

# 800 Times up Pike's Peak

An 8-year-old carryall can outrun most cars on this steep climb.



PIKE'S PEAK, COLORADO

WHEN Bill Carle heard the old pickup was snowbound at the 11,000-foot level, he climbed into a 1957 carryall and fired up the engine.

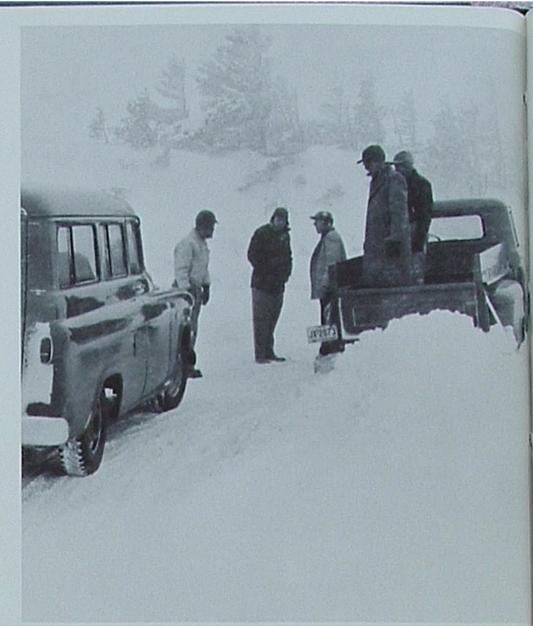
"We'll get it free," he said. "I know the road like the back of my hand." Ahead of Carle lay a 30-mile drive up Pike's Peak - 19 miles in gravel, with grades up to 12 per cent in spots. The October snow banks were 10 to 20 feet deep. The road itself was a maze of switchbacks and dropoffs; had there been time for sightseeing, he could have been inspired by some of the world's most spectacular scenery.

On this trip, however, he had no time for sightseeing. Carle, who in summer operates the New Summit House atop Pike's Peak, was working that October day with the Bell Aircraft Company. The Bell people had recently built a new high-altitude helicopter and, to dramatize the chopper's capabilities, they wanted the whirlybird to lift a heavy load from the top of the 14,110-foot, snowcapped Colorado mountain. Bill's assignment was to help set up a base camp for the photographers.

Carle, who knows the 30-mile-long Pike's Peak road better than any other man alive, roared up the road at speeds most people wouldn't even try on a July day. Thanks to the reliability of the carryall, the snowbound pickup was quickly freed and the expedition concluded its photographic mission successfully.

That was in October, 1959. Today Bill Carle is still manager of the Summit House, and he still drives the 1957 carryall.

"Even though it has 82,000 miles on it," Carle said, "the carryall will outrun the average car. I've made at



least 800 runs up to the Summit House on it, and the engine has never failed. It has never been overhauled. In fact, the valve covers and crankcase still have the original gaskets; they have never been removed."

As you probably have guessed by now, the carryall has had a steady diet of Union motor oils. Says Carle, "Only Royal Triton has been used in this vehicle quite an advertisement for your oil, don't you think?"

Naturally, Carle isn't driving up the peak in 10 feet of snow all the time. More often he is making the run in the summertime for the business of the Summit House - a coffee shop, gift shop and souvenir store. And dust is more of a problem than snow.

"Since 1963," Carle continues, "the '57 carryall has been used for occasional runs up the peak, but is not used for the daily trip. We keep it on the summit during the season, and use it mostly for our heavy hauling.

"It still runs well and will carry heavy loads easier than most pickup trucks. We think this is a most unusual record, especially under the dusty conditions and temperature changes that exist here.

"We attribute a good share of this record to Royal Triton motor oil - and use it in all six of our vehicles."

Incidentally, if you plan to visit Colorado this summer, Bill Carle urges you to make the drive to Pike's Peak.

"During the 1964 season - April 25 to November 1 about a quarter of a million tourists visited Pike's Peak," he said. "The scenery is magnificent and to truly appreciate the mountain, you should let me take you around on a guided tour - in a carryall lubricated with Royal Triton, of course."



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# SEVENTY SIX Union oil company of California

Our Cover: The supertanker Lake Palourde, newly jumboized from 67,000 to 118,000 tons, is pictured arriving at Los Angeles. Story begins on page 2.

VOLUME 9 NUMBER 5	JUNE 1965
The Lake Palourde Comes to Los Angeles	2
The History of Tankers	5
Building the Jumbos (a photo essay)	6
The Longest Voyage	8
The Quietest Voyage	10
3 Union Oilers Named to THUMS Group	12
Corporate Appointments for 3	13
Business Highlights	14
Our Diamond Jubilee Shareholders Meeting	16
Leasing the Subsurface of Los Angeles	18
Turning Back the Pages	20
In Focus	21
Union Oil Foundation Awards	22

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VOLUME O NUMBER

#### The New

# LAKE PALOURDE COMES TO LOS ANGELES

Jumboized supertanker is the largest ship ever to call at the City of Angels.



(Above) It took six husky tug boats (four showing) to nudge the 118,000 ton Lake Palourde up to the wharf. (Opposite page) The tanker, berthed at the outer harbor wharf, dwarfs pleasure boats at nearby marina. White tanks in upper center of photo are at Union Oil Harbor Pipeline Station.

THE Lake Palourde loomed over the horizon of the Pacific Ocean like an immense whale, her single screw driving her through the water at a surprising 16.4 knots. As the huge vessel passed by Santa Barbara Island, Capt. Pastrengo Rugiati (Roo-gee-AH'-tee) signaled the helmsman to turn east toward the Palos Verdes Peninsula. Ahead lay the most ticklish part of their 11,500 mile voyage.

In Los Angeles harbor, meanwhile, a crew of divers from the L.A. Harbor Commission completed a foot-by-foot survey of the harbor and pronounced the outer harbor channel and berthing area safe for the mammoth oil tanker's arrival. They knew the *Lake Palourde*, carrying 870,000 barrels of crude, would draw more than 51 feet of water, and the channel at mean tide was 49 feet deep in some places. It would take some precise maneuvering to berth this vessel safely.

At 1 p.m. on Thursday, April 15, the Lake Palourde anchored a mile out of the harbor. Because of the vessel's size, it was necessary to wait for high tide before berthing. Customs and immigration formalities were taken care of that afternoon so the ship could come in without delay on Friday morning.

Promptly at 8:30 a.m. the next day, Capt. E. H. Zecher, the senior harbor pilot in Los Angeles, arrived at the

continued





Capt. D. L. Povey, manager of the Marine Department, surveys the deck of the Lake Palourde. Vessel is longer than three football fields.

#### LAKE PALOURDE continued

Lake Palourde in the pilot boat. With him was Capt. Lionel DeSanty, port warden for Los Angeles, whose presence testified to the significance of the occasion, for the Lake Palourde was the largest ocean-going vessel ever to call at Los Angeles.

Captains Zecher and DeSanty climbed the Jacob's ladder onto the Lake Palourde. They paused momentarily and whistled in awe at the vast expanse of deck — it was longer than three football fields. Their awe was justified; the Lake Palourde and her sister ship, the Torrey Canyon, are the second largest cargo ships in the world.

While the port officials were introducing themselves to Captain Rugiati, six husky tugboats — the biggest in Los Angeles—churned up and hooked onto the 975 foot long oil tanker.

From that moment, timing was crucial. Capt. D. L. Povey, manager of our Marine Department, who was on the wharf to oversee the berthing, described it this way:

"When loaded, the Lake Palourde draws 51 feet 3 inches of water. Parts

of the channel are 49 feet deep. High tide gives us an additional four feet, making the channel 53 feet deep and giving us at least 20 inches of clearance under the ship.

"From 9:30 a.m. the tide begins falling seven inches an hour. But the Lake Palourde can discharge 35,000 barrels an hour, lifting the ship 18 inches an hour. Three hours after she begins discharging, the ship will be clear."

The sequence of events went even better than Captain Povey predicted. The six tugs met the *Lake Palourde* near the lighthouse at 8:30 a.m. After an hour of puffing and frothing up acres of water, they gently nudged the 118,000 deadweight ton vessel up to the wharf. It was 9:30 — one minute after high tide.

By 10:50 — 10 minutes ahead of schedule — the first barrel of Mideast crude oil left the vessel's tanks destined by pipeline for the outer harbor storage tanks.

On the record books in our Marine Department, this was voyage No. 35 for the *Lake Palourde*. But for Captain Rugiati and his crew of 38 this was a special voyage. The *Lake Pa-*

lourde, enlarged from 67,000 tons to 118,000 tons, was making her maiden voyage as a jumboized supertanker.

On this trip of 11,530 miles from Kharg Island in the Persian Gulf to Los Angeles, the *Lake Palourde* had carried 870,144 barrels of Gach-Saran crude. The cargo weighed 118,147 long tons. Still employing the original 25,000 horsepower steam turbine engine, the new *Lake Palourde* had averaged 16.42 knots — within half a knot of her former speed.

"The new Lake Palourde handles better than the old ship," Captain Rugiati grinned. "This is because the rudder has been enlarged."

The trip from Kharg Island to Los Angeles required 29 days, 6 hours and 15 minutes. Discharging at Los Angeles took 45 hours and 30 minutes. When the last barrel of crude was gone at 8:20 a.m. on Sunday, April 18, Captain Rugiati ordered sea-water ballast pumped aboard to get the ship down to maneuverable level. Then, at 3 p.m., with a brilliant afternoon sun blazing down, the Lake Palourde sailed proudly out of Los Angeles — bound for the Persian Gulf on voyage No. 36.

#### MARITIME SLANGUAGE

The contraction of the first the fir

Here, courtesy of our Marine Department, are the definitions of some common terms used in ocean shipping.

GROSS TONNAGE: Put away your scales; this does not refer to weight. On the contrary, gross tonnage is a unit of volume. One gross ton equals 100 cubic feet of enclosed space in a ship—cargo holds, engine room, fuel tanks, bridge, passageways and crew's quarters. (The register of a vessel states both gross and net tonnage.)

NET TONNAGE: Again, volume and not weight. Net tonnage, however, includes only the cargo space, 100 cubic feet being regarded as one ton. (On ocean freighters, where cargo sometimes is light or bulky, shipping agents may choose to calculate freight rates based on volume rather than weight; hence, net tonnage.)

**DEADWEIGHT TONNAGE:** Now, get out your scales; we are talking about weight — one of the most significant figures of all and the customary figure used in describing tankers. Deadweight tonnage refers to the weight of cargo, stores, water, bunker fuel, even crew members, required to bring a ship down to the Plimsoll mark — the deepest a ship can be legally loaded. (Incidentally, English long tons of 2,240 pounds are used.)

CARRYING CAPACITY: Another important figure, the payload. This is the weight of the cargo, expressed in long tons.

DISPLACEMENT TONNAGE: This is the number of tons of water the ship displaces when sitting in the water. The figure is roughly equal to what you would get by putting the ship on a mammoth scale — were this only possible. There are two forms: light and loaded.

LIGHT DISPLACEMENT TONNAGE: This is displacement weight of the ship when empty.

LOADED DISPLACEMENT TONNAGE: This is the total weight of the vessel, plus fuel, stores and cargo.

#### Lake Palourde and Torrey Canyon

Earle I diodide and Torrey our	. ,
Gross tonnage	61,275
Net tonnage	
Deadweight tons (summer)	
Carrying capacity	113,500
Displacement, light	
Displacement, loaded	

#### NEW UNION OIL FLAG





With the arrival of the jumboized supertankers, Lake Palourde and Torrey Canyon, the Union Oil Company unveiled a new house flag. The old one (left) had red letters on a white diamond that was set on a dark blue background. The new flag employs our marketing colors: blue "76" insignia and orange disc set on a field of light blue and white stripes.

#### GROWTH OF OIL TANKERS

paconomic months and a second



1888 — W. L. Hardison, wood schooner (not shown), capacity 6,500 barrels.



1902 — Fullerton, wood barkentine, length 235 feet, capacity 16,000 barrels.



1906 — Santa Rita, length 430 feet, speed 9 knots, capacity 55,000 barrels.



1920 - Montebello, length 457 feet, speed 10 knots, capacity 80,000 barrels.



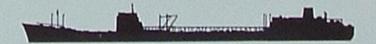
1939 - L. P. St. Clair, length 442 feet, speed 12 knots, capacity 101,000 barrels.



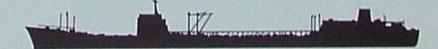
1945 - Lompoc, length 504 feet, speed 14.5 knots, capacity 140,000 barrels.



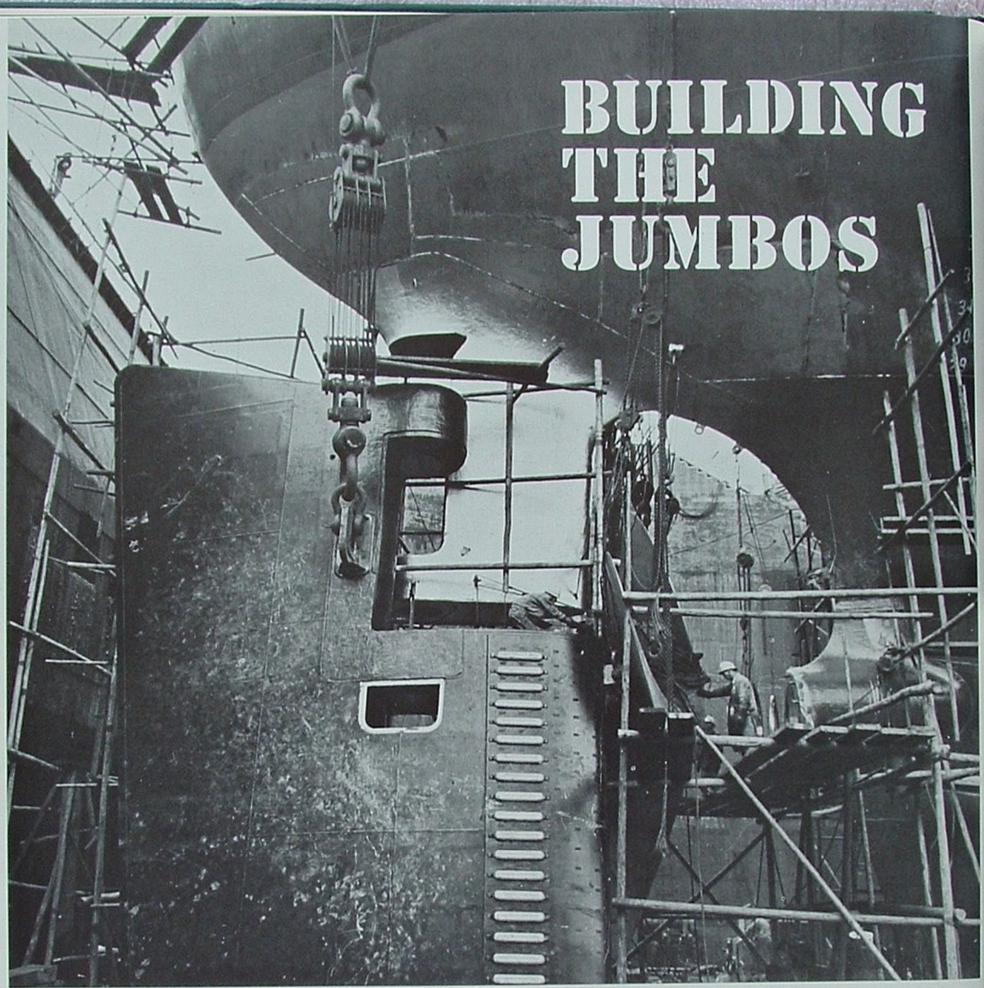
1952 - Santa Maria, length 551 feet, speed 15 knots, capacity 146,000 barrels.



1958 - Sansinena, length 810 feet, speed 17.2 knots, capacity 470,000 barrels.



1965 — Lake Palourde, length 975 feet, speed 16.2 knots, capacity 870,000 barrels.

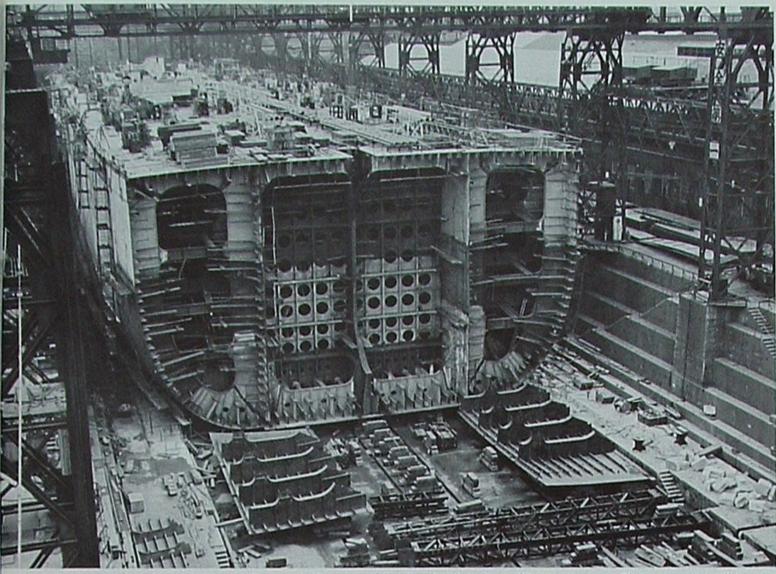


Jumboized supertankers handle better than older version, owing to enlarged rudders.

Stern was cut off and attached to larger forebody.



The conventional method of jumboizing a supertanker is to cut the vessel in half and add a middle section for extra length. A more recent development goes one step further: It also slices the ship lengthwise, adding a sandwich-like section to deepen the draft. When Union Oil decided to jumboize the chartered supertankers Lake Palourde and Torrey Canyon, a new approach was taken. We did away with everything forward of the machinery space - which, after all, is the expensive part of a tanker. Then we added an entirely new forebody, making the vessels longer, deeper and wider. In just a few days over four months, the 67,000 ton supertankers had been enlarged to 118,000 ton size. Transportation costs are expected to be reduced by about 35 cents a barrel - nearly a penny a gallon. The pictures show the construction activity.



Longer, deeper, wider forebody was built in advance. Note swash bulkheads.



Torrey Canyon: Started Dec. 7; finished April 10.



New hull (L) dwarfs older model. Bridge was put on tracks, rolled to new hull, welded down.

Lake Palourde: Started Oct. 22 and finished March 1.



Our supertankers touch the cradle of civilization during

# The Longest Voyage

As the preceding pages reveal, the supertankers Lake Palourde and Torrey Canyon represent significant accomplishments in marine engineering. The voyages of these ships represent significant accomplishments in seamanship. Here is a report on one of these voyages.

WHEN Captain Marco DiCristofaro and his crew of 38 men leave Kharg Island in the Persian Gulf aboard the supertanker *Torrey Canyon*, they begin one of the longest continuous sea voyages in maritime history.

About 11,500 miles one way — nearly half the earth's circumference — their course eastbound spans the length of the Persian Gulf, the breadth of the searing Indian Ocean. The big ship squeezes through the heavy seagoing traffic of the Singapore Straits, skirts the Philippine Islands. Then they are out of sight of land across the Pacific Ocean until reaching California's Channel Islands — land's first hint of their destination at Los Angeles Outer Harbor wharf.

As for time, the eastward voyage requires about 29 days. The return trip to Kharg, in ballast, is normally reduced to 28 days. Allowing about 48 hours at each port of call for loading and discharging, the round trip fits almost exactly into two months. It's like going around the world in 60 days.

A round trip is just the beginning for these seamen. The captain contracts for five voyages, or ten months, of steady seafaring. Crewmembers normally sign on for a year, and a few have worked as long as two years without taking vacations. Completion of a minimum 10-month contract means sailing the *Torrey Canyon* about 120,000 miles — equivalent to nearly five times around the world. In contrast, history's first single circumnavigation of the globe by Magellan — beginning in 1522 — required three years.

Recalling sea voyages by mariners of sailing days — attended by hardship, boredom, illness, occasional mutiny, and always homesickness — we wondered whether there were any similar problems on modern supertankers. An interview with Captain DiCristofaro provided a revelation of what the modern supertanker world is like.

Captain DiCristofaro is a strikingly handsome man, with slightly graying hair, eyes of the lighter shade found in northern Italy, and an expressive smile. Though a native of La Spezia, Italy — the area where Columbus was born — he doesn't come from a seafaring family, his father was an artillery test engineer.

DiCristofaro attended naval school in Italy for 13 years, eight of which were spent at sea. He served for a year in the Italian Navy, then turned to commercial ship-

ping, signing on the Onassis fleet where he advanced to master. On joining the *Torrey Canyon* in 1960, he sailed one trip as chief mate before becoming captain. Di-Cristofaro speaks excellent English, so our interview takes question and answer form:

Q. Captain, do the men become bored, discontented, ill or rebellious during the long months at sea?

A. Hardly. We keep pretty busy. Admittedly, nearly a year at sea is a very long time — probably the longest on record today. But when a seaman keeps busy, the time goes swiftly.

On a ship of this size, there are many responsibilities ... the engine room, navigation, repairs, maintenance, cleaning, chipping paint and so on.

Q. Do you find any personality conflicts?

A. (Smile.) I have yet to see two Italians who can't argue, sometimes with real passion or, as you call it, spirit. But fighting or violence? No, never! Italian sailors actually get along very well together. Their work and comradeship and also laughter are good safety valves. If left alone, the Italians can always sing — not very well in every case, but always loud and fervently.

Q. What about recreation? Is there any?

A. Of course. We have recreation rooms where crew members can play table tennis, darts, cards and other games. Radio broadcasts are always available from countries we are sailing near by, and we have albums of good music for the ship's record players; we even pipe music on deck.

There are movies. Eight of the latest films are put aboard at Los Angeles each voyage, providing two shows a week. Most of the men will see each of these films twice.

Q. How about shore leave? These are long voyages.

A. This is possible only at Kharg Island and Los Angeles — or in Japan or the Philippines during a rare stop there. Our stopovers are so brief that we have little time for sightseeing. Only a few members of the crew have gotten so far as Los Angeles or Hollywood or even Disneyland.

Q. How about the food? How do you eat?

A. Very well indeed. Our menus are Italian, of course. For breakfast we usually have ham, salami, cheese, focac-



cia (a form of pizza), coffee and milk...no eggs. Tunafish or sardines-in-oil are our Sunday extras.

Our lunches and dinners include soup, fish, meat, vegetables, fruits, Italian pastas...but no potatoes. Cakes and ice cream are special treats on Thursdays and Sundays. To our tastes, these foods are excellent, wholesome, the best in the world.

Q. You make supertanker life sound like Utopia.

A. We have our problems. Our worst experience so far — before the *Torrey Canyon* was jumboized — was a typhoon off the coast of Japan. We'll gladly change course a thousand miles to avoid one of these fierce Asian winds. But in this case, the storm was too swift and large to miss. It cost us several days of headway and a lot of paint washed off the hull. Nearly everyone had a touch of seasickness.

Q. Storms aren't your only worries ...?

A. Hardly. Our chief worry aside from storms is heavy traffic near the ports and coastal shipping lanes. Some passages, such as Singapore Straits, are very crowded these days. The size and value of a supertanker makes it necessary to take every precaution against accidents. We navigate on the premise that an accident on the high seas harms everyone — no matter who is at fault. We have had no accidents.

Q. Tell us about Kharg Island.

A. I'll try. Kharg Island — and indeed most of the land surrounding the Persian Gulf — is an area of contrasts. The island is less than 20 miles square; it is coral, topped by a 200-foot stone ridge. This affords a windbreak against the northwesterly winds.

The island's sheltered side has been visited by ships since long before the Christian era. Since I began calling at Kharg Island, I have done some reading on the Persian Gulf area. The ruins of Persepolis, which Darius the Great founded as the seat of history's first ruling empire, are ony a few miles inland from Kharg. So you might say we are touching the cradle of civilization.

At no time throughout the centuries, however, was Kharg of much value...until recently. Petroleum and supertankers have given Kharg sudden prominence.

Q. How did this come about?

A. Well, in October of 1954 the government of Iran contracted with about a dozen international oil companies

to develop huge reserves in south Iran. One example is the Gach-Saran field, which, they tell me, has oilproducing sands from 1,000 feet above sea level to 8,000 feet below.

Q. That's 9,000 feet of producing formation.

A. Yes. A single well is rated as one of the world's largest; they tell me it flows at 40,000 barrels a day. There are only a dozen or so wells drilled there, but the field delivers nearly 300,000 barrels a day — more than a supertanker load every three days.

Q. Is that where we get the oil?

A. Yes, and here's an interesting point. Moving the oil across 72 miles of desert and mountains from Gach-Saran to the Persian Gulf is done with the world's longest gravity-fed pipeline. To reach water deep enough for the supertankers, the pipeline runs another 22 miles along the sea bottom to the Kharg Island tank farm.

Q. This is where you load the crude...?

A. Correct. The wharf where our *Torrey Ganyon* loads stands in 60 feet of water. It can accommodate four large tankships at a time, and they put a full cargo of crude oil aboard by gravity flow in less than 30 hours.

Q. Then you begin the long voyage to Los Angeles.

A. That's another story.

Q. Tell me, Captain, after the long voyage, what do you do for relaxation?

A. You'll be surprised. (Smile.) Those of us who leave the ship at Kharg Island fly to Abadan, then go by jet to Italy. It takes about seven or eight hours.

After a few days at home in La Spezia, my wife and daughter and I get what you call...nervous feet. We like to travel...not by sea, of course, but to the Alps every year and to new places in Europe.

After the longest voyage, a sailor has the longest vacation, too, you know. Three or four wonderful months of relaxation. Then back to Kharg Island, the *Torrey Canyon*, and the sea. Personally, I find the arrangement very agreeable.

O. How about your wife?

A. My wife? She is completely reconciled, I believe. After all, my contract permits her to come aboard and share one round-trip voyage out of each five. A round-the-world ocean voyage and months of vacation each year? How can you beat that for a honeymoon?

#### An Oleum harbor pilot recalls his 'donkey's breakfast' during the days of sailing ships

HE was a fairly new ship," Fischer said; "only five years old. Her four masts and 90-foot spread of main yard stamped her as a fast sailer. Everything aboard was clean and shipshape. In the fo'c'sle where the crew slept there was a mattress in my bunk instead of a donkey's breakfast. Biggest surprise of all, the ship had electric lights.

"Next morning, the cargo tanks were full and the wind was favorable. We took in the mooring lines, set jibs and stays'ls to get away from the wharf. Then, starting with the main mast, we set and braced all sails on the four masts. The job took about two hours. A pretty sight from the mast or deck, the *Fullerton* under a cloud of sail must have been a prettier sight from shore."

This is how Captain Torsten R. Fischer recalls his initial voyage aboard the barkentine Fullerton, Union Oil Company's third sailing oil tanker. The Fullerton was built to help the company expand its markets. At the turn of the century, Union Oil secured contracts to deliver fuel oil to three Hawaiian plantations to operate cane grinding mills previously powered by Australian coal.

When launched at Alameda in 1902, the Fullerton attracted wide attention. There was no doubt she was a fast ship. She also was the first sailing vessel with electric lights — a safety feature incorporated to prevent a repetition of the explosion that destroyed the schooner tanker W. L. Hardison. The Fullerton had both diesel and steam pumps. Her wooden tanks would hold 16,000 barrels of oil — tremendous capacity for a vessel 235 feet long with a beam of 42 feet and a draft of 19 feet.

The Fullerton's main yard measured 90 feet and, when she was sailing with the wind, the yard extended almost 24 feet outboard on each side of the vessel; these wide mainsails accounted for the ship's great speed.

Fischer was a 22-year old itinerant seaman in the spring of 1907 when he arrived in Port San Luis (now Avila) to begin sailing on the *Fullerton*. For the next 40 years he served aboard Union Oil tankships, making the break from sail to steam and working up to captain of the *La Purisima*, *Utacarbon* and other vessels. His service was broken only to serve in the U.S. Navy during two world wars. Now retired from his Union Oil career, he is the harbor pilot who berths most of our tankships at Oleum Refinery. They say Captain Fischer is thinking of retiring for good this year — when he reaches 81.

Standing the other day on Oleum's wharf near the pitching waves of San Pablo Bay, Fischer wore a long overcoat and an old brown hat to defeat the rain and wind. His face was creased with downward angling lines, the result either of more than a half century of seafaring or of momentary worries of berthing the tanker *Avila*, soon due in from Honolulu.

"Good morning, Captain," we began. "Do you have any word of the Avila?"

"She's well inside the bay now," he replied. "You'll be able to see her in a few minutes." The barometer of his countenance dropped a little. "She couldn't berth at a worse time — right when the tide is due to turn. With this wind blowing, we'll have our hands full keeping her off the wharf. She's empty, you know, and that big sheet of steel runs before the wind like a mainsail."

"Speaking of sail, Captain," we interrupted, "how did you get started at sea? We understand you began back in the days of sail."

Captain Fischer's smile slowly returned. We quickly

# THE QUIETEST YOYAGE

Capt. Torsten R. Fischer

discovered that he is not only an accomplished seaman, but also a fascinating story teller. We let him proceed as master of his narrative.

"It was in Finland," he said, "where I was born. Nearly every boy wanted to go to sea and many of us did. I was only 15 when I first signed on as a cadet. That was in 1900. The next three years were spent at sea aboard deep-water sailing vessels. There was no pay while we were learning, but the experience was valuable; we learned seamanship."

"Then what? After your cadet days?"

"I drifted to many ports — Europe and America — wherever there was a need for sailors. I'll never forget one voyage; it was on the *Daylight*, a full-rigged sailing vessel. We spent seven months on a voyage from New England to Japan. Fire destroyed our ship and we had to live on the beach for another six months — until we could find passage back to Seattle. Out of Seattle, I worked for a while sailing ships of the Alaskan fishing fleet. It was rough work but it paid money."

"How much did a sailor make in those days, Captain?'

"I think the going pay for a good seaman was about \$18 a month. Of course, prices were lower then and there were no deductions from your pay — except for the donkey's breakfast."

"The donkey's breakfast?"

"Yes, when a sailor went aboard a vessel, he brought his own bedroll and was assigned a ship's mattress. This was simply a bag of hay, so we called it the donkey's breakfast. Three or four dollars deducted for such a mattress was uncomfortable, too. But if a sailor had \$15 in his pocket after a long voyage, he could go ashore



The Barkentine Fullerton

and live like a king for several days. Or maybe he'd spend it in a single night; then it was back to the ship.

"Usually it was no trouble for an experienced hand to find a job. You'd walk along the Embarcadero in 'the city' — we always called San Francisco 'the city' — and a man would say to you, 'Jack, I've got a four-masted barkentine sailing for Honolulu on Friday. She'll be back in a month. Best pay, good food, and your donkey's breakfast free! What do you say?'

"If you were broke and hungry, you'd accept. If you had a dime left from your last voyage, you'd hesitate a little. In either case the agent might take you to lunch or offer to buy a drink. That's why many a sailor used to go aboard ship in a stupor and wake up to find the vessel many miles at sea. We called it shanghaiing Today nobody would consider this ethical, but in those days it got the job done.

"Personally, I was never shanghaied — maybe because I was never a drinker. But it was just such an agent in 'the city' who offered me that first job aboard the Fullerton.

"She was sailing with a 16,000 barrel cargo of oil for Honolulu. The pay was exceptionally good, about \$25 a month instead of the usual \$18. Besides, the agent bought my lunch and gave me a train ticket from 'the city' to Avila, the railroad stop for Port San Luis where the Fullerton was loading."

The next morning seaman Fischer sailed his first voyage aboard the *Fullerton*, a voyage that began a maritime career with Union Oil that was to last 40 years.

"At sea," he continued, "there were 13 men aboard — three officers, eight sailors, a cook and a cabin boy. At least one officer was always on duty to take charge and to handle navigation. The sailors worked four hours on and four off. A watch required a helmsman, a lookout stationed at the fo'c'sle head, and two standby men to relieve, trim sail, splice ropes, scrub decks, scrape paint and what have you. There was always plenty to do. The cook and cabin boy had their hands full, too, feeding us and taking care of the cabins.

"In about 11 days we arrived at Honolulu, following the Great Circle route. We had to wait a short time for the wind and hire a launch to help us berth, but little time was lost in unloading. The Fullerton had both diesel and steam pumps to push the oil into storage tanks ashore. To speed things up, a locomotive from the Oahu Railroad puffed down to the pier to supply us with a bigger head of steam. We could go ashore only during off-watch.

"Returning from the islands in ballast took a day or two longer. This was because we had to sail farther north to catch the prevailing winds that sweep down from the northern Pacific. I remember one sailing vessel that tried a shortcut and wound up taking 40 days to come home."

It was steam, of course, that trimmed the Fullerton's sails. As far back as 1903, one year after she was built, the Fullerton participated in an experiment arising out of a critical oil shortage in Hawaii. She was towed along with the original schooner Santa Paula by Union's first steam-powered tanker, the Whittier. No such tandem tow over 2,500 miles of open sea had ever been attempted, but the three vessels delivered 35,200 barrels of oil to Honolulu. (By way of comparison, the Lake Palourde and Torrey Canyon each carry up to 896,000 barrels.)

After the tow, the *Fullerton* returned to her more dignified sailing career and survived steam competition for two more decades. When her masts were finally cut off a few feet above deck, Union Oil's sailing days were over. The *Fullerton* worked as an oil barge until 1925. Union Oil sold her and she was anchored off Redondo Beach, California, for use as a fishing barge. In 1928, a severe storm beached her. They burned as much of the wooden hull as possible to recover valuable copper fittings. The remaining skeleton was rock ballasted, towed to sea and sunk. But until her last voyage, the *Fullerton* was as proud a ship as ever sailed. Her keel

continued

#### QUIETEST YOYAGE continued

was as straight as when built — yet it was not uncommon for wooden sailing vessels to have two or three feet of hog (keel sag to landlubbers).

"Her best years," Fischer said, "were around 1904. Early that year, before I joined her, the *Fullerton* sailed

to Honolulu in 10 days."

(Editor's note: Eventually, the Fullerton's speed record was broken, but it took 51 years. The contemporary record for sail between Los Angeles and Honolulu is held by the sloop Morning Star, owned by Richard S. Rheem of the Los Angeles Yacht Club. The record was set in July, 1955, with an elapsed time of 9 days, 15 hours, 5 minutes and 10 seconds. But the Morning Star, which later sank, wasn't carrying 16,000 barrels of oil.)

"Later in 1907, after I signed on, the Fullerton turned to coastal service as well as the Honolulu run," Fischer said. "I can still remember clearly our first voyage to San Diego in November of 1907. We arrived one afternoon, were towed to the pier, spent most of the next day

unloading and departed in the afternoon."

"Speaking of San Diego, Captain," we interrupted, "did you know that an excellent model of the Fullerton is being made in Japan and will arrive on the Torrey Canyon in June? Later this summer the model will be presented to the Maritime Museum in San Diego, symbolizing the first Union Oil tanker to call in San Diego."

"No, I didn't. But that is good; she was a fine ship."

Captain Fischer had only scratched the surface of his memories when the tanker Avila loomed off Richmond

down San Pablo Bay. The tug we had boarded picked up speed and we steamed off in a storm of salt-water

spray to meet the Avila.

On the bridge of the tanker was Captain Willie Bodden, a veteran mariner and native of Great Britain's Grand Cayman Island in the Caribbean. While berthing the Avila, Captain Fischer was all business — seldom smiling — eyes glued to the approaching wharf. Not until the ship and wharf touched in a gentle rub of welcome did the pilot relax. Then, smiling, he looked through an open door into Bodden's handsomely furnished cabin. As Fischer started to speak, Bodden interrupted:

"Look at that bunk," he groused. "When the ship is empty, your feet rest higher than your head."

"Why don't you turn around and sleep with your head toward the bow?" Fischer inquired.

"I do, when we leave port," Bodden winked.

"I say, Captain," Fischer pursued. "Did you ever sleep on a donkey's breakfast?"

"A donkey's what?" Bodden barked.

"See," laughed Fischer. "Here's a man who knows all about sailing — he even has a sailboat of his own. But he's never heard of a donkey's breakfast. I guess there aren't many of us left who ever slept on one."



Aggers



Barker



Petrulas

# 3 UNION OILERS NAMED TO THUMS GROUP

Chosen to participate in development of huge East Wilmington oil field.

**THUMS** (representing Texaco, Humble, Union, Mobil and Shell) Long Beach Oil Co. is the name of a joint-venture group of oil companies who are developing

the huge East Wilmington field in Southern California. (See SEVENTY-SIX, February-March, 1965.)

Chosen to help staff the important project are Harry D. Aggers, who was named vice president and assistant general manager of THUMS, and Francis J. Barker, who will be manager of engineering.

Aggers, during a 31-year career with Union, rose from roustabout to manager of industrial relations in the Exploration and Production Division. He has been succeeded in the latter assignment by Jack L. Stair, former manager of production for the Southern District of the Pacific Coast Division. Colin H. Chadband succeeds Stair at the Santa Fe Springs assignment.

Barker, since his employment as a trainee at Dominguez in 1947, has held supervisory assignments at Bakersfield, Coalinga and Orcutt, and was our resident manager in Spain. Barker's replacement as manager of production for the Coast District at Orcutt, California, is Donald E. Craggs.

A third Union Oiler assigned to THUMS as chief reservoir engineer is Thomas G. Petrulas, former

district engineer at Bakersfield.

Named to the board of directors of the THUMS organization is John Fraser, manager of operations for the Pacific Coast Division of the Exploration and Production Division.

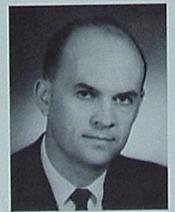
# Corporate Appointments for 3

Towler Is Elected a Director and Named to Executive Committee

> Brinegar, Thomson Elected Vice Presidents

At the Annual Shareholders Meeting April 26, Senior Vice President John W. Towler was elected to the Board of Directors. Following the Shareholders Meeting, the board met for an organization meeting and reelected all company officers except A. C. Rubel, chairman of the board, who retired. In addition, the board elected two new vice presidents: Claude S. Brinegar, manager of Economics and Corporate Planning; and M. S. Thomson, director of Refining. John Towler was also appointed to the Executive Committee.

Claude S. Brinegar is statistician, economist, teacher and business executive. He joined Union Oil in 1953 as an economic analyst while working on his Ph.D. at Stanford. The next year, after receiving his doctorate in economics, Brinegar moved to the Research Department for a year as senior research economist, then became supervisor and later



C. S. Brinegar

manager of what now is the Economics and Corporate Planning Department. He has taught economics and statistics in the extension divisions at Whittier College, Cal Tech and UCLA, and is the author of numerous articles published in business and technical journals.



J. W. Towler: His 32nd Year



Towler: His 1st Year

John W. Towler is a man of many facets: laborer, draftsman, engineer, pilot, salesman and executive in two fields; he is a colonel in the Air Force Reserve and senior vice president and director of Union Oil Company. That Towler started as a laborer at Los Angeles Refinery in 1933 is evident from the picture above. After a series of promotions in the Refining Department, and time out for World War II military leave, he was made chief refinery engineer at L.A.R. in 1945. In 1953 he became manager of Oleum Refinery and three years later, after a brief tenure as manager of L.A.R., he was named director of refining. In 1960 he was elected a vice president and late in 1963 he was elected senior vice president and given responsibility for the company's marketing operations as well as refining. Towler was born in Sturgis, South Dakota, and educated at California Institute of Technology, being graduated as a mechanical engineer in 1930. Towler, who has flown most of the military airplanes up to the first jets, has over 3500 hours of logged time. He has spent eight years on active duty in the Air Force and is now a reserve colonel.



M. S. Thomson

M. S. "Stan" Thomson began work at Union Oil as a laborer at Los Angeles Refinery. That was in 1940, the same year he was graduated from Purdue University as a chemical engineer. During the next 22 years a series of promotions in the engineering field took him from L.A.R. to Oleum and back several times. He became manager of Oleum

in 1956 and in 1959 transferred to L.A.R., which he managed until 1962. He was then named manager of planning and development. Late in 1963, Thomson was appointed director of refining.

#### **ALASKAN DRILLING BEGINS**

With the spring breakup of ice in the Cook Inlet, operations for an active offshore Alaskan drilling season are under way.

A well at West Foreland, in which the company has a 25 per cent interest, has resumed drilling after having been shut in for the winter. The first well on another joint prospect at Trading Bay, operated by Union, was spudded in May.

#### **AUTOMATED PURCHASING**

Buying by beep?

No, this isn't speculation about something in the future. Right now we are using automated devices to purchase routine items at Oleum Refinery.

Our purchasing office at Oleum has installed a device called a Data-phone which "buys by beeps."

Here's how it works: When an item is needed, a supplier's special Data-phone number is called. When a green light flashes, a Data-phone operator inserts a punch card that describes the item (in computer language) by stock number, size, style and such. The Data-phone translates the punch-card information into a series of high-pitched beeps that can be sent over a regular telephone.

At the other end of the line, the incoming beeps are converted back to electrical impulses which are fed to a key punch machine. Out of the key punch machine pops a punched card that can be "read" to tell stock number, size, style and such. The entire process takes but a few seconds.

The Data-phone system is intended to reduce time in purchasing lowcost, often-purchased materials such as hardware, valves, pipe fittings, metal sheets, bars and tubes, and electronic and electrical parts. Dataphone purchases are made only for those items for which price and quality have been established beforehand.

The volume of purchases by Dataphone is expected to increase as additional suppliers install the apparatus needed to place buy-by-beep orders.

#### BLOOD BANK DAY AT UOC

The Union Oil Girl's Club will sponsor a Bloodmobile Day at Union Oil Center from 9 a.m. to 2:30 p.m. on Friday, July 9.

Purpose of the blood bank drive will be to make emergency supplies of blood available for all Union Oil Company employees. The more rare blood types are particularly desirable.

The Bloodmobile will accommodate 180 donors during this one-day drive. The length of time involved for each donor will be from 45 minutes to an hour.

A blood bank is a valuable resource in these days of modern surgery when an operation may require three or four pints of blood. One of the extremes is open-heart surgery which normally requires 24 pints of blood.

#### FINEST TIRE WARRANTY

Union Oil Company now has what is believed to be the *finest* tire warranty in America.

With the introduction of a new line of Minute Man tires this spring, the company's already famous Insured Tire Warranty on Minute Man III and IV tires became even better. The two top-grade tires are now warranted not only against road hazard failures but also against defects in workmanship and materials failures. If the tire fails within 10,000 miles or one year (whichever occurs first), you get a new one free!

The only exceptions to the warranty are for repairable punctures and deliberate damage.

After the insured warranty runs out at 10,000 miles or one year, the Minute Man tires are still covered under a warranty for workmanship, materials and road hazard failures on a pro-rata time basis.

# BUSINESS HIGHLIGHTS

#### SEATTLE EARTHQUAKE

An earthquake in Seattle April 29 resulted in about \$10,000 damage to our Northwest Division office building in Seattle. Other plant and equipment came through practically unscathed. There were no injuries to employees.

#### THE FINEST IN FROZEN FOODS

One of the newest Union Oil gasoline accounts in the state of Washington is interesting because if you eat almost any kind of frozen vegetables they might have come from this company's factories.

The Twin City Foods Company of Stanwood, Washington, freezes thousands of tons of fruits and vegetables and packs them under 99 different labels. Thus, no matter what brand you prefer, chances are high that it may have come from a Twin City packing plant either at Stanwood, Ellensburg, Arlington or Snohomish, Washington.

Twin City Foods is the largest independent frozen foods processor in the Pacific Northwest and, incidentally, is a substantial gasoline user. An indication of the company's scope of operations is that it can store more than 27,000 tons of frozen peas, strawberries, corn, carrots, lima beans, broccoli or brussels sprouts.

Frozen foods are packaged in containers ranging from 10 ounce family servings to 60 pound hotel and institutional sizes. One of the latest packaging innovations recently begun at Twin City Foods is the so-called "boil in a bag" frozen foods. Frozen vegetables are mixed with a seasoned butter sauce, then packed in a polyethylene bag from which all the air is removed.

Why vacuum-pack frozen foods? So the bag won't float when you boil it.

#### SAFETY AWARDS PRESENTED

Pima Mining Company, a 25 per cent Union Oil affiliate, is growing.

PIMA MINING WILL GROW

Cypress Mines Corporation of Los Angeles, which has a 50 per cent interest in Pima Mining, has announced plans to triple the capacity of the copper milling and smelting plant at Pima's plant near Tucson, Arizona. The \$2 million expansion program will boost capacity from its present 6,000 tons a day to 18,000 tons a day.

Utah Construction and Mining Company holds the other 25 per cent interest in Pima Mining Co.

#### STOCKTON SPRUCE-UP

A portion of downtown Stockton, California, is undergoing a face-lifting. The J. P. Smith Construction Company of Sacramento is demolishing 12 square blocks of deteriorating buildings in the west end of the city.

Once cleared, the area will become the site for modern office buildings. Union Oil Company is supplying the contractor with petroleum products for the two-year-long project. The best safety device is a careful man, and the efforts of careful men around Union Oil Company have paid off. Safe operations at Union Oil Company in general and at Research Center, Los Angeles Terminal and the Pipeline Department in particular have been recognized by the National Safety Council.

The greater Los Angeles chapter of the N.S.C. recently presented the following awards at a dinner given by the N.S.C.

First: Research Center, which now has a record of more than 2.6 million man hours without a chargeable onduty accident, was tied for first place in the Group B category (fewer than 500 employees) of the research and development classification.

First: Los Angeles Terminal's compound and packaging operations section got first place award in the manufacturing operations classification. Los Angeles Refinery won second place in this class.

First: the southern division of the Pipeline Department won a first place award in the oil and gas pipeline operations classification. All of the above first-place winners had a lost-time accident rate of zero.

Second: Union Oil Company won

second place in the Los Angeles area in the company-wide category of petroleum companies.

#### **AUTOMATED REFINERY TRAINING**

Before a fledgling pilot checks out in a multi-engine jet transport, he "flies" the airliner in a ground trainer called a simulator. The simulator is set up to give the pilot the "feel" of the multimillion dollar aircraft without risking all on a now-or-never flight.

So, too, are refinery operators at Oleum Refinery checked out in a training device before they take the controls of a big refinery unit. Like the jet simulator, the refinery training device gives the operator the "feel" of the unit. It is set up to simulate the process flow and any variations taking place in refining units.

Oleum's device, called an operator trainer, has three principal parts: a graphic display panel, an instrument panel and a control console.

Here's how it works: A flow diagram for the process being simulated is laid out on the graphic display panel. Instruments are so connected that they will respond in the same manner as would instruments on an actual unit's control board.

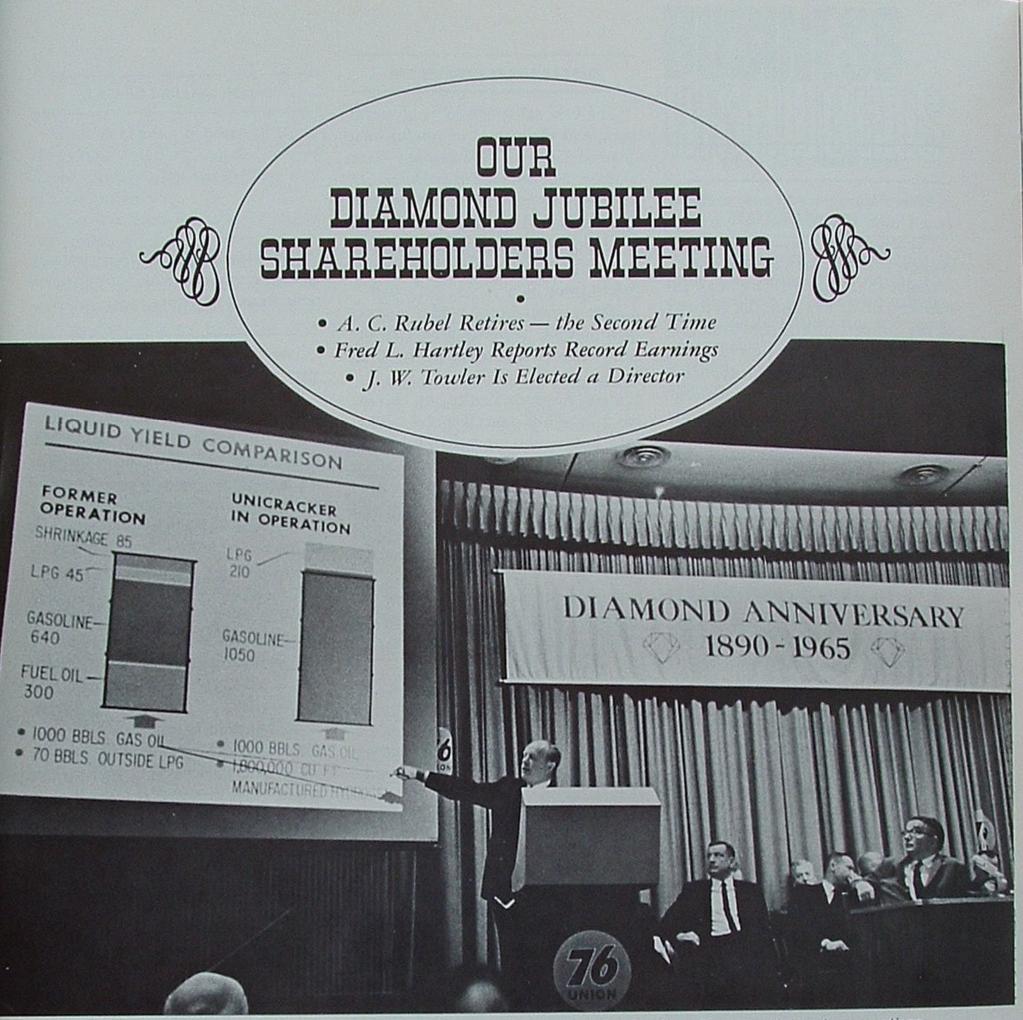
The instructor manipulates switches on the remote console to simulate a variety of operating conditions—both normal process variations and offnormal variations.

The trainee goes through the process step-by-step, explaining the flow and making any necessary adjustments to maintain proper operations. The instructor can watch the trainee's progress and either speed up or slow down the training program to match the trainee's rate of learning.

The result: better trained operators and shorter training periods.

Supplying energy for urban renewal in Stockton, California





At the 75th Annual Shareholders Meeting, President Fred L. Hartley points to chart displaying Unicracker operations.

THE 1965 Annual Shareholders Meeting — our 75th — convened at 10 a.m. Monday, April 26, before a capacity audience of shareholders in the Union Oil Center Auditorium.

Here is what happened:

- Chairman of the Board A. C. Rubel retired, for the second time.
- President Fred L. Hartley reported earnings of \$67 million for 1964 and \$19.5 million for the first quarter of 1965 — both were records.
  - With the exception of Rubel, all directors were

re-elected. Senior Vice President John W. Towler, Refining and Marketing Division, was elected to the board.

President Hartley, in the major address of the meeting, reported seven significant events which he predicted would have a great impact on Union Oil's future.

They were:

First: Union and four partners won a bid to operate California's offshore East Wilmington field — one of the largest unproduced oil fields in the world.

Second: Union and three partners were awarded a concession offshore from Iran in the Persian Gulf.

Third: Union was awarded a 100-per-cent exploratory concession in Dahomey, which adjoins Nigeria in West Africa.

Fourth: A newly built \$22-million Unicracking unit at Los Angeles Refinery has surpassed design capacity, contributing even further to a high profit outlook in 1965.

Fifth: We recently christened two large jumboized supertankers.

Sixth: The long-litigated Tallman case, indirectly involving our gas and oil properties in Alaska, was decided favorably by the U. S. Supreme Court.

Seventh: We are negotiating for a merger of the Pure Oil Company into Union Oil.

Senior Vice President K. C. Vaughan told the shareholders that the Exploration and Production department is continuing its upward momentum. "Union's reserves of crude oil and natural gas — basic raw material by which we live — were at new highs at the end of 1964, even after record production of both," he said.

Vaughan pointed out that our world-wide activity is changing the pattern of our reserve distribution. Ten years ago, 76 per cent of our reserves were in California; 15 per cent were in Louisiana; and nine per cent were in other states and Canada. Today, California reserves are only 43 per cent of our total, while Louisiana provides 30 per cent and other states and foreign have 27 per cent.

He listed several important new ventures Union has embarked on in the past few months.

"In addition, Union also expects further growth in areas where we now have production or have established the existence of substantial reserves," he said. "We are confident 1965 will be another record year for Union Oil Company. The projects I have outlined will contribute to our success this year and for the years to come."

The next speaker, William Farrar, president of Union Oil Company of Canada, read a copy of a resolution adopted by the board of directors of Union Oil of Canada expressing tribute to A. C. Rubel, outgoing board chairman of the Canadian affiliate.

More than 24 million shares of Union Oil stock were represented by proxy and in person at the meeting. This involved 85 per cent of the company's outstanding share-holders of record, who own 92 per cent of the company's outstanding shares, one of the highest percentages in industry. Calvin Morrill of San Pedro, 6 years old, was the youngest shareholder at the meeting, and 90-year-old Fred H. Solomon of Los Angeles, who acquired his stock in 1929, was the oldest.

In keeping with the theme of Diamond Jubilee in Union's 75th year, the lobby of Union Oil Center was decorated with models, displays and exhibits depicting 75 years of progress.

During the meeting, Cy Rubel delivered his farewell address as an officer of the company. We quote:

"As my last official act as chairman of the board, I am going to exercise my prerogative to personally thank those who have done so much to advance the interests of the company during my brief administration:

"-To the management team and their staffs, and particularly to the members of the Executive Committee and the department heads for their individual and collective efforts and their complete devotion to the company's interest;

"-To the more than 7,000 employees in all departments and in all categories, for their loyalty and hard work, which has contributed so largely to our success;

"-To our more than 4,400 dealers who have so ably represented us during the numerous ups and downs in the retail market over the past three years;

"-To our board of directors whose good judgment, wise counsel and constructive support have enabled management to proceed with confidence; and,

"- Last but not least, to you, our shareholders, for your continued interest and support of management, as evidenced by your attendance, your proxies and your many letters of approval and constructive criticism.

"I leave with the assurance that the company is in strong and capable hands, with a board of directors, the management team, an outstanding chief executive, supported by employees and dealers, whose combined talents are second to none in our or any other industry.



The youngest and oldest Union Oil shareholders at meeting: (L-R) Calvin Morrill, 6, and Fred H. Solomon, 90.

"The company's resources, as measured by oil and natural gas, favorable exploratory land position, both domestic and foreign, modern refineries, transportation and sales facilities, are in the best competitive condition in the company's history. I am, therefore, confident that in the predictable future the company will continue its program of progress and prosperity."

There followed a standing ovation for Rubel, and shareholders approved a resolution paying tribute to the outgoing chairman for his 42 years of service to the company.

The meeting was adjourned at 11:35 a.m.

# Leasing The Subsurface Of Los Angeles

Jim Kearns had to get 25,000 leases signed — fast!

WORD OF the lease play reached Jim Kearns one morning in September. Sitting in his office in Santa Fe Springs, he turned to his assistant, Bob Anderson, and secretary, Deane (pronounced Deanie) Kriens, and said, "We have work to do — 25,000 leases to prepare — 25,000 doorbells to ring.

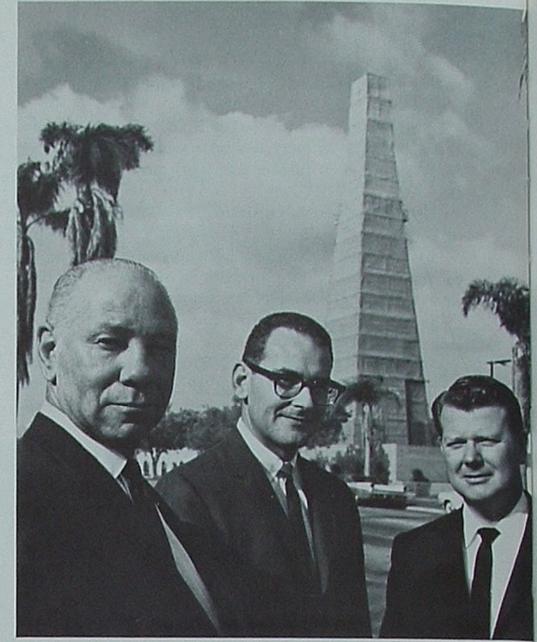
"Deane, better get about 15 girls to type and mail the lease forms." To Anderson he said, "Guess we'll need six or seven draftsmen to help with the city maps." To both he cautioned, "Tell everyone not to even whisper about the play until target date."

"Bob," Kearns said, "let's you and I get started."
On the shoulders of F. J. Kearns Jr. had fallen the task of leasing the La Tijera area of Los Angeles — 3,000 acres of densely populated area, solidly occupied by homes, schools, businesses and parks. Ownership was recorded in the names of 25,000 individuals and businesses.

The job had been turned over to Kearns only after company geologists, geophysicists and management had decided that La Tijera might be a good place to prospect for oil. After carefully checking their conclusions, the oil hunters had asked a district landman whether the area was available. To a landman, availability depends on whether mineral rights have been bought or leased by a competitor. In this case, they had not.

Kearns's first step, once he was assigned the La Tijera job, was to rent a land office; it needn't be luxurious just any place centrally located where a small office staff could handle paper work, man phones and accommodate the big crew of leasemen meeting for daily assignments. A suitable place was found on Crenshaw Boulevard,

Kearns also needed a crew. He could use agencies where professional leasemen could be found, of course, but he wanted a representation of local people, men who knew their neighbors and their neighborhood. He interviewed more than a hundred applicants before finding fifty who were just right — alert, intelligent, polite, neat-appearing men who could be relied upon to favorably



Jim Kearns (R) with realtor Cecil Murrell (L) and Bob Anderson at 4th and Washington drillsite.

represent the company. He also counted on a dozen experienced Union Oil landmen, borrowing from as far away as the Gulf Division.

While recruiting his crew, Kearns also "cased" La Tijera with Anderson, both men meeting and talking with scores of business men, particularly real estate men. "It's important to meet community leaders and know the mood of the people before you start ringing doorbells," Kearns said.

Simultaneously, at Union Oil Center and in the Santa Fe Springs land office, title work was in full swing. Each of the 25,000 properties in La Tijera — the name, street address and property description — had to be culled from public records. It was the job of Deane Kriens and her 15 typists to transfer this data to lease forms, and to make up 25,000 ten-dollar checks. Then they prepared a huge bulk mailing: To each property owner went a lease form, return envelope, letter of explanation from Kearns, and Union Oil's special leasing brochure, "Oil in Your Community."

Deane and her crew worked quickly. Despite the immensity of the task, only one month was allowed for preparation. The three days and nights preceding the target date were feverish ones at Santa Fe Springs. Lights burned all night. Deane even had to lend the company five stamps to finish the final mailing.

The big push was on.

At the opening of the lease play on Crenshaw Boule-

vard the next morning, Kearns spoke to his task force of lease men.

"Remember," he admonished, pointing to the city maps that papered the walls, "concentrate first on the areas surrounding schools and parks. If we sign a majority of property owners along these lines, the city will follow along and lease us their mineral rights under those schools, parks and streets."

The first few days were described as a "bunny hop," with men going from door to door explaining the leasing program. They were under orders to stay no longer than 10 minutes.

"Tell 'em you'll be back when they've had time to think it over," Kearns said. "The important thing is hit those doors — fast! Otherwise, competition will get wind of the play and beat us out. Let's go!"

That evening the doorbell rang in a small home on West 36th Place in Los Angeles. The owner, William Alford, was working in the kitchen. Mrs. Alford came to the door.

The caller was Victor Nickerson, a well-known businessman in the area, now representing Union Oil Company. Nickerson and Alford had a slight acquaintance. With a 10-minute deadline, Nickerson wasted no time:

"Mr. Alford," he began, "you probably received a letter and lease form from my company within the last day or two. The letter invited you to join with Union Oil — at no cost or trouble to yourself — in exploring your property for gas and oil."

Alford nodded, but said he hadn't paid much attention to it. "Why are you fellows interested in a little hunk of ground like mine?" Alford asked.

"Let me explain it this way," Nickerson replied.

"Your lot may not be very large on the surface, but it really goes down pretty deep — about 4,000 miles.

"The only part we're interested in is the subsurface, starting about 500 feet down. Our geologists have a hunch there might be some oil down there, and . . ."

"You mean they want to drill an oil well in my back yard?" Alford asked,

"Not quite," Nickerson said. "You see, the city of Los Angeles takes a pretty dim view of where you place oil derricks these days. They'll allow only one drilling site on a 40-acre tract. So we select about two acres somewhere near the center and drill several wells off at various angles; they call it whipstock, or slant, drilling."

Alford recalled reading something about it.

"That's right," Nickerson said. "The book also tells you how the derrick is camouflaged and soundproofed so nobody in the neighborhood will be disturbed by drilling noise. Furthermore, the derrick has to be taken down within 30 days after the wells are drilled.

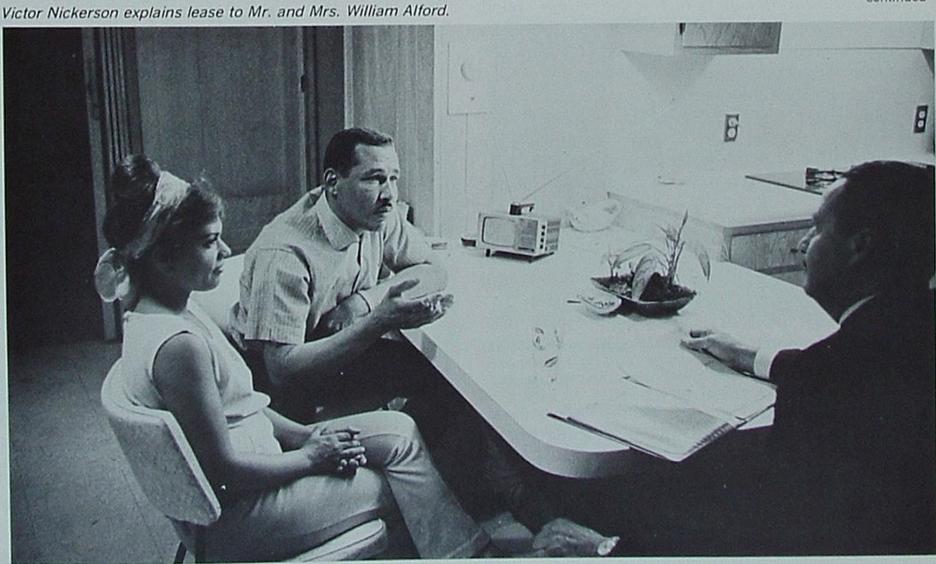
"When it's all done, the production site will probably look like a doctor's office with a fenced-in, halfacre parking lot. It might be several blocks from here."

A questioning look crossed Alford's face.

"Then, how'll you know there's oil under my lot?" Nickerson quickly replied. "Maybe there'll be no oil directly below where we're sitting now. But the city and the oil industry have worked out an arrangement that's fair to everyone. They have agreed that, if oil is found anywhere within the 40-acre drilling tract, royalties will be paid in proportion to the surface area each person owns. Even if the oil pool's under the other end of the tract, you'll get your share."

Alford had an idea. "Hadn't I better take a chance and drill my own well?" he asked.

continued



### Leasing

continued

"I'd say 'no,' for several reasons," was the reply. "In the first place, the city won't let you drill unless you lease 75 per cent or more of the entire 40 acres. Besides, drilling costs run to several thousand dollars a day. And the chances are 40-1 you wouldn't hit oil."

"Well," Alford asked,"What do I stand to make if Union hits oil?"

"That's a good question," Nickerson said. "Nobody can tell, really, until the wells are drilled. Maybe they'll be dry holes or maybe they'll produce 10,000 barrels a day. It's a gamble.

"But this I can tell you. There's a similar drilling tract a short distance from here—at Las Cienegas—where Union has drilled successfully. A friend of mine who owns a lot about the size of yours gets a royalty check of about \$35 a month. It's his share of the oil production.

"And," Nickerson continued, "the checks will keep coming as long as the oil lasts — many years, perhaps. Union might do as well on your tract — or worse — or better. Nobody knows.

"At least it won't cost you a cent to find out; they take all the chances and pay all the costs. What's more I have their check here for \$10 to hand you when you sign the lease."

The signing of William Alford and his wife to a lease agreement, though factual, is not entirely typical. A few property owners are easier to convince. Landman Kearns says that during the early days of a lease play the mailman easily outperforms all leasemen combined in delivering signed documents.

Others, however, are hesitant. They want more facts, or they want to consult someone else—an attorney, perhaps — or they will wait to see what the neighbors do. Often it takes several calls to get a signature.

With the lease play in its wrap-up stages, Jim Kearns still couldn't relax. The toughest of the hold-out landowners had yet to be signed by the remaining corps of his best leasemen. Then the Land Department could deal for one of several possible drilling sites.

But at least the secrecy and the big push were over. Now everyone could get back to the comparatively quiet routine of a normal working day.

Or could they?

The phone was ringing in Kearns's office. As he listened, the grin subsided. When he hung up, he turned to his secretary and said, "Deane, you'd better keep those extra typists. It looks like another big lease play."

### TURNING BACK The PAGES



Just 25 years ago Hitler had overrun Europe, the U.S. was marshalling its resources to meet a threat of war, Union Oil's new office building in San Francisco was under construction, the tankership L. P. St. Clair had recently been launched and exciting oil news came out of the Deep South. Said the Times Picayune of New Orleans on its front page:

"The Union Oil Company of California climaxed its entry into coastal Louisiana with a success that is seldom achieved so soon, establishing the White Lake field in Vermillion parish.

"The Union company's well, Walter White Heirs No. 1, is approximately 12 miles south of Kaplan in the White Lake prospect, which until a week ago was regarded with little favor in oil circles. Late reports Friday from the area indicated that the well is making more than 200 barrels of oil a day of about 36 gravity through a small choke.

"The Union Oil Company about two months ago took over the prospect from the Louisiana Land & Exploration Company after the latter company had drilled two dry holes."

Houseboat "Little Eva," shown in the accompanying photo, was the field headquarters of this pioneering success in an area described by the Union Oil *Bulletin* as "abounding in fur muskrat, otter, mink, water moccasins and alligators."

That was the beginning of our Gulf Division's achievement now measuring more than 500 oil and gas wells in 68 separate fields. Currently, 340 employees in the division account for a daily net production amounting to more than 35,000 barrels of crude oil and natural gas liquids and 500 million cubic feet of natural gas.



On July 1 Marjorie Gleason (L) ends a 30-year career as an executive secretary - nearly 20 of these years in the service of Union Oil's past chief executives, the late Reese H. Taylor and the recently retired A. C. "Cy" Rubel. Marge came to Union on November 1, 1945, when the president of a finance company for whom she worked was transferred to San Francisco. "I didn't want to move," she said. "Mr. Taylor heard I was available and asked me to work as his secretary." Marge was never one to get excited about anything; call her any time of day, during good times or bad, and you always heard an unruffled tone of reply. She was topnotch in efficiency, yet always patient and polite. For a person who "didn't want to move," she certainly did her share to keep pace with the front runners. On her retirement, the Wisconsin-born lady who went to school in Michigan and to work in California was still loath to move (from Los Angeles). "I've been offered two or three jobs," she confessed. "And I'm tempted."



Mrs. J. H. Fine, better known as Marguerite at our Midland, Texas, office and to everyone in the Central Division, was given a two-column salute in the Midland Reporter-Telegram of March 21, 1965. Her oil career spans nearly 31 years. She joined Union Oil at Midland in 1940, when there were only two people in the office and no production in the field. Except for a brief newspaper-editing recess in 1949, she has been in the thick of Union Oil's development ever since. She is wife of the deputy tax assessor-collector for Midland County - and mother of their daughter, Mrs. E. J. McElroy, Jr. Though born in Kentucky, Marguerite is claimed by the state of Texas as one of their FINEst.



Miss Dorothy Elliott, daughter of retiree C. H. Elliott (formerly of our Comptrollers Department), is the recipient of a Full-bright fellowship for a year's study at the University of Oslo, Norway. A graduate student in the USC School of Music, Dorothy earned her master of music degree this June. She sails in August.





Inspecting the facilities at Cut Bank Refinery in the early spring sunshine are, from left, Superintendent F. S. Allinder, Vice President C. E. Rathbone, Senior Vice President John W. Towler, and Glacier Division Manager Burton D. Thorpe.



Leaders of the Rodeo Rotary Club (at speaker's table) are, from left, George Deason, President Levi Wagner, Vice President Clyde Caldwell (general superintendent of operations at Oleum Refinery) and past president Frank Joseph. During one of their recent meetings, held at Oleum, a group of high school graduates participated as special guests. The students were encouraged to continue their education through a program the Rotarians have titled "If I knew then what I know now." The community service, sponsored by Rotary for the past four years, has aroused enthusiastic response and met with excellent success.

# Union Oil Foundation Awards

#### 4 PROMISING STUDENTS WIN 4-YEAR SCHOLARSHIPS

UNION OIL CENTER

Corporation, the Union Oil Company of California Foundation each year awards four college scholarships to sons and daughters of Union Oil Company employees, dealers, consignees and distributors. The scholarship awards are made up of two separate grants: (1) a stipend to the student, which may be as much as \$1,500 a year for four years, and (2) a supplement to the college or university selected by the student.

To qualify for application, high school students must take a three-hour long National Merit Scholarship qualifying test. This year more than 807,000 students from 17,162 high schools in the country took the tests. The awards presented by the Union Oil Foundation are based on test results, plus high school grades, leadership qualities, citizenship and extra-curricular activities.

Presentations of the scholarship awards were made by A. C. Stewart, president of the Union Oil Foundation.

Details of the scholarship presentations appear on this page.



OJAI, CALIFORNIA

tory School in Ojai, plans to enter California Institute of Technology this fall to major in mathematics. At Villanova, Tom worked on the newspaper staff, was Chess Club president, and belonged to the Young Americans for Freedom. He is the son of Mr. and Mrs. Thomas O. Mahon. His father owns Tom Mahon Chevrolet, a car dealership in Ojai that handles Union Oil products. Tom is pictured here with (L) A. C. Stewart, and (R) Reverend John F. Glynn, principal of Villanova.



TONASKET, WASHINGTON

plans to enter Washington State University this fall to major in engineering. At Tonasket High, he was president of the Honor Society and a track team letterman for four years. He played in the school band and is a member of the National Honor Society and winner of the National Mathematics Association pin award for 1963-64. He is the son of Mr. and Mrs. Roy W. Gratix of Enterprise, Washington, where they operate a Union Oil station. Henry is pictured here with A. C. Stewart.



FULLERTON, CALIFORNIA

Richard G. Wilson, a graduate of Sunny Hills High School in Fullerton, plans to enter Stanford University this fall to major either in engineering or physics. At Sunny Hills High, Wilson was a member of the California Scholastic Federation, the swimming and water polo teams, and was a language award winner. He is the son of Mr. and Mrs. John F. Wilson. His father is a research associate at Research Center, Brea, California. Wilson is pictured with his parents and A. C. Stewart.



SCOTTSDALE, ARIZONA

obert C. Swan, a graduate of Coronado High School in Scottsdale, plans to enter the University of Arizona this fall to major in business administration. At Coronado High, he was student body president in his senior year and Boys State Governor in 1964. He was president of the Arizona Association of Student Councils, and a two-year member of the National Honor Society. He is the son of Mr. and Mrs. Charles L. Swan. His father is a commercial sales supervisor in the Southwest Mountain Division marketing headquarters in Phoenix. Robert is pictured here with (L-R) Reg Brenchley, S.W. Mountain Division sales manager; Marvin D. Johnson, University of Arizona vice president, and A. C. Stewart.

#### 24 Petroleum Engineering Scholarships

In addition to the four-year scholarships awarded to sons and daughters of Union Oilers, the Union Oil Foundation also grants a number of petroleum engineering scholarships each year. These are essentially honor awards made to undergraduate petroleum engineering students in an effort to create wider interest in petroleum engineering as a career. In the past few years there has been a serious decline in the number of students choosing petroleum engineering as a major.

Recipients normally are awarded \$500 for a oneyear period, and candidates are selected from petroleum engineering students by the department heads of 10 widely recognized petroleum engineering schools. The 1965-66 school year is the second year that Union Oil Foundation has awarded petroleum engineering scholarships, and 24 students have been chosen for awards.

Colleges and universities involved in the petroleum scholarship award are the Colorado School of Mines, Louisiana State University, Stanford University, the University of California at Berkeley, the University of Houston, the University of Oklahoma, the University of Southern California, the University of Texas, the University of Tulsa and Texas A&M.



One of 24 scholarships: E. E. Sands, manager of production for the Gulf Division (L), presents a petroleum engineering scholarship to Barton M. Johnson who will attend the University of Oklahoma. Johnson's principal, B. Roy Daniels (R) of Norman Senior High School, Norman, Oklahoma, receives a recognition plaque.



→ Farewell Party for A. C. Rubel 🏵 💝

On the evening of April 26, the day A. C. "Cy" Rubel retired as chairman of the board of Union Oil Company (see pages 16-17), President Fred L. Hartley hosted a dinner party for 175 civic and business leaders to honor Rubel for his 42 years service to company and community. After the dinner, Rubel was lauded in resolutions presented by the office of Los Angeles Mayor Samuel W. Yorty, the Los Angeles County board of supervisors and business associates. In the picture above, President Hartley is presenting a farewell gift to Rubel. Pictured below, clockwise

from the front left, are: S. F. Bowlby, consultant to the Bank of California; J. C. Britton, consul general of Canada; A. C. Stewart, director of Union Oil Company; Burton W. Chace, chairman of the board of supervisors, Los Angeles County; honoree A. C. Rubel; Edward A. Martinez, chief of protocol for Los Angeles (representing Mayor Yorty); host Fred L. Hartley; Y. Tanino, executive vice president of Maruzen Oil Company of Japan; Toshiro Shimanouchi, consul general of Japan, and William H. Thompson, manager of community services, Union Oil Company.



## SERVICE EMBLEM AWARDS



#### CORPORATE

June 1965

#### **35 YEARS**

HOWARD D. EMERSON	Research	Center
ANGELA PICTOR	Union Oil	Center
FREDERICK S. SCOTT	Research	Center

#### **30 YEARS**

HAROLD S. ZANZOT. . . . . . . . . . Union Oil Center

#### 25 YEARS

PETER S. BACKLUN	м	(40)	C#	18	*	4.	500	1	Research Center
PAUL W. FISCHER.							*1		Research Center
HAL C. HUFFMAN.									Research Center

#### 20 YEARS

GEORGE R. HUBBARD...... Research Center

#### 10 YEARS

MARJORIE	COON								Union Oil Center
HELEN M.	HEAD.	10			(N				Union Oil Center
ROYCE W.	JACO .		. (6)	. ,				,	Research Center
RAMON E.	MARO	TI	A			u,		6	Research Center

#### **EXPLORATION & PRODUCTION**

June 1965

**45 YEARS** 

SAM A. MORAN ...... Union Oil Center

#### 30 YEARS

MAJOR P. CLARK......Orcutt, Calif. ALFRED A. TOMPKINS...Santa Fe Springs, Calif.

#### 25 YEARS

#### 20 YEARS

MARION L. CAPITANI . . . Orcutt, Calif. EDGAR NASH . . . . . . . . Cut Bank, Mont.

#### 15 YEARS

Santa Maria, Calif. Houston, Tex. Orcutt, Calif.

#### 10 YEARS

DODERT C BAIRD	
ROBERT S. BAIRD	Orcutt, Calif.
CHESTER F. BUDD, JR	San Joaquin, Calif.
RICHARD H. BUTLER	Midland, Tex.
LESLIE L. COLLIER	Sinton, Tex.
ROBERT B. HUGHES	Lompoc, Calif.
RALPH W. SEXTON	Houma, La.
BERNARD V. STRAUB	Casper, Wyom.
JO ANN SUTER	Union Oil Center

#### **REFINING & MARKETING**

June 1965

**40 YEARS** 

THOMAS J. KELLY......Los Angeles Refinery

35 YEARS

**30 YEARS** 

ALEXANDER CAMPAU	Los Angeles
WILBUR M. CARSON	Union Oil Center
CLARENCE R. FALK	. Oleum Refinery
CLARENCE E. HALL	Oleum Refinery
RICHARD SPAANLos	Angeles Refinery

#### 25 YEARS

PAUL K. DOYLE	Union Oil Center
WALTER T. JAMESON	Oleum Refinery
KENNETH H. LEA	. Ketchikan, Alaska
MATTHEW S. THOMSON	Union Oil Center

#### 20 YEARS

K. A. BADGLEY	Union Oil Center
JOE L, BARBERL	
JAMES E. COATSL	os Angeles Refinery
CHARLES G. GEARHART	
Santa I	Margarita Stn., Calif.
ROBERT J. HESTER L	os Angeles Refinery
ELMER E, MOLZAHN	Seattle
WALTER F. STAFFORD	Oleum Refinery

#### 15 YEARS

JAMES G. BAIRD	San Luis Obison Calif
EILEEN F. BROWN	DECEMBER OF THE PROPERTY OF TH
VERNON E. DEARDEN	Oleum Refinery
CLEMENT O. HENDRY	Oleum Refinery
WILLIAM P. JOHNSON .	Oleum Refinery
WILLIAM L. KNIGHT	Portland
LEWIS R. MOTE	Los Angeles Refinery
ROBERT E. ROBBINS	
STILLMAN F. SAWYER	Los Angeles Refinery
LUCILLE F. SCOFF	San Francisco
ANTONIO R. SILVA	Oleum Refinery
C. C. SLIMKOSKY	Bend, Oreg.
MARY W., STRADER	
D. J. VAN HARREVELD .	
RAYMOND E. WEBB	
	THE RESERVE OF THE PARTY OF THE

#### 10 YEARS

WARREN C. BERG Los Angeles Refinery
LARRY N. BUSS Santa Maria, California
KIRK O. CLOEPFIL Eugene, Oreg.
DAISY M. DAVISPortland
N. W. IRSFELD, JR Eugene, Oreg.
ALBERT B. KAUFMANPortland
ALBERT J. KENNEL Richmond, Calif.
DEAN E. KIRKPATRICK Portland
BEVERLY A. LIBERALE San Francisco
DALE A. MARTIN Los Angeles Refinery
RICHARD V. McDOWELL Santa Maria Refinery
ROBERT M. SANDMEYER Union Oil Center
BERNARD L. SCAPARRO San Francisco
JAY D. WALKER Kern, Calif.

#### **DEALERS**

June 1965

45 YEARS

FRANK F. MUNOZ ..... Santa Maria, Calif.

35 YEARS

SETH MILLER CO. . . . . . . . . . . Pasadena, Calif.

30 YEARS

DAVID G. SBARBARO . . . . . . . . . . Weed, Calif.

25 YEARS

W. H. BARTON		 		. Y	orba	Linda,	Calif.
H. F. HOFFMAN .	 				. Cor	onado,	Calif.
C. W. MORRIS	 		 		San	Diego,	Calif.
RIEDER & CO	383		 		. Cut	Bank.	Mont.
DALE WATT						leanna	

#### 20 YEARS

OWEN E. CAMPBELL	. Pacific City, Wash.
JOSEPHINE COLE	Usk, Wash.
EMIDIO DEPINA	Bakersfield, Calif.
WAYNE M. DODDS, SR	
PAUL DOUVROS	San Fernando, Calif.
HAROLD LEWISP	ort Townsend, Wash.
J. B. IRVING	
R. SCHMULTZLER	

#### 15 YEARS

WILLIAM D. DEIBER, JR Gilroy,	Calif.
ARTHUR HOLDENMolalla,	Oreg.
R. A. MELENDY Pasadena,	Calif.
A. J. O'LEARY	Calif.
CLAUDE QUINN	Calif.
GENE TEAUGE CHEVROLET Stayton,	Oreg.

#### 10 YEARS

E. L. ASHTON	Evanston, Wyom.
ED BERMAN, dba SERVI	ICE GARAGE . Los Angeles
HARRY CLAYTON	College Place, Wash.
WILLIAM R. DAVENA	Benicia, Calif.
A. L. EDWARDS	Colton, Oreg.
ART MOTULEWICZ	Modesto, Calif.
J. TROUT	Evanston, Wyom.

#### 5 YEARS

ANDREW ALLEN	Tucson, Ariz
BEACON LITE TACKLE BO	X Westport, Wash
JOHN BIEGLER	Fullerton, Calif
RAYMOND L. BREWER	Palo Verde, Calif
LEROY BURROW	
CAPSA ENTERPRISES, INC	
DAVID M. CERAOLO	Oakland, Calif.
BOB CROW	Patterson, Wash
LOIS CROW	Patterson, Wash
EDMUND D'ETTORRE	San Mateo, Calif.
JAMES E. DAILEY	Shelton, Wash
SOL FEINGOLD	Tucson, Ariz
J. K. FRAZIER	Clearlake Oakes, Calif.
VIOLET FRAZIER	Clearlake Oakes, Calif.
BOB FRITZINGER	Piedra, Calif.
FRANK GARBUTT	Mecca, Calif.
ORLINDA GUNNING	
ROYCE HARTFIELD	Arcadia, Calif.
TED JOHNSON	
T. W. JOHNSTON	Belfair, Wash.
ROBERT KONDO dba BOB'S UNION SERVICE	Kailua, Hawaii
DONALD A. LIBLEN G	reen Valley Lake, Calif.
ADAM LIPP	North Hollywood, Calif.
WILBERT M. MARTIN	
T. L. MORRIS	
OAKLEY'S GARAGE	
PACIFIC RACEWAYS	
H. A. PARKER	Tok Junction, Alaska

DARYL PHARES Vancouver, Was	h.
R. L. ROSE	lif.
R. SADLEIR Piedra, Ca	lif.
M. G. SHIRLEY Drain, Ore	g.
L. SLAYTON	lif.
GEORGIA WARNER	sh.
ZENITH WOODRUFF	lif.

#### **CONSIGNEES & DISTRIBUTORS**

June 1965

35 YEARS

D. JACOBSON......Pendleton, Oreg.

30 YEARS

GORDON WIGG ......Susanville, Calif.

10 YEARS

10 YEARS	
F. E. MEYERS (May, 1965)	Bend, Oreg.
A, J. MILLER (December, 1964) E	Boise, Idaho
SUNBURY AUTO PARTSS	unbury, Pa.
SOUTHERN PARTS AND	
ELECTRICDurham,	North Car.

#### RETIREMENTS

#### May 1965

JOHN V. DAHLGREN Oleum Refinery October 31,	1927
RALPH A. DURBIN Phoenix	1936
CLAUDE FIDDLER Long Beach, Calif October 11,	1932
LOUIE HANSEN Oleum RefineryJune 12,	1930
CHARLES H. KATZENBERGER Dominguez, Calif July 15,	1925
WILLIAM H. LESTER Research Center December 1,	1921
ERNEST R. SILVA Oleum Refinery March 29,	
FRANK J. ULBING Los Angeles RefineryNovember 27,	

#### IN MEMORIAM

#### Employees

ROY L. WATTS		
Arroyo Grande,	Calif.	

#### Retirees

Hothicoc
MICHELE BARONE Seattle
Portland March 11, 1965
JOAQUIN J. COSTA Santa Cruz, Calif,
EDWARD A. FINLEY Long Beach, Calif March 24, 1965
WILLIAM H. HAMILTON Fullerton, Calif March 2, 1965
CLYDE L. KIRKHAM Paramount, Calif March 22, 1965
Huntington Park, Calif March 28, 1965
Van Nuys, Calif
Arcadia, Calif. March 17,1965
LAWRENCE L. RINGEY Newhall, Calif,
JOHN I. SHERIDAN San Anselmo, Calif February 23, 1965
San Jacinto, Calif March 13, 1965

UNION OIL COMPANY OF CALIFORNIA
P. O. Box 7600
Los Angeles, California 90054

PAID
Los Angeles, Calif.
Permit No. 62

BULK RATE

#### **HOW WE WORK**

Who ever thought a helicopter might be cheaper than a barge? When it came to putting up a new spherical "76" sign at the Union Oil marina on the main channel at San Pedro, the question came up of how to do the job at lowest cost. A truck-crane obviously couldn't get out onto the pier. The smallest barge-crane available was expensive. So they hit on the idea of using a helicopter to lift the 350-pound, sixfoot sphere onto its perch. Pilot Sam Thrasher of Utilities Helicopter Co., who has used his chopper to prospect for uranium in Colorado, to fly geologists in the Rockies and Alaska, and to taxi Union Oilers from Huntington Beach to offshore Platform Eva, was called in for the "sling job." Thrasher described the task as routine, because "there were good men on the ground." He was referring to Ray Stober Construction Company, whose men made the hookup and finished up things with a coat of orange paint. Marina consignee Les Esposito was happy with the new sign as were our marketing and purchasing people who had found the best way to do the job at the least cost.









