

# REVIEW

Wood River, Illinois

Vol. 26 No. 4
July, 1963

## Lube Oil Hydrotreater Brought on Stream

Wood River Refinery's new Lube Oil Hydrotreater was brought on stream by Lube Department personnel in mid-July. While the new unit is the third of its kind to be built by Shell in the United States, the start-up marked a number of processing "firsts" for Wood River Refinery.

The unit is the first at Wood River to use air cooling of product instead of water cooling, and it is the first in which lines are electric heat traced instead of steam traced at time of construction.

Other Lube Oil Hydrotreaters are in operation now at Shell's Houston and Martinez Refineries. The LHT employs a Shell process which reacts hydrogen with lube oil base stocks under high pressure and temperature to remove sulfur and other impurities, thus improving the quality of both high and low viscosity index stocks for use in blending of Shell lubricants.

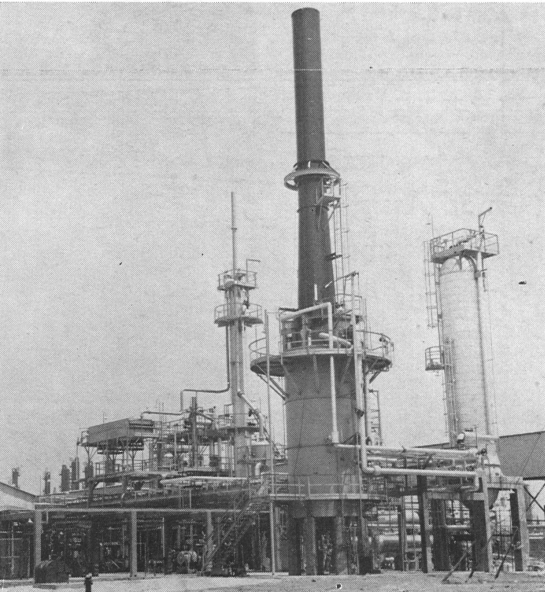
The new Wood River unit is designed to process any of 10 different feed-stocks at rates ranging roughly from 3,000 to 9,000 barrels per day. In the past, these stocks have been treated by a clay filter process.

### Product Cooled by Air

The air cooling of product from the new LHT is accomplished by pumping the product through a bank of tubes enclosed in a large metal box. Large fans either draw or force air through the box around the tubes to cool the product. The largest of three such metal boxes or coolers is 10 feet high and measures 30 by 30 feet.

Another unique feature of the new unit is that it is designed to process base stocks before the wax has been removed, thus purifying and improving the quality of the wax at the same time. The mere presence of the wax presents a processing problem, since it is necessary to keep the oil warm enough to prevent the wax from crystallizing. The electric heat tracing of the lines solves the problem.

Thermostats turn on the heat



WOOD RIVER'S new Lube Oil Hydrotreater is pictured here shortly after it was brought on stream in mid-July. The new unit can process from 3,000 to 9,000 barrels per day of different lube stocks removing sulfur and other impurities, for blending in Shell lubricants.

when the temperature of the product cools near the point where the crystals form. The electric heat may not be on most of the time. It will be used mostly during periods of cold weather or flow stoppage on the unit. The method is an improvement over steam tracing which is in operation at all times and results in waste of Refinery steam.

The new LHT is at the northeast corner of the intersection of 10th and B streets, just east of the Lube Fractionation and Extraction Unit. Construction was by Procon, Inc., Des Plaines, Ill.

Shell's first LHT went on steam at the Houston Refinery in August, 1960. The Martinez LHT was brought on stream in July, 1961.

**Barbecue**

**Photographs**

And List of Retired Employees . . . . .

**See Page 3**

## Solar Eclipse Photographs

The solar eclipse of July 20, 1963, was photographed by Research Laboratory Photographer O. E. Brown. His photograph, reproduced above, shows the eclipse in its various stages, at 15 minute intervals from 3:29 p.m. to 5:44 p.m.

Brown used a 4x5 Speed Graphic with a No. 12 welder's lens as a filter. He exposed Plus X film 1/100 of a second at f/11. For those who want to try it, there will be another partial eclipse of the sun on May 30, 1965.



SHELL'S NEW ASPHALT LINE to the barge loading docks on the Mississippi River is shown here where it comes from beneath the levee and runs west toward the river. The pipeline, according to Union Electric Co. is the longest electrically heated pipeline in the U.S.

## Electrically Heated Pipeline Carrying Asphalt to Docks

Asphalt barges at Shell's Hartford Docks on the Mississippi River now are filled by an eight-inch pipe line, running from the Refinery's Asphalt Plant to the docks — a distance of some 14,400 feet.

Approximately 45,000 feet of electric heating cable running from power supplies and control stations

spaced along the three mile pipe line maintains a temperature high enough to keep the asphalt from solidifying.

The project presented several unusual design and construction problems. Underground portions, some 2,000 feet running under highways, railroad tracks and the river levee, are enclosed in water-tight casings. Still, there is allowance, through a series of loops and slip-joints, for line expansion due to high operating temperatures.

On the river side of the levee most of the line is elevated 20 feet above ground to withstand flooding. The line can, therefore, be operated even when the river level is up to the walkway at the dock.

A new Proportioners two-component blender provides a method of controlled blending of several grades of asphalt directly into the line. Two pumps, one steam and one electric, may run in parallel and can pump asphalt through the line at a rate greater than 1,000 barrels per hour.

Employees at the controls in the Refinery and at the docks communicate over a six-telephone closed circuit Bell telephone system. Telephones are located at the Asphalt Plant Control Room, at the pumps, and at four locations at the docks.

Use of the new line results in considerable saving of time. A barge now can be loaded in about one fifth the time it took when they were filled by means of trucks shuttling between the Refinery and the docks.

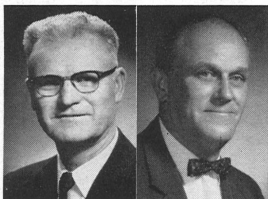
## R. K. Burns to Retire; Began Career Here

R. K. Burns, Shell Oil Company Controller, will retire September 30, after 33 years of service with the Company, according to an announcement by P. G. Grimshaw, Vice President Finance. R. H. Richards, Manager Auditing, will be nominated to succeed Burns, according to the Head Office announcement.

Burns joined Shell as a Clerk at Wood River Refinery in 1930. During the next 15 years, he progressed through positions of increasing responsibility until he was named Wood River Chief Accountant in 1946, and Treasury Manager in 1948. In 1949, he transferred to the Head Office Financial Organization as an Auditor, and was named Assistant Manager, Refinery Accounting, in 1950. He joined Shell Chemical Company in 1953, and became Assistant Controller and Assistant Treasurer in 1958. He was elected Controller of Shell Oil Company January 1, 1960.

# Anniversaries

**C. W. Grafford**  
Lube Oils  
35 Years



**E. H. Fiegenbaum**  
Gas  
30 Years

**W. E. Helmantoler**  
Gas  
30 Years



**F. A. Converse**  
Eng. Field  
25 Years



**C. H. Denny**  
P & IR  
25 Years



**A. F. McCarthy**  
Eng. Field  
25 Years

## 20 Years

- L. J. Boeser  
Eng. Field
- J. W. Fallon  
Eng. Office
- E. L. Gross  
Distilling
- T. F. Leeds  
Alkylation
- R. J. Mellies  
Technological
- P. N. Montgomery  
Eng. Field
- L. A. Moore  
Research Lab
- C. E. Sawyer  
Eng. Field
- M. O. Schmutzler  
Eng. Field
- F. A. Scott  
Eng. Field
- C. C. Van Horne  
Research Lab
- H. C. Wagner  
Eng. Field

## 15 Years

- H. R. Campbell Jr.  
Technological
- M. L. Davis  
Dispatching
- D. L. George  
Gas
- C. E. Grueter  
Lube Oils
- H. H. Henry  
Eng. Field
- M. R. Hungerford Jr.  
Technological
- E. A. Isringhaus Jr.  
Research Lab
- R. J. Light  
Purch.-Stores
- L. L. Lovejoy  
Compounding
- L. D. Maxwell  
Alkylation
- P. J. McGuire  
Treasury
- J. A. Menzie  
Eng. Services
- R. J. O'Brien Jr.  
Aromatics
- R. A. Penrod  
Aromatics
- L. E. Poos  
Alkylation
- D. L. Severe  
Treasury
- W. E. Slaten  
Eng. Field
- R. M. Weeks  
Utilities
- W. C. Wheeler  
Utilities
- J. V. Williamson  
Eng. Field

## 10 Years

- A. K. Bauer  
Eng. Field
- J. S. Brown  
Eng. Field
- V. E. Bunge  
Eng. Field
- V. L. Darr  
Eng. Field
- D. J. Hackett Jr.  
Technological
- J. T. Hensley  
Aromatics
- M. L. Hoffman  
Eng. Field
- O. G. Pence  
Eng. Field
- C. L. Reed  
Eng. Field
- C. Reynolds  
Eng. Field
- J. Trettenero  
Eng. Field
- R. F. Weule  
Fire & Safety

## R. L. Woodruff Named New Chief Research Engineer

R. L. Woodruff has been named Chief Research Engineer at Wood River's Research Laboratory, succeeding J. E. Edgar, who retired from that position July 1.

Announcement of Woodruff's promotion was made by Refinery Manager P. J. Merkus, who also announced that M. A. Hymel was transferring to Wood River Research Laboratory as Assistant Chief Research Engineer from a position in the Head Office Manufacturing Operations Department.

Edgar's retirement July 1, came shortly after his completion of 30 years of service with Shell. He joined the Company in 1933, at the Martinez, Calif. Refinery after graduation from the University of California with a mechanical engineering degree. He became Manager of the Motor Laboratory at Martinez in 1937.

His Shell career was interrupted from October, 1940, to January, 1946, when he was called to service in the U.S. Naval Air Force. In 1949, he was named Chief Research Engineer at the Martinez Research Laboratory, and he was transferred



Edgar Woodruff

to Wood River in that capacity in July, 1961.

Woodruff also came to Wood River from Martinez in July, 1961, as a Group Leader in Research Laboratory. He joined Shell at Martinez in 1951. He holds a bachelor of science degree in chemistry from the University of California.

Hymel was graduated from Louisiana State University in 1947, and joined Shell at the Norco Refinery in the Engineering Department that same year. He rose to the position of Group Leader in the Norco Technological Department, and was transferred to Head Office in 1959, as a Senior Technologist.

## D. C. McCormack Named Assistant Manager Lube

D. C. McCormack, formerly employed at Wood River Refinery, returned this month to assume the position of Assistant Manager Lubricating Oils, it was announced by Refinery Superintendent J. W. Sheehan. McCormack fills the position formerly held by J. W. Askins, who became Manager Distilling May 1.

McCormack, a native of St. Louis, joined Shell at Wood River as a Junior Technologist in 1951, after graduation from the Missouri School of Mines and Metallurgy at Rolla with a bachelor of science degree in chemical engineering.

He served in the Experimental Laboratory, Distilling, Gas and Technological Departments here before he was transferred July 1, 1958, to the Head Office Technological Department. For the past year, he has been on foreign assignment in The Hague.



## AFFECTING YOU AND SHELL

**Q. What is the outlook for petroleum reserves in supplying energy needs for the future?**

**A.** The demand for energy in the United States in 1980 is expected to be almost double that of 1960 as more energy is required to supply our expanding population and industrial economy. The use of petroleum is expected to be two-thirds higher by 1980.

Petroleum's share of the energy market is now about 72.8 per cent. This share may drop to about 69 per cent by 1980, but this slight decline will be offset by a rise in the market for petroleum, which is expected to more than double. These predictions are made in a recent report of the National Fuels and Energy Study Group of the U.S. Senate.

The U.S. now has an adequate supply of petroleum. Proved reserves of crude oil and natural gas liquids total almost 39 billion barrels — or 11 times the present annual rate of use. Natural gas reserves estimated at 271 trillion cubic feet, are equal to 20 times present annual usage.

This does not mean that we will run out of oil in 11 years or natural gas in 20. Proved reserves are those which are sure to be recoverable under present economic and operating conditions. There are billions of barrels of oil and trillions of cubic feet of natural gas which will be economically producible as advances in recovery techniques are made.

Reserves increase as discoveries are made, as old fields are extended, and as improved secondary recovery methods boost the percentage of recoverable oil. At present, only about one-third of the oil in place can be recovered. If this rate could be increased to two-thirds, about 100 billion barrels of petroleum could be added to present proved reserves.

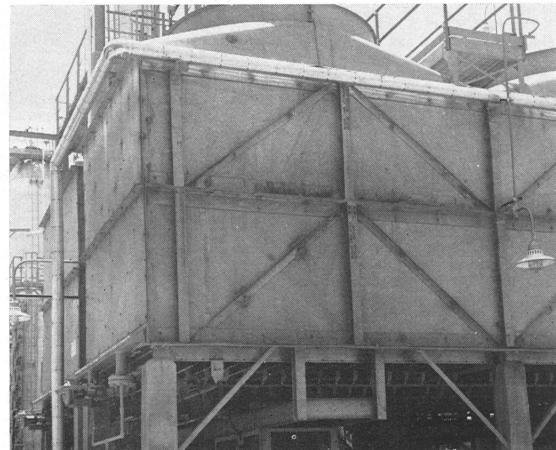
Additionally, it is expected that hydrocarbons will be economically extractable from new supply sources — oil shale and tar sand deposits — within the next 10 to 15 years. The U.S. shale deposits hold about 1,000 billion barrels of hydrocarbons, and the tar sands contain about 10 billion barrels.

Exceptions are that petroleum will continue to supply about two-thirds of the U.S. energy market well into the 21st century. Coal, hydropower and nuclear plants will supplement this supply, which will be needed to sustain the nation's economic growth and support a high standard of living for an expected population of over 300 million persons by the year 2000.

In the past, a rising demand has always created the incentive to find new petroleum reserves.



OPENING THE VALVE to put charge stock into the Refinery's new Lube Oil Hydrotreater is Operator 1st Victor P. Buese. Watching the operation which brought the new unit on stream is R. A. Jones



AIR COOLING of product from the new LHT is done in this large cooler, 10 feet high and measuring 30 by 30 feet. Large fans atop the coolers draw air around banks of tubes containing product. Two other air coolers on the new unit are used for cooling hydrogen and vapors. The fan for cooling hydrogen has a variable pitch propeller which forces air over banks of tubes enclosed in a smaller cooler.



## Shell Review

Published monthly for the employees of the Shell Oil Company, Wood River Refinery.

W. F. OSTERLOH

Editor

Box 262, Wood River, Illinois. Phone 342  
Address Communications to Editor, Shell Review,



"Hello, Mike? About this trade you sent over here..."

# 1,200 Persons Attend Annual Shell Barbecue

An estimated 1,200 persons attended the annual Shell 10 and Over Barbecue Saturday, July 20, at the American Legion Park in Edwardsville. Included in the crowd were 274 retired Shell employees.

Good food and fellowship were the highlights of the day, but additional entertainment included the Mo-Skee shoot, shooting basketball goals, listening to the music of the Heyshakers, and this year only—watching a solar eclipse with a viewing apparatus designed by Research Laboratory and P&IR personnel.

Alonzo Bowman, 86, again was the oldest pensioner to register. Bowman, who lives in Bethalto, was 86 years old last Christmas day. He retired from service at the Refinery January 1, 1946. Second oldest was John W. Madosh, Mitchell, and running third by two days was G. C. Mueller, Alton. Madosh was born January 24, 1878, and Mueller on January 26, 1878.

And retired employes came from quite a distance to attend the Bar-

becue. Those registering from states other than Illinois and Missouri included E. H. Eyers, Port Ritchey, Fla., and T. L. Groppel, Clearwater, Fla. G. H. Hendricks came to the Barbecue from Charlottesville, Va., and E. H. Uhley from Morris Chapel, Tenn. Coming from Arkansas were W. H. Wilson, Hot Springs; R. E. Moore, Bull Shoals, and Fred Dunsing, Hardy. Groppel was the person traveling the greatest distance to attend traveling just a few miles more than Eyers. Port Ritchey is just north of Clearwater on the Florida Gulf Coast.

### Reunion for Two

And the Barbecue marked the reunion of two retired Shell men who hadn't seen each other since they were graduated from Greenfield High School in May of 1924. Getting re-acquainted this year were Lynn C. Cooper, Alton, who retired March 1 from the Engineering Field Department; and Keith C. Blocker, Edwardsville, who retired recently from the position of Assistant Comptroller.

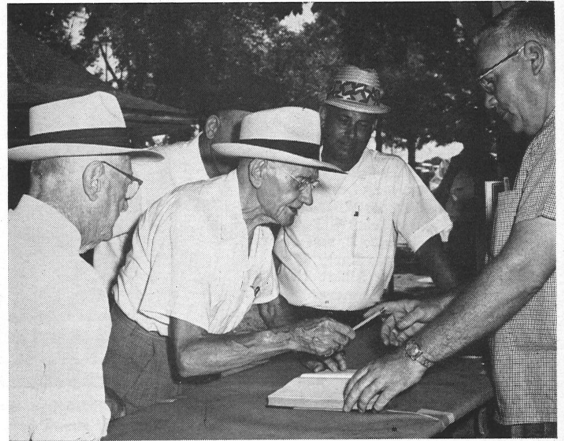
Following is the list of retired employes in the order in which they registered at the Barbecue.

Alvin Hartley, E. F. Baker, O. L. Wilhold, James T. Fitzgerald, R. F. Ruchstahl, O. W. Kirkpatrick, Leo Eller, Irvin Nesbitt, C. F. Holtgreve, J. A. Simpson, Marshall E. Bohlmeier, Joseph Kurant, Theodore R. Miller, Charles W. Vogel, Amiel C. Krueger, Ross D. Bennett, W. H. Wilson, V. J. Mellor, J. E. McMichael, F. W. Killam, Gilbert Cruthis, F. F. Kuehnel, O. E. Fulkerson, J. H. Markham, E. Lee, Jesse A. Mason, Bill Douglas.

Allan R. Taylor, M. F. Dugan, R. B. Thompson, Edward Feldman,

Paul A. Ufert, E. F. Obert, W. J. Meyer, B. H. Williams, O. Summers, E. H. Eyers, George K. Frieman, Frank Schmid, Alva M. Barnwell, Roscoe C. Sitzes, Michael F. Tranuecker, I. W. Smith, E. J. Hull, Wallie T. Lewis, W. L. Sehnert, C. McReynolds, Charles E. Davison, John H. Murphy, Homer Morris, C. C. Nichols, John H. Tippett, H. F. Head, E. N. Piazzi, S. J. Tipsword, Edmond Whalen, L. G. Frazier, John M. Davis, E. R. Harris, Fred S. Howard, C. A. Krieder, William Linder, Charles L. Ellington, Lee W. Howard, W. S. Schneider, Doris N. Zumwalt, Orville J. Espenschied, W. I. Shattuck, G. M. Kendall, Charles A. Maguire, Henry C. Reding, J. A. Howdeshell, J. B. Rull, C. D. Maroe, R. B. Boyd, C. H. Marcus, E. D. McCallister, John W. Madosh, Louis Warford, J. A. Eilenberger, Charles Dilling.

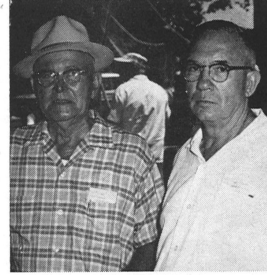
Fred A. Miller, Martin L. Schlectie, Oscar A. Kleintert, A. W. Scobbie, Walter H. Suhre, Roy  
**(Continued on Page 4)**



**REGISTERING** at the Barbecue headquarters tent in this photograph are two of the three oldest pensioners to attend the Barbecue this year. At left, Alonzo Bowman, at 86 the oldest pensioner to attend, watches as G. C. Mueller, 85, prepares to sign the register. J. A. Bowman, Research Laboratory, and R. L. "Jack" Turner, Engineering Field, watch the pensioner registration proceedings.



**RECENTLY RETIRED** Chief Engineer C. C. Wuth is shown here telling Refinery Superintendent J. W. Sheehan about his life of leisure since the first of June.



**TWO RETIREES** from the Lube Department paused in their visit to pose for the photographer. At left is C. C. Nichols and the pensioner at right is A.R. Taylor.



**SHOOTING SKILL** was tested by many of the 1,200 persons attending the Barbecue. But these fellows are posing, not shooting, for there is no one to throw the targets for them to shoot.



## 1,200 Persons Attend Annual Shell Barbecue

(Continued From Page 3)

Hunter, Fred D. Obermiller, Al-fred Ruyle, Walter Arth, George C. Mueller, Alonzo Bowman, W. M. Jackson, William G. Kovarik, H. J. DeVries, Frank Kolesa, Louis H. Stahlhut, B. W. May, H. W. Sheppard, Mark Williams, John W. Buttery, John Z. Quinlan, W. F. Strayhorn, J. Russell Ewers, Harry E. Dubin, C. H. Puckett, Albert H. Mersinger, Clem G. Wehmeyer.

T. F. Stadelman, J. H. Reddick, E. D. Hanson, Milo Beltz, William R. Mitchell, G. H. Hendricks, D. L. Harvick, Wallace C. A. Johnson, J. H. Baumeister, George M. Buxton, A. W. Pardieck, William F. Gillespie, F. B. McGow, C. P. Edsall, Russell Williams, Clarence F. Honke, J. R. Venable, Harry W. Jett, L. Earl Sawyer, Leo Jackson, C. B. Starnes, D. V. Smith, Joseph E. Kennedy, W. R. Kendrick, Clarence C. Mayfield, Frank E. Hatten, R. O. Keilbach.

A. L. Luebbers, Clarence Greeling, Lawrence Hoffman, B. Rex Shannon, J. A. Walker, H. Hockinghomer, J. M. Witherow, R. C. Brown, L. T. Witter, Elmer L. Barnett, Glen Herndon, J. E. Phillips, A. C. Taylor, L. F. Smith, Fred O. King, L. E. Grosh, Otis Logan, W. E. Hurley, O. R. Oglesby, Walter Koch, G. D. Allen, Julius L. Andreaus, Robert H. Kiser, W. W. Nall, G. K. Wood, William D. Riley, Luther C. Wood.

### Other Retirees

Albert A. Shashek, Cecil S. Blankenship, Cecil C. Wuth, C. C. Hall, H. M. Kay, John B. Gerard, Calvin W. Smith, Harry J. Frye, Lloyd H. Brett, Maura K. Phillips, T. W. Stouffe, Sam Henson, Vern V. Lucas, Charles P. Long, Ira W. Westfall, W. F. O'Hair, Harrison L. Rohrkaste, G. G. Bill Welch, Clay Barton, William Clayton, Leland F. Laux, L. A. Kramer, V. J. McCoy, Leo J. Breitweiser, A. G. Fuchs, Ron Ward, Mark L. Lambert.

Paul K. Schoenleber, Louis Noel-tner, Owen Newton, Ira Killam, M. L. Young, Art Higgins, R. V. Soapes, B. L. Tanner, Enos Rintoul, N. J. Snow, John E. Sellier, W. J. Going, Gilbert L. Wade, John G. Robinson, W. J. Lascoe, G. Knauss, E. F. McCrellis, B. L. Wolverton, Harold Theuer, Glenn Holford, H. E. McCarthy, J. J. Over, H. E. Thompson, Elmer W. Johnson, M. E. Ruyle, Sam Strayhorn, E. F. Cox.

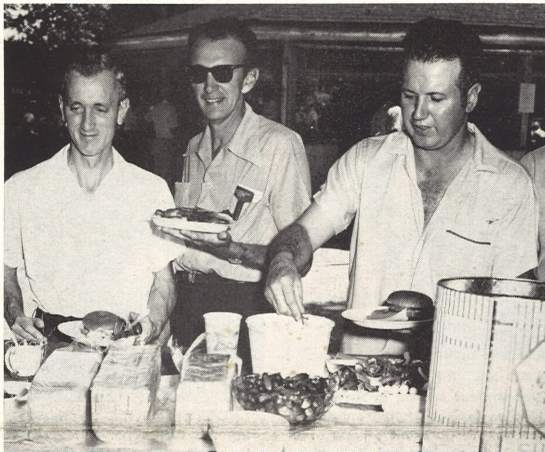
L. N. Talmage, Ray L. Misegades, Leland F. Longman, W. C. Hamilton, Winford Hix, Edward F. Primas, T. L. Groppel, V. L. Major, Thomas C. Harris, Vincent F. Azzarello, Daniel I. Ayres, John A. Schilling, I. L. Spaulding, E. J. Kadletz, Elmer H. Uhley, F. C. Hegeman, R. E. Harrawood, C. E. Dey, E. W. Hessel, Louis H. Ahlmeyer, J. J. St. Eve, R. E. Bretzman, John B. Sweeney, C. J. Bryan, Clarence B. Beck, Lloyd Lemmon, C. W. Hand.

H. Bruley, J. C. Nelder, O. W. Bardelmeier, C. E. Provow, Joseph A. Broderick, Fred E. Thompson, Edward F. Schaberg, Clarence Knoche, J. N. West, R. R. Moore, J. H. Mourning, John F. Burns, William F. Fleming, John DeCota, Robert J. Johnston, L. A. Hardison, Henry A. Eichen, Ray Arnold, John S. Hall, G. H. Van Horne, George C. Zirges, Fred Dunsing, W. L. Bienemann, Monroe Rhodes, Guy B. Richards, Art Carnahan, George Caudle, Martin Henke, J. G. Callender, H. E. Harvick, Earl F. Hanser.

## Additional Barbecue Scenes



W. I. "BILL" SHATTUCK, a regular visitor at the Shell Barbecue through the years is shown here greeting one of his many friends.



FOOD APLENTY was a highlight of the day. Shown here are three employees filling their plates from the ample supply of food available.



THE HEYSHAKERS, combo in hillbilly costume, provided musical entertainment from the back of a truck parked beneath the trees.

## Home the Hard Way

### Homing Pigeon Gets Lost, But Is Returned to Shell Employee Owner

A homing pigeon will get home — one way or another. One owned by James J. Allen, Operator A Special at Shell Oil Company's Wilmington-Dominguez Refinery, recently made it the hard way.

Allen entered the bird in a race from Marysville, Calif., to his home in Redondo Beach — a distance of about 400 miles. But the bird got lost and landed on a tank-

er about 80 miles out to sea — a tanker carrying Shell products, of course.

The crew member who rescued the bird decided to take it home to his next door neighbor who raises pigeons. About six weeks after the bird left Marysville, it was delivered to the seaman's neighbor—Allen, of course.

## Wood River Employees Will Play in Shell Chess Tourney

Wood River Refinery will be represented in a world-wide Shell Chess Tournament beginning in September. The Wood River entries will be composed of two teams of players from Research Laboratory, participating in the tourney under the sponsorship of the Shell Recreation Association.

The tournament, being conducted for entries from Shell sports clubs all over the world is being held at the suggestion of the Shell Sports club of Ceylon, according to the May edition of SHELL MAGAZINE. That organization is providing a committee to administer the tourney and a lotus bowl as a prize for the winning team.

All plays will be made by mail.

As a result, the Wood River teams will be corresponding with Shell personnel at some of the many Shell locations throughout the world. The tourney will be conducted on an all-play-all system, so the Wood River teams will play each of the other teams participating in the tourney.

Ten Research Laboratory chess players are competing in a tourney of their own, in order to select eight men who will comprise the two four-man teams. Taking part in the local play-off are P. J. Akers, H. J. Gebhart, K. N. Hitchcock, J. E. Lauck, W. J. Lochmann, J. D. Metcalfe, D. E. Poling, K. T. Wendler, L. C. Westcott and E. Wittner.

## Shell Chemical Company Offering Complete Plastics Design Service

Shell Chemical Company is helping to shape tomorrow's packages as part of a complete plastics design service recently offered to industrial customers using Shell polypropylene, polyethylene or polystyrene.

Shell technicians of the Plastics and Resins Division provide customers with aid, including design and color advice from the widely-known industrial design firm of Raymond Loewy/William Snaith, Inc. This firm has helped to pioneer advancement in designing plastic packages, whose format often determines the salability of consumer products.

Shell Chemical offers this special service to fill the individual needs of each customer. The three thermoplastic polymers can be fabricated into containers and packages to protect, display and dispense a wide variety of products ranging from instant coffee to hypodermic needles.

After Shell Chemical studies a customer's market and sales objectives, experiments are made with packages in new shapes and

colors designed with the aid of Loewy/Snaith. Once a design is chosen, Shell Chemical will also assist the customer in choosing a fabricator to make the package, supervising the mold design, and marketing the product.

Shell's three "poly" plastics offer many desirable features for packages — each is light in weight, high in strength, and can be molded or shaped and colored for handsome appearance.

In various forms Shell polypropylene resists heat, chemicals, oil and grease, dirt and moisture. It is flexible and can be made into a clear, strong film. It has many applications, including packages for medicines, cosmetics, foods and other merchandise; trays; cartons and boxes; as a coating; and as a wrapping film.

Shell polyethylene is especially useful in making resilient, rigid bottles, tough wrapping film, squeeze bottles and carbon coatings. Shell polystyrene often is used to make disposable drinking cups and rigid food and merchandise containers.

## SHELL OIL COMPANY Wood River, Illinois

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YOUR SUPERVISOR:

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Edwardsville, Ill.  
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