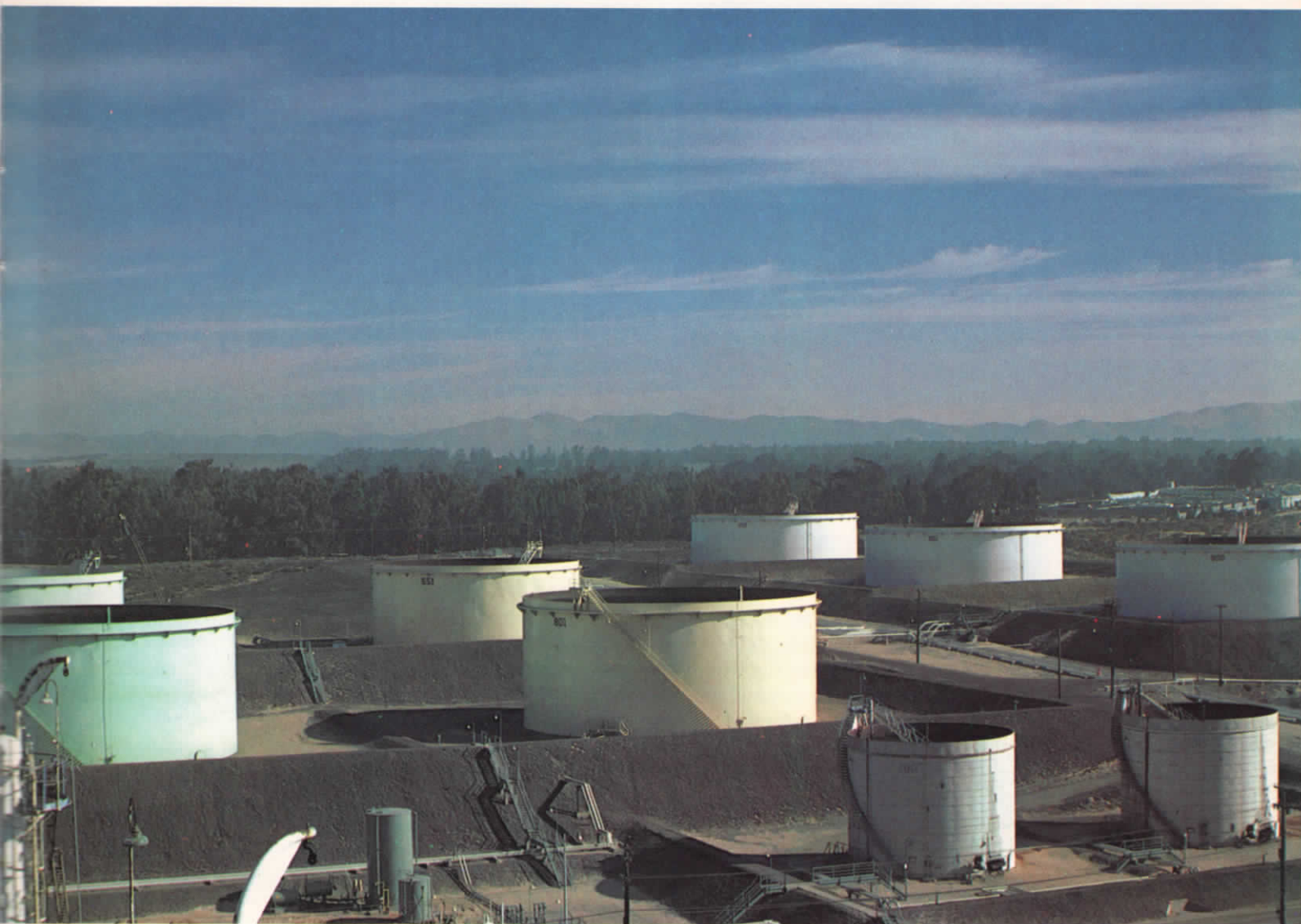
With cooperation between the Union 76 Division and Science and Technology, the concept was tested. Several service stations were modified and experiments were conducted successfully. Frank Lord's idea was put into practice throughout the company and eventually was patented.

"It was a lot of fun and very exciting," Lord notes. "And what's more, when the push for cleaner air came along, this recovery system was already in place and enabled us to be ahead of the pack."



In the last case, the nozzles were continuing to dispense gallons after the tank was filled. A Union suggestion alleviated the problem.

With conservation of energy so critical, vapor recovery systems in effect in the company's operations play an important role. By preventing thousands of gallons of vapors from escaping into the atmosphere, the country's energy supplies are stretched and the air remains cleaner. 70



Storage tanks with floating roofs and stiff rubber seals reduce vapor emissions by 99 percent.

operations report

CORPORATE VICE PRESIDENTS ELECTED

Union Oil Company of California's Board of Directors has elected Joseph Byrne and Cloyd P. Reeg corporate vice presidents of the company.

Byrne will head Union's corporate industrial relations department. He had been divisional senior vice president, national marketing and operations coordination, for the company's Union 76 Division since 1979.

He joined Union in 1953 and has held a wide range of positions in refining, planning and marketing operations. Byrne holds a bachelor's degree in chemical engineering from Stanford University and master's and doctoral degrees from Massachusetts Institute of Technology, where he served as an assistant professor for three years.

A member of the American Institute of Chemical Engineers, the American Association for the Advancement of Science and the American Petroleum Institute, Byrne resides in Santa Ynez with his wife, Nancy. They have three children.

Reeg, who joined Union Oil in 1948, has held a wide variety of positions in the company's research organization. He was recently named president of the Union Science and Technology Division which is responsible for Union's research activities.

A member of the American Institute of Chemical Engineers, the National Petroleum Refiners Association, the American Petroleum Institute, and the World Affairs Council of Orange County, Reeg earned a bachelor's degree in chemical engineering from Ohio State University.

He resides in Fullerton with his wife, Bea. They have two children.

NEW APPOINTMENTS ANNOUNCED

The following appointments were announced recently.

Daniel M. Waldorf has been named director of strategic planning in the Corporate Development Department. He was formerly manager of Union's Los Angeles Refinery and lives in Palos Verdes Estates, Cal.

Dean Laudeman was appointed vice president of exploration for the Union Oil and Gas Division. He previously served as vice president of exploration for Union Oil Company of Canada. He resides in Rancho Palos Verdes, Cal.

Neal E. Schmale was named director of the Corporate Economics and Budgets Department. He had been a senior planner in the former Corporate Planning and Evaluation Department. He is a resident of Manhattan Beach.

Wellman E. Branstrom has been appointed director of planning for the Union 76 Division, which conducts the company's refining, marketing and transportation operations. He had been manager of operations and profit planning in the division's western region. He lives in Huntington Beach, Cal.

S. Kessler Alley has been named vice president of refining and products research for Union's Science and Technology Division, the company's research and development operation. He had been manager of refining research. He lives in Brea, Cal.



Robert D. Campbell



Richard K. Eamer

Two New Directors

Robert D. Campbell, formerly chairman of the board of Newsweek, Inc., was elected to the company's board of directors on March 5.

Campbell, born in Billings, Montana, was educated at Northwestern University. After serving as vice president of Champion Textile Co. in Chicago, he joined Newsweek, Inc. in 1949, moving up in management ranks until he was selected chairman of the board in 1976. He retired from Newsweek in 1980.

While serving in the Air Force, Campbell rose to the rank of Brigadier General.

Campbell and his wife, Julia, reside in Rancho Mirage, California.

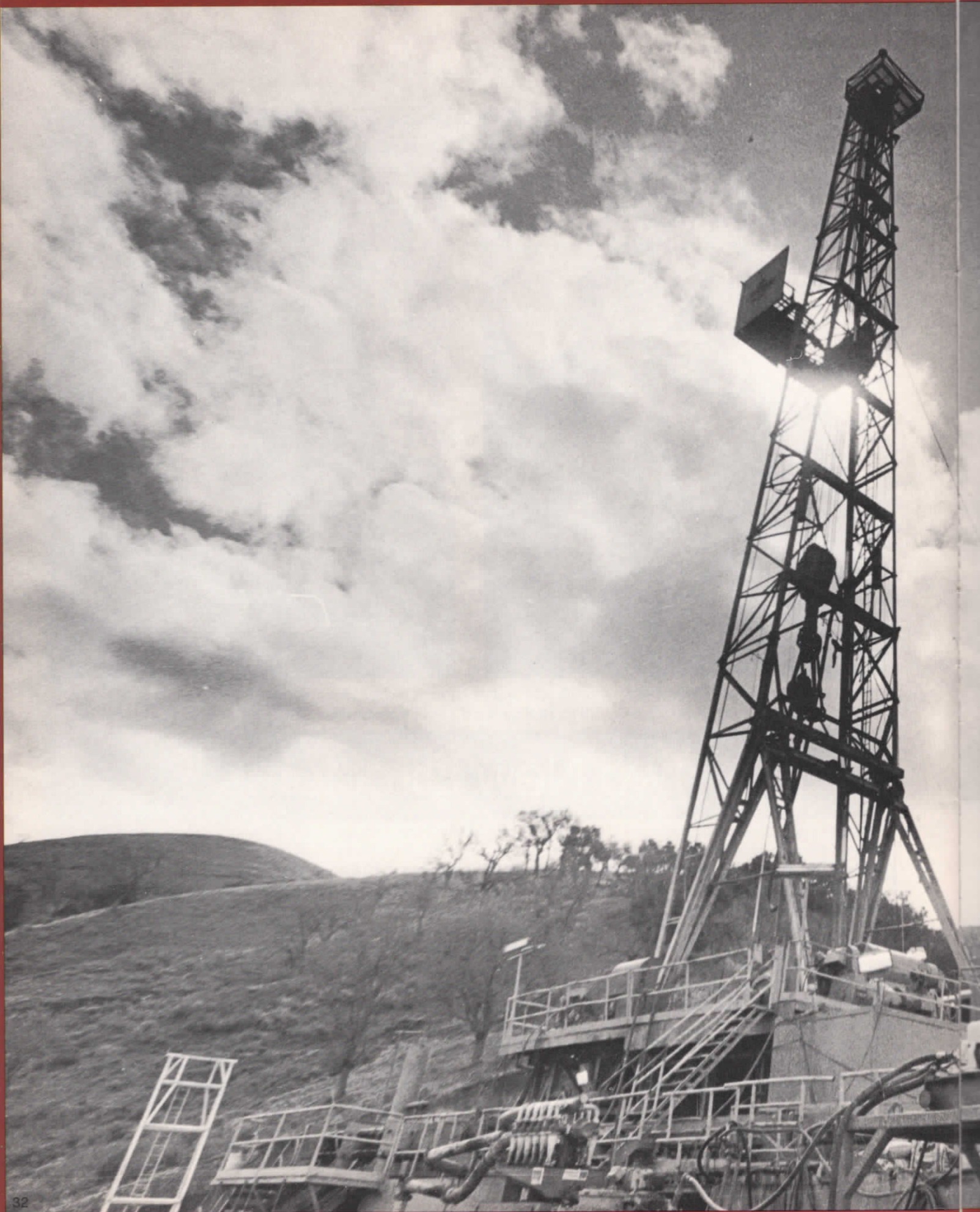
Richard K. Eamer, president and chairman of National Medical Enterprises Inc. (NME), was elected to the company's board of directors on March 5.

Eamer, a native of Long Beach, California, practiced law in Beverly Hills prior to forming NME, one of the leading proprietary health care companies listed on the New York Stock Exchange.

He is a graduate of the University of California with a B.S. in accounting and an LL.B. from the USC School of Law. In addition to being a certified public accountant, Eamer is a member of the California and American Bar Associations.

He resides in Pacific Palisades with his wife, Eileen, and two children.

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Drilling in the rain

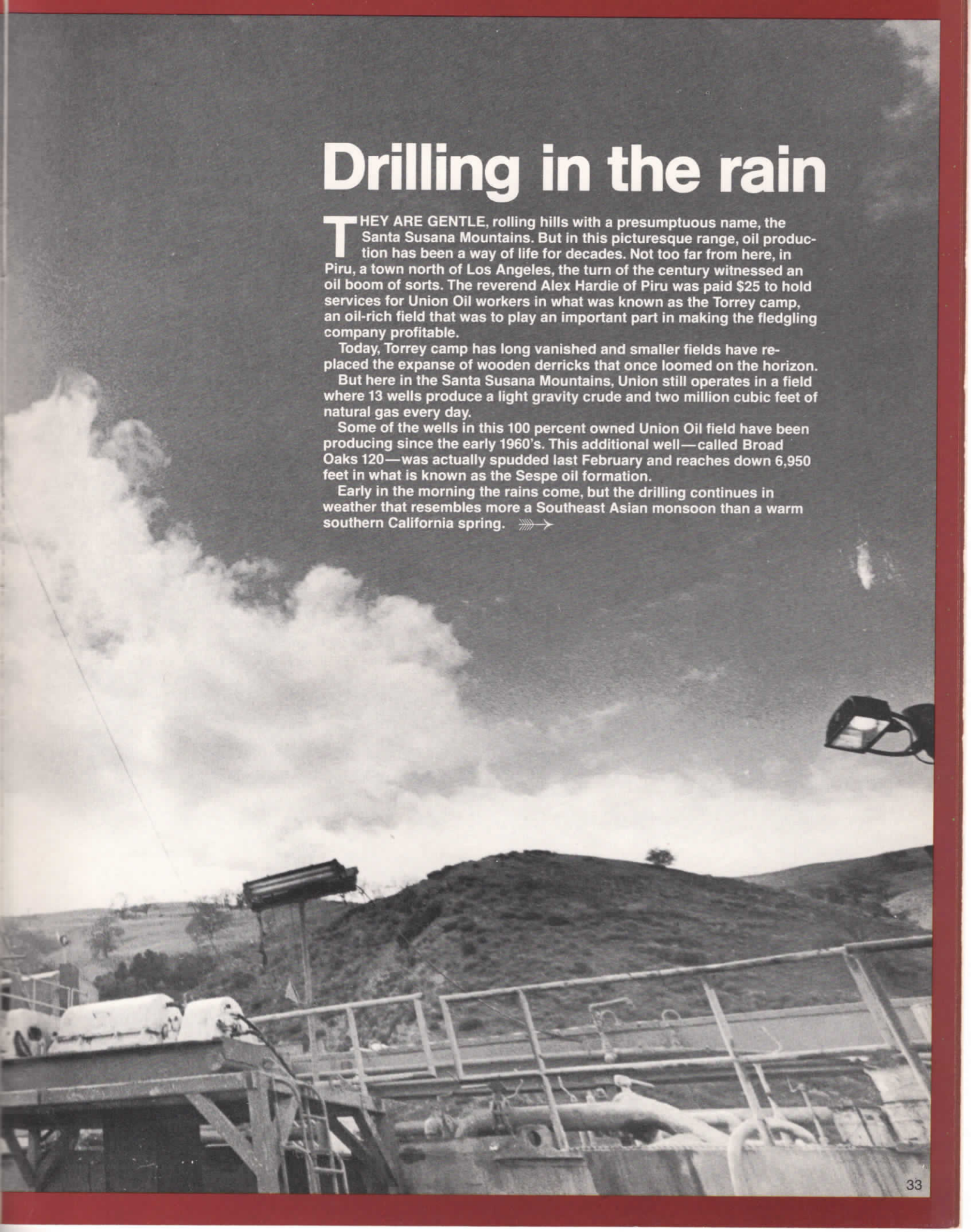
THEY ARE GENTLE, rolling hills with a presumptuous name, the Santa Susana Mountains. But in this picturesque range, oil production has been a way of life for decades. Not too far from here, in Piru, a town north of Los Angeles, the turn of the century witnessed an oil boom of sorts. The reverend Alex Hardie of Piru was paid \$25 to hold services for Union Oil workers in what was known as the Torrey camp, an oil-rich field that was to play an important part in making the fledgling company profitable.

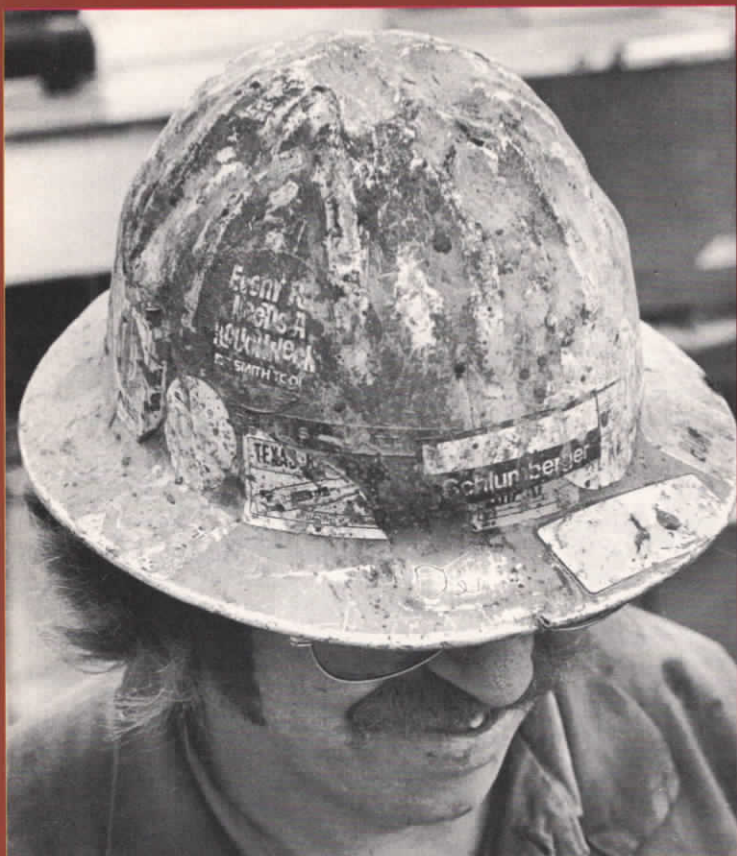
Today, Torrey camp has long vanished and smaller fields have replaced the expanse of wooden derricks that once loomed on the horizon.

But here in the Santa Susana Mountains, Union still operates in a field where 13 wells produce a light gravity crude and two million cubic feet of natural gas every day.

Some of the wells in this 100 percent owned Union Oil field have been producing since the early 1960's. This additional well—called Broad Oaks 120—was actually spudded last February and reaches down 6,950 feet in what is known as the Sespe oil formation.

Early in the morning the rains come, but the drilling continues in weather that resembles more a Southeast Asian monsoon than a warm southern California spring. ➡





"Every one needs a roughneck," the sticker on the mud-splattered hard hat reads (**left**) but what the roughnecks definitely did not need today was rain to dampen their hopes of finishing the day's scheduled drilling on time. Meanwhile J. W. Todd, a tool pusher, (**below left**) takes advantage of the rain to save himself a trip to the water cooler. With rain still falling by mid-morning, the relatively narrow drilling pipes needed to tap this shallow California reservoir are stacked on support frames by the drilling rig.









Union Oil's James W. Livingston, drilling foreman, keeps a close look on the activities of the crew working Broad Oaks 120.

As the weather becomes more inclement, the tool pushers prepare to make a connection in the well.

Later this month, the drilling rig in the hills will be replaced by a well that will be almost hidden by the brush. Eventually the oil from Broad Oaks 120 will wind up at the Union Oil Los Angeles refinery while the natural gas will be piped to the Santa Clara gas plant. ⑦⑥



Service Emblem Awards

CORPORATE

MARCH 1981

40 YEARS

LAWRENCE B. HIGBEE Union Oil Center

30 YEARS

GEORGE C. EVANS Union Oil Center

25 YEARS

ELIZABETH H. LAVERS Union Oil Center

20 YEARS

ROBERT C. SCHOETTLER Schaumburg, Il.

10 YEARS

ERNEST L. BROWN Santa Rosa, Ca.
SARA E. GIBSON Union Oil Center
CATHERINE E. PETERSON Union Oil Center

5 YEARS

JIMMY R. LUGENBEEL Union Oil Center
STEVEN W. THOMAS Taft, Ca.

APRIL 1981

40 YEARS

WILLIAM D. FARR Union Oil Center

25 YEARS

GLORYN G. McKEE Union Oil Center

10 YEARS

LESLIE A. GIBSON Union Oil Center

5 YEARS

BYRON C. MOBUS Sacramento, Ca.
PHILLIP R. ROBBINS Union Oil Center

UNION SCIENCE AND TECHNOLOGY DIVISION

APRIL 1981

30 YEARS

ROBERT E. BERBERET Brea, Ca.

25 YEARS

ROBERT E. HELANDER Brea, Ca.
RAYMOND A. WHISENAND Brea, Ca.

15 YEARS

CHARLOTTE L. RUBIDOUX Brea, Ca.

10 YEARS

JEROME KALINOWSKI Brea, Ca.

5 YEARS

GALE E. SMITH Brea, Ca.

MAY 1981

40 YEARS

ROBERT L. SWITZER Brea, Ca.

35 YEARS

THOMAS L. KOWALSKI Brea, Ca.

30 YEARS

ARTIE L. SCOTT Brea, Ca.

25 YEARS

WILLIAM G. GROSS Brea, Ca.

15 YEARS

SIDNEY F. KRUPICKA Brea, Ca.

UNION REAL ESTATE DIVISION

APRIL 1981

15 YEARS

PAULA M. YOUNG Union Oil Center

UNION OIL AND GAS DIVISION

MARCH 1981

45 YEARS

ELMER G. NEELY W. Liberty, Il.

40 YEARS

CHARLIE E. CLARK Van, Tx.
DONALD W. WRIGHT Olney, Il.

35 YEARS

DONALD B. NEWTON Orcutt, Ca.

30 YEARS

NOBLE L. CANTRELL Van, Tx.
ROYCE W. BROUSSARD Lafayette, La.
JAMES W. BURNSIDE Casper, Wy.

25 YEARS

ODEAN KEETER Santa Fe Springs, Ca.

20 YEARS

MARY K. VALENCIA Los Angeles, Ca.

15 YEARS

LYLE R. DAVIS, Sr. Orcutt, Ca.
CHATALYN C. NORMAL Midland, Tx.
WILLIAM D. POWERS Santa Fe Springs, Ca.

10 YEARS

BRIAN K. DAVID Moab, Ut.
M. C. GRIFFIN, Jr. Ganado, Tx.
JUDITH M. HOWICK Union Oil Center
RUDOLPH LOPEZ Ventura, Ca.

5 YEARS

DAVID A. COLE Bakersfield, Ca.
JOHN J. CORCORAN Sacramento, Ca.
MARVIN G. MOSLEY Ardmore, Ok.
EDWARD J. O'DONNELL Santa Fe Springs, Ca.
HOWARD M. SANTILLAN Orcutt, Ca.
MARK R. THOMAS Midland, Tx.
JOHN D. TRAYLOR Ardmore, Ok.

APRIL 1981

45 YEARS

SEBERT W. ESTEP West Liberty, Il.

40 YEARS

PAUL E. CRAVENS West Liberty, Il.

35 YEARS

LAWRENCE H. SMITH Midland, Tx.
GLENN D. THOMPSON Houston, Tx.

30 YEARS

JAMES C. ABEL Midland, Tx.
ROY A. KENDRICK Houma, La.
LAWRENCE R. LEEK, Jr. Coalinga, Ca.
V. E. RUTHERFORD Orcutt, Ca.
GRANTLEN O. SHANNAHAN Oklahoma City, Ok.

25 YEARS

JANIE R. MORRIS Houston, Tx.

20 YEARS

CLARK J. DUGAS Houma, La.
FLOYD G. FLEMING Abbeville, La.
DAVID L. KNUTSON Santa Paula, Ca.

15 YEARS

WILLIAM E. GOFFINETT Santa Fe Springs, Ca.
ROBERT L. HEURICH Santa Fe Springs, Ca.
DAVID E. JOHNSON Casper, Wy.
GEORGE E. MOORE Midland, Tx.
RAPHAEL A. POURCIAU Houma, La.
BYRON R. SCOTT Taft, Ca.
NANCY ALICE WATSON Orcutt, Ca.

10 YEARS

DORA L. ALCARAZ Los Angeles, Ca.
LEROY J. CHARLES Houma, La.
EDDIE J. ISTRE, Jr. Houma, La.
RUBEN G. JARAMILLO Santa Paula, Ca.
JOY S. LOCKHART Lafayette, La.
GERRY L. SHAUL Orcutt, Ca.

5 YEARS

CLEMMIE H. ADKINS Coalinga, Ca.
JAMES T. BRAXTON Abbeville, La.
MELVIN W. COATS, Jr. Santa Fe Springs, Ca.
ROBERT D. CONKLIN Olney, Il.
CLIFTON FAULKNER Anchorage, Ak.
MARK V. FILEWICZ Ventura, Ca.
WILLIAM R. GREEN Andrews, Tx.
FRANK R. POLLREISZ Anchorage, Ak.
ERIS A. PORCHE Abbeville, La.
JOHN R. ROHNER Coalinga, Ca.
WALTER G. TEZENO Abbeville, La.
JAMES R. WEBSTER Andrews, Tx.

UNION 76 DIVISION

MARCH 1981

40 YEARS

ROBERT C. BEARDEN Schaumburg, Il.
WALLACE J. BLAYLOCK Los Angeles Terminal
WILLARD B. BOZYCH Chicago Refinery
DONALD L. BRADLEY Anchorage, Ak.
HENRY W. DANERI San Francisco Refinery
GEORGE A. LaFORTUNE Los Angeles Refinery
DELOS L. C. OSTRANDER Pure Transportation Co.
ERCELL H. SMITH Santa Paula, Ca.

35 YEARS

FRANK B. BOARD San Francisco Refinery
LESTER P. BROWN Beaumont Refinery
ALBERT M. CARGO San Francisco Refinery
CHARLES F. COOPER Beaumont Refinery
LEROY CEDRIC E. FAUNT Coalinga, Ca.
WILSON J. FREDERICK Beaumont Refinery
LLOYD E. HANSON Los Angeles Refinery
JOHN R. KENNEDY Santa Maria Refinery
CHARLIE E. LOFTON San Francisco Refinery
C. G. LONGFELLOW, Jr. San Luis Obispo, Ca.
MANSFIELD P. LOWERY San Francisco Refinery

DANIEL F. MURPHY San Francisco Refinery
WALTER POLLARD Santa Maria Refinery
JAMES L. POWELL Beaumont Refinery
FORREST S. PURKEY Beaumont Refinery
ALBERT H. SIMPSON Schaumburg, Il.
OTIS W. THOMAS, Jr. Beaumont Refinery

30 YEARS

EDDIE S. ANDERSON Chicago Refinery
GEORGE BALLEW Chicago Refinery
LEONARD H. BERGLUND Chicago Refinery
DELMAR D. BRADBURY Chicago Refinery
ROBERT BROOME Columbus, Oh.
LEO BURNETT Beaumont Refinery
JOHN E. CAMPBELL San Francisco, Ca.
JOHN G. ENGLISH Stockton, Ca.
MAX M. ETTER Chicago Refinery
THOMAS P. FABEK Chicago Refinery
PHILIP L. GLASS Portland, Or.
WILLIAM H. HOLMES Los Angeles Refinery
REYNOLD A. JACOBSON Chicago Refinery
ARTHUR L. JOHNSON Chicago Refinery
LYLE P. LOFLIN Charleston, W.V.
WILLIS J. LUEBS Chicago Refinery
PAUL F. MILLER Los Angeles Refinery
THOMAS G. THOMPSON Dayton, Oh.

25 YEARS

WILLIAM J. BODIFORD Portland, Or.
REED RIDING Los Angeles Refinery
JOHN W. MECH
W. H. Barber Co. Chicago, Il.
RONALD R. RUNGE Schaumburg, Il.
CARROLL A. SCOGIN Birmingham, Al.
RICHARD E. STRAUSS Schaumburg, Il.

20 YEARS

NORMA A. ELWELL Hoffman Estates, Il.
PATSY R. HARDY Los Angeles, Ca.
RONALD E. NESS Bakersfield, Ca.
GARY C. PIATANESI San Francisco, Ca.
MYRON S. PODGURSKI Hoffman Estates, Il.
LEWIS E. SMITH Minneapolis, Mn.

15 YEARS

ELFRIEDE ELLA ADAMS Richmond Terminal
RONALD D. BATTE Birmingham, Al.
ROBERT P. FRANK San Francisco, Ca.
JACK H. GREEN San Francisco Refinery
DOUGLAS JOHNSON Los Angeles, Ca.
JAMES B. KNASEL Cincinnati, Oh.
HORACE G. LUTZ Los Angeles Refinery
ROBERT A. ODELL Wildwood, Fl.
WARREN A. SPROULE Milwaukee, Wi.
SONJA M. STANFIELD San Francisco, Ca.
DAVID WINK Richmond Terminal

10 YEARS

PHILIP E. BUMBLAUSKAS Chicago Refinery
MICHAEL R. CLEM Chicago Refinery
BERNARD M. COLEMAN Charlotte, N.C.
RICHARD L. FAVERO Chicago Refinery
DOROTHY E. FULTON Schaumburg, Il.
JAMES T. GANT Chicago Refinery
MICHAEL H. GEIGLE Portland, Or.
THOMAS H. GRIMES Detroit, Mi.
GERALD A. GROCHMAL Chicago Refinery
DONALD R. HARDWICK Dayton, Oh.
GLENNETTE C. HOFMANN Schaumburg, Il.
STEPHEN E. LAGGER Chicago Refinery
KENNETH A. LARSON Santa Maria Refinery
WILLIAM LAURIE Chicago Refinery
DALE J. MARONTO South Holland, Il.
JAMES R. MCKINNEY, Jr. Chicago Refinery
WILLIAM J. MUELLER Chicago Refinery
JOHNNY R. PEACOCK Macon, Ga.
WILLIAM A. PRIVARA, Jr. Chicago Refinery
GREGORY SHAWVER Chicago Refinery
JOHNNIE D. STINDE Tukwila Terminal
LEON A. ULFERS Chicago Refinery
SHARON L. VALLEJO San Francisco, Ca.

5 YEARS

DEBORAH K. BEATH Beaumont Refinery
JOHN M. BEDLION Santa Maria Refinery
JANET E. BOULTER Los Angeles, Ca.
REBEKAH J. CORBIN San Francisco Refinery
JOHN M. DAY Nederland, Tx.
ROBERT C. DAY Schaumburg, Il.
LINDA J. ECKEL Schaumburg, Il.
NATHANIEL FOSTER San Francisco Refinery
CARLOS V. FRIAS South Holland, Il.
BONNY J. GOLINO Richmond Terminal
FRANK C. KRUGER Richmond Terminal
BETTY J. LARSEN Wildwood, Fl.
PAULA L. NOREIKO Chicago Refinery
TIMOTHY F. O'BRIEN Los Angeles Terminal
ROBERT L. OWENS Sacramento, Ca.

MICHAEL W. PELTZ Torrance, Ca.
RUSSELL J. PROKUSKI Schaumburg, Il.
THOMAS J. PRUSA Los Angeles, Ca.
LARRY W. ROBERTS Portland, Or.
THOMAS K. SCHUMACHER Los Angeles, Ca.
RICHARD J. SURAY
W. H. Barber Co. Chicago, Il.
WILFRED B. TURNER Edmonds Terminal
SIPUON UONG Los Angeles Terminal

APRIL 1981

40 YEARS

SAM BODZIN Los Angeles Terminal
OLIVER F. DAVENPORT Birmingham, Al.
RAY A. HENDREN Los Angeles Terminal
PAUL D. HILEMAN Toledo, Oh.
GEORGE L. PERINI Chicago Refinery
WILLIAM A. VON DER HEIDE San Francisco Refinery

35 YEARS

ALLEN C. BARNES San Francisco Refinery
WILLIAM S. BIGGERS Beaumont Refinery
JOHN C. BUSTLE Schaumburg, Il.
ERIN P. CARTER San Francisco Refinery
JOHN CEBALLOS San Francisco Refinery
WILFORD J. CRAIG Santa Paula, Ca.
HOWARD L. FARRA Schaumburg, Il.
JOHN H. HALLERAN Schaumburg, Il.
MAXWELL T. HASTY Birmingham, Al.
JACK C. LEPPER Chicago Refinery
JAMES M. LOUGHRIDGE San Francisco Refinery
FRED G. MANDES Los Angeles, Ca.
CARL T. MARSHALL San Francisco Refinery
AMADOR P. RUBIO Santa Maria Refinery
OTTO A. SALO Santa Maria Refinery
EDWARD G. SOUZA San Francisco Refinery
LOUIS C. WEBER Schaumburg, Il.

30 YEARS

ROBERT H. BRAUN Los Angeles Refinery
CLARENCE R. CLARK, Jr. Chicago Refinery
BENTON H. FIEDLER Schaumburg, Il.
JOYCE N. FOWLER
Pure Transportation Co. Van, Tx.
RAY G. HENDERSON Chicago Refinery
GEORGE R. JOHNSTON Los Angeles Refinery
JEANETTE D. JONES Schaumburg, Il.
HOMER F. LAMBERT Atlanta, Ga.
JOHN R. LORGE Los Angeles Refinery
DON E. MERRITT Schaumburg, Il.
WALTER B. SARTORI Chicago Refinery
CHARLES N. WHITESIDE San Francisco Refinery

25 YEARS

HUMBERTO L. DIAZ Schaumburg, Il.
VICTOR J. EVANS Santa Maria Refinery
ROBERT F. GLEASON San Francisco, Ca.
EDWIN G. HYDER Los Angeles Refinery
CARROLL H. NICHOLS Dayton, Oh.
DANIEL PIRO Redding, Ca.
ANDRE J. ROY Torrance, Ca.
GERALD W. SCHWIMLEY Schaumburg, Il.

20 YEARS

GAGE H. GOODEMOTE Miami, Fl.
R. R. HUDDLESTON San Francisco Refinery
ROBERT J. SOMMERSETH Edmonds Terminal
LOUIS D. TROST San Francisco Refinery
DOUGLAS N. TURNBULL Edmonds Terminal
GEORGE K. YAMAMOTO Honolulu, Hi.
ANDREW A. ZYWICKE Schaumburg, Il.

15 YEARS

HARRIS T. CLABAUGH Phoenix, Az.
RAMON F. DECHANT Los Angeles Refinery
JAMES A. HAYASHI Los Angeles, Ca.
LAWRENCE W. HUGHES Schaumburg, Il.
BENJAMIN D. KELL Los Angeles Refinery
TERRY L. KENNEDY Cincinnati, Oh.
GLEN A. MacMASTER Los Angeles Refinery
ROBERT W. McCABE Seattle, Wa.
CHARLES W. REED Bay City, Mi.
KLEPPER MASON SCOTT Los Angeles Refinery

10 YEARS

KARIN M. ADAMS San Francisco, Ca.
BARBARA E. DAVIS Wildwood, Fl.
THOMAS E. GLAZIER Anchorage, Ak.
JUNIOR L. GOLDEN
Pure Transportation Co. Van, Tx.
STEVE M. HALL Columbus, Oh.
DAVID G. HOV Portland, Or.
DAVID C. KEITH Edmonds Terminal
DONICIO LAGODLAGOD Honolulu, Hi.
MICHAEL E. LINDNER Brisbane, Ca.
LILY M. MAR San Francisco, Ca.
EDDIE PAIGE, Jr. Atlanta, Ga.

JAMES L. PRINCE Schaumburg, Il.
JACK G. ROMBERG Chicago Refinery
DANIEL T. SWEENEY Chicago Refinery
JAMIE W. VIESSELMAN Bethlehem, Pa.

5 YEARS

DOYLE E. BEARD Nashville, Tn.
LINDA M. BOGUE Los Angeles, Ca.
RONALD C. BRINKMAN Santa Maria Refinery
JAMES R. CAMPBELL Los Angeles Terminal
STUART M. CANNES Chicago, Il.
JAMES M. FLEMING Anchorage, Ak.
JOHN A. GILSKI Schaumburg, Il.
NARCISO GUERRERO Los Angeles Refinery
MARGARET S. HALL South Holland, Il.
GERALDINE R. LeBLANC
Pure Transportation Co. Houma, La.
GARY M. LEFEBVRE Portland, Or.
LANCE M. MCGILLIARD Schaumburg, Il.
RUBEN MUNOZ Los Angeles Refinery
GREGORY S. SIDOR Schaumburg, Il.

UNION GEOTHERMAL DIVISION

APRIL 1981

5 YEARS

DOUGLAS J. GROVES Big Geysers, Ca.
EUGENE M. JOJOLA Big Geysers, Ca.
JOSEPH I. MORFORD Santa Rosa, Ca.
BRIAN P. ROBERTS Santa Rosa, Ca.

UNION CHEMICALS DIVISION

MARCH 1981

30 YEARS

CHARLES J. CORNELL Denver, Co.

25 YEARS

LEONARD J. BURKE Conshohocken, Pa.
LEON E. HINKLE La Mirada, Ca.

20 YEARS

WILLIAM DUGGINS Union Oil Center
ROY HARMON Brea, Ca.
FRANCIS ULLERSBERGER Carteret, N.J.

15 YEARS

JOHN H. JONES Charlotte, N.C.
DONALD L. SMITH Charlotte, N.C.
WALTER M. TAPLEY Houston, Tx.
LORRAINE WISWEDEL St. Clair Shores, Mi.

10 YEARS

WALLACE E. BRODEUR Schaumburg, Il.
JAMES E. POPPENHAGEN Rolling Meadows, Il.
CHARLES R. SHEEHAN Charlotte, N.C.

5 YEARS

PATRICIA CARTER La Mirada, Ca.
DAVID FAY Kenai, Ak.
JAMES FERGUSON Brea, Ca.
ROBERT HALL Kenai, Ak.
LESLIE KOSYDAR Kenai, Ak.
FLOYD MCGAHAN Kenai, Ak.
MARILYN NEWELL La Mirada, Ca.
LARRY W. PROPOST Charlotte, N.C.
TIMOTHY J. WILKES Charlotte, N.C.
DAVID W. ISAAC Charlotte, N.C.

APRIL 1981

25 YEARS

FRANK DLOUHY Union Oil Center
ELSIE HUFSTETLER Clark, N.J.
JOHN K. LASKEY Conshohocken, Pa.

20 YEARS

FREDERICK G. HOWARD Vancouver, Wa.
ROBERT McMAHON Union Oil Center

15 YEARS

PERRY A. FRIDAY La Mirada, Ca.
LEE KRON Rolling Meadows, Il.
WILLIAM M. NUNN La Mirada, Ca.
ROBERT A. WAMSLEY Charlotte, N.C.

10 YEARS

BEA BARTHELMEH La Mirada, Ca.
TOMMY BARNETTE Charlotte, N.C.
GRANT E. BELDIN Vancouver, Wa.
LUCIUS J. HARRIS Rolling Meadows, Il.

Service Emblem Awards

5 YEARS

ERLEND HOAG Kenai, Ak.
 RICHARD L. KUSTIN Bridgeview, Il.
 DANIEL M. LEE Charlotte, N.C.
 JOHN McCAULEY Aloha, Or.
 JOSEPH A. PASCUAL Tucker, Ga.
 HERBERT ROOPER Kenai, Ak.
 BILLY B. SMITH Charlotte, N.C.
 RAY A. THOMAS Charlotte, N.C.

UNION INTERNATIONAL DIVISION

MARCH 1981

30 YEARS

JOHN W. CRAMER Union Oil Center

10 YEARS

BRIAN W. G. MARCOTTE Union Oil Center

5 YEARS

CHUNG H. YU Union Oil Center

APRIL 1981

30 YEARS

JOHN C. PEARSON Union Oil Center
 HENK WORIES Union Oil Center

5 YEARS

ROBERT D. FEINGOLD Union Oil Center
 MURRAY G. GREENWOOD Union Oil Center
 JAMES R. ISHAM Union Oil Center
 GEORGE JOHNSTONE Union Oil Center
 JOHN M. THOMPSON Union Oil Center

UNION OIL COMPANY OF CANADA LIMITED

MARCH 1981

30 YEARS

C. W. DUMETT, Jr. Calgary, Alberta

15 YEARS

JULES NORMANDEAU Calgary, Alberta

5 YEARS

RICHARD BLAKENEY Calgary, Alberta

APRIL 1981

15 YEARS

CHARLES T. MAXWELL Calgary, Alberta

10 YEARS

MARCEL LEVAC Fort St. John, B.C.
 DIANE WILLGOOSE Calgary, Alberta

5 YEARS

DON BROWN Grand Prairie, Alberta

UNION ENERGY MINING DIVISION

MARCH 1981

5 YEARS

ROBERT D. KETTERLING Casper, Wy.

MOLYCORP

MARCH 1981

20 YEARS

KEITH STEEVER Mountain Pass, Ca.

15 YEARS

TERRY FITZGERALD Mountain Pass, Ca.
 EDDIE GARCIA Questa, N.M.
 CLAUDIO RUEL Questa, N.M.

APRIL 1981

15 YEARS

WILLIAM CRABTREE Mountain Pass, Ca.

10 YEARS

JUAN TRUJILLO Questa, N.M.

5 YEARS

KATHLEEN CARPENTER Louviers, Co.
 JAMES FRENCH Mountain Pass, Ca.
 CHRIS WELCH Louviers, Co.

POCO GRAPHITE

MARCH 1981

5 YEARS

DANNY STYLES Decatur, Tx.

JOBBER AND DISTRIBUTORS

MARCH 1981

45 YEARS

CITIZENS OIL CO. Gaffney, S.C.

30 YEARS

LES A. ESPOSITO San Pedro Marine, Ca.

25 YEARS

D. J. HORSLEY Klamath Falls, Or.
 SHORE OIL CO. St. Clair Shores, Mi.

20 YEARS

GURLEY OIL CO. INC. Birmingham, Al.
 SCHULTE OIL CO. Grand Marais, Mn.

15 YEARS

WILLIAMS OIL CO. Tallahassee, Fl.

10 YEARS

BRANDON & HULL Greenville, Tn.
 DOWNTOWN MINUTE Minneapolis, Mn.
 CAR WASH, INC. Concord, N.C.
 SECURITY OIL CO. Morristown, Tn.
 SHIRLEY OIL CO. Three Rivers, Mi.
 THREE RIVERS GAS & OIL CO.

5 YEARS

CARPENTER OIL CO. Newark, Oh.
 K & P OIL CO. Grundy, Va.
 ZAN-C, INC., MARINE DIST. San Diego, Ca.

APRIL 1981

55 YEARS

LEVENS, INC. Carrollton, Ga.

35 YEARS

LIBERTY OIL & GAS CO. West Liberty, Oh.
 WILLIS OIL CO. Anderson, In.

30 YEARS

BOICE & BARBEE Nogales, Az.
 KENDALL OIL CO. Park Rapids, Mn.

25 YEARS

CLIPPER YACHT CO. Sausalito, Ca.

20 YEARS

LEEWARD PETROLEUM CO. Waianae, Hi.
 LINCOLN OIL SERVICE Normal, Il.

15 YEARS

CLARK OIL CO. Eufaula, Al.
 R. W. RIPLEY Battle Mountain, Nv.

10 YEARS

KNOWLES OIL CO. INC. Riverview, Mi.
 MARKLINE OIL CO. Troy, Mi.
 MYERS & SON CO. So. Whitley, In.

RETIREMENTS

NOVEMBER 1980

N. HENRI MASARKY, MolyCorp
 Denver, Co. August 1, 1965

DECEMBER 1980

EUGENE M. AUSTIN, W. H. Barber Oil
 Minneapolis, Mn. January 2, 1947
 PAT C. CLARK, Union 76 Division
 San Francisco, Ca. November 11, 1945
 GEORGE B. CREED, Union 76 Division
 Reseda, Ca. June 19, 1941
 HAROLD EDWARDS, Pure Transportation
 Beaumont, Tx. May 28, 1967
 LOIS M. ERICKSON, W. H. Barber Oil
 Minneapolis, Mn. April 30, 1937
 LOUIS A. FALGOUT, Sr., Oil and Gas
 Delcambre, La. November 21, 1950
 PAUL A. FISCHBACH, W. H. Barber Oil
 St. Paul, Mn. January 28, 1958
 WILLIAM H. GRAHAM, W. H. Barber Oil
 Minneapolis, Mn. February 24, 1937
 ROBERT H. HUBER, W. H. Barber Oil
 Minneapolis, Mn. January 21, 1946
 CHARLES E. LIVESAY, Union 76 Division
 San Francisco, Ca. November 17, 1964
 GEORGE E. MOSHOLD, Union Chemicals
 La Mirada, Ca. August 21, 1963
 JAMES V. NOLAN, W. H. Barber Oil
 Minneapolis, Mn. May 4, 1948
 LEONARD A. RABE, W. H. Barber Oil
 Minneapolis, Mn. April 8, 1948
 LAWRENCE C. RASMUSSEN, W. H. Barber Oil
 Minneapolis, Mn. January 21, 1946
 ROBERT C. SERPE, W. H. Barber Oil
 St. Paul, Mn. August 4, 1953
 EARL D. SIMKINS, Union 76 Division
 Lemont, Il. August 28, 1950

JANUARY 1981

CARL E. BOGUE, Union 76 Division
 Lindale, Tx. June 26, 1944
 GORDON L. BOYCE, Union 76 Division
 Lockport, Il. January 5, 1940
 ROBERT L. CAMPBELL, Union 76 Division
 Downers Grove, Il. December 29, 1941
 ROBERT W. CHESTNUT, Union 76 Division
 Pasadena, Ca. March 25, 1947
 JOHN A. CHRISTIANSEN, Union 76 Division
 Walnut Creek, Ca. December 3, 1945
 RALPH O. CLARK, Corporate
 Torrance, Ca. May 23, 1939
 THOMAS L. DIVER, Oil and Gas
 Olney, Il. October 1, 1938
 WALTER J. DUMONTIER, Oil and Gas
 Cut Bank, Mt. November 6, 1945
 DAVID A. DUNN, Oil and Gas
 Midland, Tx. March 1, 1952
 FORREST S. ELLEMAN, Union 76 Division
 Inverness, Il. January 27, 1947
 NEIL R. FAGERBOURG, Oil and Gas
 Santa Maria, Ca. July 24, 1946
 JEAN I. GOOLEY, Union 76 Division
 Elk Grove Village, Il. July 18, 1960
 MARGARET T. GRANQUIST, Union 76 Division
 Barrington, Il. August 28, 1961
 JAMES N. GRAY, Union 76 Division
 Beaumont, Tx. February 5, 1951
 ROBERT H. HARRISON, Union 76 Division
 Birmingham, Al. December 1, 1951
 J. C. HODGENS, Oil and Gas
 Porum, Ok. August 23, 1948
 EMMETT C. HOWELL, Oil and Gas
 Van, Tx. July 20, 1945
 ALVA O. JENSEN, MolyCorp
 Payson, Az. September 23, 1970
 LEROY P. JORDAN, Union 76 Division
 Hawthorne, Ca. May 4, 1953
 PHILIP K. KIBBE, Union 76 Division
 McHenry, Il. April 20, 1964
 VIRGINIA D. KING, Union 76 Division
 Mission, Ks. August 22, 1960
 GAIL A. KIRWAN, Union 76 Division
 Midlothian, Il. August 14, 1951
 CHARLIE E. LOFTON, Union 76 Division
 Rodeo, Ca. June 6, 1946
 CLAUDE C. MALONEY, Jr., Oil and Gas
 Midland, Tx. October 25, 1948
 HENRY W. McCALL, Oil and Gas
 Midland, Tx. August 16, 1949
 JOSEPH M. McGARAH, Union 76 Division
 Heth, Ar. October 1, 1952
 WILLIAM A. MIERTSCHIN, Jr., Union 76 Division
 Beaumont, Tx. June 1, 1948
 JACK J. MYER, MolyCorp
 Boise, Id. March 9, 1965

WILLIAM A. NABERS, Oil and Gas
Avenal, Ca. April 30, 1940
LOREN L. NEFF, Science and Technology
Fullerton, Ca. July 17, 1943
GORDON W. NELSON, Union 76 Division
Beaumont, Tx. February 24, 1948
OLIVER C. NELSON, Oil and Gas
Santa Maria, Ca. April 23, 1953
WILLIAM D. NEWHALL, Union 76 Division
Lomita, Ca. December 4, 1950
JOSEPH O. NORTH, Union 76 Division
Napa, Ca. June 18, 1942
RICHARD W. ODELL, Union Chemicals
Crest Hill, Il. March 1, 1957
ANTHONY PALUMBO, Union 76 Division
Richmond, Ca. September 7, 1950
FRANCIS A. PATE, Science and Technology
Highland, Ca. September 17, 1945
HAROLD E. PAULUS, Union 76 Division
Troy, Mi. December 1, 1935
CHARLES W. POST, Energy Mining
Corpus Christi, Tx. November 5, 1953
CALVIN B. RASCOE, Union 76 Division
Port Neches, Tx. February 12, 1951
GERALD REYENGA, Union 76 Division
Port Neches, Tx. October 27, 1952
ELLIS E. RICHARD, Union 76 Division
Sonoma, Ca. November 27, 1946
HARRY R. SANDBERG, Union 76 Division
Lemont, Il. June 23, 1952
SIMON S. SEIFERT, W. H. Barber Oil
Minneapolis, Mn. November 8, 1945
RAYMOND L. SHULER, Oil and Gas
Olney, Il. November 17, 1939
LEE R. SIDES, Pure Transportation
Van, Tx. February 12, 1962
JOHN F. SKEHEN, Union 76 Division
Oceano, Ca. August 27, 1945
WOODROW W. STEIGER, International
Exeter, Mo. August 13, 1969
HUGH J. STEVENS, Union 76 Division
Beaumont, Tx. March 8, 1948
R. E. THOMPSON, Corporate
Indian Wells, Ca. February 1, 1941
ALVIN E. THUFTIN, W. H. Barber Oil
Minneapolis, Mn. May 1, 1951
BURTON L. WHITNEY, MolyCorp
Henderson, Nv. December 13, 1965
JEAN WILKINSON, MolyCorp
Roseville, Ca. November 15, 1965
HERBERT C. WILLIAMS, Oil and Gas
Noble, Il. July 16, 1941
STEVE A. WILLES, Union 76 Division
Melrose Park, Il. June 22, 1959

FEBRUARY 1981

EVERETT M. ADAMS, Union 76 Division
Concord, Ca. May 16, 1951
HUGO E. ANDERSON, Union 76 Division
Long Beach, Ca. February 1, 1955
PAUL E. BLAKE, Oil and Gas
Santa Maria, Ca. September 27, 1943
ROBERT G. BUNKELMAN, Oil and Gas
Santa Maria, Ca. June 9, 1941
LEE R. BROUSSARD, Union 76 Division
Port Arthur, Tx. July 13, 1948
CHARLIE E. CLARK, Oil and Gas
Van, Tx. March 1, 1941
NELSON C. COLYER, Union 76 Division
Dayton, Ky. May 1, 1959
PAUL P. DUBOSE, Union 76 Division
Beaumont, Tx. February 10, 1947
LLOYD D. FORET, Union 76 Division
Beaumont, Tx. February 20, 1951
PAUL E. FORREST, Science and Technology
Pomona, Ca. May 5, 1953
WILLIAM A. FRICKE, Union 76 Division
Arlington Heights, Il. August 20, 1959
ROBERT A. GABRIEL, Oil and Gas
Van, Tx. March 19, 1945
DOROTHY C. GLATHART, Oil and Gas
Olney, Il. April 18, 1955
CURTIS J. GWALTNEY, Union 76 Division
Ft. Lauderdale, Fl. December 16, 1947
IRA N. HEBERT, Oil and Gas
Thibodaux, La. January 18, 1950
JACK H. HICKMAN, Union 76 Division
Lockport, Il. August 4, 1942
WALTER H. HONIGMAN, Union 76 Division
Palatine, Il. April 1, 1956
THOMAS B. HOWARD, Sr., Union 76 Division
Atlanta, Ga. February 1, 1951
WALTER T. JAMESON, Union 76 Division
Pasadena, Ca. June 19, 1940
PAUL E. JENNINGS, MolyCorp
Las Vegas, Nv. September 17, 1966
JOE N. KOVALY, Union 76 Division
Big Bear City, Ca. October 22, 1948
LEONARD L. LEWIS, Union 76 Division
Sonoma, Ca. October 6, 1952

LESLIE E. MANNING, Union 76 Division
Vallejo, Ca. February 26, 1943
THOMAS C. MAYS, Union 76 Division
Beaumont, Tx. January 3, 1949
OTIS N. MEADOR, Union Chemicals
Pittsburg, Ca. May 4, 1960
JOHN MEEKMA, Interstate A/T Stop
Dyer, In. October 16, 1971
HAROLD L. NEWEL, Union 76 Division
Long Beach, Ca. February 18, 1952
JONAH J. QUICK, Sr., Oil and Gas
Santa Maria, Ca. June 8, 1942
DONALD L. SARGENT, Union 76 Division
Minneapolis, Mn. September 6, 1945
ANTHONY A. SAVINE, Union 76 Division
Benicia, Ca. January 24, 1951
ROBERT M. SENFF, Oil and Gas
Santa Maria, Ca. January 14, 1946
TOMMIE L. THOMPSON, Union 76 Division
Beaumont, Tx. December 14, 1950
CHARLES C. WHEELER, Corporate
North Hollywood, Ca. December 16, 1951
PAUL LEROY WHIP, Science and Technology
Brea, Ca. October 29, 1951
ROBERT W. YOUNG, Union 76 Division
Lockport, Il. September 5, 1950

MARCH 1981

DAVID E. FADER, Union 76 Division
Sanford, N.C. November 11, 1957
JAMES P. FANNING, MolyCorp
Barstow, Ca. January 12, 1968
CLYDE B. GREEN, Oil and Gas
Odessa, Tx. January 7, 1949
JOSEPHINE S. GREENMAN, Union 76 Division
Westby, Wi. February 22, 1971
GRANT W. HENDRICKS, Science and Technology
Brea, Ca. January 11, 1943
PAUL D. HILEMAN, Union 76 Division
Oregon, Oh. April 16, 1941
HENRY L. HOLDREN, Union 76 Division
Arroyo Grande, Ca. September 25, 1947
ROBERT S. JENSEN, Union Chemicals
Lombard, Il. January 16, 1951
ROBERT W. LOFSTROM, Union 76 Division
Carson, Ca. December 18, 1953
WILLIAM B. MYRES, Union 76 Division
Oceano, Ca. February 10, 1955
LATHEN G. PLATT, Union 76 Division
Starks, La. April 19, 1948
RICHARD L. ROBB, Union 76 Division
Camarillo, Ca. June 21, 1948
WAYNE E. SHOUP, Oil and Gas
Tyler, Tx. January 23, 1947
ROBERT L. SMITH, Union 76 Division
Van Nuys, Ca. July 9, 1956
HAROLD C. STRAND, Corporate
Long Beach, Ca. November 10, 1948
JOSEPH J. WELCH, Jr.,
Richmond, Va. August 12, 1946

IN MEMORIAM

EMPLOYEES

THEODORE F. ANSELMO, Union 76 Division
Maple Heights, Oh. December 16, 1980
WILFORD V. CAMPBELL, Union 76 Division
Port Arthur, Tx. January 25, 1981
MARY V. DECKER, Union 76 Division
West Memphis, Ar. December 25, 1980
HAROLD GEARHART, Energy Mining
Albany, Or. December 17, 1980
LEROY J. GUILLOTTE, Jr., Oil and Gas
Franklin, La. November 28, 1980
GARNET H. MCCALL, MolyCorp
Colton, Ca. November 27, 1980
ROSE M. MCCULLOUGH, Union 76 Division
Hoffman Estates, Il. January 25, 1981
PETER MITCHELL, Union 76 Division
Birmingham, Al. January 19, 1981
WILLIAM R. NEILL, Union 76 Division
San Pedro, Ca. January 19, 1981
GLENN E. THOMPSON, Oil and Gas
Whittier, Ca. January 9, 1981
EDNA C. WATSON, Union 76 Division
Garden Grove, Ca. December 31, 1980

RETIREES

OTIS B. ALLRED, Oil and Gas
Van, Tx. January 18, 1981
WILLIAM A. APAKA, Union 76 Division
Honolulu, Hi. December 17, 1980
ISAAC AYERS, Union 76 Division
Sycamore Valley, Oh. November 10, 1980

ADOLPH BARTLESON, Oil and Gas
Cut Bank, Mt. September 21, 1980
ERIK BERTAS, W. H. Barber
Mabank, Tx. January 4, 1981
LEONARD BRIGGS, Oil and Gas
Springdale, Ar. January 27, 1981
VICTOR V. BRUNSON, Oil and Gas
Morgan City, La. December 2, 1980
MARGARET L. BRYAN, Union 76 Division
Los Angeles, Ca. June 12, 1980
RALEIGH S. CHAMBERS, Union 76 Division
Seattle, Wa. December 9, 1980
HARVEY A. COLE, Union 76 Division
Beaumont, Tx. January 27, 1981
KENNETH A. COVELL, Union 76 Division
Ft. Worth, Tx. December 18, 1980
PAUL ROBERT CREEL, MolyCorp
Sanford, Co. January 14, 1981
OTTO R. CRUNCLETON, Union 76 Division
Anaheim, Ca. October 6, 1980
KENNETH M. DELANEY, Oil and Gas
Olney, Il. December 3, 1980
JOHN NEVEN DEMSEY, Union 76 Division
Ben Lomond, Ca. November 19, 1980
JOHN G. DINEFF, Union 76 Division
Toledo, Oh. December 25, 1980
CLIFFORD DONOHO, Science and Technology
Cave Junction, Or. December 26, 1980
ASHLEY DOSS, Union 76 Division
Fullerton, Ca. January 17, 1981
ROBERT C. DOWNING, Union 76 Division
Mobile, Al. December 16, 1980
FRANK E. EISELE, Union 76 Division
Mesa, Az. November 27, 1980
CHARLES W. ENGLISH, Union 76 Division
MacClenny, Fl. December 24, 1980
FRANK G. FARIA, Union 76 Division
Vacaville, Ca. January 13, 1981
FRANCIS O. GREENE, Union 76 Division
Wilton Manors, Fl. November 1, 1980
LAVERNE GONYA, Union 76 Division
Auburn, Mi. January 17, 1981
CLIFFORD A. HARDEE, Union 76 Division
Miami, Fl. December 12, 1980
STANLEY R. HARTMAN, Union 76 Division
Buckeye Lake, Oh. January 1, 1981
NORRIS V. HARTSELL, Union 76 Division
Huntington Park, Ca. December 14, 1980
LEO HENDERSON, Union 76 Division
Red Bluff, Ca. January 14, 1981
ARLIE HULL, Oil and Gas
Kermit, Tx. January 3, 1981
JAMES W. KANNER, Union 76 Division
Vacaville, Ca. December 30, 1980
EMIL KAUFMAN, Union 76 Division
Barrington, Il. December 7, 1980
HAROLD F. KEANS, Oil and Gas
Yucaipa, Ca. December 28, 1980
ESTELLE B. KLEANER, Corporate
Los Angeles, Ca. December 29, 1980
CHARLES O. KURTZHALZ, Union 76 Division
Newark, Oh. December 21, 1980
FULLER LIDDELL, Union 76 Division
Broadview, Il. January 11, 1981
ALBINO S. LUSARDI, Union 76 Division
San Luis Obispo, Ca. December 25, 1980
VERNIE J. MADISON, Union 76 Division
Green Valley, Az. January 27, 1981
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Santa Maria, Ca. January 30, 1981
JAMES A. MILLS, Oil and Gas
Van, Tx. November 15, 1980
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Decatur, Ga. January 2, 1981
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Van, Tx. January 17, 1981
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Glendale, Ca. December 5, 1980
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Columbus, Oh. December 12, 1980
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Lemoore, Ca. December 9, 1980
DWIGHT A. RICHARDS, Union 76 Division
Toledo, Oh. December 13, 1980
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Wheat Ridge, Co. November 29, 1980
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Hemet, Ca. December 30, 1980
ROBERT C. WORSLEY, Panama
Balboa, Rep. of Panama October 18, 1980
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Hazel Crest, Il. November 8, 1980

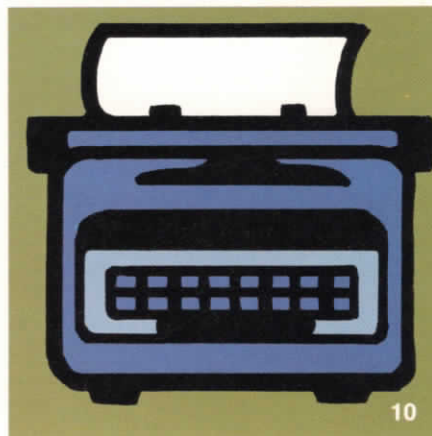
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COVER: A welder in Louisiana's Vermilion Field connects a pipeline on platform 26 C which serves as a gathering point for 60 other wells in the area. Photograph by Sergio Ortiz. Story on page 1.

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