

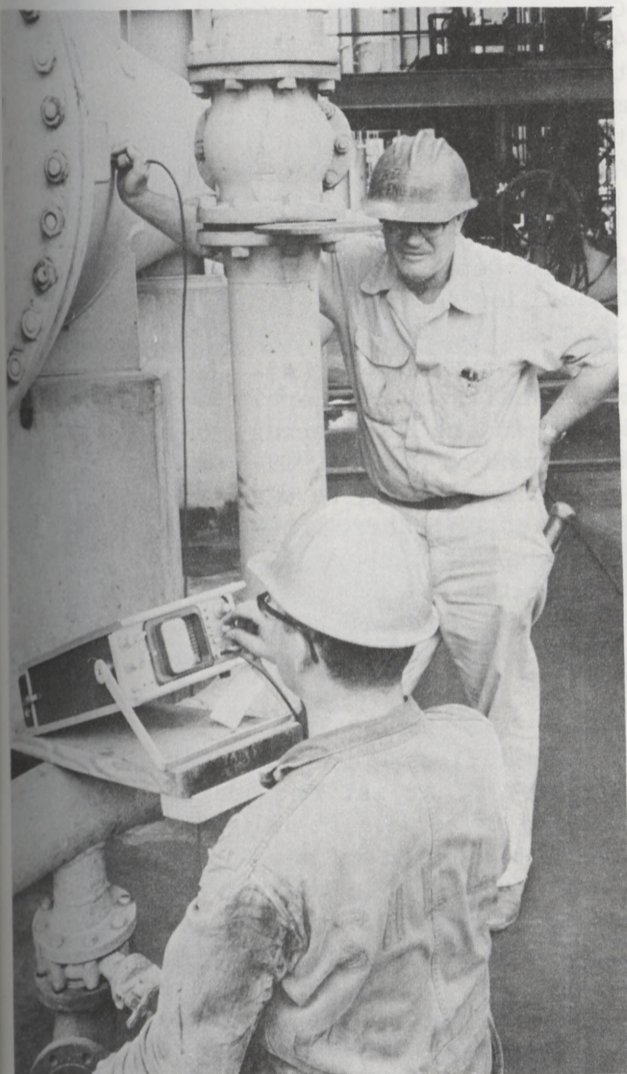
Shellegraph

Houston Refinery

Vol. 37, No. 10

Friday, March 10, 1972

ULTRASONIC INSTRUMENT TO HELP INSPECTORS TAKE READINGS OF METALS



Art Janszen and Billy Simpson are measuring the thickness of an exchanger shell at Distilling Unit No. 2 while the unit is in operation, using the new Sonaray 301.

Modern technology has added another dimension to the many instruments used by the inspection group to assure that refinery equipment remains in good operating condition. A new Sonaray 301 ultrasonic instrument which operates on the same principle as "Radar" is being used by the group.

The 301 instrument is used to locate subsurface cracks, flaws and to measure wall thickness of any metallic material as well as for weld quality inspection. As part of a continuing project, the Engineering Service inspection group will be using this equipment extensively throughout the refinery on units while they are in service as well as during shutdown periods.

Sound waves from a piezoelectric crystal penetrate the steel and bounce back from the opposite side. The time interval required for this to occur is a function of the metal thickness. The time interval is amplified and displayed on a cathode-ray tube

which is calibrated to give metal thickness, and detect cracks, or other discontinuity in welds or steel plates.

Four Sonaray 300 instruments, the predecessors to the 301, have been in operation at the refinery since 1966.

NORCO WINS CONSERVATION AWARD FROM LOUISIANA WILDLIFE GROUP

Shell's Norco Refinery has received the "Conservationist of the Year" award from the Louisiana Wildlife Federation for the "Outstanding Conservation Achievement by a firm, company, or corporation in the field of environmental pollution control and conservation."

A plaque was presented to C. H. Plomteaux, Manager, Norco Refinery, at a March 4 awards banquet during the Federation's 33rd annual convention in Baton Rouge. It was one of ten awards in the Eighth Annual Governor's State Conservation Achievement Program, sponsored by Sears-Roebuck and Company.

The Refinery's entry covered pollution abatement for air, water and noise as well as plant beautification. Among the highlights:

Air--Prevention of vapor venting and hydrocarbon leaks from tanks, stack gas sulfur conversion, and reduction of particulate matter emission.

Water--Waste water handling facilities that have outfall waters abounding with crabs, nutria, minnows, and frogs. Replacement of dock facilities to ensure against contamination of Mississippi River.

Noise--46 noise-reduction projects completed since 1968--30 more are in various stages of completion.

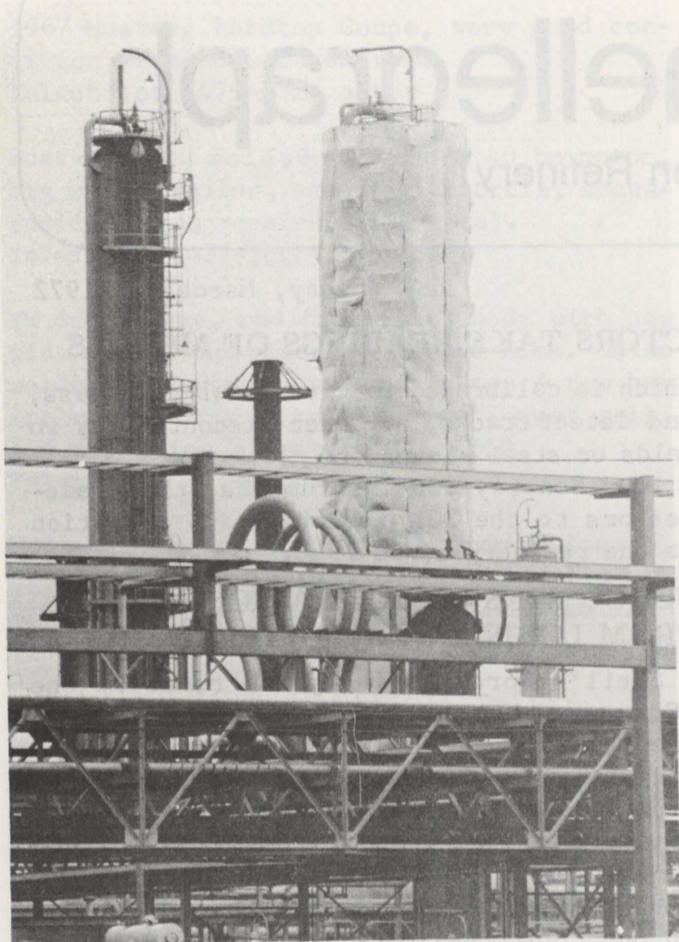
Beautification--Hedge and tree planting, general improvement of roads, grounds and facilities.

The intent of the Governor's conservation achievement program is "To further the proper utilization and conservation of the natural resources of the State of Louisiana--soils, minerals, forests, fisheries, and wildlife--through an awards program designed to bring about greater knowledge of conservation projects, and to give proper recognition to those persons and organizations who make outstanding educational and informational contributions to the natural resource welfare of the community, the parish, and the state."

HOW'S BUSINESS?

That little blue booklet attached to the Shellegraph this week has been provided for your benefit so that you may understand the financial operation of the company.

CLASSIFIED



If you've ever papered a house, you'll appreciate the work which went into making the windshield for the debutanizer column in the CC gas recovery unit. About 1500 feet of muslin were used to wrap the column so that a polyurethane foam insulation could be applied to the column easily. The column, which has been in operation since 1946, had its old insulation removed, then it was hydro-blasted to remove rust scale, a preventive paint was applied and then the new insulation was sprayed.

RIDING A BUGGY IN THE GRAND ENTRY

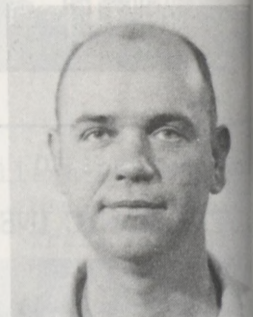


In the Grand Entry at the Rodeo Sunday, representatives of San Jacinto County included Sheriff "Humpy" Parker, little Molly Brown (granddaughter of F. D. Jennings), Mrs. Jewel Rhodes, Paul Whitmire, winner of a Livestock

Personnel Moves

COOK, CARRAWAY NAMED FOREMEN

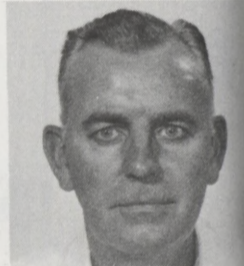
K. H. Cook, Operator No. 1, Distilling Department, has been named Operations Foreman. The move, which was announced by J. R. Cox, Superintendent Operations (West), was effective March 1.



Cook

Ken joined Shell in the Cracking Department as a General Helper in July 1946. He was made an Operator No. 1 in that department in December 1955. He transferred to the Distilling Department in April 1970.

W. L. Carraway, Safety Inspector in the Safety Department, is being promoted to Operations Foreman in Lubricating Oils-Section A.



Carraway

Wally began his career with Shell as a General Helper in the Engineering Department on March 7, 1949. In April 1952, he was assigned to Lubricating Oils where he progressed to Operator No. 1 in January 1959. He moved to his present position as Safety Inspector in April 1969.

The Shellegraph editor has another hat to wear. That is, the editor has another capacity to serve. In addition to publishing the weekly refinery newspaper, your editor is now responsible for the Shell Bulletin, the Chemical Plant monthly newspaper. Her first edition was published in February.

Show agricultural scholarship, County Judge J. R. Page, and Don Jennings, President of the Chamber of Commerce and Ambassador to the Houston Livestock Show and Rodeo on San Jacinto County day.

22-foot Travelers trailer, tub & shower fully self-contained, oversize refrigerator,

the Pace Funeral Home. Burial was in Cleveland.

How's Shell
SHELLEGRAPH
Published by Shell Oil Company for its Houston Refinery and MIM Research-Houston employees at Deer Park, Texas.

ELECTRICIANS DINE OUT ON SHELL FOR SAFE YEAR OF WORK



At the recent electrician safety dinner were guests Mrs. and Mr. F. B. Harrison, Mrs. and Mr. T. Gary Mathews and Mrs. W. A.

Ham. Sampling the buffet dinner were electricians and wives honored for a safe year of work.



Socializing were L. C. Berger, T. M. Galban, C. S. Guidry, Mrs. Guidry, Mrs. J. R. Alexan-

der, Mrs. Galban, Mrs. J. P. Brasher, M. C. Pitchford and J. P. Brasher.

OIL DROPS: BAILEY JOINS AUTO EMISSION PANEL, ROXANA OLDTIMERS MEET

Dr. W. A. Bailey, Research Director, MTM Research Lab, has accepted an appointment as a member of the ad hoc Panel on Catalysts for Automotive Emission Devices and Petroleum Refining of the National Materials Advisory Board Committee on Technical Aspects of Critical and Strategic Materials.

The panel will "assess the technological potential of catalysts other than platinum as economic and efficient substitutes for platinum in petroleum refining and in automotive emission devices for controlling atmospheric pollution; and to indicate areas of further research."

The National Materials Advisory Board is part of the National Research Council, which as the operating arm of the National Academy of Sciences and the National Academy of Engineering, is a nonprofit group of scientists and engineers. The group is dedicated to the advancement of science and technology for the welfare of mankind.

The Roxana-Shell Old Timers Association

will hold its annual meeting March 31-April 1, at the Texas State Hotel in Houston.

The club is a social organization open to all Shell retirees. It was originally composed of those employed by Roxana Petroleum or Shell prior to March 15, 1931, but now welcomes all Shell and affiliated companies' retirees.

Dues are \$12 a year which pay for two social functions at the annual meeting. All interested retirees not already on the Association's mailing list may get further information from the organization's president, W. M. Harris, 5450 Darnell St., Houston 77035, telephone: 713-667-3153.

SHELLEGRAPH

Published by Shell Oil Company for its Houston Refinery and MIM Research-Houston employees at Deer Park, Texas.

Mrs. Josie Ochoa--Editor

CLASSIFIEDS

FOR SALE

Black persian, 9 months old, copper eyes, spayed, declawed, shots, no worms, lovely pet, \$35.
Telephone: 472-2719 evenings

Townhouse--Leawood: Alief schools, 2-2½-2, complete electric kitchen, drapes, central heat-air, all carpet, assume GI loan, \$21,500. Low equity and monthly note.
Telephone: 498-4922

Apt. size coppertone stove, ideal for camp house. \$15.
Telephone: 487-3649 after 5

80 hp Johnson outboard-super seahorse, electric with controls, tachometer and spare prop. \$575.
Telephone: 481-0037

2 black bucket seats-\$35. Antique band saw-\$25. Small wood hydroplane boat--\$10.
Telephone: 645-0448

24" girl's Roadmaster bicycle, \$65 new, chrome fenders, looks new, \$15.
Telephone: 923-5795

1½ ton Carrier air conditioner window unit, excellent condition, \$75. Closet furnace, good condition, \$30.
Telephone: WA 6-9801

Moving-blue modern sofa, 2 end tables, coffee table, very good condition, \$130. Gold tweed rocker recliner, good condition, \$40.
Telephone: 479-6447 after 4 p.m.

1962 Ford Econoline van, 6 cyls, carpet, interior paneling, good condition, \$495.
Telephone: 333-2620 after 5

1969 3/4 ton Chevrolet, 23,050 miles, air conditioned, power brakes, power steering, automatic trans., custom cab with camper, self contained, sleeps 6, \$150 & assume note.
Telephone: 645-6248

FOR RENT

New 2 bedroom trailer house-furnished, central air & heat. Bills paid. Private lot with shade trees.
Telephone: 487-0956 after 6 weekdays, anytime weekends.

PERSONAL

Thank you fellow employees for the gifts and well-wishes upon my retirement last week. I will always remember working with you.
John A. & Clara Butterfras

PROVIDENT FUND NEWS

The following is the Equities Fund valuation:

February 20, 1972- \$2.602

RETIREMENT FESTIVITIES FOR THREE



Joe Pena sports the gun and plaque given to him by fellow employees upon his retirement last week after 25 years of service.



John Thompson also received a gun and well-wishes from fellow employees. He had 27 years service.



W.I. Peppers presented a fellowship plaque to John Butterfras upon his retirement after 27 years.

How's Business?

1971 despite difficulties and setbacks, was a year of generally improving performance for Shell. Earnings, after being down sharply in the first 6 months, recovered in the second half to end the year 3% higher than in 1970.

Net income totaled \$244.5 million. This was a return on shareholders' investment of about 9%. It was also a profit of about 6¢ on every \$1 we took in (not counting almost \$700 million in sales taxes collected from customers). Almost all operating figures—except for reserves of liquid hydrocarbons and natural gas—showed modest but healthy gains. Production of liquid hydrocarbons (up 6%), refinery output (up 7%), refined product sales volume (up 2%), oil and gas revenues (up 9%), and chemical revenues (up 6%)—all were at new highs.

Reasons for the brighter profit picture:

—Aside from the higher levels of operations, much of the earnings improvement came from better prices for most of our refined products. Automotive gasoline prices, in particular, which had been severely depressed, reached more satisfactory levels in July.

—Federal Power Commission decisions on natural gas prices and the reinstatement of the investment tax credit helped the last-half recovery. The FPC action allowed sizable sums which had been collected previously but held subject to refund to be taken into earnings.

—The absence of costs and expenses related to the new Houston olefins plant, which had cut into

1970 net income, made a big difference last year.

—“Of great significance for the long-term future of the Company,” Harry Bridges, president, said, “was the fact that the improvement was also the result of sustained and continued efforts to reduce costs and improve efficiency.”

What held us back?

The plus factors were largely offset, however, by higher costs of raw materials, supplies and wages; increased writeoffs associated with non-producing leases and manufacturing and marketing expansion and modernization; lower prices obtained for chemicals; and larger interest payments.

Two major setbacks also occurred. The Delaware legislature blocked our plan to build a refinery on a site we have owned since the early 1960s. And a federal court granted an injunction which resulted in cancellation of an offshore lease sale which was to have been held last December.

Emphasis on energy

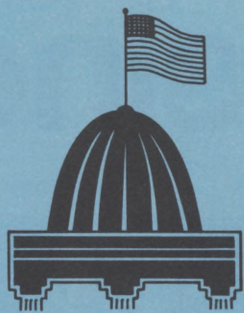
About the national energy situation, Mr. Bridges said: “Your Company has prominently supported industry efforts to alert public and government opinion to the issues at stake. We have reinforced this with public and private representations of our own. The indications are, however, that the full dimensions of the future energy supply position are not yet understood. During the year ahead corporate efforts will be redoubled to achieve wider appreciation of what needs to be done on a national basis.”

Where the money goes

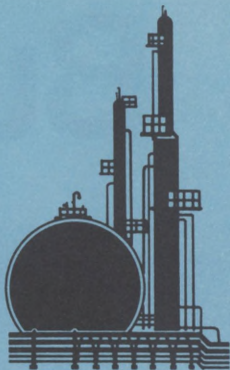
From every dollar that came into the till . . .



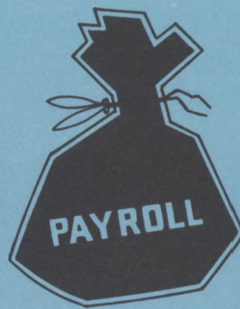
36¢ was paid to our suppliers for things we use . . .



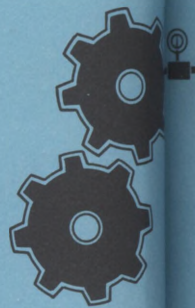
19¢ went to government in income, consumer and other taxes . . .



18¢ went to cover other operating costs . . .



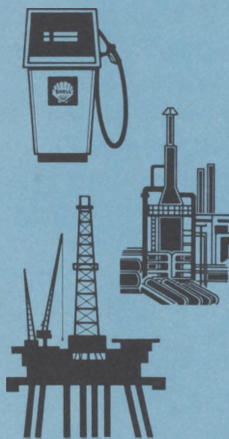
12¢ was paid to employees in wages and salaries, including benefits . . .



9¢ went for depreciation and assets used up . . .



3¢ went to shareholders as dividends . . .



2¢ was reinvested in the business . . .



1¢ was needed to cover debt payments.



Expressed in actual amounts, the total revenues in 1971 were \$4.6 billion. Of this amount, \$1.6 billion went to suppliers, \$889 million in taxes, \$850 million to cover other operating costs, \$539 million to employees, \$411 million for depreciation and assets used up, \$162 million to shareholders, \$83 million back into the business and \$48 million in interest and debt amortization.

Operating trends



Production of liquid hydrocarbons 731,000 b/d up 6%.



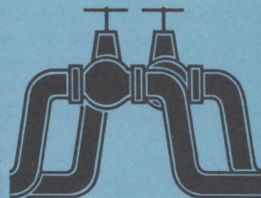
Refinery output 1,004,000 b/d up 7%.



Total refined products sales revenue \$2.2 billion up 6%.



Chemical operating revenues \$556 million up 6%.



Natural gas sales volume 2,715 million cubic feet a day, level.

Big investments to keep the business going

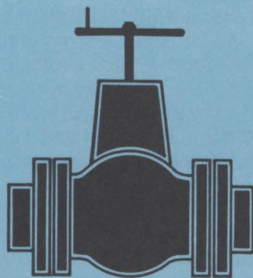
Last year \$450 million went into capital investment, primarily on new plants and equipment. Another \$93 million was spent on exploration. This \$543 million represents an investment of \$15,000 per employee.



Oil exploration and production \$321 million



Marketing facilities \$100 million



Transportation and miscellaneous \$44 million



Oil product manufacturing \$39 million



Chemicals manufacturing \$39 million

What we did last year

New services for motorists

Marketing innovations included the establishment of 45 new self-service gasoline retailing outlets, plus the introduction of automatic car-wash facilities. At present, these are in operation or under construction at nearly 100 stations. The self-service feature appeals to a large segment of the motoring public who are willing to refuel their cars themselves to save money. Car washes have won immediate popularity because they are usually provided free with fill-ups.

For Shell Credit Card customers

We put into full-scale operation the special customer service line to the Tulsa Credit Card Center. This is a nationwide toll-free telephone service Shell Credit Card holders can use to get quick action on matters concerning their accounts.

New automotive products

Two new premium motor oils went on sale—SHELL SUPER X* 20W-50 and SHELL SUPER X 10W-40. The first is designed for use in hot weather and the second for cold climates, although both provide superior performance over a very wide temperature range.

Service station "facelifting"

Sometimes called the "wrap-around" program, it used cost-saving materials and building techniques to give some older service stations a more modern and attractive architectural appearance. About 600 stations have already been remodeled and more are due to get their faces lifted.

Extension of our exploration horizons

We went beyond the North American continent for the first time in our search for new reserves of oil and gas. Our first endeavor was a joint venture with Continental Oil Company and Ecopetrol, the national oil company of Colombia, to explore 1.3 million acres in the plains of eastern Colombia. Negotiations for other ventures in Latin America were under way and we are continuing to look for other opportunities in Latin America and West Africa.

The joint venture in Canada

Exploratory activities continued in high gear in this major undertaking involving interests

*Shell Trademark

in 72 million acres inland and offshore, with Shell Canada as the operator. In the 34-million acres of joint holdings off Nova Scotia, a cumulative total of 24 wildcat wells had been drilled by year-end. Several encouraging shows of oil and gas were encountered, but no commercial discoveries yet. Joint holdings of 4.8 million acres in the St. Lawrence Lowlands and the Gaspé Peninsula continued to be evaluated by geophysical work. A program of seismic work and drilling was also under way in the Northwest Territories, where joint holdings total 7 million acres.

Offshore Louisiana discoveries

Exploratory drilling on 7 of the 9 tracts acquired at the December, 1970, federal lease sale resulted in the discovery of commercial quantities of oil and gas on 3 tracts. Development of these new fields is now proceeding.

The discoveries emphasize the importance to Shell of the continental shelf in the Gulf of Mexico. About 45% of our crude and condensate and 35% of our natural gas were produced in this region, which also accounted for about 40% of all capital expenditures for drilling and development.

Domestic onshore E&P programs

An active drilling program continued in the Uinta Basin of Utah, where Shell brought in the discovery well in 1970. Production has been established along a 20-mile geological trend.

An aggressive drilling program also continued in Michigan, where we have had an unusually good wildcat well success ratio since 1969—13 discoveries versus 9 dry holes. Last year 4 wildcat wells were indicated discoveries, 3 oil and 1 gas. All the accumulations so far are small, but profitable.

Oil and gas production and reserves

Gross production of crude oil and natural gas liquids rose to a new high of 731,000 barrels a day, 6% above the 1970 rate. Gross natural gas production averaged 3,020 million cubic feet a day, slightly below the 3,027 million cubic feet a day in 1970.

The rate of additions did not keep pace with production, however, so reserves declined. At year-end net proved reserves were estimated at 2.2 billion barrels of

liquid hydrocarbons and 8 trillion cubic feet of gas. A year earlier they were estimated at 2.3 billion barrels of liquids and 8.4 trillion cubic feet of gas.

Improved Shell Chemical performance

Operating revenues of \$556 million were 6% higher than in 1970. Burdensome contracts related to the new Houston olefins plant ended. The plant's capacity was boosted about 20%.

Production began at two new plants in Houston of vinyl chloride monomer and orthoxylene, chemicals not previously made by Shell. A large new plant was completed at Marietta, Ohio, to supply the rapidly growing market for KRATON® Thermoplastic Rubbers. Facilities at Marietta for making polystyrene were also expanded.

Shell Chemical also announced it was withdrawing from the styrene-butadiene rubber business, which is no longer attractive because of oversupply and depressed prices. The Torrance plant will be closed.

Research reorganized

A plan to reorganize and consolidate research, technical computing development and patent and licensing activities was announced. All these activities will be centralized in Houston, except for research in biological sciences, which will continue at Modesto, California.

R&D focused on environment

Research activities gave high priority last year to environmental conservation programs. They ranged from work on prevention and cleanup of oil spills to programs concerned with noise control and odors. OIL HERO, a surface-active chemical agent which is used in containment and cleanup of oil spills, won an Environmental Protection Agency classification as a specialized surface-collecting agent. Other research projects in the same category included effluent treatment, evaluation of barge and tanker oil alarm equipment and studies involving changes in the composition of gasoline to meet new ecological requirements.

New head office in Houston

One Shell Plaza replaced the RCA Building as head office with the completion of the move of corporate headquarters from New York to Houston.