



HURRICANE TRACKING MAPS AVAILABLE  
AT YOUR SHELL DEALER AUGUST 1

Beginning August 1, you can pick up a free Hurricane Tracking Map from your Shell dealer in the coastal areas of Texas and Louisiana.

As a community service, Shell will cover the movements of Hurricanes through the Caribbean, Gulf of Mexico, and Atlantic. Selected radio stations in Texas, Louisiana, Florida, Alabama, Georgia, North Carolina, South Carolina, and Virginia will broadcast 60-second bulletins on each storm.

When the U.S. Weather Bureau announces that a storm has been sighted and named, Shell will broadcast in the above named states for two days announcing this information in seven bulletins in morning and evening periods. The next series of announcements will be broadcast when an area goes into a Hurricane "watch" period, and will continue until the Hurricane "warning" is announced. The broadcasts will give the direction, speed, and other pertinent information. When a particular storm ends, the programming cycle will cease.

The above pattern will be followed for every Hurricane during the summer. In Texas and Louisiana you can hear the bulletins over the following stations: Houston--KILT, KNUZ, and KTRH; Galveston --KGBC; Port Arthur/Beaumont--KPAC and KTRM; Lafayette--KVOL and KXKW; Lake Charles--KPLC and KLOU; Baton Rouge--WLCS and WAIL; and New Orleans--WSMB, WDSU, and WNOE.

SHELL OIL INCOME SETS RECORD  
FOR QUARTER AND SIX MONTHS

Shell Oil Company's consolidated net income for the first six months of 1966 rose 10 per cent to an all-time high of \$126.5 million over the \$115.2 million earned in the first half of 1965, or from \$1.90 to \$2.08 per share, Richard C. McCurdy, President, announced Tuesday, July 26.

Earnings in the second quarter of \$64.9 million, or \$1.07 a share, also a record, were 7 per cent above the \$60.4 million, or \$1.00 a share, earned in the second quarter of 1965.

Mr. McCurdy, noting that Shell's average sales prices of most major refined products, including gasoline, were about the same in the second quarter of this year as in the same period last year, said a 7 per cent increase in refined products revenue achieved by the Company was due almost entirely to volume gains. The Company also made substantial gains in the sales of chemicals and natural gas in the second quarter.

Production of crude oil and natural gas liquids set new records for both the second quarter and half year, and refinery crude intakes were above comparable levels for last year.

Mr. McCurdy also reported that on June 15, 1966, the Company received the remaining balance of \$57,000,000 due from the placement in March of \$150,000,000 of 5 per cent debentures due 1991.

Copies of the Quarterly Report are available to Shell Stock Fund members in Room 139, Main Office Building.

# SHELLEGRAPH



HOUSTON  
REFINERY

No. 195

Friday, July 29, 1966

HELP PREVENT OUTDOOR FIRES

The Texas Parks and Wildlife Department asks campers, fishermen, and others patronizing the outdoor recreational season to be careful with fires. The department cautioned that the greatest individual threat comes from careless smoking even the mere flicking of a lighted cigarette from an automobile. But campers and picnickers should be on the alert to be certain that the most innocent fire in the open is completely out before leaving the area.





TAIN HOLDS JOINT MEETING WITH MANAGEMENT ADVISORY COUNCIL - Saturday, July 23, was



not unlike many Saturdays for a group of 20 industrial nurses of the Texas Association of Industrial Nurses. At 8:30 a.m., these nurses from different areas in Texas, met

in Houston at the Continental Houston Hotel for a day-long meeting. Our MRS. HORTENSE HINES, RN., Recording Secretary for the State organization, presided over this meeting. At noon, the nurses met with a 5-man Management Advisory Council, composed of members of management from Port Arthur, Fort Worth, San Antonio, Dallas, and Houston. L. J. HALLMARK served as Chairman for this group. These meetings are held once a year in order to meet the demands of Industrial Nursing needs and create a greater understanding between Industrial Nurses and Management.

"A LITTLE FELLOW BUT WELL PUT TOGETHER" -

A. B. MC NAIR and JOE D. HUGHES recently spied a baby skunk (6" long) and decided to catch it for Joe D. to have as a pet for his children. McNair picked the little fellow up and started to hand it to Joe D., but he, being in the "down wind" direction, got the full treatment. He decided this wasn't a playmate after all. What happened to "Baby"? - Another co-worker, A. L. MC PHAIL, took it home to his children, and it has turned out to be a real pet - hasn't been deodorized yet either. (For anyone interested, the following is taken from an article which appeared in a recent issue of Game Magazine: "When having these troubles, bathe in tomato juice for about 15 minutes, rinse, and the aroma is gone.")

ON HONOR ROLL AT UNIVERSITY OF TEXAS -

LINDA KAY REITZ, daughter of F. G. REITZ, Shell Chemical, was one of 7 University of Texas students named for the Summa Cum Laude on the Spring Semester Honor Roll for UT college of Education students. As many will remember, pretty Linda Kay worked at the Research Laboratory last summer.

VACATION TIME! Your SHELLEGRAPH set out to find out how some of the refiners like to spend their vacations - where, why, and when. Some of the answers appear below:

ED MARTINEZ, Accountant, Treasury: "I



like the Western portion of the U.S., primarily because of the climate and scenery, and I do have most of my relatives living out there." Prefers summer months.

BARBARA MC PHAIL, Stenographer, Treasury:



"We, my husband, Jack, and I always take our vacation on the San Jacinto River as we own a boat and all the equipment necessary for water skiing, which we both love." Prefers summer months.

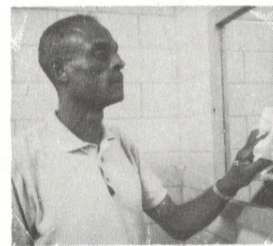
R. B. HUMPHREYS, Instrument Man #1, Engr.

Field: "To the hills of Arkansas on a quiet



lake in the open spaces to fish, where there are no telephones and only one boss, my wife." This he likes to do with his wife and children during the summer months.

J. D. CREEKS, Janitor, Engr. Field: "Not



much of a traveling man, stay around the house, mostly when on vacation, and catch up on long-needed chores." Does have a brother in Wichita Falls and one in Navasoto who he visits occasionally. Prefers July and August.

L. B. BURCH - Special Tester, Refinery

Laboratory: "I have rented a place at



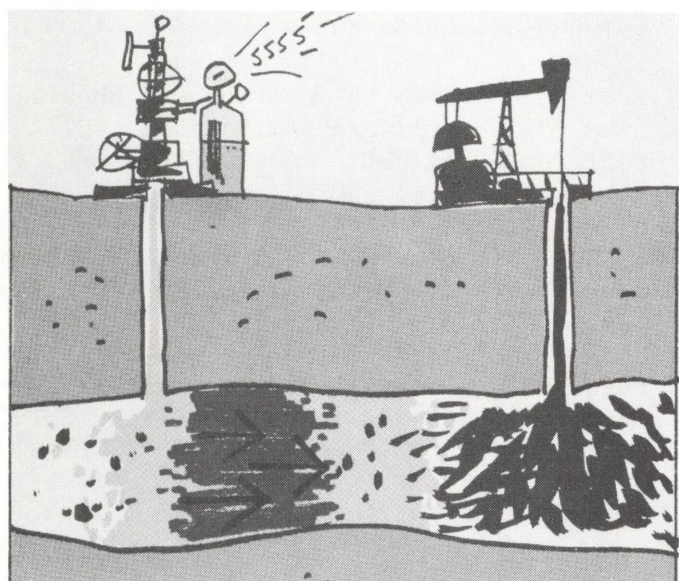
Buchanan Dam on Inks Lake for the past 4 years because the water is sky-blue and the fishing and climate are perfect. It's ideal for me and my family to enjoy water skiing." Prefers summer months.

## THERMAL RECOVERY METHODS - PART II

Thermal recovery simply means applying heat in one form or another to the crude to make it flow - just as molasses was heated over the stove in the old-time kitchen before it was brought to the table during the winter. The application of the principle is not simple, however. Thermal recovery will not work well in every reservoir because of conditions in the formation or, if it does work, the costs may outweigh the value of the added production. Under any circumstances, thermal recovery at this stage of development is more costly than conventional additional recovery procedure, both in capital investment and operating expense. As the nation's energy demands continue to soar and as the industry finds new approaches to greater efficiency in thermal methods, it will become even more feasible to use underground heat recovery techniques.

The three main approaches to thermal recovery are illustrated and explained below:

### IN SITU COMBUSTION

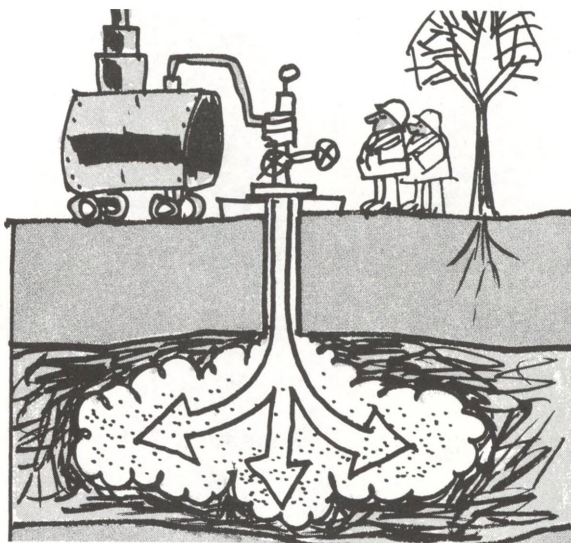


Literally a "burning in place" or "fire-flood" technique, this method uses some of the oil in the reservoir itself as the heating fuel. Special equipment is placed down the bore of an injection well and the underground oil immediately around the well is ignited. The "flame front" or "burn" is maintained and pushed forward through the reservoir by the injection of compressed air. As the "fire front" advances through the reservoir, it heats up the oil ahead of it and, to some extent, breaks the heavy crude down into lighter liquids. Warmed up, the crude becomes mobile and flows more readily to producing wells, which lift it to the surface.

#### PETROLEUM USE TO INCREASE

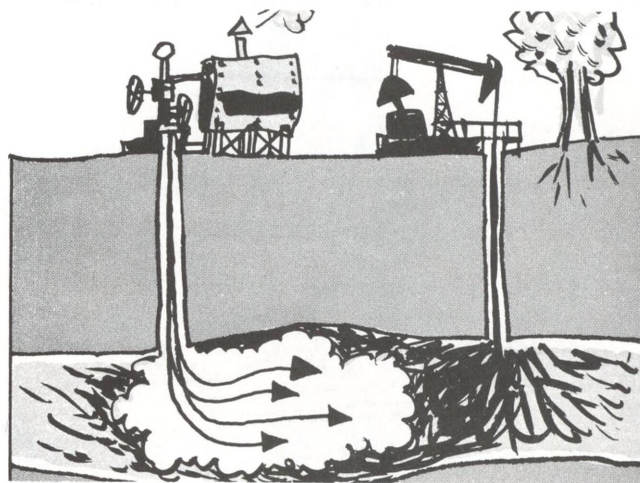
The Interior Secretary has forecast that Americans will use more crude oil between now and the end of 1980 than they used in the first 100 years of industry. This represents a 50 per cent increase over present consumption rates.

### STEAM SATURATION



In some cases, the injection of steam or hot water is more effective in loosening the clinging grip of the heavy crude to the reservoir rock. Pushed into the reservoir under pressure, the hot, moist fluid saturates the formation around the well for days or even weeks. The operation is then reversed, with the well used to produce the now-lighter crude oil until it is time to repeat the process.

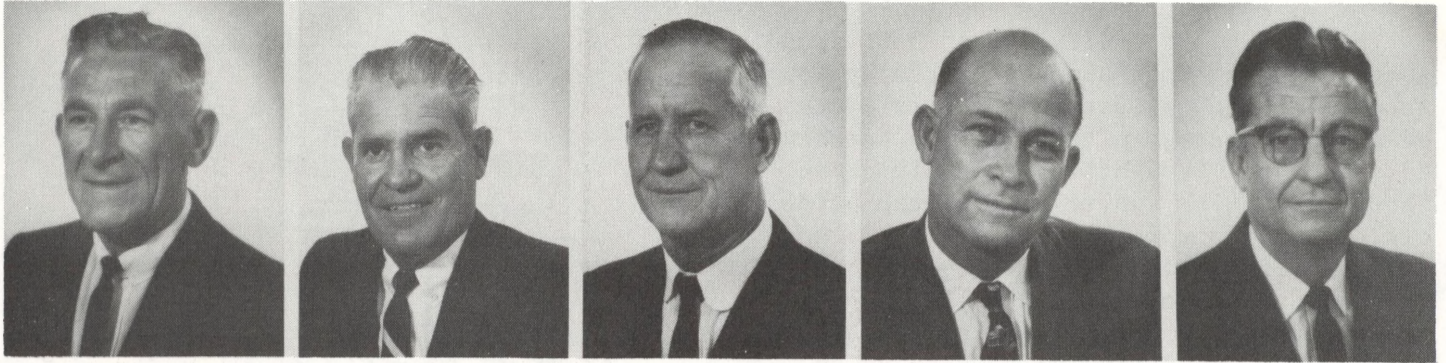
### STEAM DISPLACEMENT



In some ways, the steam displacement method resembles waterflooding. Certain wells are used for injection purposes to drive the oil to surrounding producing wells. However, the water is injected at high temperature in the form of hot water or steam. Again, the heat improves the flow characteristics of the heavy crude, making it possible to bring it to the surface.

The general theory of thermal recovery has been explained in Part I and Part II. Since there are more than 2,000 reservoirs in the United States, many of them in Texas, containing thick, heavy oil, this will be a challenging target for the petroleum industry's scientists and production experts as they push ahead in an effort to produce this valuable resource on a commercial basis. Eventual success will increase greatly its capacity to deliver the petroleum products that will be needed in the days ahead.

SERVICE ANNIVERSARIES - 30 YEARS



R. G.  
Hightower  
Dispatching

J. A.  
Sullivan  
Research Lab.

C. D.  
Fisher  
Engr. Field

O. B.  
Anderson  
Engr. Field

L. H.  
McDonald  
Utilities

THE TOLL OF TRAFFIC FATALITIES

Traffic deaths across the nation rose to an estimated 49,000 in 1965. This was 3% above the indicated 1964 total of 47,700, but it was the smallest year-to-year increase in the last four years. The Texas traffic toll of 3,028 fatalities was a .73% increase over the 1964 total of 3,006 fatalities. This was the smallest year-to-year increase in Texas since 1961. In previous years increases were: 1964 - 10.15%; 1963 - 12.72%; 1962 - 4.62% and 1961 - 2.66%

CLASSIFIEDS

FOR SALE

1953 Ford Pickup. Motor, transmission, generator, radiator, and starter recently rebuilt. Good six-ply tires, radio, and heater. Has steel bed.  
\$395.00  
Telephone - GR-9-3533

Maple baby bed with mattress and chest. Like new - both were \$69.95 each. Will sell for \$30 each.  
Telephone - GL-3-5502

PICKETT slide rules Model N-902ES - \$4.85 each. Only 22 left - Available in Purchasing-Stores office.

Furnished house, 1 acre land, swimming pool. Lake Tejas, lake for fishing only. Highway 59 to Shepherd, Texas, right on FM RD-23.  
Telephone HU-6-4720

Crosley Shelvador Refrigerator - good condition.  
\$35.00  
Telephone - GR-9-2703

21" Admiral T.V., table model.  
Telephone - GR-3-6858

1965 MGB - Radio and heater. Wire wheels, Tonneau cover, 20,000 miles. One owner.  
\$1800.00  
Telephone - HU-7-0290 after 5 p.m.

HOUSE FOR RENT

Located in Southeast Houston. Freeway Manor - 538 Globe Street. Three bedrooms, two baths, brick, single attached garage. Available August 15.  
Telephone - Crosby 428-4076

WANTED

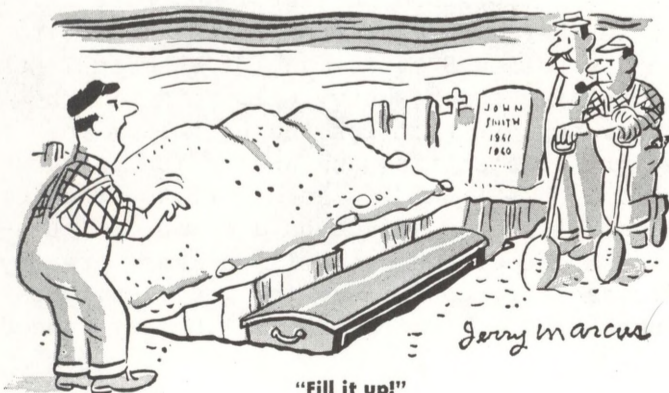
One 5-gallon electric or gas water heater for a trailer house.  
Telephone - Baytown 583-1920



"Fill it up!"



"Fill it up!"



"Fill it up!"

*Jerry Marcus*