

"On Tour"

THE TANKER "OLEUM"

JUNE, 1948

VOL. 10, No. 6



R. D. GIBBS
Vice President

The "bell" we refer to is a nautical measurement of time equivalent to a half-hour, of which there are 17,520 in a 365-day year. By taking an additional mathematical step, using Union Oil's 60 years of sea-faring as a multiplier, we obtain the impressive total of 1,051,200 bells—or one of the longest records of successful oil tanker operation in maritime history.

Pioneer of the Company's fleet was the WALLACE L. HARDISON, the first tankship to be built and operated on the Pacific Coast. She gave a convincing demonstration in 1888 that oil could be safely and economically transported by sea, and forced the Ventura-to-San Francisco rail freight rates on petroleum from one dollar to fifty cents a barrel. In her wake came a steady succession of Union tankers, each a little larger and better than its predecessor. All have contributed valiantly to the growth and development of nations bordering the Pacific; and the fleet's history is remarkable for its fine record of safety and efficiency.

Today, more than a million bells after the HARDISON, our Marine Department bears a heavy and widespread transportation responsibility. Under the Head

Office direction of R. D. Gibbs, our seven largest tankers are each month carrying an average of 3,185,000 barrels of oil and traveling a total distance of 37,000 nautical miles. To accomplish this requires that the ships keep constantly at work, night and day, winter and summer, throughout Pacific waters. Seldom are they slowed greatly or stopped by the most adverse weather.

The job of keeping this petroleum fleet in operation is handled by a group of Union Oilers numbering approximately 320, including the officers and crews who man the ships. Pulse of the enterprise is the office of Captain J. B. Stene, Manager Marine Operations. He and his staff keep in communication with all of the tankships, with the more than 20 ports they serve, and with the refineries and pipe lines that depend upon tankers for transportation of their crude.

Thousands of refined oil storage tanks, scattered coastwise from Nome in Alaska to Valparaiso in Chile, and westward to the Hawaiian Islands, depend upon Union tankers for their oil supplies. Crude oil production from the San Joaquin and Santa Maria Valleys flows



CAPTAIN J. B. STENE
Manager Marine Operations



CAPTAIN O. WEIDEMANN
Marine Representative, San Francisco



MR. R. H. CYRUS
Port Engineer, Wilmington



CAPTAIN L. L. LISHMAN
Port Captain, Wilmington



CAPTAIN D. L. POVEY
Marine Representative, Seattle



MR. H. E. CATTERMOLLE
Chief Ship Dispatcher

San Francisco Bay Points—
Port San Luis
Los Angeles
San Diego

San Jose de Guatemala

Balboa, C.Z.

Curacao
Aruba

Antofagasta

Taltal

Cruz Grande

Valparaiso

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by pipe line to Port San Luis, where a tankship must be on hand regularly to receive it. Oleum Refinery depends almost entirely on water-borne deliveries of crude to keep its stills working and its thousand men employed. To a lesser extent Los Angeles Refinery is also geared to tanker deliveries from the north.

Mr. H. E. Cattermole is Chief Ship Dispatcher.

Supervisory duties have been delegated to Captain L. L. Lishman and Mr. R. H. Cyrus at Wilmington, to Captain O. Weidemann at San Francisco, and to Captain D. L. Povey at Seattle. Aided by the Port Steward and Personnel Representative, they attend to cargo handling, manning, provisioning and repair of ships at those major ports; expedite loading and unloading; and handle all other problems of a local nature pertaining to the fleet's operation and turn-around.

Based either on the number of vessels in service or the tonnage of oil transported, Union Oil Company's ocean-going fleet ranks as the second largest on the Pacific Coast operated by an oil company.

MODERN TANKER



Blueprint of Efficiency

The Tanker

The idea of a sea-going tanker was by no means new when the *HARDISON* created Pacific Coast history in 1888. Several attempts had been made, the first as early as 1863, by European shipping interests to build and use such a vessel. Two or three small tankers had in fact operated along the smooth waters of the Volga River in Russia. But the experiments had collided with numerous obstacles, and hardly a ship had survived the hazardous petroleum trade for more than a few months without being destroyed by fire. Most men felt that tankships would never operate successfully.

The *HARDISON* did not entirely remove this early pessimism, for she too was destroyed by an accidental fire during her first year. It remained for such successors as the *SANTA PAULA*, *FULLERTON*, and *WHITTIER* to prove that fire and rough-water hazards could be conquered by the ingenuity of determined men.

Until 1903, tankships were either converted from or patterned after dry-cargo freighters. However, the building of our *WHITTIER* in that year marked the beginning of a new tanker era. Her steam-generating plant and machinery were placed aft to reduce the fire

hazard. Cargo tanks were made a part of the hull, giving the vessel greater stability in rough weather. A place for dry cargo was built into the forward part of the ship. Cooking facilities, dining rooms, and comfortable quarters for the engineers and crew were placed in the stern. Cabins for officers were built amidships, above the main deck and convenient to the bridge.

Nearly all tankers since 1903 have been similar to the *WHITTIER* in design, but have adopted many modern improvements and refinements. Each succeeding generation of these ships produces a vessel that is larger, safer, faster, more comfortable, and capable of handling a much larger transportation assignment.

The *HARDISON* created quite a sensation in her day. With cargo tanks of 6,500 barrels total capacity, she could carry the petroleum burden of 42 tank cars. However, by way of comparison, today's *LOMPOC* can transport in a single voyage 140,000 barrels (5,880,000 gallons) of gasoline. Merely to match the carrying capacity of seven tankers now in Company service would require a fleet of 127 *HARDISONS*.

Of the major ships now in Company service, four—the *L. P. ST. CLAIR*, *VICTOR H. KELLY*, *PAUL M.*



GREGG, and A. C. RUBEL—have rated cargo capacities of 100,000 barrels. The newer SANTA PAULA, OLEUM, and LOMPOC are each equipped with 140,000 barrels of cargo-tank space. Oldest of these tankers, the ST. CLAIR, was built in 1939, while the three largest and newest are products of 1945.

The fastest of our ships travel when loaded at 15.5 knots, and when empty at 16.5 knots. All use oil for fuel; generate steam for the turning of turbo-electric generators; and are propelled by geared turbines or turbo-electric motors. The largest of them can load a 140,000 barrel cargo in 12 hours, and discharge this full load in 24 hours. The scheduled dry-docking of these ships every six months for a period of seven days keeps them in top operating condition. Equipped with nearly every modern instrument and device, including radar and radio telephone, they are splendid examples of efficient water transportation.

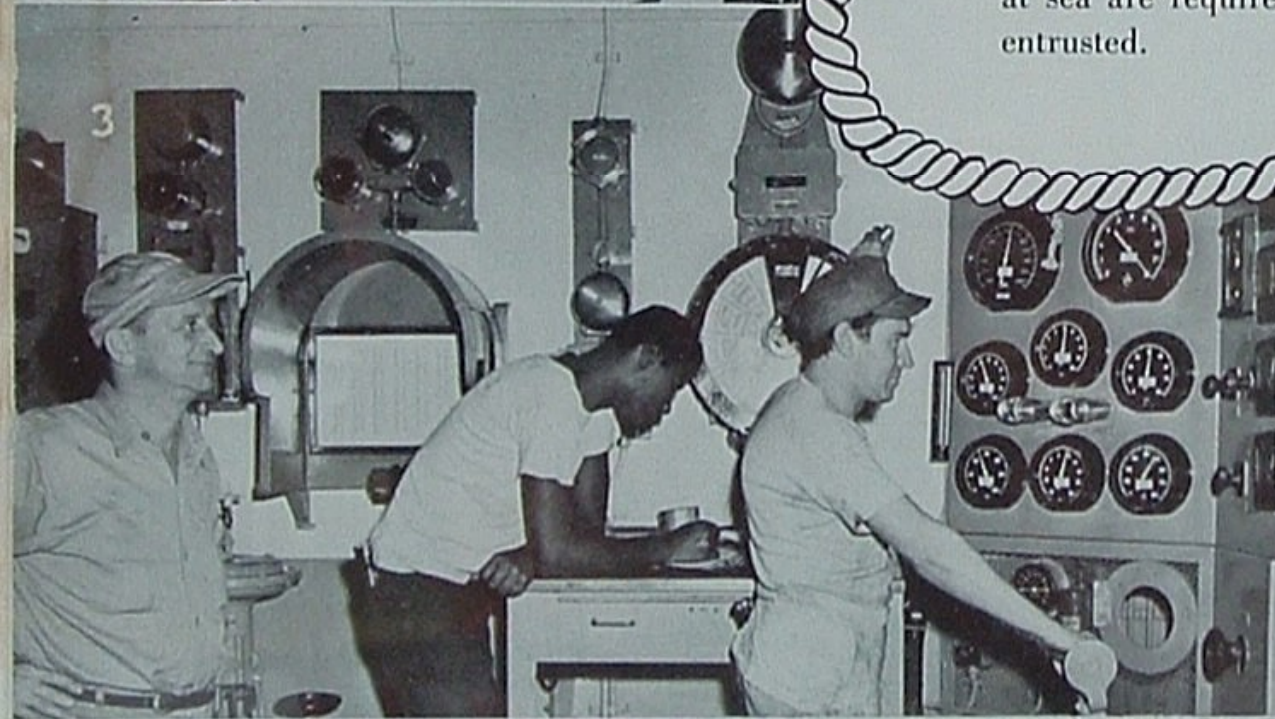
A tanker at sea, above, gives an inaccurate impression of her size. In dry dock, at right, the hull rises to an impressive height.





The Officers

Safe and economical operation of a modern tanker imposes great responsibility upon the 10 men comprising the ship's officers. . . . The Captain is master of the vessel and directly responsible for its work and preservation. . . . In supervising navigation, ship upkeep, cargo handling, records and reports, the Captain is assisted by 1st, 2nd and 3rd Mates. The Radio Operator keeps the tanker in contact with stations ashore or other ships at sea, and may also serve as timekeeper-clerk. These officers are quartered amidships under the bridge. . . . To the Chief Engineer is delegated the operation, emergency repair, and upkeep of the complicated machinery that propels and serves the tanker. The Chief is aided by 1st, 2nd and two 3rd Assistant Engineers. They are quartered aft above the engine room. . . . Thorough technical training and long experience at sea are required of most men to whom such responsibilities are entrusted.





1 John Law, a mariner from his boyhood, has been Chief Engineer of the Oleum since her launching in 1945.

2 Although menus are identical, sea tradition stipulates that officers and crew dine in separate dining rooms.

3 R. W. Lockett, 3rd Assistant Engineer, operates controls as signals are sent via telegraph from bridge.

4 William Sutherland, 1st Assistant Engineer, checks gauges while fireman regulates burners under boilers.

5 With the aid of maps and weather data, A. Tomter, the Captain, plots SANTA PAULA's run to Oleum.

6 This gyro-compass, by which vessel is steered on straight course, is being adjusted by Mate J. A. Spotts.

7 Every Radio Operator is known aboard as "Sparks." He exchanges messages with ports and ships.

8 The chart room, aft of the wheelhouse, holds maps of every coast and interest of Captain W. H. Peterman.

9 At sea the Captain (A. Tomter) devotes much time to studying the course through binoculars or radar.

10 Useful to a navigator (2nd Mate J. W. Robertson) in determining latitude and longitude is the sextant.

11 First Mate Robert Bonner instructs helmsman at change of watch to keep gyro-compass indicator on "338."

12 Chess is one means by which Mates George Lowe (left) and H. H. Weidenhammer occupy an off-watch.





Assigned to fog watch on the bridge deck, John F. Costa operates the L. P. ST. CLAIR'S fog whistle.



The deck crew stows mooring lines as the RUBEL leaves San Diego.

On a working schedule of 4 hours on, 8 hours off, Bo's'n R. L. Cottle finds time for a letter home.

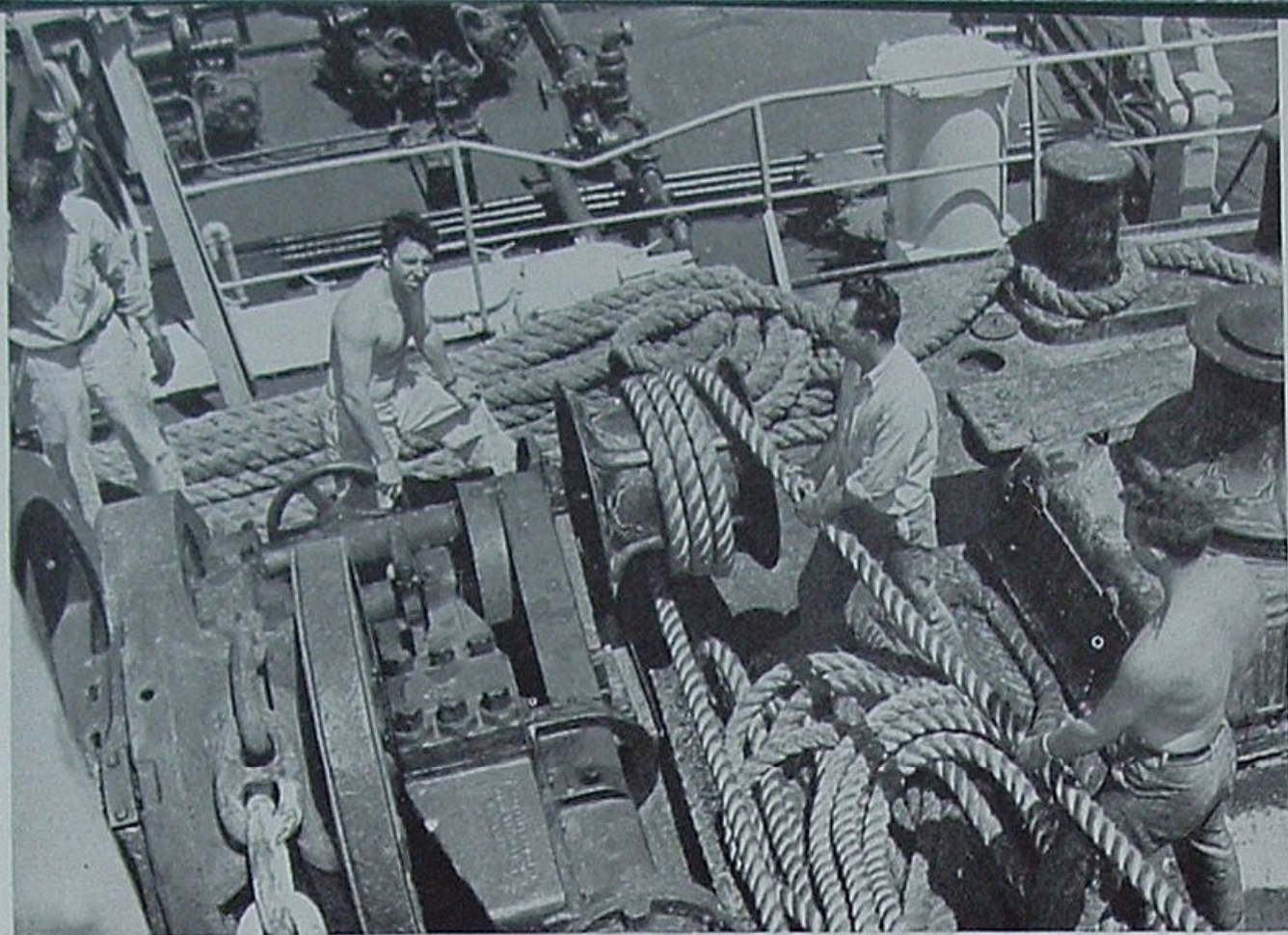


The Crew

The lot of the average tanker seaman is Utopian compared with the sailor's plight in former times. Gone are most of the old dangers, hardships, rat-infested fo'c'sle, scurvy, long months at sea. No longer is it necessary to "shanghai" a crew. Under direction of the Steward, crew's sleeping quarters are kept clean and orderly; food is prepared and served that rivals the best we can find or afford on land. The seaman can, and frequently does, work his way upward to the best jobs and offices the Company has to offer aboard or ashore.

Gauging cargo tanks are Klaus Aarue and Mate R. C. Chamberlain.





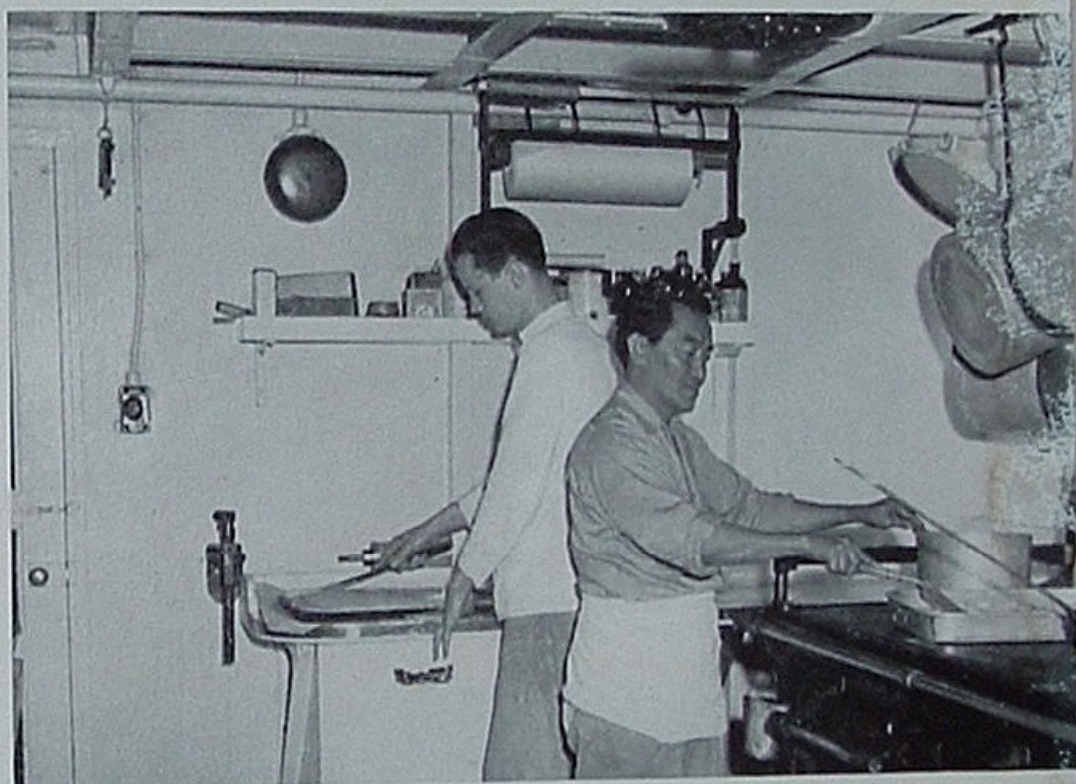
Most of shipping's "heave-ho" has been assumed by the steam winch, seen retrieving a line.



This is life-boat drill aboard OLEUM.

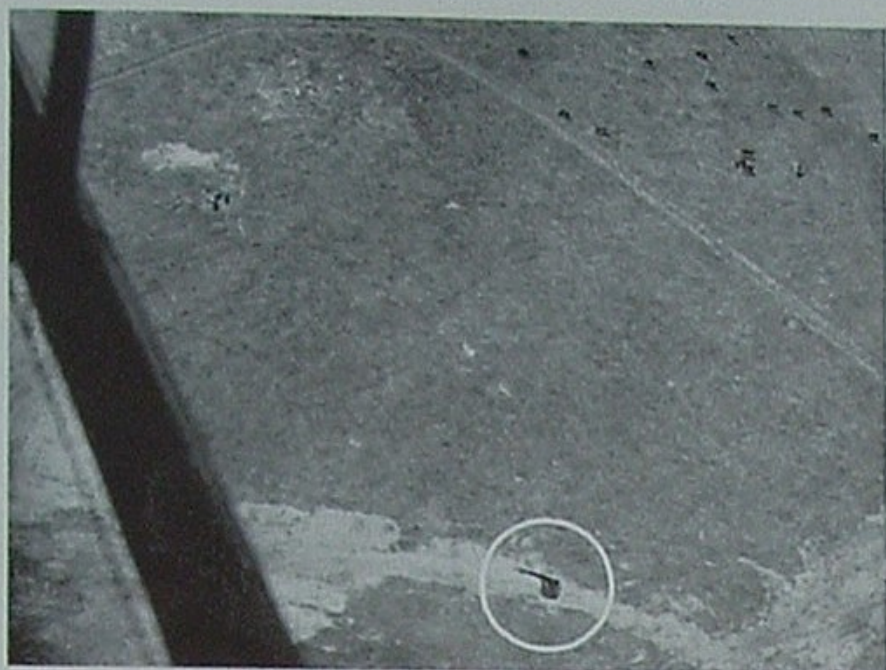


A man of many ports and sailing adventures is Bo's'n Jarrett Ah Chin, native of Hawaii, Golden Gloves boxing champion, and, above, deft wielder of a marline-spike as he splices a new cargo line.



Proof of a pudding, by 2nd Cook Peter Lenneman and Steward J. M. Lozano (above) is established by crew's "road-testing" (below).





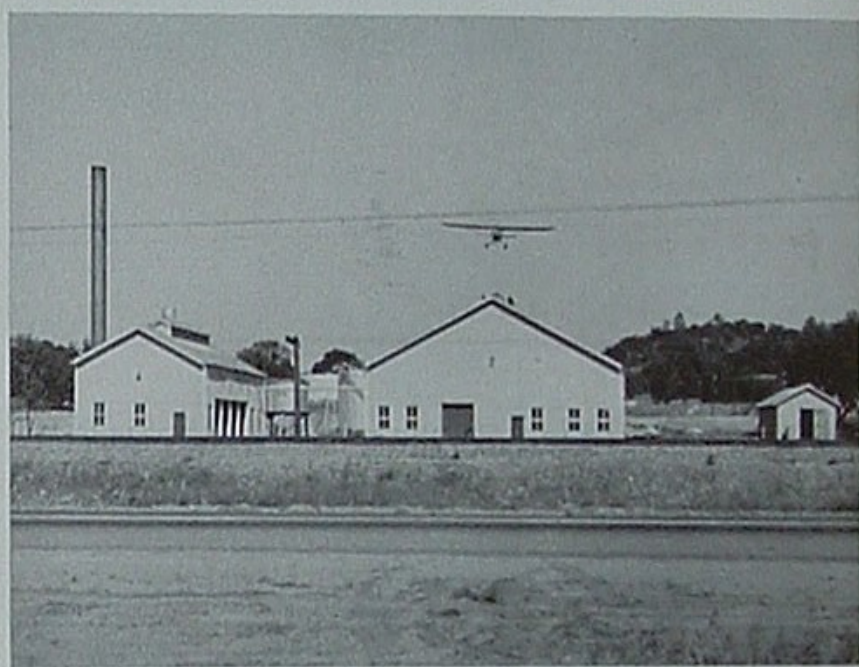
Any dark, shiny spot over a petroleum pipe line suggests a leak to the flying line walker. Note that the leak, in circle, is more conspicuous than cattle grazing at upper right.



After a comfortable landing in the cow pasture, Bob does some investigating with his shovel. He is thus able to determine the seriousness of a leak or whether it is merely an oil spill.



Leaks are recorded in three copies, one for the pilot's file, one to be mailed to Union Oil, and the third (above) to be deposited in a "bomb" and dropped at the nearest office or station.



Within a few minutes after discovering the oil leak, Bob arrives over Santa Margarita Pump Station. He "buzzes" the plant a time or two in order to attract the attention of some employee.



Bob aims at a graveled area in the pump station yard when releasing his report bomb. The bomb is equipped with a pennant of bright hue to insure its being found without great difficulty.



This particular leak report is picked up and read by Jack E. Harrington, senior engineer at Santa Margarita. He will immediately relay the report by telephone to a repair crew foreman.



Pilot Robert M. Smoot settles down on his Paso Robles home strip after a hard day of "walking" the Union Oil pipe line.

Airplane "Walks" the Pipe Lines

Pilot Bob Smoot is oil's 1948 version of a pipe line walker.

Time was, and still is in most instances, that America's more than 150,000 miles of petroleum pipe lines were inspected for leaks by ground walkers. They traveled afoot, on horseback, in horse-drawn buggies, or rarely in light autos to find where corrosion or strain had caused a break in the partly-buried lines. Fifteen miles was a good day's hike and oftentimes it took several hours to get word of a leak to one of the repair crews.

Airplane walking was partly the outgrowth of manpower shortages during World War II. It proved to be not only satisfactory but in some ways more efficient and economical than older methods. Even the smallest leaks can be easily spotted from the air by an experienced pilot. Picking out some familiar landmark or numbered telephone pole near the oil-soaked ground,

he is able to report the location of a break within minutes. Repair crews speed immediately to the point of trouble.

Working only one day a week during the past year, Bob has spotted over 200 leaks for Union Oil Company alone. Leaving his home at Paso Robles early in the morning, he is able to cover the entire Company line from Port San Luis to Bakersfield by midafternoon. In the horse-and-buggy days this was a big job for four men working full time.

Despite his hair-raising exploits, Bob has a perfect safety record and no oversights chalked up against him. One company even tested him by purposely spilling two or three gallons of crude over an obscure section of the line. He not only reported the spill but told them where they had dropped the can.



GEORGE COLE, left, received the championship trophies from Emcee Irving Hancock in recognition of his under-par 70.



FLIGHT WINNERS were (L-R) George Phillips, C. R. MacKenzie, W. C. Grant, (Emcee Hancock), E. A. Hendricks and Art Mays.



John Cain almost raised same with his brilliant 71!

TOURNAMENT IMPRESSIONS: (L-R) Palmer, Swan and Mitchell of Riverside studied up for next year. The long ride, etc., from

New Golf Champion

Touring the Lakewood Country Club course May 22 in 70 masterful strokes, one under par, George "King" Cole of Oleum Refinery captured the 22nd Annual Union Oil Golf Tournament.

Playing in the same foursome with George and making it a spirited contest throughout was John Cain, Watts Marketing Station newcomer whose fine 71 gave him the Vice President's Cup. The 1947 winner, E. A. Sanders of Los Angeles Refinery, lowered his last year's 75 to a 73 to turn in third best score of the day.

Other outstanding athletes among the 210 participants were W. I. Martin of Riverside, winner of the Triton Trophy for low net; Lyman Limbocker who fore told his exact net score and won the Century Handicap; and Denis Berdine whose prowess as an armchair golfer was thought to deserve the Bull Throwers' Trophy. R. L. Smith of Comptrollers won the special pitching contest; Ike Messenger, Land Department, wielded the most sensitive putter in that special event; and another Land Department man, Joe Maxwell, took home a prize for dropping his tee shot closest to the pin on No. 9 hole.

An uproarious chicken dinner delighted both victors and vanquished.

Phoenix was beginning to tell on Adams, Garvin, Marsh and Goughnor. Bellburg, McGilliard, Hurst and Hostetter wished they





RUNNERS-UP were Roulston (proxy for Sanders), Spratt, McVey, (Emcee Hancock), McGilliard, Champlin, Petrie and Simmons.



"Should auld acquaintance be forgot and never brought to mind, We dubbed the ball on every drive and were 20 strokes behind."



Oleum Refinery, home of 1948's champions, was represented by C. R. Foss, Mrs. Banducci, Angelo Banducci and George Cole.



This Marketing foursome from Riverside, H. D. Glenndening, Bill Grant, C. R. MacKenzie and Bill Martin, cornered three trophies.

were safely over the water hazard on No. 9. Everybody at Walts Marketing Station plays golf, including, Simmons, Monroe, Marsh-

all, Cain, Benson and Gass. Barney Koogle of Bakersfield exclaimed, "If I can hit this next shot right, I'll be half-way home!"



Asphalt Goes To Aid Of Irrigation

As a result of experiments by the Bureau of Reclamation, important quantities of water may be conserved by lining irrigation canals of the West with hot-mixed, hot-laid asphaltic concrete.

Seepage through the porous bottoms of unlined canals is known to consume a large portion of America's irrigating water.

In the West alone there are 150,000 miles of canals and laterals, of which the Bureau of Reclamation has constructed 15,000 miles. As only 600 miles of ditch are at present lined, it is at once evident how much work remains to be done and what large quantities of asphalt will be required to fill potential needs.

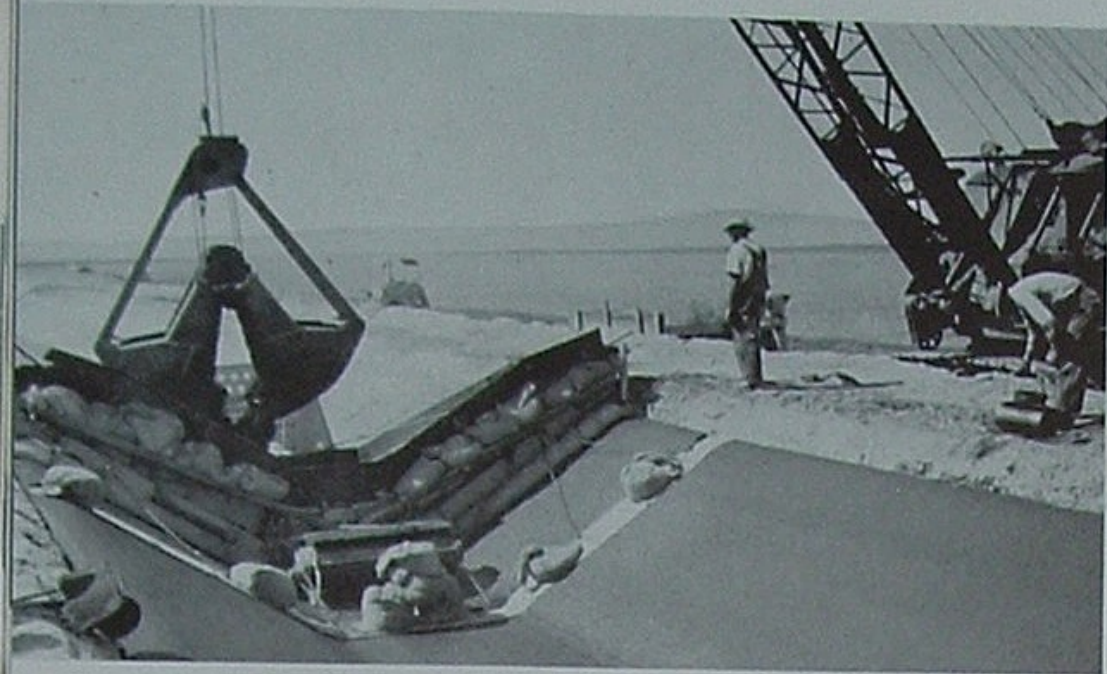
One of the major obstacles in the path of experiments was that of developing methods and machinery for doing the canal paving. In order to stimulate the construction industry toward a solution, the Bureau of Reclamation awarded a contract for the lining of approximately 10 miles of canals with asphaltic concrete on the Pasco Pump Laterals near Pasco, Washington. The project was the first major installation of asphaltic lining in which it was specified that mix be placed by machine methods. A placing machine was developed by the Madsen Iron Works, Los Angeles, and the paving was contracted to J. E. Terteling & Sons.

Although the paving machine was designed to provide compaction by means of rollers, it was found that, by substituting hot screeds weighted down with sacks of sand, far better results were obtained. It was possible to obtain a 92-95% density of the compacted mix using this method. On previous experimental projects compaction was provided by rollers. Field changes served to iron several defects out of the placing machine and satisfactory results were obtained.

Union Paving Asphalt of 60-70 penetration was used on this experimental project. Tom McCorkle Construction Co. of Boise, Idaho, contracted to handle the mixing phase of operations and used a Madsen 2000-pound batch plant to prepare the asphaltic concrete. The project included canal sections with base widths ranging from five down to two feet. Thickness of the lining was two inches.

It can be concluded that steps beyond the experimental stage can now be taken with confidence. Placing techniques are well developed; we have learned the proper mix design; and a lining can be specified to suit the needs and budget of every canal system.

By Ace Myers



Near Pasco, Washington, a Bureau of Reclamation canal-lining project introduces placing machinery for the first time.



The asphaltic concrete used to line the canal contains Union Paving Asphalt of 60-70 penetration, is hot-mixed, hot-laid.



The completely-lined canal loses practically no irrigation water through seepage, discharges any surplus into the Columbia.

T5X Takes Another Bow

At the Foothill Lemon Company in Corona the spotlight is on two conventional six-cylinder Chevrolet engines being used to power two well and booster pump setups.

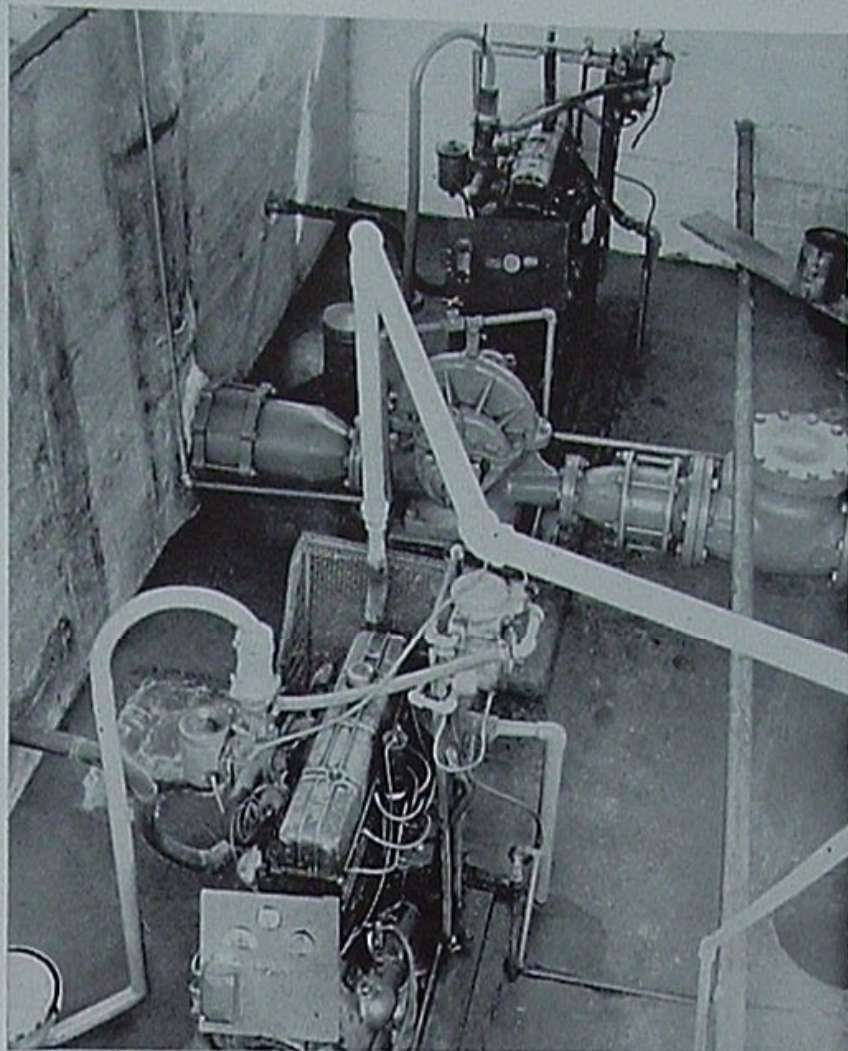
The No. 1 engine had operated, up to the time this report was made, a total of 13,027 hours without an overhaul and was still showing no signs of mechanical failure. Engineers consider this performance equivalent to 521,080 road miles.

An even more astounding record had been compiled by the No. 2 engine. Running practically on a 24-hour basis, it had built up 15,924 hours, the equivalent of 636,960 road miles, and appeared to be good for at least another full season of operation.

We are advised that these engines have no special supplementary equipment such as large volume oil filters, special valves and rings, etc. Both engines have operated during the entire period on our T5X Oil, SAE 30.

The Foothill Lemon Company, largest grower and packing company in the Corona district, enthusiastically gives T5X major credit for these records.

*By F. S. Lanning
Industrial Service Representative*



These two Chevrolet motors, lubricated with T5X Oil, have amassed over a million miles without need for overhaul.

Crystal Oil For Television

Our Red Line Crystal Oil is being used by manufacturing concerns in the Long Beach District as an important material in the fabrication of television magnifiers.

The magnifiers are made by cementing two pieces of plexi-glass, one flat and the other concave, together to form a lens-shaped flask. Before being completely sealed the flask is filled with Red Line Crystal Oil 85, giving it the appearance and magnifying properties of a solid optical lens.

Placed in front of a television screen, the device serves both to enlarge the televised images and present them with added clearness.

Red Line Crystal Oil was selected because it is non-injurious to plastic materials, has good refractive properties, and is free from bubbles.

By Oren M. Totten



This is how Red Line Crystal Oil is placed between two pieces of plexi-glass to form an excellent television magnifier.

Stitch In Time Saves \$9,000

By Gale Peterson

Los Angeles Refinery was up against it recently when an explosion (prior to the recent bad fire) in a crude heater at Unit 33 damaged steel plates from which ceiling firebricks are hung to form the plenum chamber. These plates are made of 10-gauge steel, one of today's very scarce items. New plates, if obtainable, would have cost about \$12,000.

Employee boilermakers and welders immediately grasped the suggested idea of putting the warped plates back into their original shape. A big press was constructed out of scrap. Built on somewhat the same principal as a pair of pliers, it was capable of exerting a pressure of 80 tons at the short end when a force only one-fifth that great was exerted at the long end. This gadget proved equal to flattening the plate surfaces, while sledgehammer techniques were used to straighten rough edges.

The shops were given this repair problem on a Thursday at noon. By 4 p.m. that same day they had de-

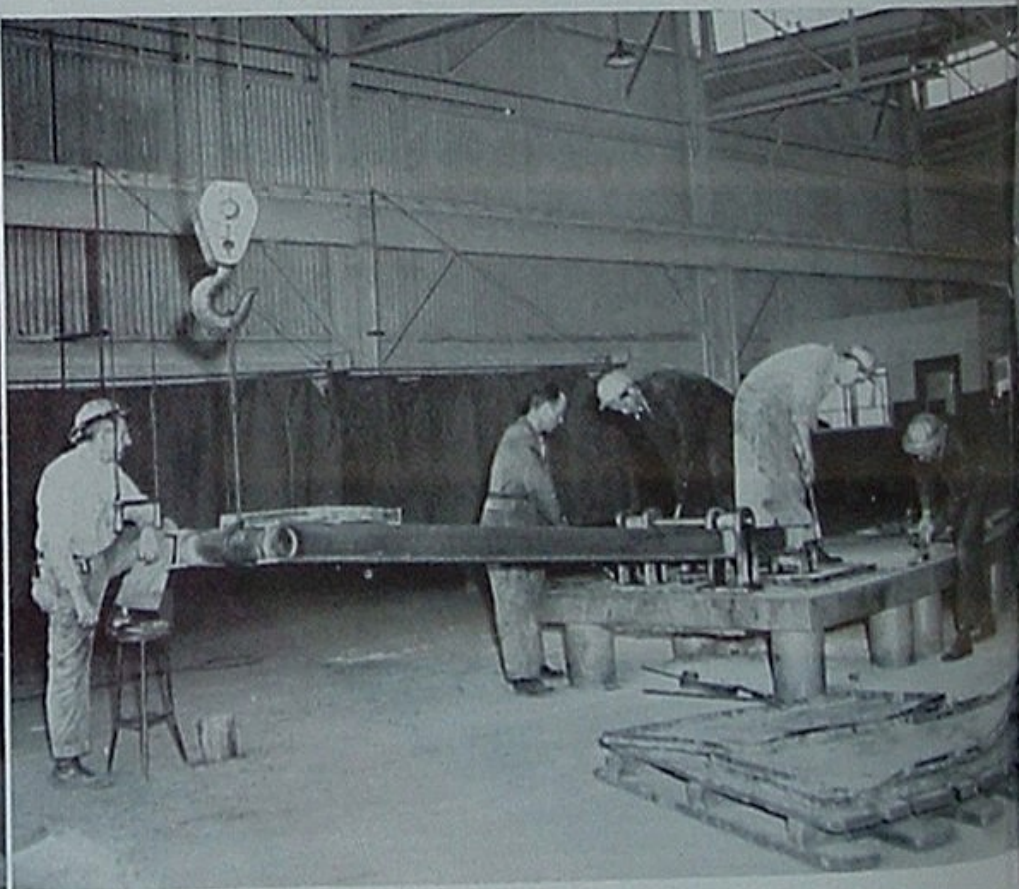
signed and built the press. Working on a schedule of 16 hours a day, they had all of the 275 damaged plates back in serviceable condition by Sunday evening.

In contrast to the \$12,000 cost of new plates, the cost of repairs amounted to approximately \$3,000. Thus, a saving of approximately \$9,000 was realized.

Of perhaps greater importance, however, was the economy of shut-down time. Unit 33 is a large combination crude fractionation and thermal cracking plant. It is one of the major plants at Los Angeles Refinery, since most of the crude handled passes through it for separation into various feed and blending stocks used elsewhere in the refinery and into certain finished products. A shut-down of the unit calls an immediate halt to the manufacture of some products and gradually effects the operation of other units. It has been estimated that the ability of Union Oil craftsmen to make repairs in this instance resulted in shortening shut-down time by six or seven days.



The refinery-designed press is capable of exerting an 80-ton pressure, more than sufficient to flatten the warped steel. Plate edges are pounded back into shape with sledgehammers.



Left to right, Boiler Shop employees Dan Wright, Vic Johnson, Bob Dennis, Ray Bledsoe and Dick Nelson press and hammer the kinks out of an explosion-damaged plate made of 10-gauge steel.

RETIRING

Knox L. Sellers

To Knox Sellers, July 1 will mark the end of all formal occupations and the beginning of leisure unlimited. Born in Carolina in 1883, Knox enjoyed all the benefits of being reared on his father's farm before deciding to cast his lot in the oil business. He joined Union Oil in 1920 and for the next 11 years worked as a tooldresser, derrickman, rotary helper, standard and rotary driller. Since 1931, he has served as a wellpuller, compressor operator helper, and field operator in both the Dominguez and Playa Del Rey fields. Mr. and Mrs. Sellers have lived in Inglewood for many years and state that July 1 is soon enough to begin making plans for the future.

By Lloyd Kinney

Albert Barton

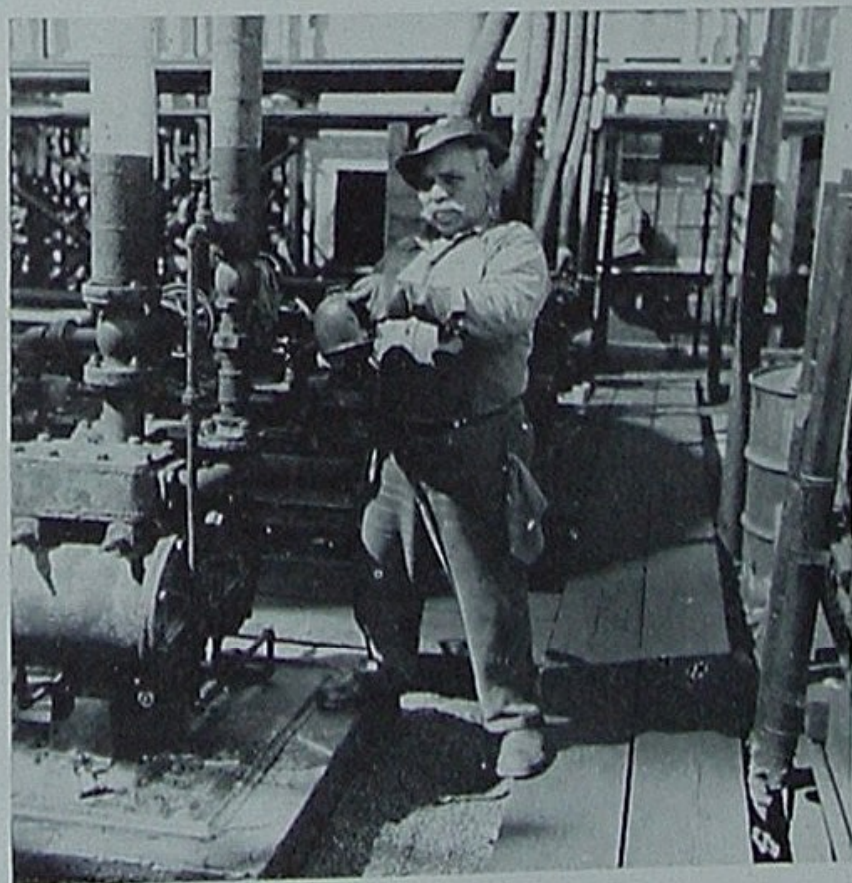
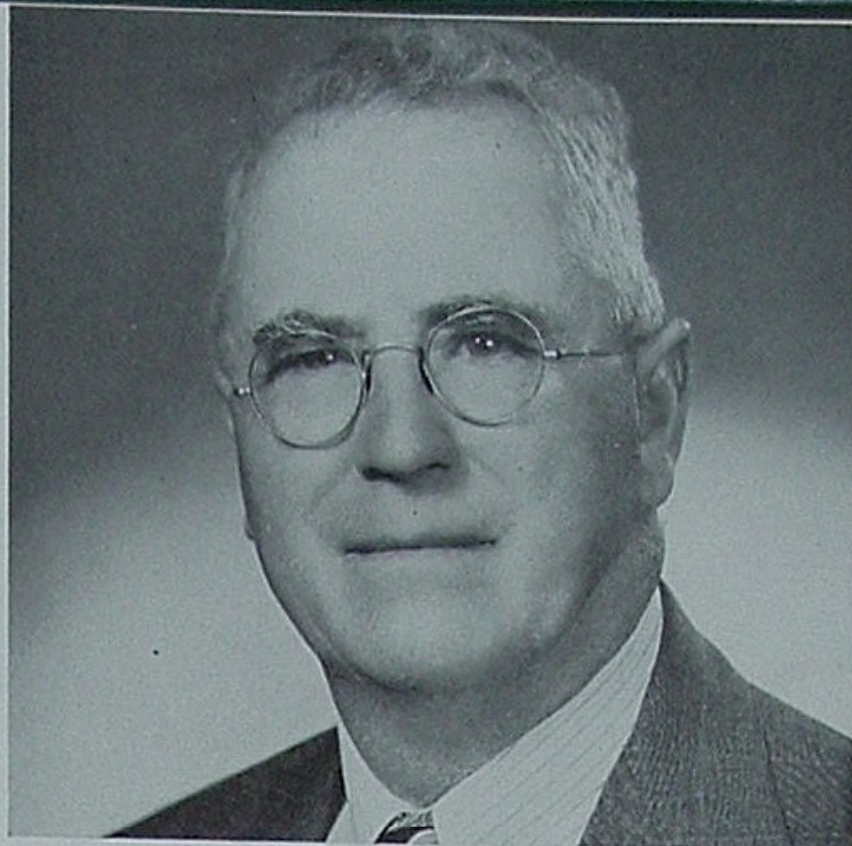
Very few Union Oilers have a better first-hand conception of Oleum Refinery's growth than Albert Barton. He first came to work at the refinery in 1904 when there were only 18 men on the payroll. Unfortunately his service continuity was broken for about one year in 1912, but he has been an eyewitness to every major Oleum improvement during the past 44 years. Al has given valuable service in the Asphalt Department, Barrel Cooper Shop, and as an assistant pumper and pumper in the Pump House. Since 1926, he has been a refinery foreman. During these many years, the Bartons have built and developed a lovely home overlooking Carquinez Straits. Among its flowers, shrubs, ponds and patios Al plans to find the retirement happiness we all wish him.

By C. R. Fitzgerald

Antonio C. Avila

Everyone at Oleum is going to miss the good nature and bristling white mustache of Tony Avila. Since his employment date in 1926, he has been a cheerful and familiar figure as master repairman of refinery roads or, more recently, in the capacity of a filler in the Compound Department. Born in Mexico in 1883, Tony learned early in life to look at the bright side of troubled times and conditions. His philosophy and industry have undoubtedly been valuable assets because, during the past thirty years he has been the breadwinner for his family of six boys and five girls. Tony is at present undergoing a physical checkup and overhaul before venturing along the road of retirement.

By C. R. Fitzgerald





Introducing Ed Dittrich, his wife Magnhild and son Jimmy, house-hunters extraordinary, seen enjoying their home-made living room.

House Unsighted; Built Same

By Gudrun M. Larsen

Here is documentary and pictorial proof that good old Yankee resourcefulness is not dead!

The customary American thing to do nowadays when we pick up and move into another town is to look in vain for a house or apartment, then start screaming to high heaven against the government, the real estate profiteers, the war, the unions, big business, and every other institution within recollection.

But that isn't exactly the way Captain John Smith, Daniel Boone, Thomas Jefferson, Brigham Young and other migrating Americans used to solve their housing

problems. And it isn't the way Ed Dittrich, resident manager at Klamath Falls, Oregon, solved his.

About one year ago Ed was transferred by the Company from Tacoma to his Klamath Falls assignment. The housing problem was as bad as or worse than it is now. He looked the town over for a suitable family dwelling, but found nothing left except a very small shack; and Ed was the only one of a hundred house hunters who wanted anything to do with a shack. He immediately sent for his wife and young son, and the entire family went to work.



Ed couldn't buy or rent a snack-bar so he designed and built this handsome one to make late-for-work breakfasts a pleasure.

Evenings and holidays for five months thereafter found the Dittrichs taking only an occasional few hours off for duck hunting. The rest of their spare time was spent in giving the shack a new lease on life.

Out came the old windows to make way for modern ones. Three new rooms were built on to provide a living room, kitchen, two bedrooms, bath and a utility room. Off came the old flat roof and on came a new gabled one.

Together the family installed all new bathroom fixtures, electric wiring, electric heater and automatic gas floor furnace. They hung the wallpaper, laid the linoleum, carpeted the living room wall-to-wall. Their kitchen took on the appearance of a magazine ad with its white enamel cupboards and appliances and a luxurious snack-bar that Ed designed himself.

Then turning their attention to the yard, they built a white picket fence and turned landscapers to put the finishing touches on perhaps the most comfortable little home in Klamath Falls.

Hats off to the Dittrich brand of resourcefulness that can convert a bad house and a worse situation into the solid comfort of a good home!



Before



During



Finished except for fence and landscaping.



BAKERSFIELD BARBECUE—If you like beef of the tender variety that is wrapped in paper and burlap and barbecued underground on a bed of hot stones—if you like the weather just cool enough

for an extra cup of outdoor coffee—if you prefer to dine in some shaded nook with your family and a host of congenial friends—if you're not averse to carrying home a free radio, merchandise

Union Oilers

OLEUM POT-LUCK DINNER—Preferring to take chances on their own domestic arts rather than risk disappointment at one of the fish-

and-chips establishments, the Oleum Girls Club recently invaded Bayo Vista for this pot-luck exchange of amenities.





order, set of steak knives, or other gate prize—if you like nothing better than to sit down for a few hours and reminisce with fellow-workers you haven't seen for several years—then you'd have en-

joyed the May 8th barbecue at Bakersfield thoroughly. Here's proof that several hundred employees were within sound of the dinner bell and responded on the double.

OLEUM REFINERY FOREMEN'S buffet dinner at Spenger's Fish Grotto found Jack Warnecke holding a narrow lead on the first lap.



Union Oilers, Continued



PROMOTED: Dick Perry is registering complete accord with his new Southwest Territory office job. He has to his credit 10 years in Company service stations and three with Uncle Sam.



ARMY MAN: In October Major M. R. Graham, above, will have completed a year of Union Oil training. Cooperating with the Army, the Company has introduced him to every phase of the oil business.



PIN QUEEN: Liz Watson, right, smiles her appreciation as Fred Anderson of Personnel presents a bowling "Oscar" emblematic of high individual series in the Head Office Women's Bowling League. In one single evening Miss Watson rang the bell with a high game of 255 and a high series of 572, top bowling in any league. Shown with the winner is Chairman Aileen McGarry, who presided throughout the league's 1947-48 season.



RESIDENT MANAGER, MONTEREY: Starting as a tank truck salesman at Oakland in 1942, E. Boyd Bevan, above, gained additional marketing experience in San Francisco and San Jose, and on March 22, 1948, was appointed resident manager, Monterey.

In my opinion ...



Dear Editor:

On Page 10 of the April ON TOUR you have two pictures that are not in accord with safety rules for handling radio active products.* I, a laywoman, know this is not the correct way to handle such materials, so am releasing the following ode to "Photo Credits:"

Daley, Allen and Lippens
Snapped an awful mistake
Sans safety—they are pippins—
Wake up, you lads, awake!

Yours for safety
Jean Webster
Long Beach, Calif.

*The nuclear physicists tell us there is no harm in handling a mildly radioactive sample as pictured. However, unshielded isotopes from Oak Ridge are a few million times more potent and dangerous.

Dear Editor:

The April article on the Purisima fire was very interesting, but my first thought when I read it was "When did this happen?" I could not find the date of the fire in the article. Suggest items be given a date line if possible.

You fellows are doing a swell job with ON TOUR. Keep up the good work.

M. S. McNamara
Oleum Refinery

*A good idea! The date was March 22, 1948. Thanks sincerely.

Dear Fellow Employees:

This is Andy P. Tucker writing. Most of you know that I had a heart attack almost a year ago. I am getting a little better but not fast.

Last month I was terminated on permanent disability. My insurance will take care of me for another four years.

I want to thank all of my friends who came to see me and offered help when it was needed—Bob Turner, Amos Turner, Eldon Allen, Richard Winters, Clifton Simonson. Lloyd Kinney took care of all my legal papers personally. My thanks to all of them.

Friends, the Company has been good and treated me swell. Since being down, I have talked to different men working for other companies. Their insurance, sick pay and other benefits don't seem to be nearly as good as ours. I don't think we could get a better deal elsewhere.

This may sound funny coming from Andy the truck driver. But I have slept in the same dog house with Cy Rubel; and worked on the same wells with Swede Larson, Frank Boyd, Ray Judy, Bill Butler, Rudy Hartman and many others. You remember, John Rockfellow, how you almost ran me into the ditch when you were moving the cement mixer?

Well, folks, it has been a pleasure to work with you. I don't get out much, but if any of you drive this way, drop in and see me. So long, everybody.

Andy P. Tucker



SERVICE BIRTHDAY AWARDS

JUNE, 1948

Thirty Years

Aus, Nina, H. O. Comptroller's
McDonald, Wm. J., Central Territory.
Richards, Frank H., H. O. Sales Serv.
Whitham, Helen, H. O. Sales Serv.

Twenty-Five Years

Aguirre, Pedro V., Research-Wilmington
Awbrey, Ernest T., Central Territory
Carpenter, Ruth L., Southwest Territory
Copeland, Randolph, No. Div. Pipe Line
Crosby, Patrick H., Northwest Territory
Faria, Antone A., Oleum Refinery Mfg.
Genter, Edwin J., L. A. Refinery Mfg.
Hartshorn, Chas R., H. O. Comptroller's
Hopper, Basil, H. O. Executive
Johnson, Oscar M., Northwest Territory
Kemp, Marvin W., So. Div. Pipe Line
Koch, Esther M., H. O. Purchasing
Quigley, Louis A., Oleum Refinery Mfg.
Sauvinet, Florence B., Patent—Wilmington
Sims, William, Oleum Refinery Mfg.

Twenty Years

Beckwith, Lawton B., Research
Burke, Virgil L., Central Territory
Campbell, Chas. H., Jr., No. Div. Pipe Line
Carpenter, Richard G., L. A. Refinery Mfg.
Christensen, C. V., Central Territory
Cook, Herbert E., Southwest Territory
Corcoran, David Z., Central Territory
Curnow, Roy H., Valley Div. Field
Eifert, Edward J., Research—Oleum
Gardiner, Thomas W., L. A. Refinery Mfg.
Jacobs, Frank M., H. O. Sales
Kincaid, Allan L., Northwest Territory
McClellan, Archie B., Honolulu District
McLennan, Lester W., Research—Oleum
McClure, Wallace M., Southwest Territory
Manies, Morrison, Oleum Refinery Mfg.
Openshaw, Reuel, Coast Div. Field
Self, Ruby, Oleum Refinery Mfg.
Stewart, Arthur C., H. O. Executive
Wilson, Frank A., Oleum Refinery Mfg.

Fifteen Years

Boroff, Ralph, Coast Div. Field
Clark, Kenneth R., Coast Div. Field
Hammond, Edwin D., Coast Div. Field
Jackson, Arthur, Central Territory
Kimberly, John R., No. Div. Automotive
Kimble, Roscoe M., Central Territory
Krossa, Roy W., Coast Div. Field
Leptich, Joseph, Northwest Territory
Michael, Jared L., Valley Div. Field
Openshaw, Myron S., Coast Div. Field
Renning, Allen A., Marine Wilmington
Rilea, Gerald, L. A. Refinery Mfg.
Sauer, Louis C., Northwest Territory
Vannier, Guy K., Northwest Territory

Ten Years

Argyle, Tom S., Southwest Territory
Fenton, Joseph, Southwest Territory
Gerardin, Joseph P., Central Territory
Moore, Ivan K., Northwest Territory
Nenno, Clifford C., Southwest Territory
Williams, Geo. F., Northwest Territory

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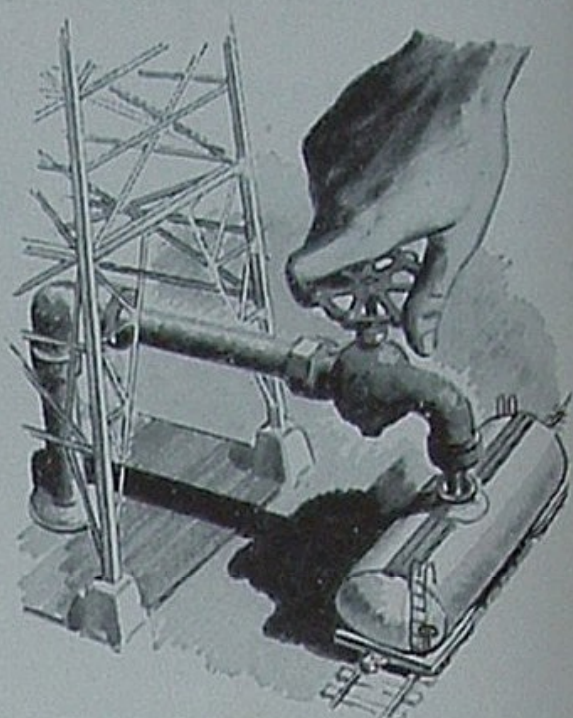
Is America running out of oil?



1. The proved, underground crude oil reserves in the United States—economically recoverable at today's costs and prices—total approximately 26 billion barrels. At the present time we are using up those reserves at the rate of almost 2 billion barrels per year. Two goes into 26 thirteen times. So, at first glance, you'd be inclined to predict that America will be out of oil in 13 years.



2. But you can't divide today's annual consumption into total reserves and come up with a figure that means anything. To begin with, oil fields don't act that way. Even if we discovered *no new reserves*, our present fields would still be producing *some oil* 100 years from now. Production would *taper off* each year until it got far below our present requirements.



3. But you simply can't draw crude oil out of the ground at a fixed rate as you'd empty a water tank. In the second place, we are continually discovering *new* crude reserves. With the exception of '45 and '46 we've discovered *more new oil every year* than we've used up. So our known reserves have kept increasing. But admittedly this can't go on forever. Sometime the law of diminishing returns will catch up with us. What then?



4. There are several alternatives. Every company has its favorite project. But one that interests us particularly at Union Oil Company is *oil shale*. In the Green River Basin of Colorado and Wyoming there are deposits of oil shale that contain an estimated 200 billion barrels* of recoverable shale oil, enough to supply the entire needs of the country—for 100 years! Some of these deposits belong to the Union Oil Company.

*U. S. Bureau of Mines Estimate.



5. Until recently, no one had succeeded in developing a process for extracting this shale oil on a commercial basis. But for the last 23 years Union Oil scientists have been working on the problem. They have not achieved complete success yet. Shale oil will cost more than the present price of natural petroleum. But if the need arises it *will be available* in quantities that will make our present reserves look small indeed.



6. Furthermore, our shale oil project is only one of such projects. Similar ones are going on all over the country in the laboratories and oil fields of the 13,875 individual companies that produce and refine oil for the American people. The search for new oil sources is a ceaseless one because we're all in *competition*. We all have the *incentive* to find those sources *first*. That's why you can flatly guarantee that as long as this country retains a free competitive economy adequate oil supplies *will continue to be found*...probably for hundreds of years to come.

UNION OIL COMPANY
OF CALIFORNIA

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This series, sponsored by the people of Union Oil Company, is dedicated to a discussion of how and why American business functions. We hope you'll feel free to send in any suggestions or criticisms you have to offer. Write: The President, Union Oil Company, Union Oil Building, Los Angeles 14, California.