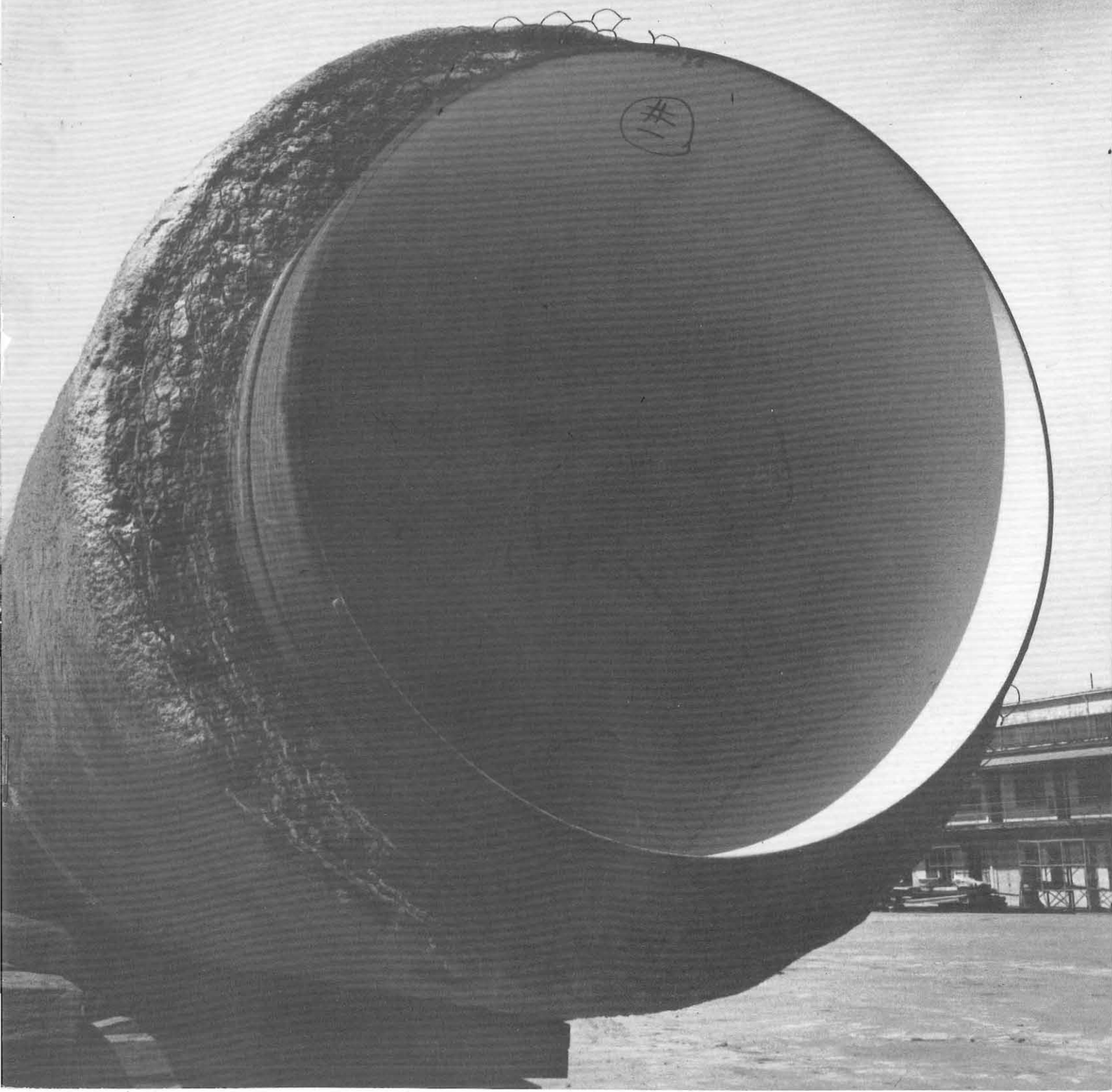


GO DEVIL 79.7



The laying of the Pier E pipeline was an assembly line affair — one crew had trench digging in progress while another crew laid the 40-foot joints. When those groups of workers called it a day at 3:45 p.m., a third crew came on to do the internal coating work. The result was the building of the largest-diameter pipe in Shell's history.

The five-mile, 42-inch line runs from Arco's dock in Long Beach, through Union Pacific land, across the Cerritos Channel, to the Wilmington Manufacturing Complex.

In reciprocal agreements reached with Arco in 1972, Shell agreed to lay the big pipe for the joint use of Shell and Arco in exchange for the use of Arco's dock at Pier E. "In the late '60s, Shell recognized that the domestic crude supply on the West Coast was diminishing and, along with it, the need for on-shore pipeline transportation," says Ron Dudley, Plans and Analysis, who's project coordinator for Pier E. "The result was that, in the early '70s, many in the industry began to look to improve their crude oil marine facilities. For Shell, it meant this

arrangement with Arco, which has a refinery in Carson adjacent to ours at Wilmington."

Following seven years of complex right-of-way negotiations and permit acquisitions from various local, state, and federal government agencies (see related article), construction began on June 28.

Earl Bales, pipeliner, Hobbs, was the inspector on duty at that time. "We started putting in the pipeline across Arco's property that day, at the dock end of the line. In July, we built the scraper trap. A temporary contractor, Ledford Brothers, built both."

Following a temporary delay, construction resumed on August 20 with the main contractor, Hood Corporation.

The Pier E line was no place for the person in a hurry; in addition to the lengthy approvals, the laying of the line itself was also a prolonged process.

"Excavation was slow. We had to dig a ditch seven feet deep by eight feet wide in areas congested with other sewer, water, oil, and gas lines," says Buz Zoller, Pipeline Construction engineer in charge of the project.

"Two hundred feet a day is about all we could dig and complete."

In the continuous process of installing the line, the digging, laying, and welding were followed by the application of two coats of white epoxy resin on the inside of the field joints.

"You have to wait 24 hours between coats. That meant the coaters may have had to go as far back as two days' work into the pipe to complete the coats," says Zoller. "Four hundred feet is a long way to crawl, even in a 42-inch line."

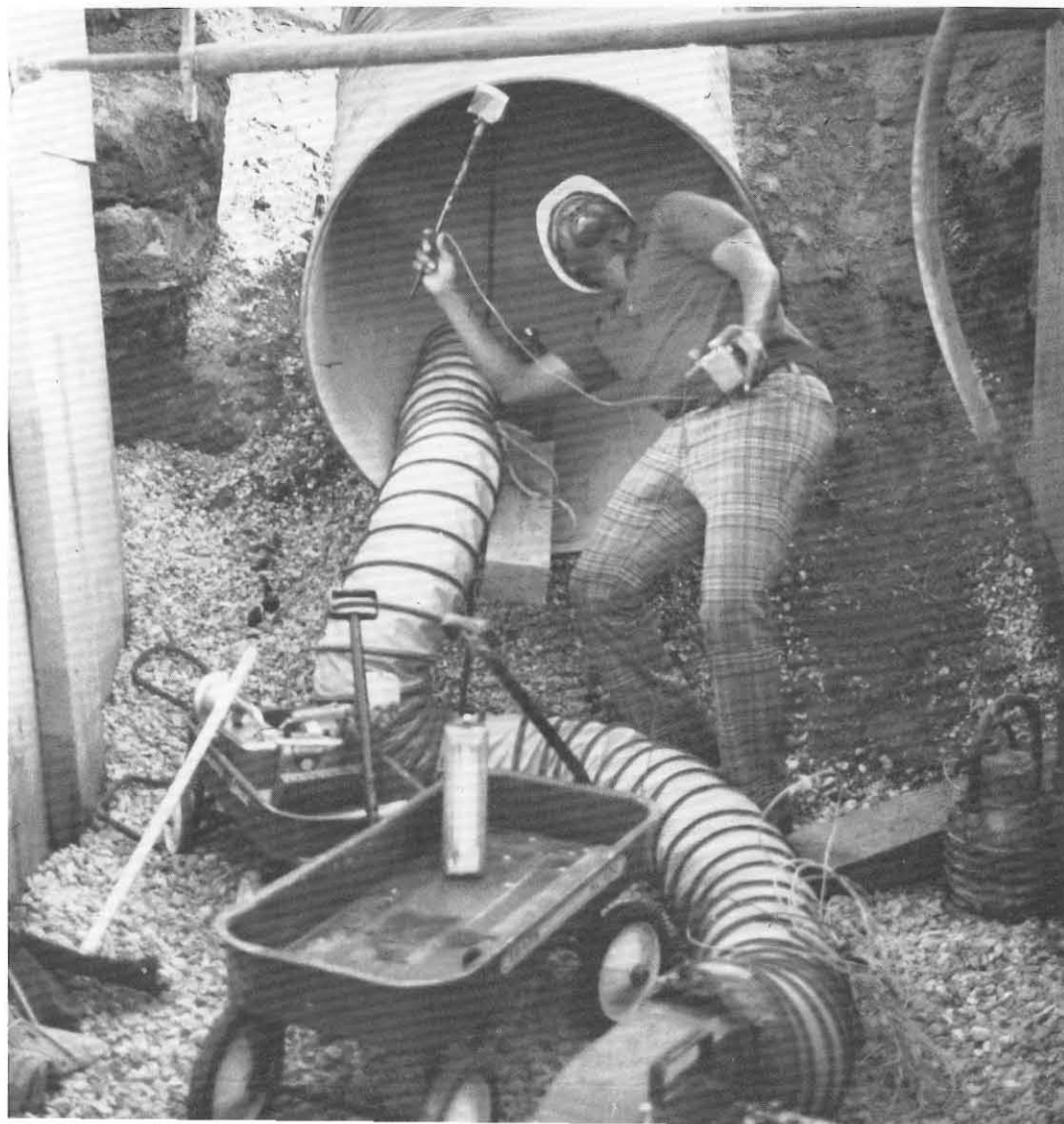
With the land north and south of the Cerritos Channel being 10 feet below sea level, the bottom of the construction ditch was about 17 feet below sea level. The result was salt water intrusion into the pipeline ditch. It had to be de-watered in order for the welders to get down in the ditch safely.

"The engineers put tubes around the trench and surrounding land. At the bottom of these tubes were pumps which took

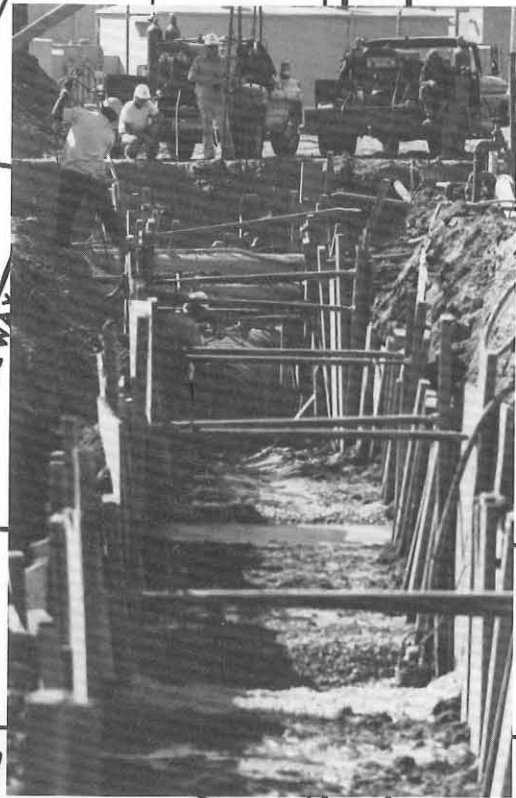
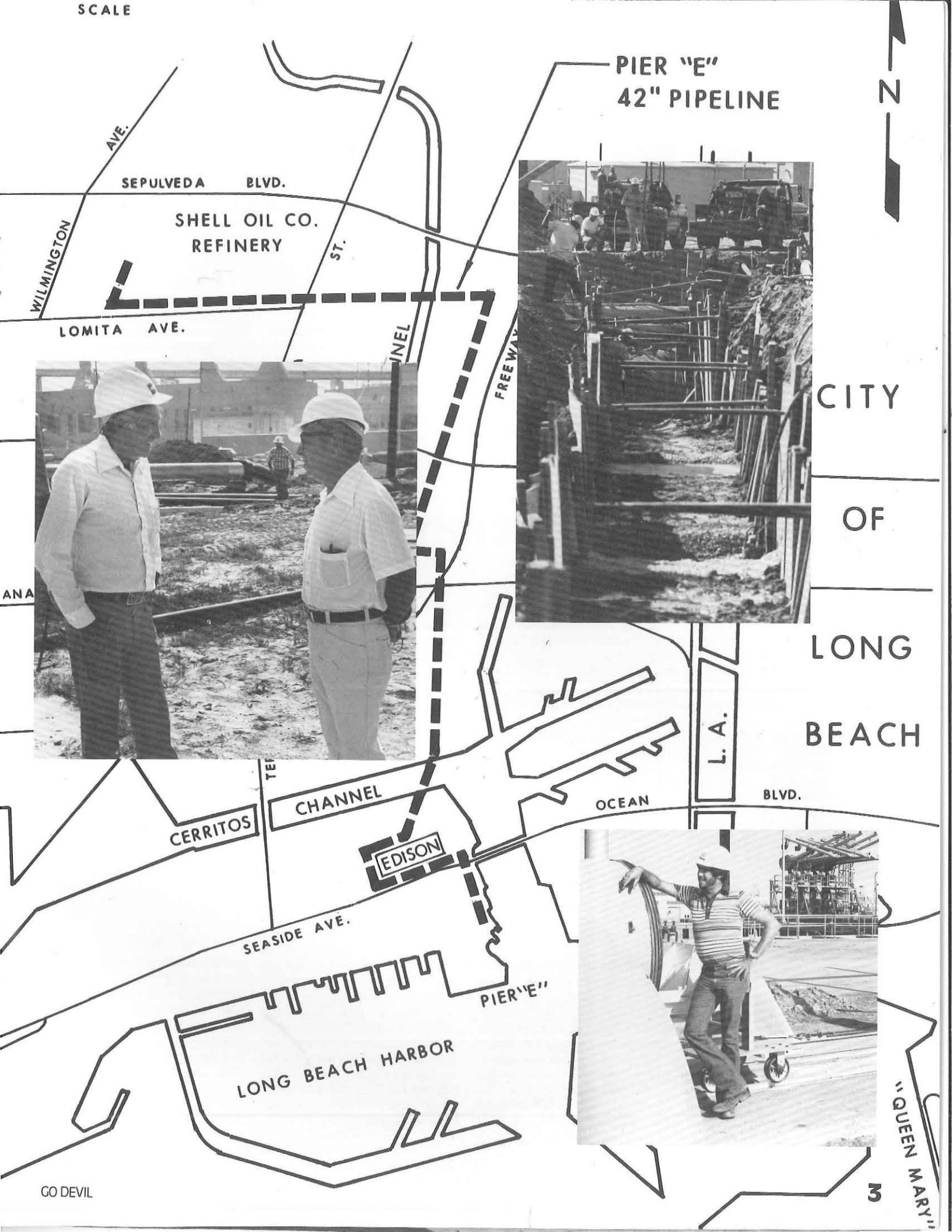
continued on page 4

Pier E digs in

Completion scheduled for March



Left: Harry Miller, Kermit, who's material clerk on the project, gracefully demonstrates the internal coating technique for the camera. *Opposite:* (top) A trench-eye view of the maze of pipes the Pier E line had to cross through. (middle) Jim Mekin (left), construction superintendent for Ledford Brothers, keeps in close touch with Vince Cobb, chief inspector. (bottom) Earl Bales had a sixth sense that this would be no swift project; while home during the summer construction break, he married his girlfriend and brought her back to Long Beach.



continued from page 2

out the water," says Norm Von Ignatius, who works with Dick Kerick in Anaheim. "That leaves you with the problem of water disposal. On Terminal Island, it was shipped by pipeline to the U.S. Navy's private sewer operation. On the north side of the Cerritos Channel, it was shipped to the City of Los Angeles sewer system. Ground water can't be put in the ocean. It contains lead, zinc, mercury, oil, and grease which can't be dumped."

The last major obstacle will be the crossing of the Cerritos Channel. One continuous welded piece of pipe about 600 feet long

will be floated down the channel and lowered with cranes.

"For this operation, we will use 42-inch pipe to which a four-and-one-half-inch concrete casing has been applied. It weighs 1,000 pounds per foot. That weight is necessary to ensure negative buoyancy; that is, to keep it sunk," says Don Barry, projects engineer, Pipeline Construction.

"To prepare for the channel crossing, we have dredged a ditch 20 feet deep to meet Corps of Engineers and Port of Long Beach requirements. The top 10 feet of dirt which we removed was taken 11 miles out to

sea and dumped in 600 feet of water, out of any area where contamination could endanger fish. The other 10 feet will be replaced."

Barry says Pier E's dock capabilities will be about the same as those at St. James on the Capline. "Ships of up to 190,000 deadweight tons can berth at the pier. Turnaround time should be no more than 36 hours, including mooring, pumping, and harbor transit. From there, the 50,000-barrel-per-hour throughput capacity line will carry the crude the five miles to Wilmington, where we have four 300,000-barrel storage tanks in

readiness."

At *Go Devil* deadline time, the parts of the line on either side of the channel were finished, with the Cerritos Channel crossing scheduled for a March completion date.

Other pipeline employees who worked on this project were Vince Cobb, Head Office chief inspector, who was in-spector in charge; Dick Holman, maintenance foreman, Bakersfield, who is senior inspector on the Cerritos Channel Crossing, aided by Gary Boone, pipeliner, Long Beach; and Harry Miller, pipeliner, Kermit, who was material clerk.

Before construction could start...

The reciprocal operating agreements with Arco for Pier E and the 42-inch pipeline were reached expeditiously; however, acquisition of the necessary permits to construct the line took somewhat longer.

Dick Kerick, staff land agent in the West Coast Division office, Anaheim, feels as though he's made a career of seeing this project through to the point where construction could become a reality. He has reams and stacks of paper to illustrate the work it's taken to get through the approval process with the state, federal, and local government agencies.

"The only way out of the Harbor area, a distance of 1.6 miles, was across lands owned by Union Pacific Land Resources and Southern California Edison. We began negotiations with those companies in 1972.

"Since an oil field with secondary recovery facilities was located on a part of the U.P. lands, they insisted we cross the Edison property. After about three years, however, it became apparent that we could not reach an agreement with Edison. We then proposed a reroute on U.P. lands

which would eliminate the need to cross the Edison power plant property. The negotiations were complicated because the 42-inch pipeline crossed through the heart of the oil field, which was owned and produced by Champlin Petroleum Company, a subsidiary of U.P.

"Finding a suitable route which did not conflict with Champlin's operations was difficult and time consuming. Finally, however, we reached an agreement in principle with Champlin and U.P. in the fall of 1977.

"While these negotiations were going on, we also had filed an application for a construction permit from the California South Coast Regional Commission, as well as an application for an engineering permit from the Port of Long Beach. However, these agencies refused to act on our applications until we had obtained all private right of way, including that across Union Pacific.

"After we were finally able to meet all its requirements, including an Environmental Impact Assessment (EIA), the Commission issued the permit in late 1976.

Ten days later, the California Air Resources Board (CARB) appealed the case, alleging we had not adequately addressed the air quality impacts of the pipeline in the EIA.

"On January 1, 1977, a new Coastal Act took effect in the state. As a result of the CARB appeal, we were thrown into a new hearing before the California Coastal Commission, practically starting the process over.

"At the first hearing in January of 1977, the commission staff recommended against the permit. Several hearings and nine months later, and after intensive negotiations with the Commission staff, the Commission issued a permit subject to CARB and the Southern California Air Quality Management District (SCAQMD) approval of the air quality elements of the project.

"In our application with SCAQMD, we showed that the project resulted in a decrease in air pollutants from tanker emissions, because we planned to unload fewer larger tankers at the deeper Pier E compared to the larger number of smaller tankers at Mormon Island.

"After seventeen months of negotiations regarding baseline emissions, trade-offs, and emission factors, SCAQMD agreed that the project resulted in a net reduction in air pollutants and issued its permit in April of 1979. These discussions had been complicated by the fact that SCAQMD was also considering the air quality aspects of the highly controversial Sohio project for crude oil unloading facilities in the Port of Long Beach, which had been challenged by several environmental groups.

"But that wasn't the end of the story," he says. "On May 9, Clean Air Now (a local environmental group) appealed the issuance of the permits to CARB. CARB rejected the appeal."

The next fly in the ointment? The Federal Clean Air Act of 1977 Amendments prohibited any new construction after July 1, 1979, unless the State Implementation Plan (SIP) has been approved by EPA. Since California's SIP had not been approved by July 1, the first shovel of dirt was turned on June 28 in time to meet the deadline.

Joseph A. Holmes

Safety Awards



Gulf Coast Division

F.J. Griffith

Central Division

R.S. Alexander
R.W. Guthrie, Jr.
R.L. Mitchell
B.B. Parker
C.N. Prater

Mid-Continent Division

G.S. Arnold
J.J. Cipolla
R.R. Riggs
H.E. Schaller
S. Virga
L.H. Whitworth

West Coast Division

G. Christy, Jr.

Thirteen may have a reputation for being a number connoting bad luck among the superstitious. But an achievement quite the contrary is true in this case. During 1978, 13 Pipe Liners achieved the enviable record of working 30 consecutive years without a disabling injury, an enviable record in the field of health and safety.

Pipe Line has been proud to recognize this achievement in accident-free work since 1956 by presenting qualifying employees with the Joseph A. Holmes Individual Safety Award.

The Joseph A. Holmes Safety Association was founded in 1916 by 24 leading national organizations representing the mining, petroleum, and related industries. It commemo-

rates the efforts of Dr. Holmes, the first director of the Bureau of Mines, to reduce accidents and ill health in the mining and allied industries, and to promote the doctrines of safety and conservation of life in those industries.

At the time Holmes became director of the Bureau of Mines, the health and injury experience wasn't too good. The picture has improved considerably, however, primarily as a result of the safety practices and procedures he helped inaugurate.

This year's awards were presented during the fall round of Safety Chapter Dinner meetings, when the above recipients were given wallet-sized certificates, lapel pins, and hardhat decals.

Retirement party

A chapter in **Martha Foster's** life that began in 1953 in McCamey when she went to work as a telephone operator closed August 3. She retired following more than 25 years with Shell Pipe Line. A reception honoring her was held in the Director's Room of the First National Bank in Midland.

More than 150 fellow employees and friends were there to celebrate with her. They had donated to her retirement gift, a money tree, presented by **John Limmer**, safety representative. The appropriate gift should help her with her retirement plans which include travel to Spain and Portugal.

—Pat Hopson



Deaths

Travis C. Bryant, retired from Shell Pipe Line Corp. on March 1, 1963, died November 3. He is survived by his widow, Verna, of Midland, TX.

Ralph A. Eaton, retired from Products Pipe Lines on May 1, 1966, died October 30. He is survived by his widow, Maria, of Clinton, IL.

Leo C. Geiler, retired from Shell Pipe Line Corp. on January 1, 1958, died October 16. He is survived by his widow, Mary, of Houston, TX.

Harry L. Jones, retired from Shell Pipe Line Corp. on June 1, 1968, died November 19. He is survived by his widow, Barbara, of Longview, TX.

Johnnie O. Main, retired from Shell Pipe Line Corp. on August 1, 1971, died November 28. He is survived by his daughter, Patricia, of Winnie, TX.

Willie D. Polvadore, retired from Shell Pipe Line Corp. on August 1, 1961, died October 28. He is survived by his widow, Cora, of Houston, TX.

Vic I. Porter, field gauger, Brownfield, died October 21. He is survived by his widow, Nancy, a daughter, and grandson.

Tykeliners

Lois and B.L. Burns, electrical technician, Midland, announce the arrival of their third child and second son, Stephen Edward, born November 10. Weighing 7 lb.-9 $\frac{3}{4}$ -oz. and measuring 21 inches long, he was welcomed by Sheryl Lynn, 7, and Michael Lee, 5.

Robin and Gregory Lauck, maintenance truck driver, Lima, became parents for the first time on October 4 with the arrival of Joshua Cain. The child weighed 8-lb., 4-oz. and was 19 $\frac{1}{2}$ inches long.

Leroy and Gail Melton, Employee Relations assistant, New Orleans, are another set of new Pipe Line parents. Langston Joseph was born October 30 and weighed in at 7-lb., 1 $\frac{1}{4}$ -oz.



Joshua Cain Lauck



Langston Joseph Melton

Personnel Changes

HO

L. R. Johnson
from Maintenance Foreman
GCD—to Sr. Eng. Asst.
Pasadena to Reg. & Mtce. Stds.

CD

J. C. Falkenbury
from Tank Farm Gauger
to Oil Movements Controller
McCamey

R. E. Foster
from Utility Gauger
to Field Gauger
Hamlin to Brownfield

C. B. McKee
from Pipeliner-Truck Driver
to Tank Farm Gauger
McCamey

J. D. Busby
Pipeliner
McCamey to Goldsmith

R. E. Dinges
from Laborer
to Pipeliner 6-12
Newcastle

D. R. Tice
from Pipeliner
to Utility Gauger
Hamlin

C. B. Treadwell
from Pipeliner 6-12
to Field Gauger
Hamlin to Brownfield

D. R. Busby
from Pipeliner 6-12
to Pipeliner
Hobbs

J. M. Corley
from Pipeliner 6-12
to Pipeliner
Eunice to Hamlin

M. R. Ybarra
from Pipeliner 6-12
to Pipeliner
McCamey

R. B. May
from Laborer
to Pipeliner 6-12
Hendrick

L. L. Wineteer
from Pipeliner 6-12
to Pipeliner
Newcastle

L. L. Albright
from Laborer
to Pipeliner 6-12
Newcastle

GCD

R. A. Capone
from Laborer
to Pipeliner (6 mos.)
St. James

J. W. Stephenson
from Laborer
to Pipeliner (6 mos.)
Pasadena

J. R. Campbell
from Operations Foreman
to Operations Supervisor
Pasadena

D. P. Louviere
from Operations Foreman
to Operations Supervisor
Sorrento

J. C. Bridgeman
from Meter Meas. Mech. C
to Meter Meas. Mech. B
Nairn

W. R. Gravois
from Transfer Attendant
to Terminal Agent
St. James

O. J. Dufresne
from Oil Movement Controller
to Terminal Agent
St. James

R. A. Robert
from Terminal Agent
to Asst. Supv. Oil Mvmnts.
St. James

G. B. Carabajal
from Gauger
to Meter Meas. Tech.
Pasadena

P. R. Scioneaux
from Asst. Terminal Supv.
to Oil Movements Controller
St. James

D. E. Levine
from Terminal Agent
to Sr. Operations Asst.
St. James

G. L. Hallam
Laborer
Pasadena to Goodrich

K. D. Morris
Pipeliner (6 mos.)
Pasadena to St. James

M. A. Hawley
from Pipeliner (6 mos.)
to Utility Pipeliner
St. James to Sorrento

R. A. Riddle
from Lead Pipeliner
to Maintenance Foreman
Pasadena to Orange

T. T. Shaddock
Meter Meas. Tech.
Gibson to Orange

D. A. Schexnayder
Pipeliner-Welder I
St. James to Sorrento

MCD

D. J. Allan
from Laborer
to Pipeliner (6 mos.)
Kalkaska

A. W. Mims
from Sta. Attd. A
to Utility Ggr.
Healdton

C. R. Peterson
from Sta. Attd. A
to Utility Ggr.
Boyd/Pauls Valley

P. A. Jones
Clerk
Indianapolis
Office Svcs. to Finance

L. Robinson
Clerk
Indianapolis
Office Svcs. to Finance

W. M. Raudman
from Laborer
to Pipeliner (6 mos.)
Kalkaska

K. W. Duffy
from Laborer
to Pipeliner (6 mos.)
Patoka

M. L. Franklin
from Engineering Asst.
to Pipeliner
HO—Reg. &
Mtce. Standards
to Dyersburg

Shell Welcomes

CD

Jeanna M. Faris
Clerk
Midland

GCD

R. E. White
Laborer
Jackson

C. Wintill
Meter Meas. Mech. B
Pasadena

G. M. Estes
Mech. C
St. James

R. S. Zeringue
Laborer
St. James

MCD

C. A. Kinley
Clerk
Indianapolis—Office Svcs.

J. A. Ulmer
Clerk
Indianapolis—Office Svcs.

WCD

K. G. Sorenson
Communications B
Anaheim

Service Anniversaries

T. E. Chambers
GCD—Kilgore
40 years

J. R. Grantland
CD—Hobbs
30 years

J. C. Milam
GCD—St. James
15 years

C. R. Phipps
GCD—Pine Grove
15 years

J. D. Grotts
MCD—Cushing
10 years

V. I. Kelley
CD—Big Spring
10 years

Retirements

J. Baker
Field Gauger
Brownfield



D. M. Martin
25 years—November

GO DEVIL

79.7

Billye Lynn Ratliff, editor

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Published each month for employees, pensioners, families and friends of Shell Pipe Line Corporation. All correspondence should be addressed to **Go Devil**, 1591 One Shell Plaza, P.O. Box 2463, Houston, Tex. 77001, or to one of the following field reporters.

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Wood River Ramona Porter

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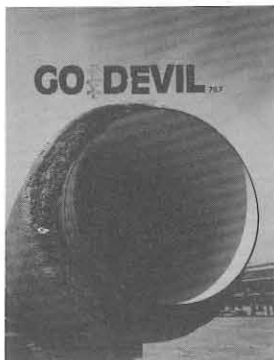
West Coast Division

Los Angeles Dine Moore
Coalinga Doretta Deshields
Long Beach Connie Sanford

Gulf Coast Division

New Orleans Gail Melton
PL Construction ... Art LaRochelle

COVER



Pier E. Following seven years of permitting and construction effort, this largest-diameter pipe in Shell's history is scheduled to be complete in March, 1980. The five mile, 42-inch line runs from Arco's dock in Long Beach, through Union Pacific land, across the Cerritos Channel, to the Wilmington Manufacturing Complex. For the story, see pages 2-4.

JM BEARD
RT 3 BOX 190R
CANNON ROAD
GONZALES

3100 07
853122B

LA 70737

Glances backward

25 years ago

This picture, featuring Gibb Barclay and his family on a hunt for the perfect Christmas tree, was on the cover of the December, 1959, **Go Devil**. At the time, Gibb was assistant station foreman in Osage, Wyoming. The photo inset shows the family today — (l to r, front) Mrs. Barclay, Gibb, Joan; (back) Larry, Gary, David. While Dad moved on to other assignments, Joan, Larry, and Gary chose to remain in Wyoming. David lives in Oklahoma. Gibb and Charlene are now in Louisiana; he's currently chief inspector on LOCAP.

