FALL 1980

Gulf States magazine

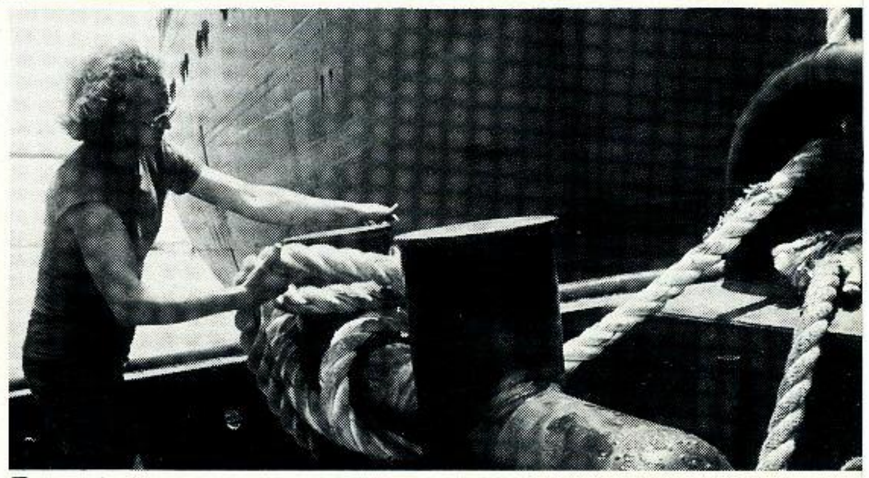
Photo by Ken Haynie

Like a helmeted ***Star Wars*** *character, this driver makes ready for a high-speed, Texas-style race at the Texas World Speedway. See related story on page 14.*

Gulf States magazine

Volume 2, Number 2 FALL, 1980

Cover Photo:
Relaxing at the Woodlands Courtesy of The Woodlands



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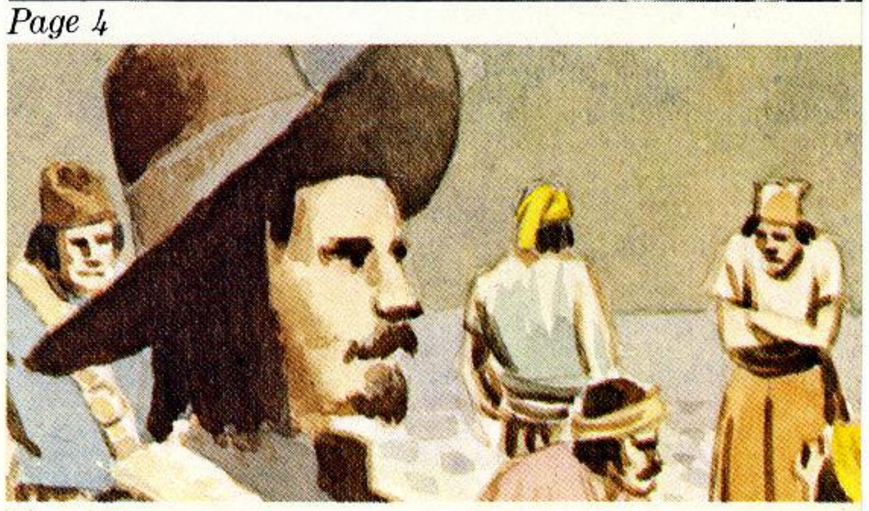

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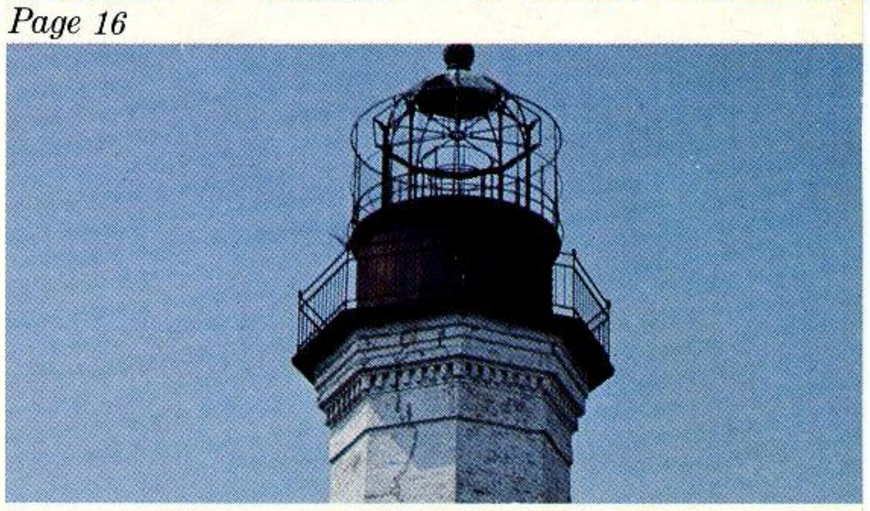

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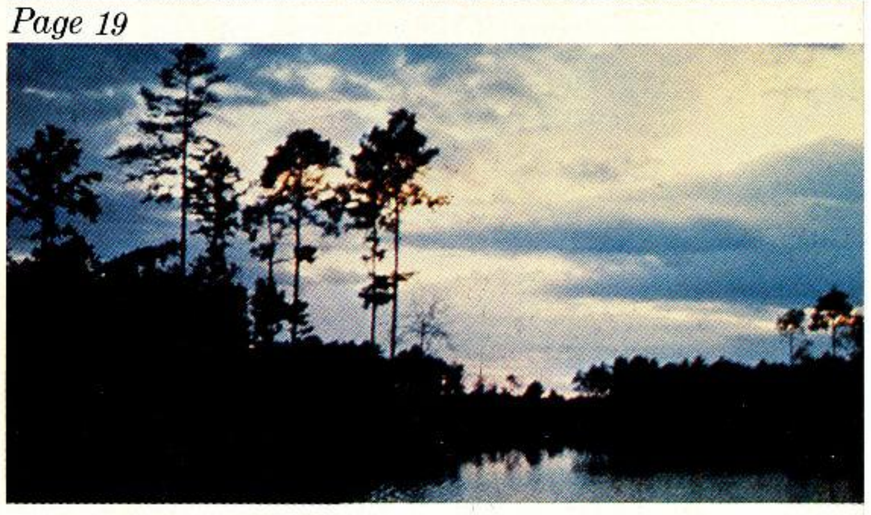

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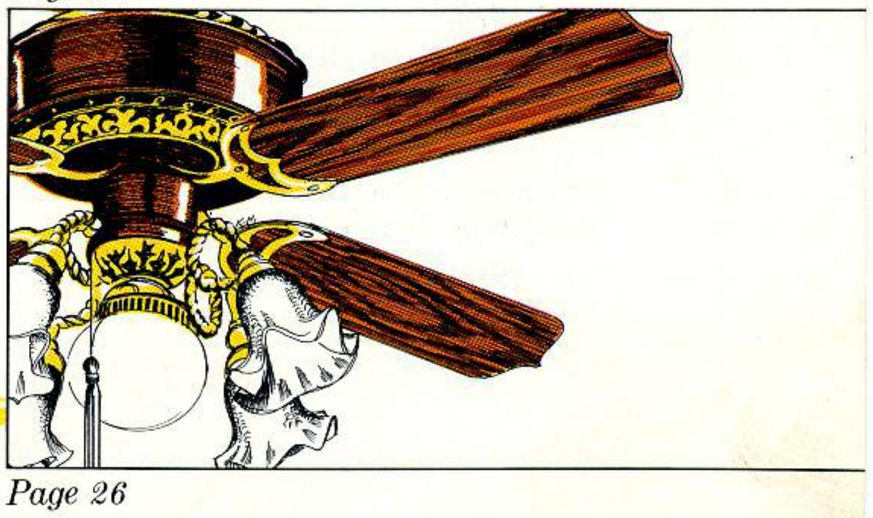

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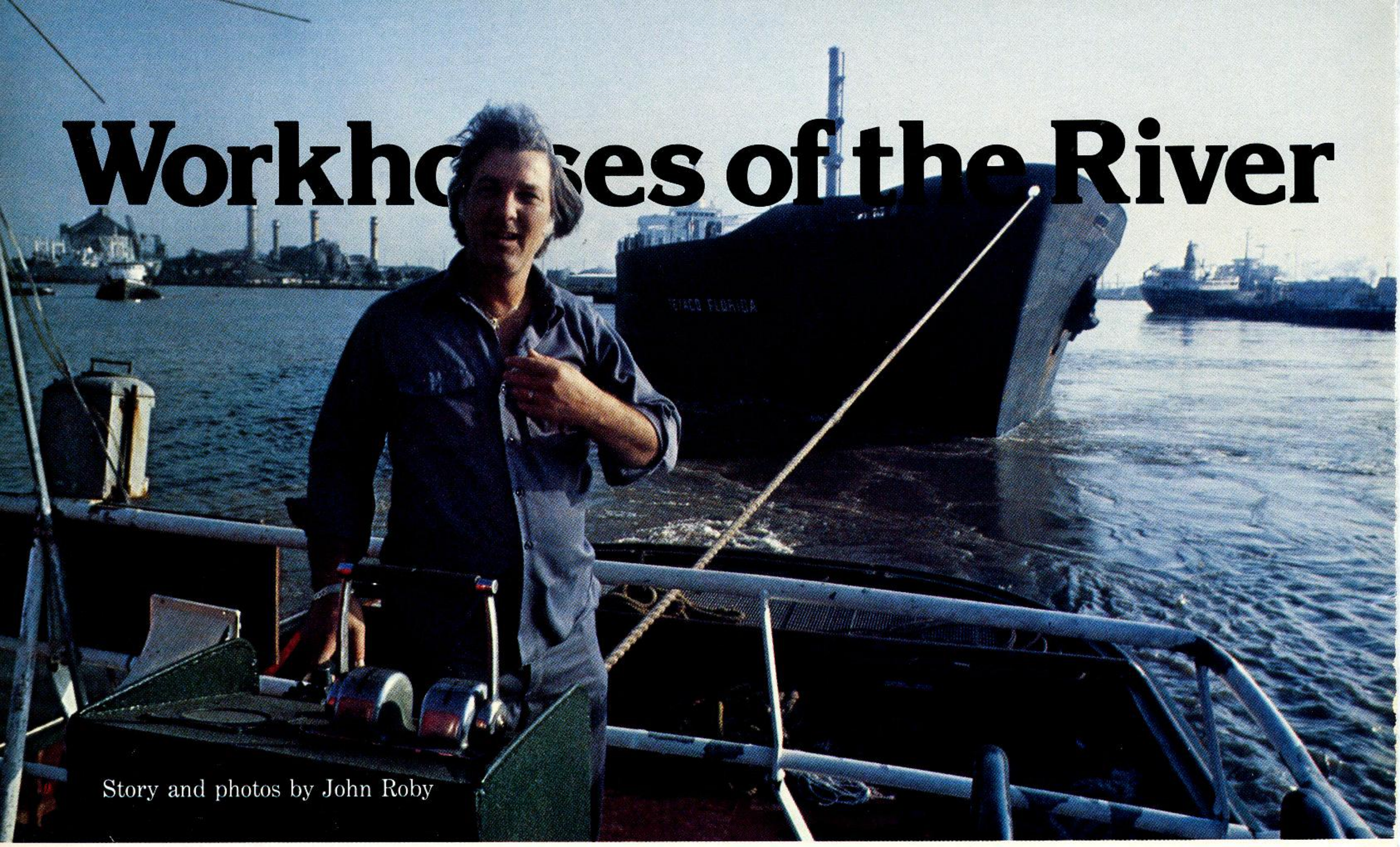
Gulf States Magazine is published in the Public Affairs Department of Gulf States Utilities Company, P. O. Box 2951, Beaumont, Texas 77704. Offices are at 285 Liberty St., Beaumont, Texas.

Workhorses of the River



Story and photos by John Roby

Weldon Potts' day begins at 4 a.m.

Red-eyed, he stumbles into the galley of the tug *Titan* and searches for his coffee cup. After taking a long, deep drink of water from the cooler, Potts pours a mug full of three-hour-old coffee and ascends to the wheelhouse.

Below him, the *Titan* comes to life. First the tug's engineer, then a deckhand appear with the same bleary-eyed demeanor of the captain, and go about their familiar duties. The rumble of the diesel generators that provided power for the *Titan's* air conditioning through the stifling night give way to the wall-shaking roar of twin 1,600-horsepower marine diesel engines. They start with a high-pitched scream, then settled immediately to a dull, throbbing idle.

A deck hand dumps last night's coffee and begins the first of many fresh pots.

Within minutes, the *Titan* eases away from the Sabine Towing slip on the Sabine-Neches Waterway and heads downstream for her first job of the day.

In the wheelhouse, Potts sits comfortably in pitch darkness, his solitude broken only by an occasional crackle on the VHF radio and the ghostly blue tint of the tug's radar screen.

"Now tell me," he asks, "what other job is there where you get this view driving to work?"

From his perch 30 feet above the waters of the ship channel, Potts commands a view almost as bright as daylight. The still-high moon illuminates all traffic on the channel, and shorefront industries — shipyards, bulk terminals, fishing piers — glow in the half-light. Million of ripples on the water's surface are touched with a frosting of silver, pinpoints of light twinkling in the distance. Ahead, the Gulfgate bridge is outlined on the gray sky like a passive dinosaur stretching from the mainland to Pleasure Island, curving at the tip in a sparkle of street lights.

All around him, the ship channel is alive. Strings of barges pushed by canal tugs appear on radar as tiny dots, then narrow into elongated dashes as they approach. An experienced viewer can count the number of barges in a tow by spotting tiny indentions that reveal the end of one barge and beginning of another. An occasional harbor tug and oilfield supply boat pass silently by, their own crews preoccupied with the business of starting another work day.

The *Titan's* first job of the day is to moor a tanker at the Texaco refinery below Port Arthur. The job is for 6 a.m. At 11 knots, it will take the tug about an hour to make the 12 mile run from Sabine Towing wharf near where the Neches River intersects the ship channel. Potts plans to meet the *Texaco Mississippi* in mid channel, attach lines to the ship and assist the Texaco tug *Havoline* with the mooring — a routine operation that should be completed in an hour's time. The next job is scheduled for 9 a.m., with the rest of the day open.

The *Titan* arrives before the ship, so the captain swings her to the left side of the channel and "pushes bank," intentionally steering his tug toward a relatively smooth spot on the shore and gently nudging the shoreline with engine power reduced. The maneuver has the effect of holding the boat in the ready position more or less stationary while the tanker — at this time still in the Gulf — approaches the rendezvous point.

"The name of this game is 'hurry up and wait,' " Potts jokes as he settles back with a fresh cup of coffee. "A lot of our time is spent laying up waiting for a job. It's not the job that's hard, but the hours are murder."

The crew members of the harbor tug are aboard throughout their watch, which can last two or four days. The captain, engineer and two

deck hands sleep aboard in air conditioned quarters, eat their meals aboard and sometimes go the entire watch without ever touching solid ground. Last night's work included two mooring jobs. The last one ended at 1:30 a.m.

"I'm not much on protocol," Potts remarks as he leans back in the high captain's chair to survey the slowly brightening world around him. Ahead, toward the horizon, Sabine Lake looms over a narrow slit of land that is Pleasure Island. His is a still, silent world, his privacy broken now and then by the heavily cajun-flavored accent of a fellow tug captain somewhere on the waterway. The owner of the voice is lonesome, and he uses the radio to reach out for companionship.

"That son of a gun hasn't even been to Louisiana for 20 years, so why does he still have that accent?" Potts muses.

Potts began his tug career 15 years ago as deck hand and relief cook. He's been in the wheelhouse since 1961, and is known as simply "a good boatman," the highest compliment on the waterfront.

"I guess it sounds kind of corny, but I've always wanted to work on a boat," he said. From the time I was a kid, that's really all I've wanted to do."

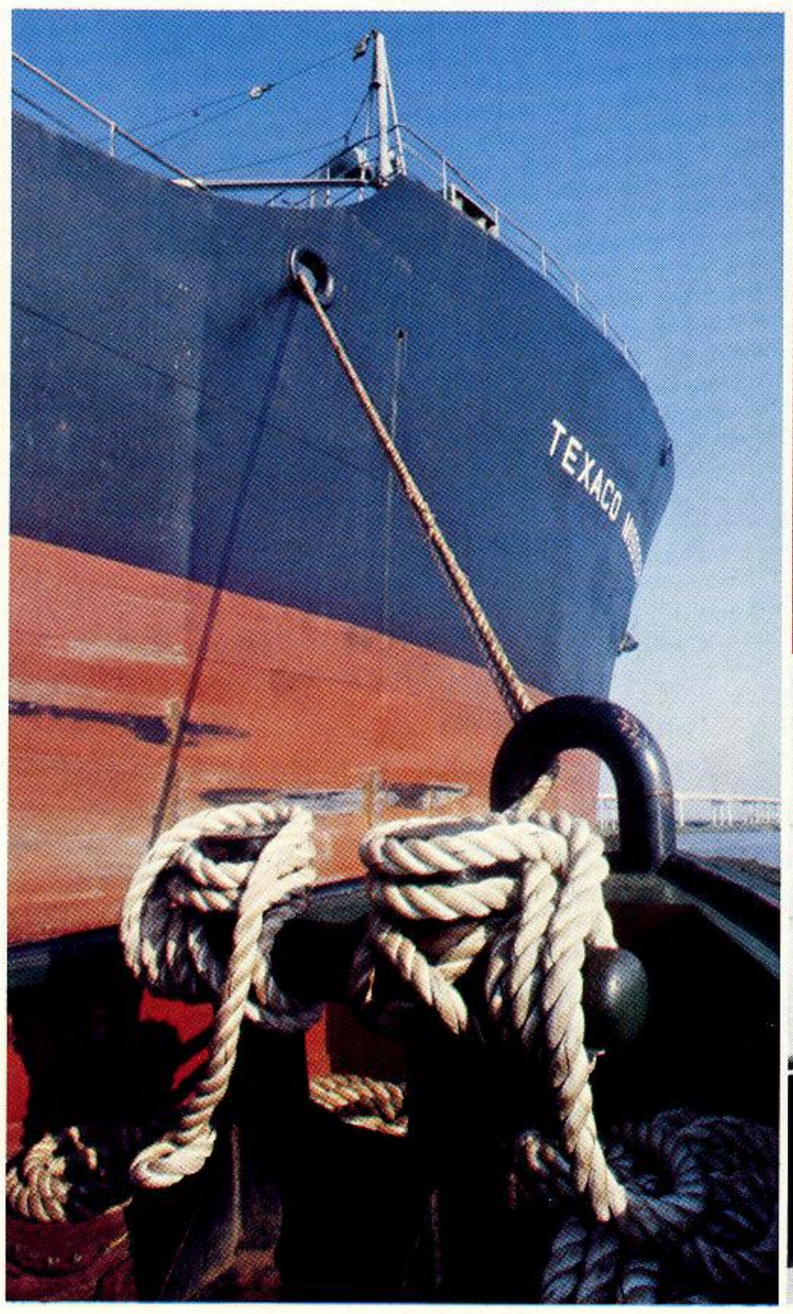
Potts started on canal tugs, tall boats that ply the Intracoastal Canal and inland waterways, pushing barge strings that may reach a quarter mile in length. Their crews work 12 hour days, six on and six off. A fast learner, Potts was working in the wheelhouse long before he earned his license, and was given command of the *Titan* when she was christened in 1977.

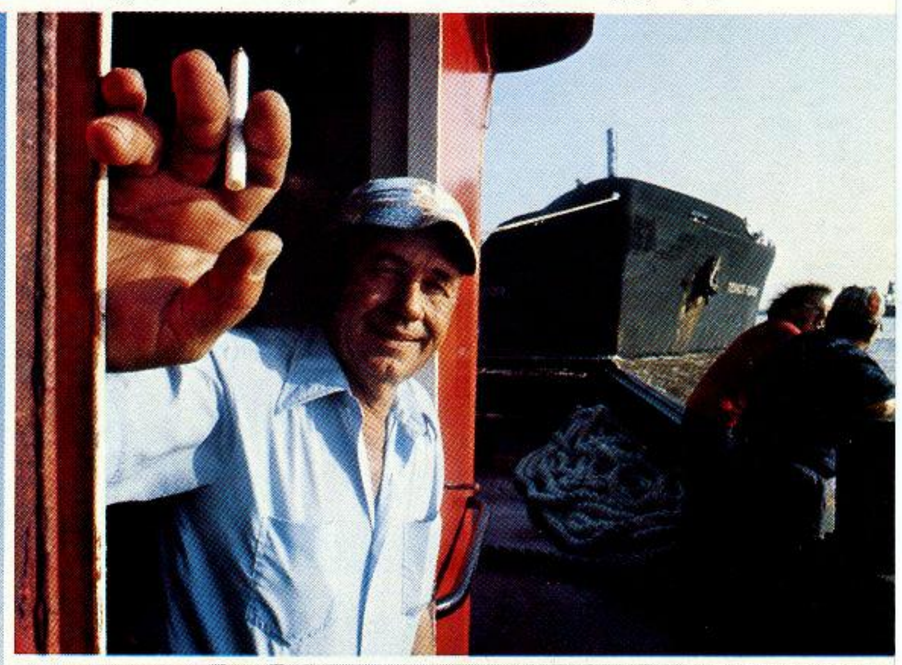
"You don't see many college graduates on tugs, but I've never worked with anyone that didn't like his job," Potts said. "Sure everyone grouses about the work, the hours, you know. But the freedom is what everyone likes."

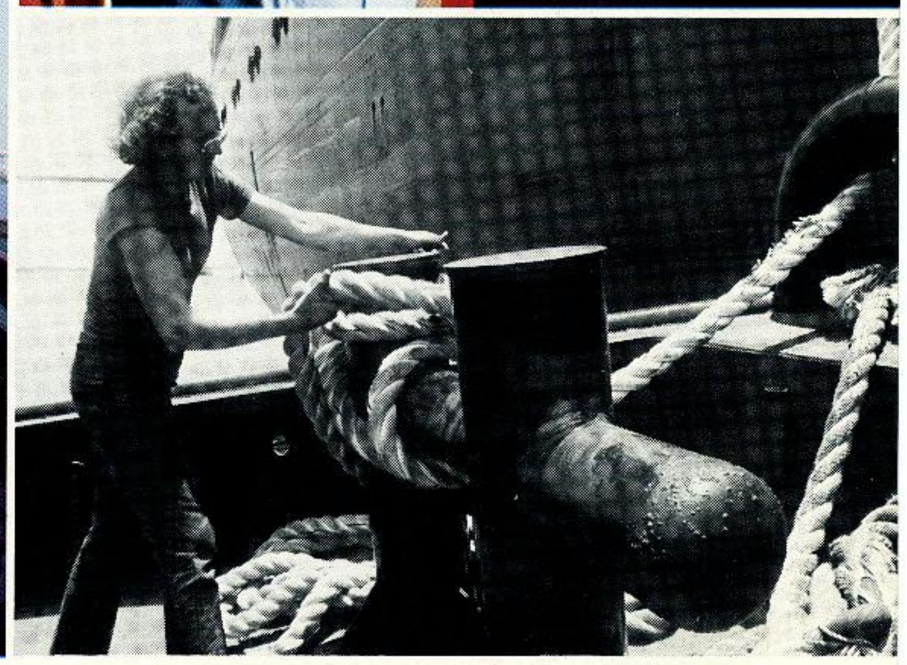
"If I worked on shore, I would go crazy. You know, sitting here in the channel, with a rising sun in front and water on three sides. I don't think I"ll ever have to worry about my boss suddenly sneaking up to check up on me. Of course, he's only a voice call (radio) away."

The radio — really three radios scanning a range of communications frequencies — is an ever-present companion. Intercom systems throughout the boat keep the crew

Willie Francis takes a break from his engineering duties (top right) while Richard Travis checks the hawser (bottom right) and Weldon Potts gets a view from the stern (facing page).







in touch with the outside world and home office. The captain rarely has his orders for the day in writing; most come in over the speaker.

Along with her twin, the *Hermes*, the *Titan* is usually used to moor and unmoor huge tankers that inhabit the Sabine-Neches ship channel, at last count the nation's fifth-busiest port.

Last year, she and her four sisters shared an average of 21 moorings and unmoorings per day. (See related story.)

It is a rarefied atmosphere, this life on the channel. "Home" is 100 feet long, 20 feet wide, always noisy and sometimes wet. The crew members of the *Titan* are lucky in that their boat is only three years old, equipped with the absolute latest in creature comforts and electronic technology. Each member has separate sleeping quarters, owing to the fact that the *Titan* was built to accommodate a double crew with room to spare. On long tows, such as offshore work which the *Titan* is occasionally called upon to perform, as many as 10 persons can be aboard.

The crew of the *Titan* has a combined 75 years on the channel: chief engineer Willie Francis, the veteran with 31; deck hand Joseph "Yogi" Landry, next with 26; Potts, 15; and deck hand Travis, the rookie with three. All except Travis have been on the *Titan* since her maiden job; he joined her when she was just a few months old.

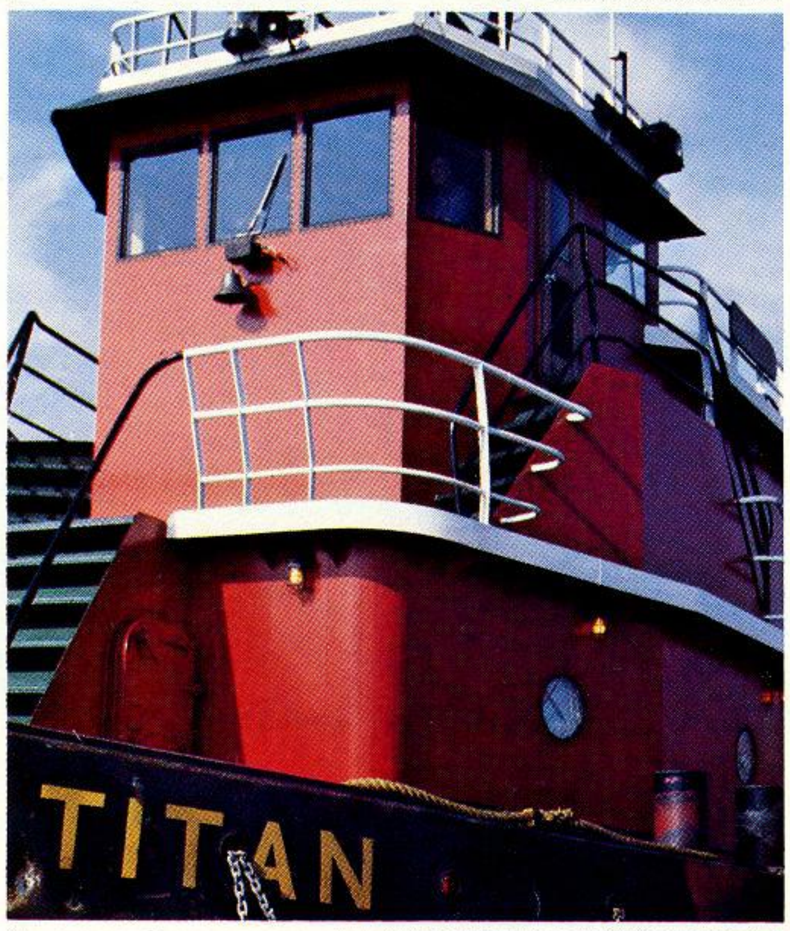
Such a combined tenure is pretty unusual these days, with turnover among deck hands the highest. Hours are long and the work is dirty, but, as Yogi puts it, "Where else can you get three meals a day and as many naps as you need and still get paid good for it?"

Yogi is very popular among the crew. He's the cook in addition to deck hand. Until a few years ago, all of Sabine's tugs had fulltime cooks on each watch. Now a deck hand with a penchant for cooking handles the galley duties.

Yogi joined Sabine after an army stint. He worked on the company's tankers for four years and has been on harbor tugs for the last 21. His nickname was bestowed years ago when a fellow deckie saw him with a cap on backwards and pointed out his resemblence to Yogi Berra.

By 5 a.m., Yogi has a pot of beans bubbling and steaming dutch oven full of smothered round steak bubbling on the galley stove. Lunch today will be served at 9:30 a.m.

"It takes a lot of good food to keep these guys going," Yogi comments as he trims another steak and drops it into the thick roux. "We usually cook one big meal a day and we are



Deck hand Joseph "Yogi" Landry (top photo) handles all his regular duties and cooks, too.

Mr. Roby is a Beaumont-based writer who frequently writes about nautical subjects.

free to fix anything else we want. The only rule is everybody has to wash his own dishes."

After he's satisfied with the progress of his lunch, Yogi settles down to fill out the grocery list. Later, he will call the twice-weekly order in and the groceries will be waiting for the crew upon arrival at the Sabine dock.

Talk around the galley table shifts to high school graduations, baseball, gardening, and the weather.

The galley's intercom calls the men to action with news of a job.

At the Texaco wharf, a tanker has become mired in the mud and the tug *Havoline* is unable to free her.

The ship's pilot instructs the *Titan* to attach a line on the starboard bow to assist.

Potts maneuvers the *Titan* to within a few feet of the massive flared bow of the *Texaco Florida.* Deck hand throws a heaving line to a tanker's crewman stationed on the bow. The heaving line is a lightweight nylon rope attached to the much bigger hawser that will be used to tow the ship free. The hawser is called a nine-inch line, measured by its circumference — which snaps taut, spraying tiny droplets of water that sparkle in the early morning light. Deck hands on both vessels scatter as the line tightens.

Potts leaves the wheelhouse to take up a position on the *Titan's* stern where a duplicate set of controls allows him to steer and apply power with an unobstructed view. Then the fight begins.

Potts applies full engine power and the full 3,200 horses below come to life. The hawser tightens even more and the wet fibers stretch to the limit. With the engines at full rev, the *Titan* heaves for a full five minutes before the *Florida* moves an inch. Then slowly . . . ever so slowly . . . the huge tanker begins to budge. More pulling and the tanker is positioned in the open channel and begins her journey to the Gulf. Her draft mark shows 38 feet, the practical limit of the 40-foot channel between her and open sea.

After the lines are returned and all are put back into the ready position — the weighted rope "monkey fist" that gives a deck hand some weight with which to throw his heaving line stowed with its hawser coiled nearby — Potts is asked what would happen if a hawser were to snap under the strain.

"Ask Willie," he grunts.

"You lose your spleen," is the engineer's unsolicited reply.

"Three years ago I was working on a capstain with my back to the job when a hawser broke and caught me across the back. It was the next day before I realized anything was wrong . . . and I almost died before they got me to a hospital."

Now Willie usually stays in the engine room during towing operations, and never has his back to the action when a hawser is tight.

Later, the *Titan* "lays up" at Great Lakes Carbon Co. waiting for orders. A deck hand takes advantage of the break in activity to grab a quick nap. Another wanders off the boat to find a telephone. The engineer watches a portable color television in the galley.

Willie Francis first entered the engine room of a tug in 1945 and has been with Sabine on one tug or another since 1949. As chief engineer, he is never more than 20 feet from the two massive engines. He starts them first thing in the morning, keeps the engine room wiped and swept and is rarely asleep when the tug is under way.

The constant roar and throb of the twin power plants doesn't bother Willie. "I love the sound of the engines when they're running right," he said. "I can tell more from the sound than from sight."

Like Potts, Willie prefers the four-on, four-off watch, commuting at the end of each shift 50 miles north to his home in Jasper. There, he likes to fish, hunt and garden, "in that order."

Willie has seen the tugboat business come a long way in his 31 years on the waterfront. The crew's comfort, for example.

"When I started, there was no air conditioning," he recalls, not so fondly. "Or electric stove, refrigerator and freezer. A lot has changed in just a few years. When I started, there was no wheelhouse control of the engines. The engineer had to respond to bell and whistle signals from the captain . . . answer the bells we called it. And believe me, it kept you on your toes."

Her slip cleared by the departure of the *Florida,* the *Texaco Mississippi* is now ready take up a berth. The *Titan* meets her midstream in the channel and three lines are made fast on her bow. At the other end of the massive ship, 624 feet downstream, the *Havoline* places her lines on the stern.

Like a mother duck and her ducklings, the three enter the Texaco basin, turn, and begin to move to-

ward the wharf.

While mooring or unmooring a ship, the tug captain receives his instructions from a pilot on the bridge. The pilot's orders come in over a designated radio frequency and are answered by a short blast on the tug's horn. The tug captain answers in this manner to avoid cutting into the pilot's commands and possibly covering up a vital transmission.

When two tugs are used for a mooring — as they usually are when handling a ship as large as the *Mississippi* — the pilot calls each by name with her specific instructions. The mooring is back-and-forth push and pull routine, which Potts likens to "trying to push a watermelon flat against a curb."

These huge tankers, with displacement in the neighborhood of 30,000 to 50,000 deadweight tons, are flared at the bow and stern. Mooring one hard up against a flat wood or concrete wharf means the ship has to push a lot of water out of the way, and the resulting waves can bounce a tug around easily.

"It's like parallel parking on a grand, wet scale," the captain observes as he alternately pulls on lines and nudges the tanker with his boat's bow, in response to the repeated commands from the pilot.

" . . . Come ahead dead slow *Titan* . . . back it down slow *Titan* . . . ease on *Havoline* . . . come ahead *Titan* . . . " Each time the pilot's words are followed by the throbbing reply of the *Titan's* engines and the quick blast of the tug's horn.

There's a slow eclipse as the tanker eases into position — a gradual darkening as the huge curved bow slowly comes between the morning sun and the *Titan.*

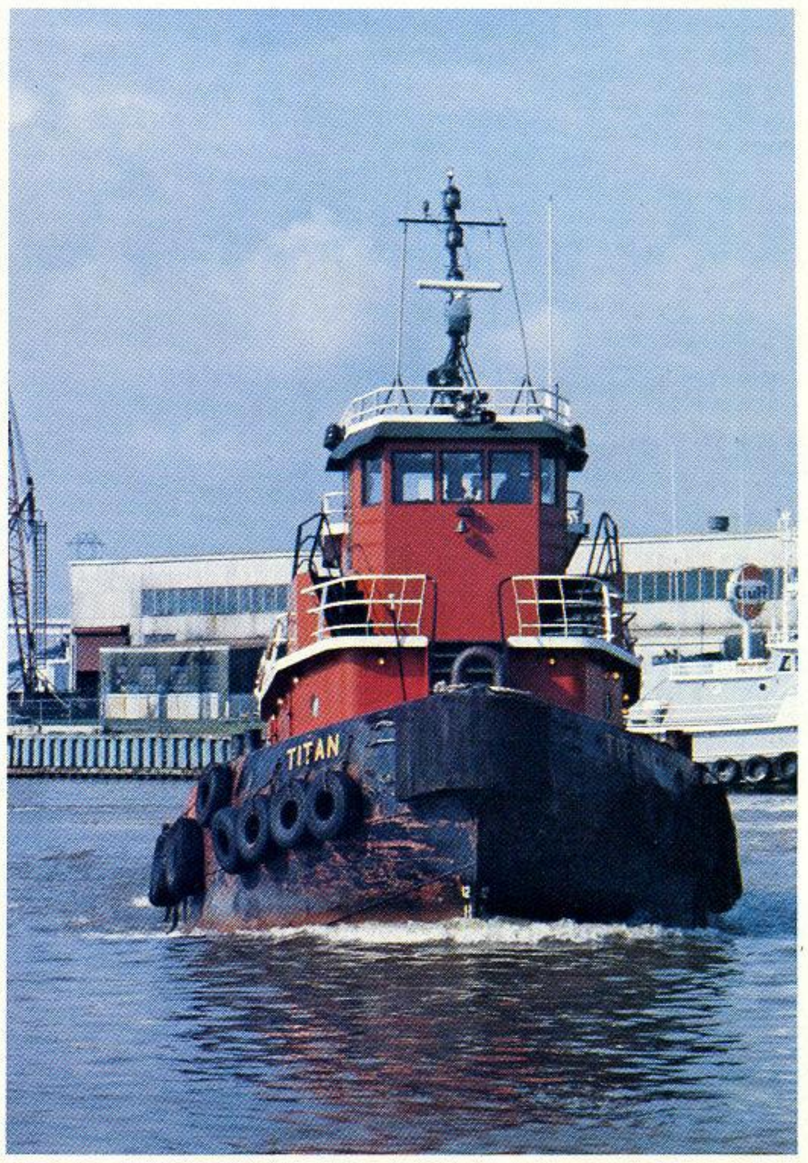
The exchange of commands continues, the pilot calling each tug by name and the captains responding with their horns. Reverse engines . . . pull on lines . . . let up . . . nudge forward . . . lean ahead against the bulkhead. The *Mississippi* eases into the slip. It seems like inches at a time. There are just a few feet of clearance between the *Mississippi* and ships already berthed fore and aft of her, so the pilot must be in complete control as he orders minor corrections in course.

Finally, after 15 minutes of back and forth motions, the tugs shove the *Mississippi* against the wharf so her lines can be made fast. Then the crew of the *Titan* relaxes.

Later in the day, the *Titan* is called upon to shift the 742-foot Mobil tanker *Tasso* from anchorage to a berth at the Sun Oil Terminal below Beaumont, where she will discharge her cargo of crude oil. Other jobs follow . . . at terminals of Mobil, Topco, Fina, Gulf, the Port of Port Arthur, Texaco Port Neches . . . ships with names like *Vanessa, Gulfcrest, John Tyler, Hellenic Challenger, Anastasia* . . . each job much like the last.

"Once you've moored and unmoored ships at all of the terminals in the channel, the jobs start to look pretty much the same," the captain commented. "At night, it's not much different . . . just dark. But it's the only job for me. I've tried other things, but like most boatmen, I always come back. If I worked on shore, I'd go crazy. Every day, listening to the same damn whistle, punching the same damn clock, looking at the same four walls . . ."

"Once the tugboat life gets in your blood, there's nothing you can do to get it out." □



The Titan wends its way homeward.

The Sabine-Neches Waterway

Ships and barges on the Sabine-Neches Waterway carried 108.5 million tons of commerce during 1977, according to the U.S. Army Corps of Engineers. The corps complies such statistics and publishes them in its annual report, **Waterborne Commerce in the United States.** The latest available figures are for the year 1977, but estimates indicate the cargo tonnages have increased steadily for the last two years.

For statistical purposes, the Sabine-Neches Waterway includes all public and private terminals on the Sabine and Neches rivers from the Gulf of Mexico to turning basins at West Port Arthur, Orange and Beaumont, a total of 82 miles of waterway. The bulk of the cargo was crude petroleum, some 49 million tons in 1977; residual fuel oils, 12 million tons; refined petroleum products, 18.6 million tons; liquid sulphur, 1.5 million tons; and grain products, 2.6 million tons.

The waterway includes three major ports: Beaumont, Port Arthur and Orange, and about 30 public and private terminals.

The corps report also complies the number of trips inbound and outbound by vessels on the waterway. In 1977, there were about 37,000 separate trips each direction by vessels ranging in draft from 40 feet to 18 feet or less. Of this total about 1,600 were tankers, another 1,600 were general cargo ships (freighters) and about 16,000 were tank barges carrying liquid bulk products, mostly petroleum products. Another 12,000 trips were by tugboats.

These vessels were moored and unmoored at the various terminals by tugs operated by two towing companies: Sabine Towing & Transportation Co. and Moran Towing of Texas.

In addition to the *Titan,* Sabine has five harbor tugs operating in the waterway. The *Hermes* is a virtual twin of the *Titan* and is also a 3,200 horsepower tug. Other Sabine tugs, each 2,000 horsepower, are the *Aries, Trojan* and *Vulcan.*

Sabine has two other boats, the *Hercules* and *K. C. Smith,* which normally operate in Lake Charles Harbor.

Moran Towing of Texas, Inc. operates four tugs in the water way. The *E. M. Black* and *Stella II,* both 1,600 horsepower; and the *Helen* and *Mary Moran,* both 3,600 horsepower. □

THE ENERGY STORE... nothing for sale but plenty for FREE

by Ilene Harral

It's not the typical success story. After all, how many stores are there that have been open for 1 1/2 years, haven't sold a thing and yet have a business that is better than ever?

But The Energy Store fits that description exactly and, as unlikely as it sounds, the store's "free" merchandise is fulfilling quite a demand on the market. "People know they can get energy information there six days a week," Sam Badger declares. "We had about 20,000 people last year in Beaumont." Badger is Beaumont consumer services supervisor for Gulf States Utilities, the Energy Store owner and operator.

Actually, GSU has two Energy Stores — one in Baton Rouge at Cortana Mall and another in Beaumont's Parkdale Mall. And to keep up with today's mobile society, there even is an Energy Van operating out of Lake Charles and Baton Rouge.

The purpose of these unique business ventures is to sell less of GSU's own product. As most people realize, money and energy both are in tight supply, and conservation is necessary. "The goal was to make people aware of energy conservation," explains Badger.

Brainchild of the Consumer Services Department, the concept of the Energy Store began to take shape in December 1977. By the spring of 1979, both the stores were "open for business."

Both reflect the creative touch of Joe DeJean, director of customer relations in Beaumont. In designing the stores, DeJean recalls, "The space available in both malls dictated the style. In Beaumont, we were able to lease some open space and construct the store (a portable unit) in kiosk style."

The challenge in Parkdale, explains DeJean, was not only to make the store look attractive and meet mall standards and requirements, but also "to scale everthing to create

GSU's kiosk-style Energy Store in Parkdale Mall, Beaumont, attracted 20,000 people last year (facing page).

a feeling of having enough space in a small area." The use of "Plexiglas" helped on all counts. One of the displays is a turbo vent and, as DeJean says, "There is nothing beautiful about a turbo vent. But when we mounted it on 'Plexiglas' and added a motor, it became an appealing display."

He makes it sound simple but admits it was not. Designing the Baton Rouge Energy Store also called for creative but carefully planned decorating skills. Formerly a small doughnut shop, the Baton Rouge store is only 15 feet wide. "So, one wall is solid mirrors," DeJean describes. "The mirror-effect opens up or increases the space area."

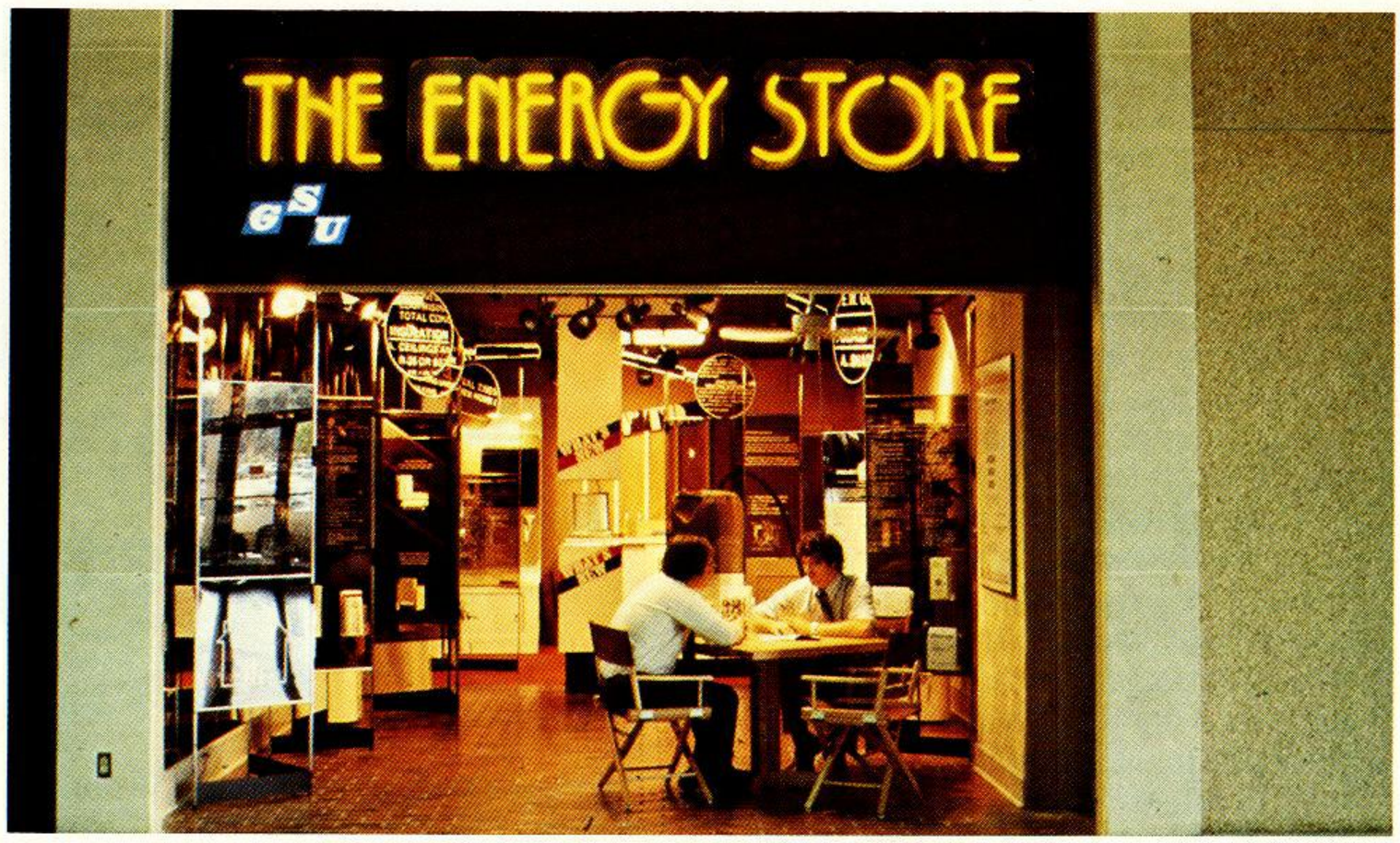
The Beaumont store is open from noon to 9 p.m., while the Baton Rouge shop receives visitors and telephone calls from 9:30 a.m. to 5:30 p.m. Harriet Babin, Baton Rouge consumer services supervisor, says 25 to 30 people daily obtain energy conservation counseling in the Cortana Mall store. Both facilities are staffed with trained personnel, and the counseling often is fairly comprehensive.

"The questions visitors ask are sophisticated," Babin comments. "The Baton Rouge store maintains fairly extensive files to help answer questions. More and more people are coming in with house plans when they are ready to build or remodel."

The Energy Stores are stocked with a cross section of energy information from reliable sources such as Louisiana State University, Texas A&M University, the Federal Energy Administration, Better Business Bureau and Edison Electric Institute, as well as GSU-compiled material.

As DeJean describes the purpose of The Energy Store, it is "to show customers how to maintain a comfortable lifestyle in spite of rising fuel costs and to teach about energy efficient devices and equipment."

To undertake such a broad task requires commitment and cooperation with many people. For instance, homebuilders and contractors in the Baton Rouge and Beaumont areas participate in the stores through support of the National Energy Watch (NEW). NEW is a standardized energy efficiency program developed by the electric utility industry to aid homeowners in energy conservation. Many homeowners have registered at the Energy Stores to receive home energy audits.



The Baton Rouge Energy Store offers customers a "how-to" area where they can practice caulking and weatherstripping.

The stores also employ giveaways to help get the point across:

- Thousands of free, foam plates for electrical outlets were distributed in the Baton Rouge store to call attention to an easy way to plug energy-wasting air leaks.
- In Beaumont, more than 20,000 water-saving, flow restrictors were given away. At another time, rulers to measure the R value of insulation were handed out.

Attractive displays are featured in the stores illustrating conservation information about such things as insulation, heating and cooling systems, air infiltration and attic ventilation.

Specialized information is available detailing, among other things:

- Time-of-day metering
- Solar and heat-pump water heaters
- GSU-sponsored energy-efficient homes
- Remote-control air conditioning
- Thermal storage

The Beaumont store recently exhibited a special attraction about wind energy systems provided by West Texas State University. Other special attractions have appeared at the store. A "how-to" section where, Babin explains, "people actually can practice caulking and putting on weatherstripping" is featured in the Baton Rouge store. In addition, an audio-visual unit provides people with explanations of fuel adjustment, insulation R value, weatherstripping, energy-efficiency ratios (EER), caulking, shading and glass.

Both stores are compact educational warehouses. The same might be said for the Energy Van, except that it is not only compact, it is also on wheels.

"The van has the same exhibits as the stores, but they are on single panels which can be taken out of the van for exhibition," explains Jane Dufrene of Lake Charles Consumer Services. The van, which is shared by the Lake Charles and Baton Rouge Divisions, covers a lot of territory.

"It goes to conferences, meeting and workshops all over the area," Dufrene says. The van, too, offers free literature and even gave out helium-filled ballons to promote the project. The traveling van will be one year old this fall.

Probably the most interesting part of the van is the solar collector housed on top. The two back doors of the van open to reveal just how the collector works. The right door contains a transparent water tank. Fascinated observers watch as the water is pumped up into the collector and then back into the tank on the left door where the temperature is read.

"Naturally," Dufrene explains, "the solar collector is more interesting to watch on a sunny day than a cloudy one. But even when the van has been booked for an appearance on a cloudy day, the solar exhibit still can be educational; anyone who plans to use solar power has to plan ahead for cloudy days when the

power source is weak."

The energy information given out by GSU's stores and van always is free. Implementing some of the ideas will cost little or nothing. Other innovations may be more expensive, such as a solar water heater. However, 37 states have granted property tax relief for solar installations, 15 states have income tax credits or deductions and six offer exemptions from sales taxes.

The National Energy Act contains additional solar tax credits. Other tax breaks for conservation equipment are available. Energy conservation tax credits were first available on 1978 returns. Nearly six million Americans took advantage of the offer that first year, saving themselves $555 million for expenditures on insulation, storm doors and windows and such "renewable energy sources" as windmills and solar panels.

The Energy Store also could be termed a renewable energy source (of information). According to Badger, about 1,200 people contact the Beaumont store each month. And many people just drop by both stores without ever registering.

With that kind of visibility, the company is reaping more than just the cooperation of its customers in conserving energy. As DeJean summarizes: "The big payoff is that it's a highly tangible, visible effort by the company to prove we care." □

Americans have always been able to laugh in the face of adversity. Humor may be found even in the energy crisis.

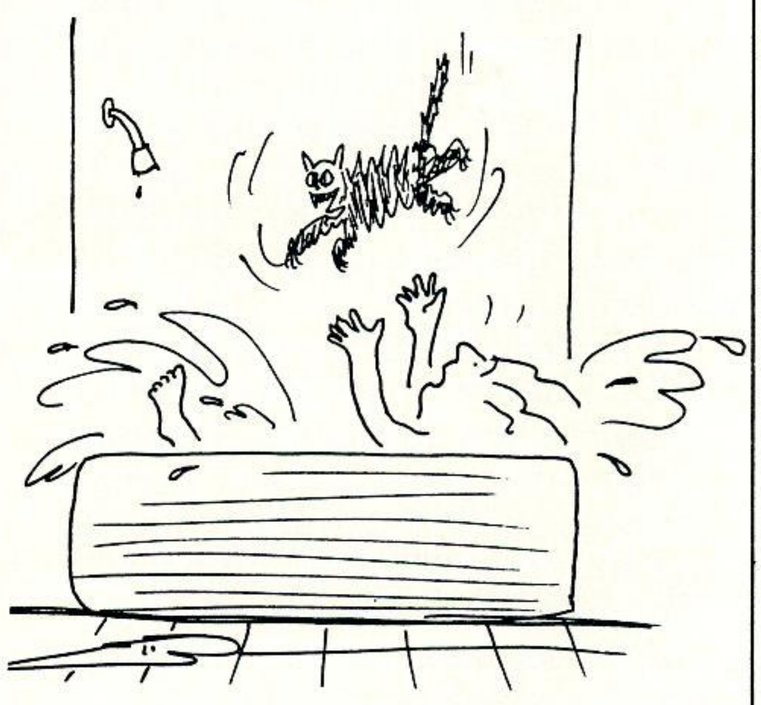
Conservation Tips You WON'T Find at The Energy Stores

By Donald A. and Stephen White

Every electrical consumer knows some of the major ways to save on electricity, such as better home insulation and more energy-efficient appliances, but there are many more lesser known ways of cutting your energy requirements drastically. We present some of these for your consideration.

- Based on the success of "chunky peanut butter," here's another way to save money with your electric mixer. Use it for only *half* the normal time when mixing mashed potatoes! "Chunky" mashed potatoes served with lumpy gravy show your friends you care and that you didn't use a powdered mix for either of them. And you save electricity!
- The electric can opener is so easy to use that most folks remove the entire lid just so they can see the top of the can remaining stuck to the magnet. Actually, you need open only *half* of the can to remove most foods such as peas, carrots, cranberries, clams and so forth. In our experiments only a canned whole chicken gave us the slightest problem (which turned out to be an impacted gizzard).
- Where the average garbage disposal can be replaced with an inexpensive goat, trash compactors present another energy problem. Why not make trash compacting a family activity? Simply store trash and non-goat-edible garbage in an old open suitcase to the point where everyone in the family sits on it while mother tries to fasten the lock!
- Much of the energy waste from the home refrigerator is created by those long, lingering moments the door hangs open while the consumer tries to spot the cream cheese package or an old jar of marmalade. For this reason, a Polaroid snapshot of the interior of the refrigerator should be taken each morning and attached to the outside of the refrigerator door.

Thus the viewer can contemplate "what looks good to eat" or find last week's spaghetti and plan his attack on the interior of the box without excess energy waste. Futhermore, the little light in the refrigerator should be removed. It is unnecessary during the day, and eating at night is not good for you. Besides, you have only the manufacturer's word for it that the light goes "off" when the door is closed.



- The swirling and splashing of a home whirlpool bath wouldn't seem half as relaxing if you were aware of the energy expense involved. A low cost alternative consists of taking the family cat into the tub with you!

• Unplug burglar alarms and have your wife rearrange the furniture each evening. After all, if you fall over it each time she rearranges, so will an intruder! (Don't do this unless you really *hate* your neighborhood burglar.)

• Electronic bug killers. Many people have these little gadgets with purple lights inside to attract and electrocute lawn and garden bugs in the spring and summer. The same result may be achieved without cost by utilizing two small wood blocks (similar to those children play with). Simply place bug on top of block "A," then whack it with block "B." Blocks may be decorated if desired.

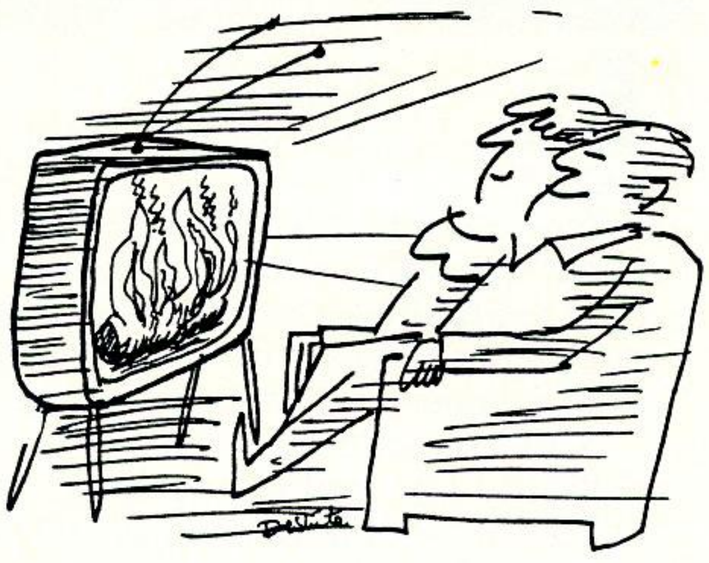
• Replace good light bulbs with "dead" bulbs (which use far less electricity). These are ideal for closets and other areas where lights are often left "on" accidentally. (Dead bulbs, if you have none, are available from the authors at $1.00 each and are warranted for 10,000 hours of service.)

• Disconnect your door bell. It's the first thing a real energy-conscious person will do. A handsome door knocker adds a "touch of class" to your home and allows visitors to use their own distinctive knocks. If such a purchase is a strain on the budget, simply glue a carpet tack to the old door bell button (point outward). This should suffice to get your attention when a visitor arrives.

• The kids' electric train or slot racer should be mounted on a four-by-eight foot piece of plywood. At game time, assign each corner of the board to one family member who may then raise, lower or tilt the board to let gravity propel the train or slot racers about the track. The new slot racers which feature "loop the loop" tracks will be especially interesting, and best of all, you use no electricity at all!

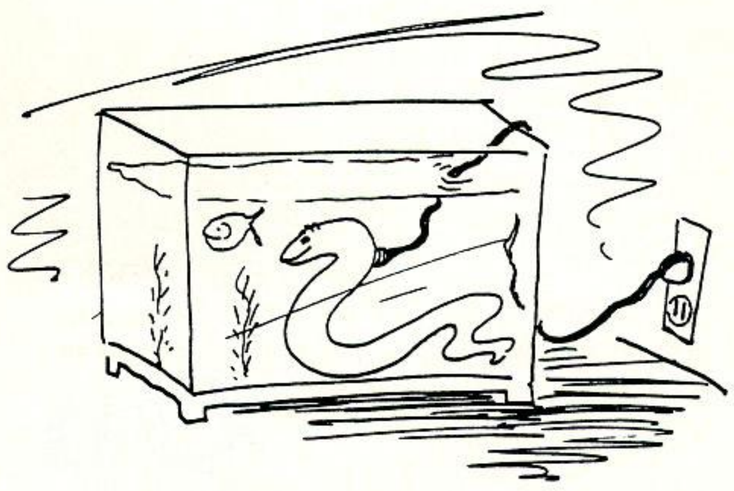
• An ordinary home blender uses a surprising amount of electricity for such simple chores as mixing drinks. It is therefore suggested that when using the blender, you put the container on the motor as usual, fill with ingredients, place cover firmly on top, then lift and shake the entire blender as you would a cocktail shaker! The results are more than satisfactory, the energy savings obvious, and the development of firmer biceps and pectorals are a real fringe benefit.

• Your picture window is one of the big energy wasters but can be replaced with an ant farm. Simply add an extra pane of glass and make a sandwich of raw earth and a few ant colonies. Not only is dirt a great insulator, but you'll spend hours in front of your new window watching ants as they cultivate their farm, raise their children, have uprisings and revolts against neighboring colonies; and yes, even fight wars. It's actually more fun than TV!



• Fireplaces create a draft that can actually rob your home of heat. Why not videotape your next roaring fire in color? Then simply pop the video cassette into your video cassette player and invite family and friends to sit around your glowing TV set!

Other advantages are your abilities to have the sound level of crackling and popping completely in your control; plus you'll never have to buy another "colored" log, since you may adjust the color on your TV set to give a different color every night! When fire begins to die, simply rewind cassette and replay.



• Aquarium owners will find substantial savings possible by recharging their electric eels no more than once monthly! If this is not satisfactory, switch to a wood-burning eel.

• Decorative lighting, of course is important at Christmas. However, the string of lights need NOT be plugged in! Should friends comment, strike them a sharp blow to the left temple with an empty soda bottle which will enable them to see what appears to be . . . twinkling lights.

• When using your electric clothes dryer, remember that it exhausts HOT air, so plan to wash and dry your hair whenever you dry a load of clothing. Simply sit outdoors under the dryer vent. Lint may be brushed from hair later or kept in place for decorative effects. A wet canary may also be dried in the same manner if you're careful. □

Donald White is an advertising and sales promotion executive in Indianapolis. His son, Stephen, works for a major Indiana radio station.

On The Air In Baton Rouge with WBRH

Kevin Carter is not just a disc jockey, he's also WBRH station manager.

Photo by W. L. Benedetto

by Smiley Anders

It looks like any other radio station.

There are banks of equipment along the walls, posters from record companies showing recording stars, tiny rooms with turntables, microphones and control boards.

Amid the clutter, a disc jockey skillfully manipulates records, tapes and scripts to keep the show moving along. There's some music, a little chatter, some public service tapes.

The only difference is that this particular radio station is operated entirely by high school students, and the disc jockey, who is also station manager, is 17 years old.

The station is WBRH at Baton Rouge High School, one of only two stations in the country operated totally by students. (There are several other high school radio stations in the U.S., but they have adult staffs.)

Kevin Carter, the station manager, puts on the Beatles' "Abbey Road" album and leans back in his chair for a bit of rare relaxation.

"This is our rock segment now," he says, "called Leisure Landing. It goes from 3 to 5 p.m., followed by our big band show until 6 p.m., when we sign off."

The 20-watt station is currently on the air from 9 a.m. to 6 p.m. daily (except for the summer months), but Kevin says it has applied to the Federal Communications Commission (FCC) to move up to 500 watts and stereo (it's an FM station, currently at 90.1 on the FM dial) and to expand its hours to 8 a.m. to 8 p.m.

"When we do that we'll start showing up on the Arbitron ratings of radio stations in Baton Rouge." he says.

The station started four years ago when the East Baton Rouge Parish School Board authorized the project at Baton Rouge High, which has been turned into a "magnet" school offering advanced courses and a college-type schedule to attract students from all over the parish without regard to school districts.

There are now 52 students at Baton Rouge High taking classes in radio broadcasting, with the top 12 to 15 of them running the station each year. The others use the facilities in their class work, but don't go

on the air.

"We have a lot of variety in our schedule," says Kevin. "We play fusion jazz in the afternoons, we have syndicated educational shows such as Mike Whorf's history show, and we play classical music in the mornings — although it's hard for high school students to pronounce some of those names . . ."

There are also interview shows with community leaders, news of activities at the school, a show featuring comedy albums, and remotes of high school football games on Friday nights.

"We do special remote broadcasts," says Kevin, "such as a charity Jumpathon from a shopping mall."

He said the station was the first in Baton Rouge to play "big band" music, but that now it had been added to the programming of one of the largest AM commercial stations. And it was the only station playing classical music and jazz until Baton Rouge got its public radio station earlier this year.

"We run it just like a commercial radio station," says Kevin, "but we have more freedom to experiment with different types of music and programs."

Kevin Carter comes by his interest in radio naturally — his father, Lew, manages an AM station, WXOK, and is president of the new public radio station in Baton Rouge.

Kevin does a Saturday morning jazz show on public radio and also is on the air at night at WIBR, a commercial AM station. He gets paid for these jobs, but not his work at WBRH. Despite this, he enjoys working at the high school station more.

"This is what I make of it — I can play the kind of music that I know, the kind I enjoy," he says. "I've got freedom here."

He's taking both radio and electronics courses, and says he'd rather be an engineer at a station than a broadcaster, despite his early success in the latter field.

"I'll probably attend LSU, and work my way through school broadcasting on local radio stations. It's a great way to work your way through college."

John Dobbs, who teaches the radio class and serves as faculty adviser for the station, says that of the students who have taken radio course and worked at WBRH, 15 are employed at local stations, including TV stations and cable TV.

"We've got students working in broadcasting all over the state now," says Dobbs. "Station managers are calling me up asking for recommendations. By the time our students graduate, they're ready to move right into a station. They know their way around."

But he points out that not all of the students want a career in broadcasting. Some just find it interesting. He says the station's assistant manager, Johnette Medici, doesn't plan on going into broadcasting but likes working at the station.

In the short time it's been on the air, the station has received recognition from the community, both for its programming and its public service work.

"We got hundreds of calls about our big band show when it first came on," says Dobbs. "We were ahead of the commercial stations in recognizing the nostalgic appeal of this type of music. And in 1978 we received the Golden Mike Award from the American Legion Auxiliary for our "Little Folks Schoolhouse," which was named the best children's show in Louisiana that year. We beat out all the other stations in the state, and we're quite proud of that."

Kevin says that sometimes it seems that the adult population of Baton Rouge has more interest in the station than the students at Baton Rouge High.

"But that may be because they're in school much of the time we're on the air," he admits. "We're beginning to get more reaction from the students, especially about our afternoon rock show."

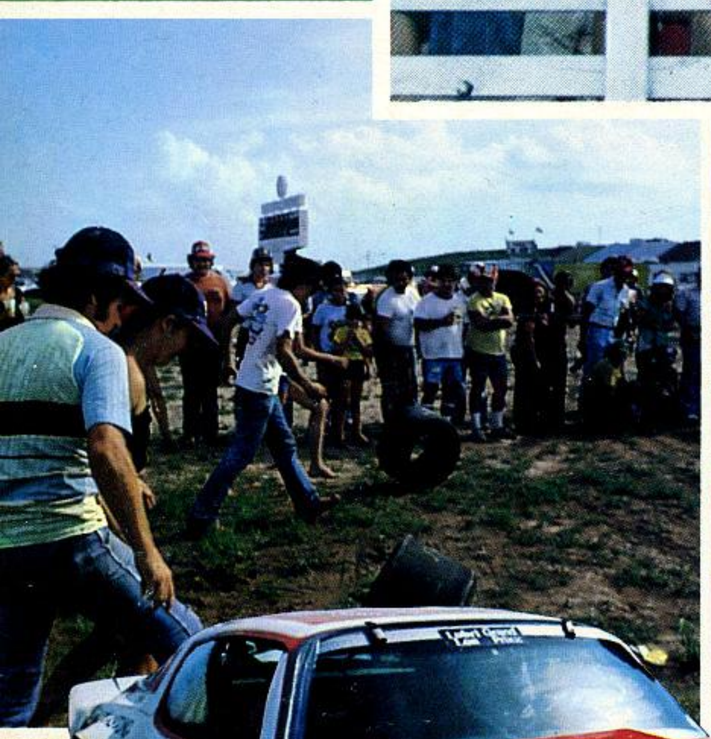
Abbey Road is coming to its end, and Kevin turns back to the mike with practiced ease.

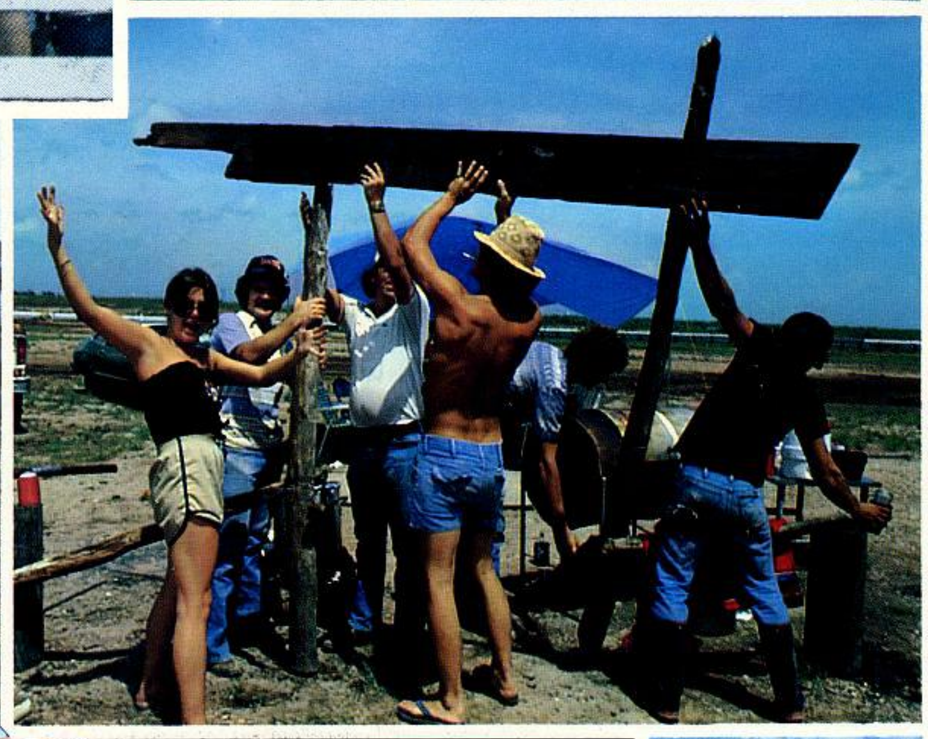
"That was the Beatles," he says in his smooth DJ's voice, "and now here's a number from Fleetwood Mac requested by some guys over at a welding shop. Remember, you can request your favorite rock tunes by just giving us a call here at WBRH . . ." □

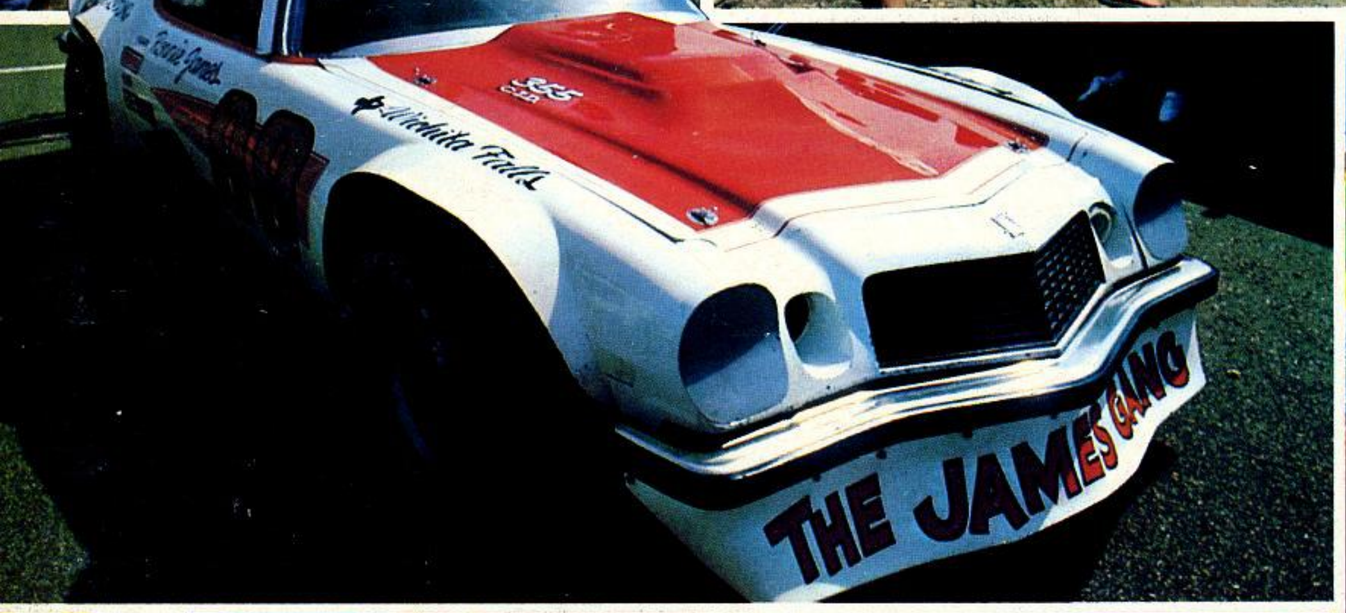
Mr. Anders, a Baton Rouge business writer, is a frequent contributor to Gulf States Magazine.

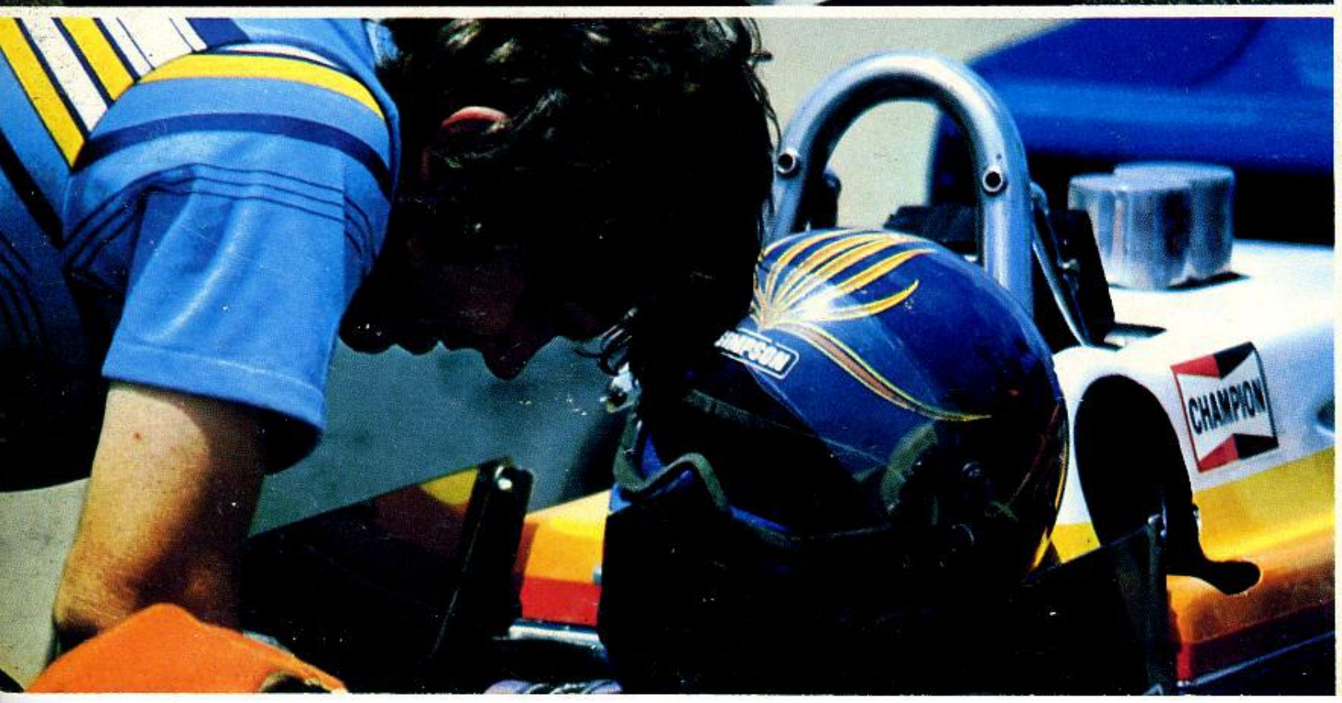
No place but TEXAS

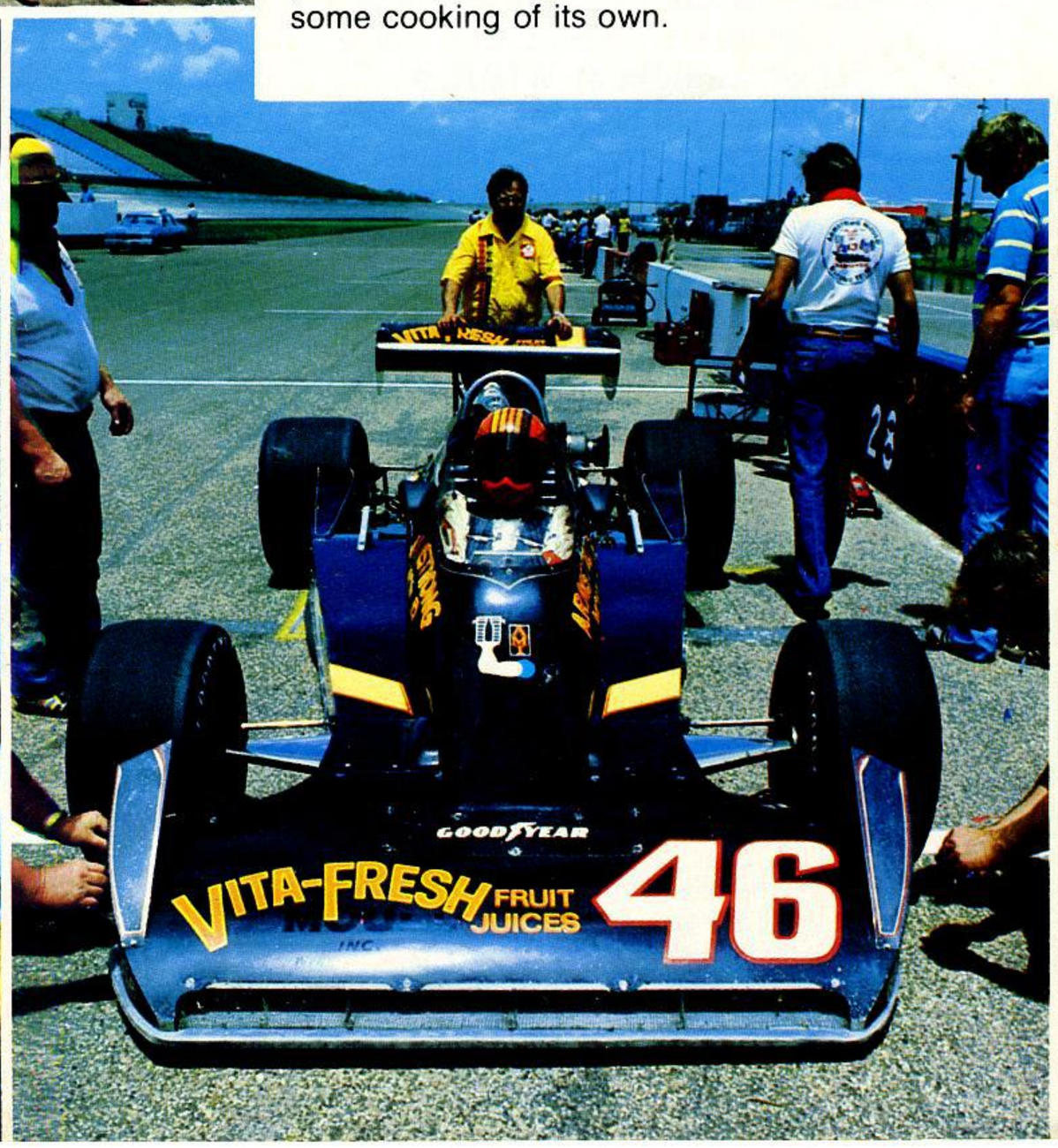
Photographs by Ken Haynie







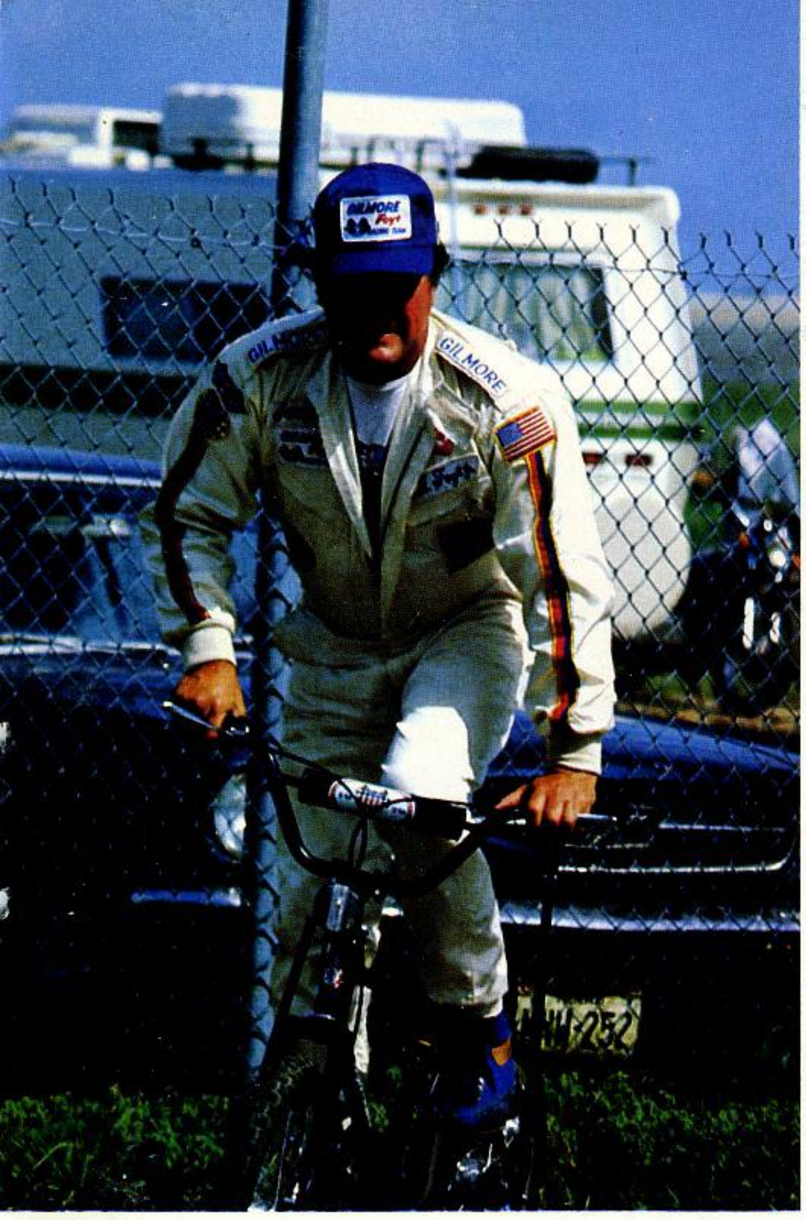




Where can you find, all in one place, motorized machines wrapped in gaudy colors, backyard barbecue fanciers, tire-rolling rookies, weathered faces encased in Star Wars-style helmets and a contest to see who looks the best in a wet T-shirt? As the saying goes, no place but Texas.

The official reasons for this kind of gathering, staged each summer at College Station's Texas World Speedway, are automobile races involving Indy-style championship cars, mini-Indy machines powered by Bosch VW engines and late model stocks. But it's the non-racing activities that make for the carnival atmosphere.

The Brazos Valley Backyard Barbecue Championship is held in conjunction with the races, and people wearing everything from cutoffs to cowboy hats mingle to watch the contestants cook pork and beef under the hot Texas sun that does some cooking of its own.



Local favorite A. J. Foyt, a Houstonian who has won four Indianapolis 500s and routinely pounds asphalt ovals at speeds of nearly 200 miles per hour, appears quite at home riding his bicycle from the garage area to the pits.

A tire-rolling championship is another side show. Teams roll a racing tire across the field — with one slight rule modification: No hands allowed.

Perhaps the highlight of the weekend is the wet T-shirt contest, where a couple of dozen well-proportioned young ladies do their thing with help from several buckets of ice water. Losing the audience's attention is not a problem in this event.

Those who go to see the races aren't disappointed, either. Speedy machines roar around the oval like angry giant bees . . . mechanics sweat to get just one more mile per hour out of their engines . . . bright colors decorate cars and clothes . . . the raw smell of the cars' alcohol-based fuel permeates the air.

Although there are race tracks everywhere,no place but Texas are they put to such spectacular use.

— Rick Harvin

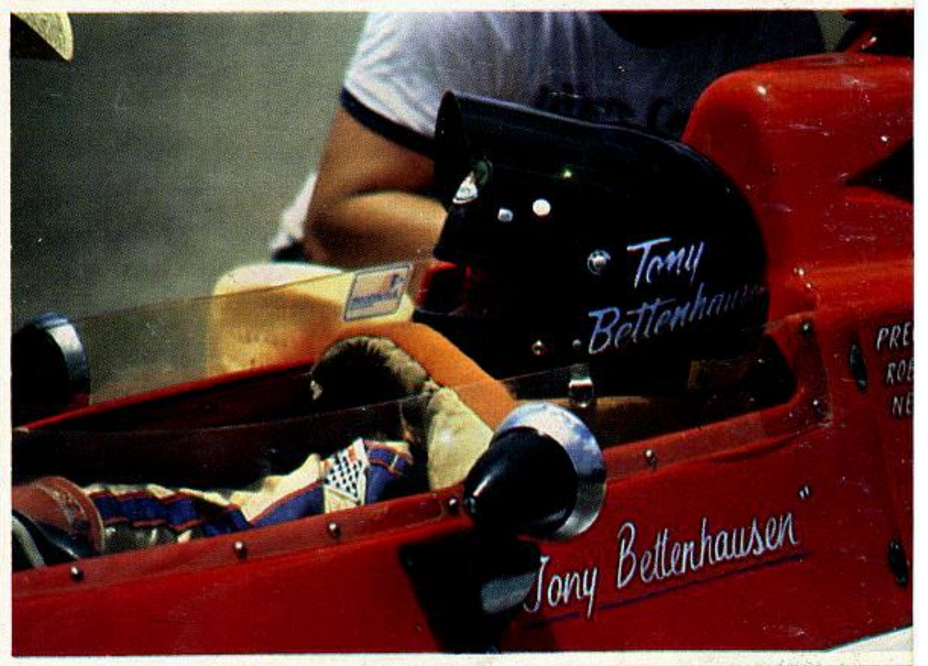


Illustration by Jack Shofner

By all accounts, the famed French privateer Jean Lafitte was in a black mood as he sailed toward the mouth of the Trinity River on a misty morning in late February, 1821.

The American Navy had just given Lafitte 60 days to get out of what was later to become Galveston. Lafitte was stung by the injustice. Had he not turned an American near-disaster into victory at the battle of New Orleans a decade earlier?

He had. But he could not live on his past accomplishments.

During the previous fall, in a rare case of poor judgment, Lafitte had allowed several of his lieutenants to salley out on their own search of French, Spanish and English ships in the Gulf. Unbeknownst to Lafitte, his crews got carried away and engaged everthing in sight — including American shipping. The last straw for President James Monroe was news of Lafitte's men chasing an American sloop into Matagorda Bay, plundering it and burning it to the water line.

So in February, Lafitte's brig — laden with five bearskins of gold coin and bullion — weaved uneasily through hidden sand bars and reefs of the lower Trinity River. Lafitte, disconsolate and brooding, was looking for a spot to cache his gold. Having roamed the Gulf for nearly 15 years, Lafitte knew he would be back.

But something, nobody knows what, happened to his flagship. The Pride was breached and sank in minutes while the crew escaped with their lives and precious little else.

What happened to the treasure? And is there more?

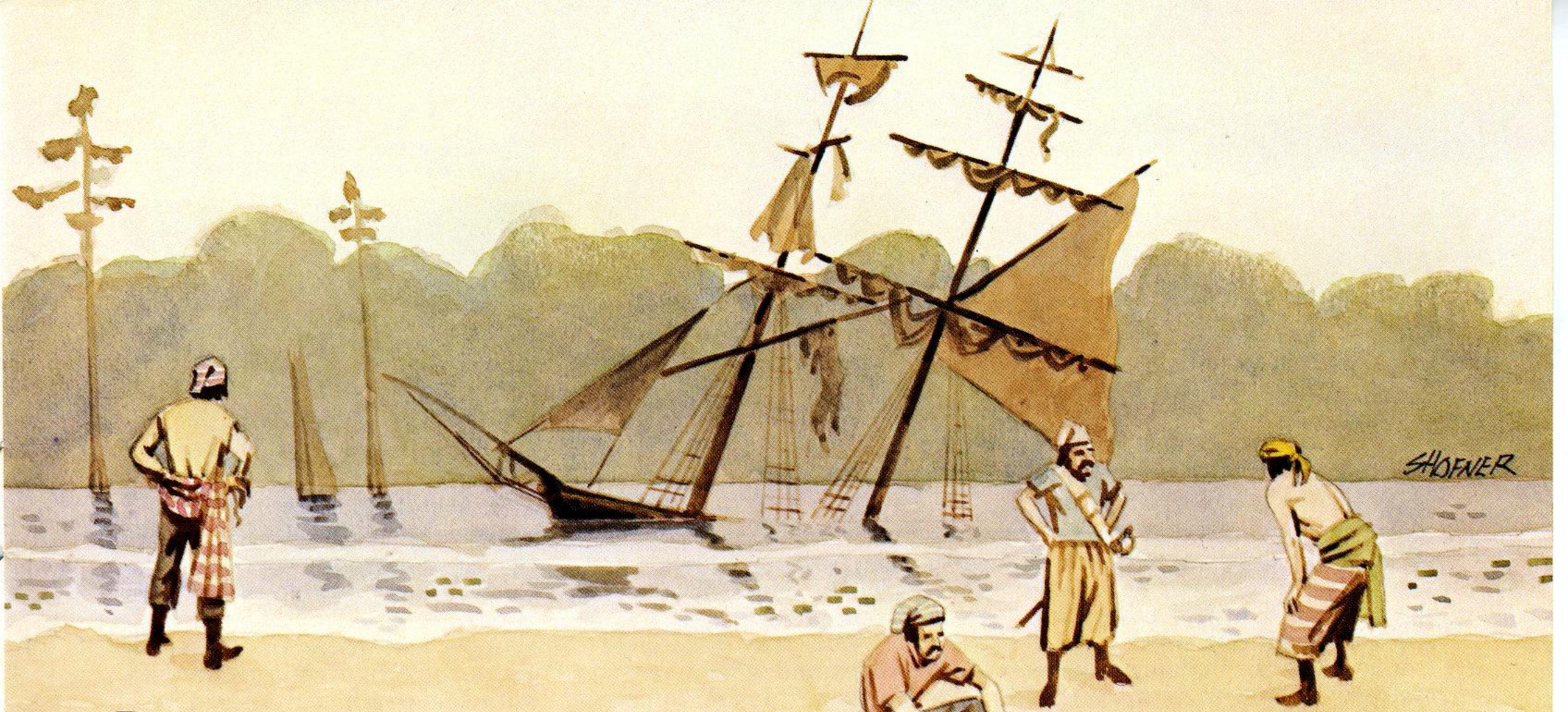
Lafitte was known to have plundered over 300 ships. One, the Spanish galleon Santa Rosa, was captured June 12, 1816, in the Gulf with more than $2 million in silver ingots aboard. At today's prices that is probably more like $10 to $15 million.

The consensus is that there probably are a half dozen sites where Lafitte buried treasure. They range from the lost gold in the Trinity to the banks of Clear Creek near NASA's Johnson Space Center to various areas along Galveston Island.

But the greatest treasure, the five bear skins of gold, went unsought until 1949 when a Wallisville, Texas, rancher, hearing a story about Lafitte's lost ship, recalled a story his grandfather told about getting snagged on a sunken ship in Lake Miller in 1883.

In the quicksand-like mud, the rancher began probing with a long stick. In due course, he outlined an object shaped like a ship in the mud. It was 75 feet long and 35 feet wide. The few existing descriptions of the Pride give it just about the same dimensions.

The rancher began plans to excavate the ship only to have



Treasure is where you find it

by David White

alleged descendents of Lafitte drop by with their hands out. On top of that the State of Texas wanted part of the action and quashed the whole project by pointing out the lake bottom to be dug up was owned by the state. With that everyone's interest waned and the dig was abandoned.

To this day, the site — a quarter mile north of Interstate 10 and about half a mile east of the Trinity River — remains untouched.

Maybe.

How much is the treasure worth if it is still there? Just guessing, it would be reasonable to assume that a bear skin would be able to hold 80 pounds of gold without difficulty. That would yield 5840 troy ounces. At $500 per ounce, the face value of the treasure would be about $2.9 million. Its historic value is incalculable.

There are more treasures than this in Southeast Texas and South Louisiana. But for some there is no clue of where to dig.

For instance, shortly after Lafitte's debacle in the Trinity, a group of French officers from Napoleon's army showed up in Texas. They were armed with Spanish land grant, funds from France and Spanish coins. Spain was trying to enforce its claim to Texas and was using the French as pioneers in a colonization effort.

The French — about 80 men, women and children with little more than the sun and stars to guide them — treked up the same Trinity River that defeated Lafitte before turning east. From the few crude and clearly inaccurate maps, it appears the French chose to settle in what later would be known as the infamous Big Thicket of East Texas.

To the uninitiated, the Big Thicket is akin to a cross between an Amazon rain forest and an African jungle.

After just three years, the colony began disintegrating and by the end of eight it was gone. The relics, French cash and Spanish coins have never been discovered. But if the crude maps are to be trusted, it appears the French settlement could have been in an area of East Texas centered roughly on the present-day community of Saratoga.

And then there are the wonderfully improbable stories of Spanish soldiers pushing caravans of gold out of Mexico along the El Camino Real that started near Laredo and moved roughly northeast through the western tip of Southeast Texas before swinging east through the Natchitoches, Louisiana, area. The stories are great, but the problem is: Where were these soldiers taking their gold?

Throwing practicality to the wind, one story goes that the Spaniards were set upon by Indians somewhere in East Texas, probably between Huntsville and Nacogdoches. Legend has it the embattled soldiers buried their gold in a river bank, fought their way out and never could find the site again.

Another tale has a Spanish convoy far south of the El Camino Real. Perhaps near what is now Montgomery County, Texas. Once again, the Indians, who seemed to have an inordinate relish for attacking Spaniards with gold, caught them in a beech grove and unleased their arrows. Only one soldier escaped with his life. (It's never two or six or ten, it's always one.) Fortune hunters in later years tried to follow the trail and eventually found a beech grove with many arrow heads embedded in the trees, but nothing else.

One would think the arrow heads would have been as valuable to the Indians as the gold.

Are these stories fact or fable? The historians who record them do so with a straight pen. And an underground culture of elusive and secretive treasure hunters in both Texas and Louisiana spend their weekends and vacations in quest. And in the past five years, two monumental finds of sunken Spanish galleons have been made off the coast of Florida.

Fact or fancy? Browse a few libraries, tromp across the ground and find out for yourself. □

These tiny artifacts were among the first brought up from the sunken El Constante.

...and they found it

It's a non-descript building on North Street in Baton Rouge and there are a bunch of people who want to keep it that way.

Right now the building is being outfitted to unravel a mystery and then preserve the results forever. The people doing the work don't want droves of the curious getting in their way.

The mystery is what has all the appearance of being an almost perfectly preserved treasure trove from a Spanish galleon that went down during a hurricane in August of 1766. While other galleons have been recovered, this one foundered in what could only be described as an archeologist's heaven. It sunk in 18 feet of water about a mile and a half off Morgan City, La. Soon after it went down, it was covered by a nearly an inpenetrable layer of Beaumont clay that kept oxygen of getting to much of the treasure speeding its decay. That is what thrills the archeologists and that's the reason for the building on North Street.

The treasure appears to be in almost mint condition and as quickly as it is recovered, it will be transported to the Artifact Stabilization Lab on North Street where scientists and technicians will treat it with chemical baths and special coatings to preserve this slice of history.

The story of this treasure ship is almost as fascinating as the treasure itself. Preliminary investigation — and it may not prove to be true — follows this line:

The Spanish galleon **El Constante** was loaded in a Mexican port in mid-summer 1766 for the first leg of a journey to Spain. If the Spaniards followed the normal ritual, the **El Constante** was badly overloaded with treasure and people.

What is known for sure is that the sunken ship went down laden with gold, silver, copper, rouge for makeup, cured turtle shells to be used for European hair combs, leather hides, and what appears to be junk pottery from the Phillipines being passed off as Aztec ceramics.

The first portion of the journey was a run across the Gulf to Cuba where the fleets staged twice a year for the hazardous crossing to Spain. The **El Constante** and two sister ships never arrived in Cuba. Whether they took a northern route to avoid bad weather or the **El Constante** was blown north by a hurricane is not known. But what archeologists think is the **El Constante** finally went down in sight of the Louisiana Coast.

Then a curious thing happened. The Spaniards, who had been losing treasure ships to Gulf storms for two centuries, and were expert at recovering cargo, either could not or did not attempt a salvage on the **El Constante**. Dr. Sherwood Gagliano, one of the chief archeologists working on the recovery said, "The ship was probably between 80 and 100 feet long and after it sank would have been clearly visible above the surface for several years." And the Spanish had gone so far as to put together skilled salvage teams in Cuba for just such occasions. But today's preliminary recoveries from the ship show a bounty of wealth still intact. The one and only dragline scoop into the wreckage that verified the contents brought up more than $300,000 in gold alone.

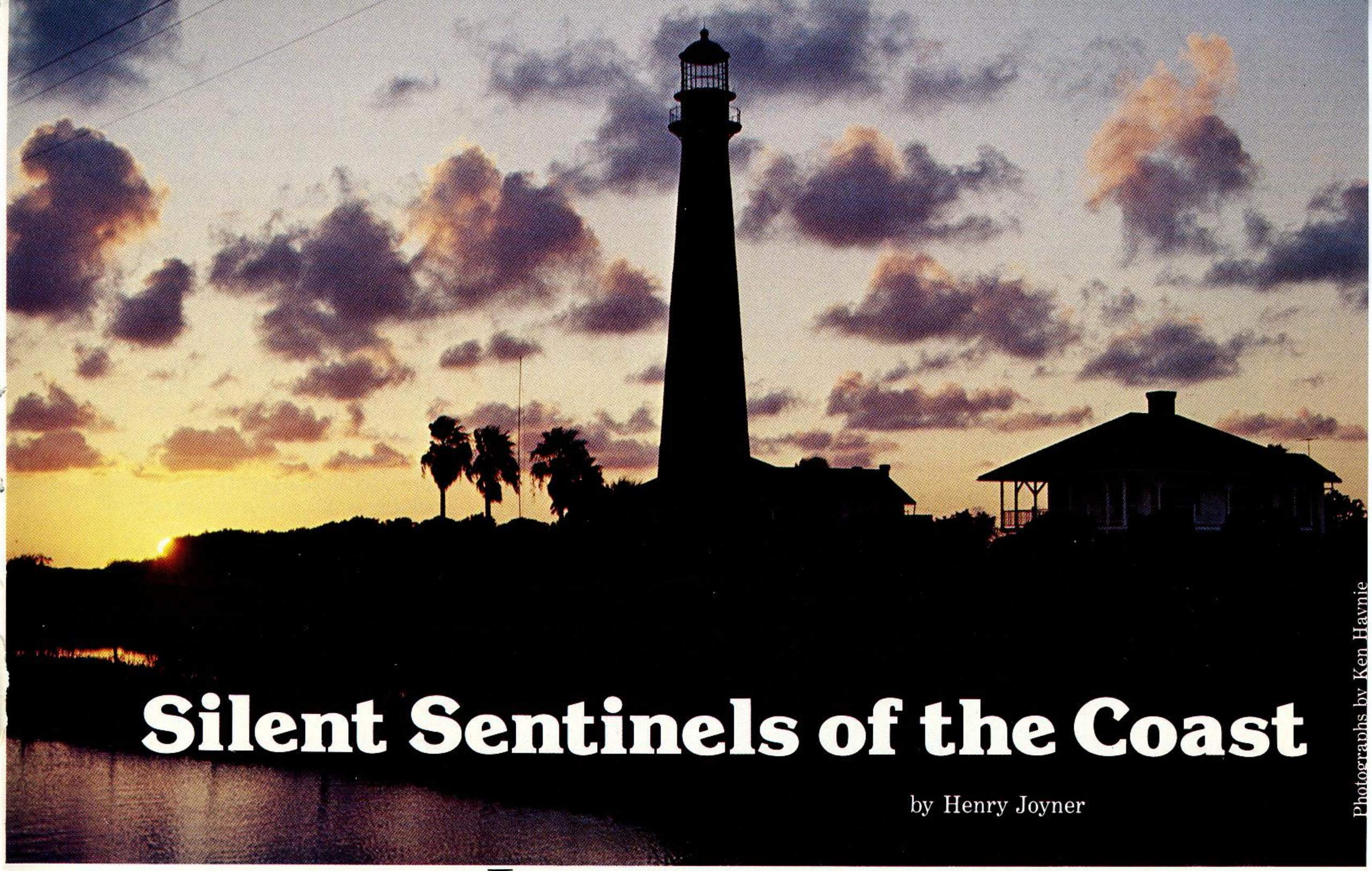
It is Dr. Gagliano's thinking that the people of the area knew exactly what was lying off their coast for the nearby bayou is named Rio del Constante. In fact, that name is presently the keystone to archeologists thinking that it is the **El Constante** that has been found.

Until the bulk of the ship is salvaged no one can say for sure it is the **El Constante**, but right now Curtis Blume doesn't care. Curtis Blume is the Port Bolivar, Tx., shimper who discovered the wreck last spring. His shrimp nets tangled with the wreck and when Curtis tugged them free, up came a hundred pound disc of copper. Blume called a friend and fellow shrimper Steve Smith of Cameron, La., to dive on the site. Feeling his way through muddy water that allows only six inch visibility, Smith recovered a couple ballast stones and artifacts from the wreck.

With excitement beginning to mount, Blume and Smith got a clam shell bucket to take a bite at the site. And that was that last of the amateur excavation. The bucket brought up a cross section of incredible treasure.

It was then that Blume and Smith went to the state of Louisiana with their story. Presently, a scientific expedition is being mounted to recover the remainder of the ship. The only thing hindering the treasure hunters and perhaps endangering what Louisiana Governor Dave Treen has desrcibed as "one of the most sigificant archeological discoveries anywhere in the Gulf," is the lack of an Army Corps of Engineers permit to let the recovery begin. While the archeologists won't say it out loud, one can hear the frustration in their voices when the Corps of Engineers is mentioned. The treasure hunters fear is that the weather will prohibit diving in a couple months, but unprincipled scavangers could scoop out the entire of the value of the wreck with dredges during the winter if the site goes unguarded.

Gulf States Magazine will have an editorial team there when the salvage operation begins and will publish a detailed account in the winter issue.□



Photographs by Ken Havnie

Silent Sentinels of the Coast

by Henry Joyner

The sun sets on the Bolivar Lighthouse (above) and it will be dark until sunrise.

Lighthouses — those traditional symbols of hope and safety for sailors over the centuries — have one by one dimmed their beacons. But two towers remain along the upper Texas and southwest Louisiana Gulf coast as tributes to another age.

Both well over 100 years old, the Boliver Point Lighthouse at the entrance to Galveston harbor and the Sabine Pass Lighthouse at the mouth of the Sabine River have weathered the ravages of fierce hurricanes and Civil War battles. Their stories of human bravery and natural disasters have made them landmarks in the history of this area.

The original lighthouse on the southernmost tip of the Bolivar peninsula was built in 1852, one of the first three in Texas. It was torn down during the Civil War by Union Soldiers and its iron tower carted off to be made into war material. It was only half as tall as the present 116-foot, cast-iron and brick spire built a few years later in 1872. It was this tower that withstood the devastating winds and waves of two of the most deadly hurricanes of this century.

Perhaps its finest hour came during the long night of August 15, 1915, when a killer storm packing 120 mile-an-hour winds lashed the island of Galveston.

"The big tower shook and swayed like a giant reed," reported assistant lighthouse keeper J. P. Brooks. "Every moment we expected to feel the structure crumbling beneath (our) feet or to have the heavy glass windows of the lamp crushed in."

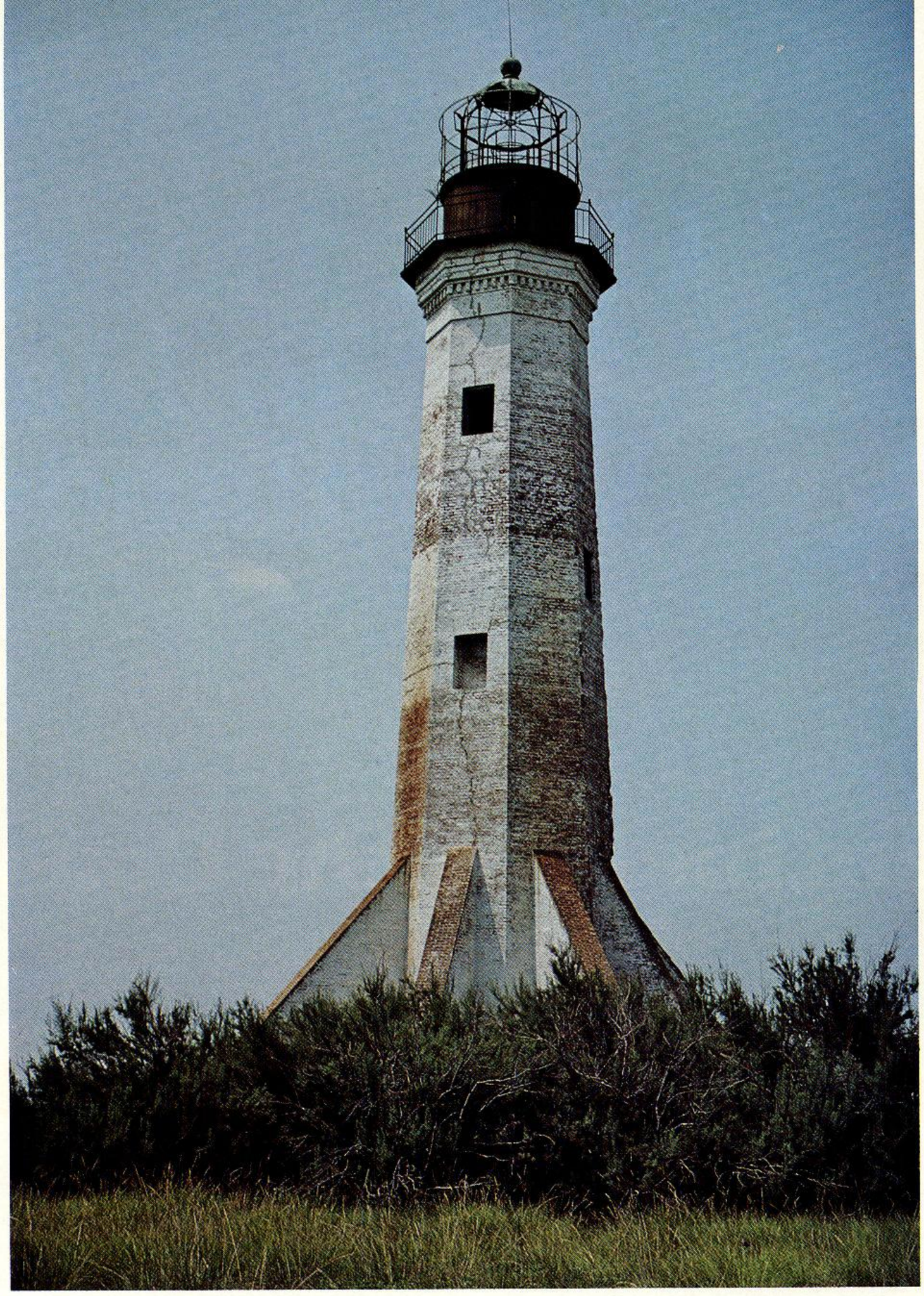
As Brooks turned the big lamp in the top of the swaying tower by hand, 60 people, mostly women and children, huddled on the circular stairs below. They had taken refuge there as rising water forced them to flee from the keeper's home nearby.

Mrs. Theresa M. Wells, one of the tower refugees, was 11 at the time, but her memories of the harrowing night were still vivid when she recalled them some years later.

"When darkness closed the low line of the land, despair engulfed us, for as the hours passed the hurricane increased.

"Water came into the tower to the first landing, a height of 12 feet or more. It was impossible for the men to push the door shut again and the remainder of the night the massive door slammed against the wall," she remembered.

"In the tower, terror reigned. The



Standing tall in the marsh, the Sabine Pass Lighthouse holds only a brief place in history.

refugees thought the tower was crumbling. It rocked and wavered and men were thrown to the floor."

As the storm's intensity increased, it became impossible for Brooks and lighthouse keeper C. H. Claiborne to keep the big lamp rotating. They wedged the lens as securely as they could, trimmed the mantles of the lantern and left it burning. Throughout the storm the light continued to shine.

When daylight broke through the clouds the next day, all 60 people who had taken refugee in the tower remained safe and dry.

Ironically, the next night the powerful light was dark for the first time since the tower was erected. The storm had washed away the oil supply used to fuel the beam that signaled hope throughout the hurricane of 1915.

The Sabine Pass Lighthouse was already dark at the time of its most famous role in history. It first flashed its signal out into the Gulf in 1857, but at the outbreak of the War Between the States, the Confederate government ordered that all 164 lighthouses along the coast be darkened to prevent Union ships from entering southern ports.

It is still located on the banks of Lighthouse Bayou on the Louisiana side of the Sabine-Neches waterway and is surrounded by marsh. At dawn on April 17, 1863, the lighthouse was written into Civil War history books — even if it is just a small footnote.

The lighthouse and the keeper's house had apparently been abandoned by the local militia since it was no longer in use. But the Union blockade fleet anchored offshore had a use for it. For more than a month, the fleet commander has sent a daily reconnaissance party by whaleboat to the lighthouse to keep watch over Confederate military movements on shore. An unsuspecting group of rebel fishermen drifting lazily down Lighthouse Bayou were surprised and captured by the Union troops. When the fishermen failed to return, the local Confederate commander became suspicious and sent a detachment of sharpshooters to the lighthouse to lay seige for the infiltrators. They took up positions in the tall marsh grass near the lightkeeper's house and waited.

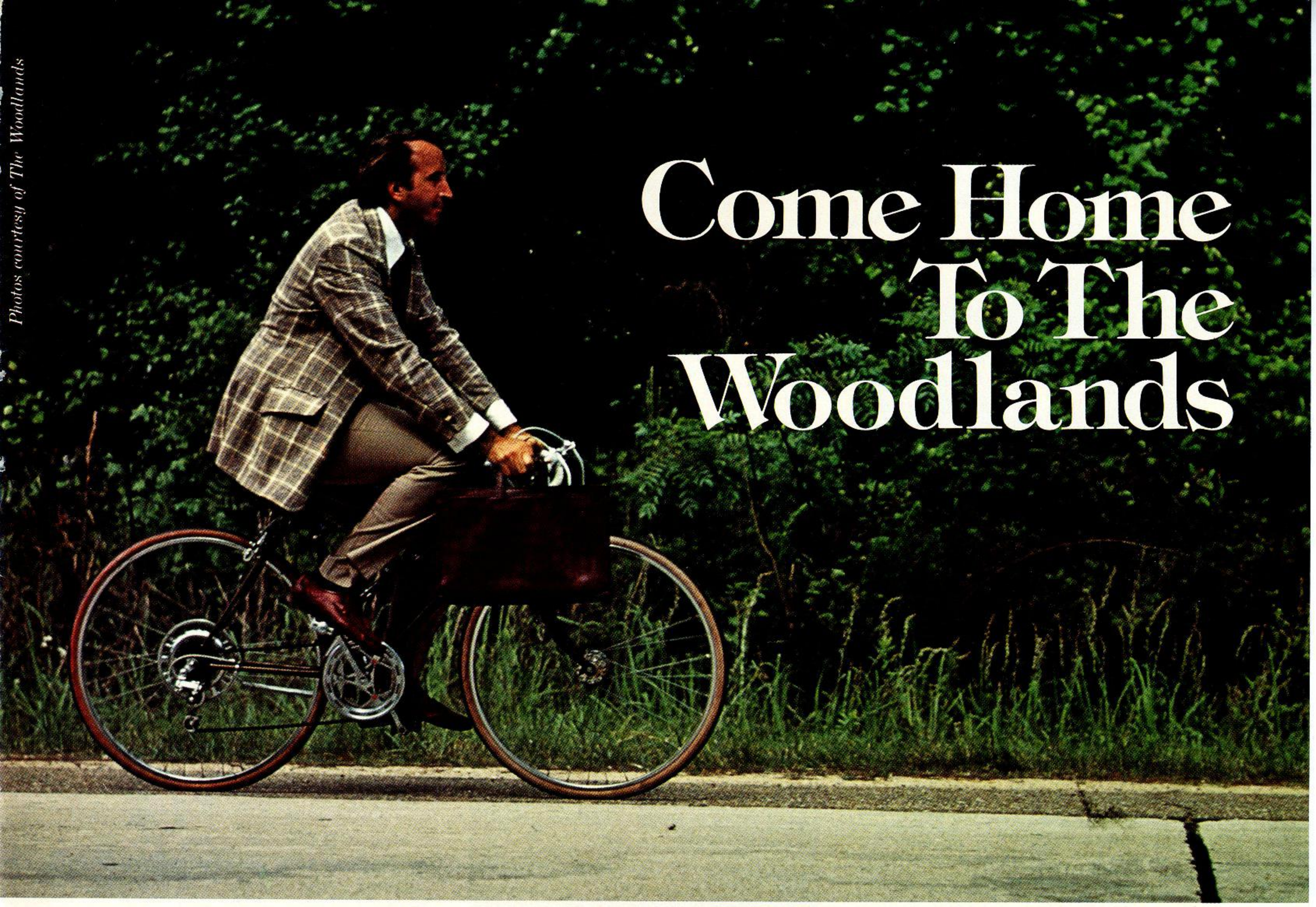
As dawn broke the next morning two of the blockader's whaleboats were spotted rowing toward the Sabine Lighthouse carrying the blockade commander and group of bluecoats. As the yankees approached the rebel's hiding place a fierce melee of whining musket balls and buckshot broke loose. The sudden attack sent the surprised landing party scurrying for their boats only to discover that one was hopelessly stuck in the thick mud. One boat escaped with all but one of its crew seriously wounded.

Commander D. A. McDermut, skipper of one of the blockade ships, was mortally wounded and surrendered what remained of his troops. A Confederate surgeon worked throughout the night in a vain attempt to save the Union officer's life. Under a flag of truce, two Union surgeons were allowed to come ashore to reclaim McDermut's body for proper burial in his native north.

The Sabine Lighthouse's place in history was brief. It was passed by five months later when Union gunboats invaded Sabine Pass in the ill-fated battle that made Dick Dowling and his rowdy group of Irish Texans local heroes. The only action it saw during the Battle of Sabine Pass, according to local legend, was when the 84-foot tower was struck by a stray cannonball.

Today, visitors to the park honoring Lt. Dowling can see the gray stone tower in the distance across the waterway. It stands forlornly in the marsh, its wooden walkway collapsed and its metal staircase rusting in the harsh Gulf Coast weather. It was closed as an active lighthouse in 1952 and turned over to the state of Lousisiana.

The powerful beam from the Bolivar Lighthouse flashed its last glimmer one spring evening in 1933. It is privately-owned now and is used as a summer home. It still delights visitors who journey down Highway 87 to cross the Galveston ferry. □



Photos courtesy of The Woodlands

Come Home To The Woodlands

By Lynn Garner

"There is a train we keep inside that carries our life along, year after year, rushing, clattering through time and space . . . We pass through communities of identical houses like boxes to hold identical lives. Pass pastures of trucks and traffic grazing on concrete and noise . . . Our lives pass through and we wonder: When will this old train we're on bring us home again?"

Mr. Garner is a Conroe-based correspondent for a Houston newspaper.

Come home to The Woodlands. That's the seductive message beckoning visitors at The Woodlands' elaborate information center to move into the nation's most successful new hometown. This is not just another fashionable subdivision. Look again, for this is a social experiment backed by government and private enterprise designed to serve as a model for the urbanization of America.

Last fall, The Woodlands celebrated its fifth birthday. This meticulously planned community of almost 9,000 residents was carefully carved into 23,000 acres of lush East Texas pine forest along Interstate 45 only 25 miles north of the bustling boomtown of Houston.

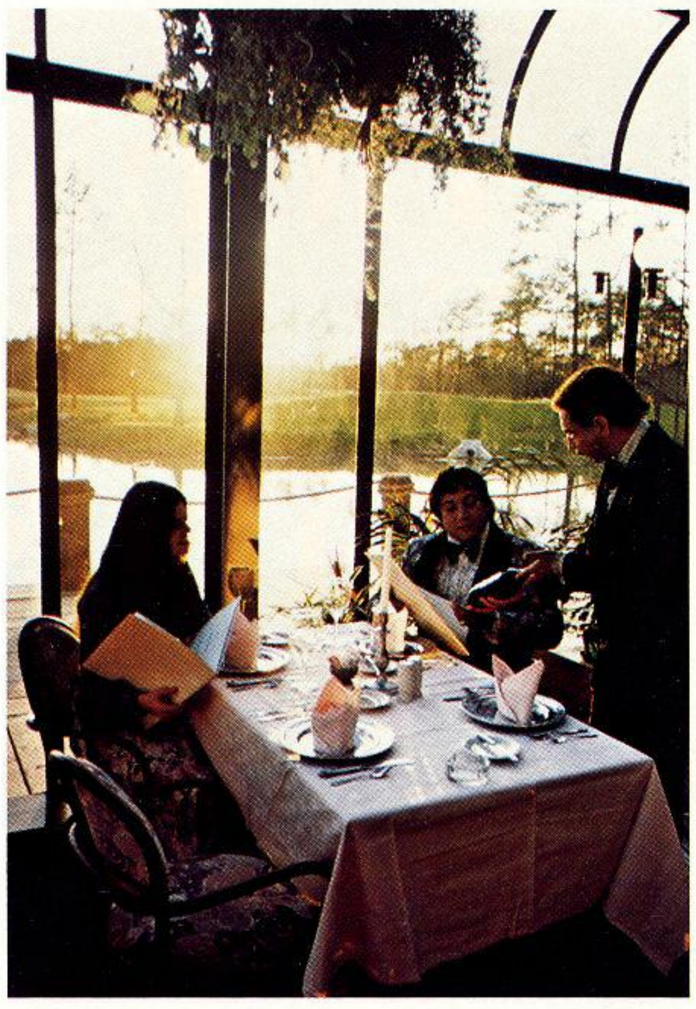
George P. Mitchell, a Houston oilman, is the moving force behind the Woodlands. He is embarked on an ambitious project to avoid the "terrible, garish" growth in parts of Houston's urban sprawl, to create a new community with jobs and education for people of all income levels which will break the cycle of endless poverty, and, above all, to make The Woodlands so profitable that other corporations will emulate the success.

The Woodlands is a project of Mitchell Energy & Development Corp., assisted financially by the Department of Housing and Urban Development. Mitchell's company is one of the top 15 oil and gas exploration firms in the nation, with assets of $786 million.

Mitchell, the son of a Greek emigrant who settled in Galveston, likes to envision life decades into the future, and how it can be improved:

"By the year 2000, the Houston metro area will have grown from 2½ million to 4½ million. How do we make that work? How do we avoid the white flight of the middle class to the suburbs, leaving the disadvantaged behind and the cities without its valuable resources?

"How do we avoid creating new subdivisions that are unanswerable to the cities they surround and depend upon like parasites? This is



Elegant dining is only one of the amusements available at The Woodlands.

what's destroying our cities all over the country."

Whether The Woodland's residents like it or not, the unincorporated community lies in the extraterritorial jurisdiction of Houston and they can expect to be annexed in 10 or 15 years "to become part of the political whole," as Mitchell says.

And by the year 2000, Mitchell hopes to see The Woodlands grow to a community of 150,000 residents, with a total investment of $5 billion from government, private enterprise and individuals. Total investment by the end of 1980 will reach $450 million, with 40 percent from Mitchell's own company.

Only four of the original 13 new hometown projects in the country have survived. Eight were killed either by poor planning or by ill-timed startups during the 1974-75 recession. Three projects have survived with large doses of federal aid. "Ask HUD, and they will tell you that The Woodlands is their most successful project," Mitchell says.

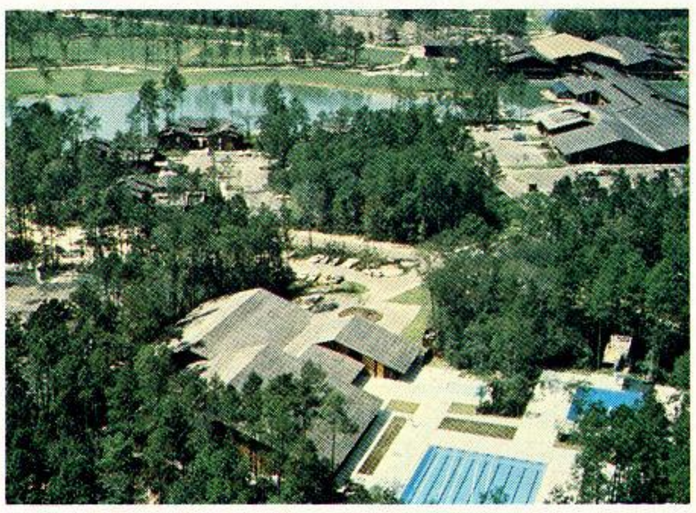
A wildcatter by nature, Mitchell likes to compare the new hometown program to the oil business.

"I've told HUD they should be satisfied with their success rate. I may drill nine wildcat wells and only hit one," Mitchell says with a grin. HUD's faith in The Woodlands was demonstrated with a $50 million federal loan guarantee, almost double the amount for the other projects. Another $17 million in federal funds have been approved in the form of community development block grants.

The Woodlands opened after Mitchell spent a decade combining more than 300 real estate transactions into a single package, and after almost $10 million was invested in comprehensive engineering studies and environmental impact statements.

"We looked at every similar project in the world. In terms of beauty, The Woodlands is already a success," Mitchel said. "Financially, it's generated a negative cash flow, but it's reaching a break-even point. It requires a tremendous front-end cost."

Seeing is believing. The welcomed exit off the busy interstate onto the wide, tree-lined boulevards in The Woodlands is like leaving the Indy 500 for a Sunday drive through the countryside. The forest shields the tall, reflective-glass



The Woodlands architecture takes advantage of natural settings for energy conservation.

office buildings from view, and the homes in varying styles and prices are hidden in small neighborhoods laced together by greenbelts and hike-and-bike trails. Of the 3,000 persons working in The Woodlands, many prefer walking or riding bicycles. The automobile almost seems to be an intruder here.

Each homeowner belongs to The Woodlands Community Association, which serves as the local governing board. Housing codes and deed restrictions are strictly enforced.

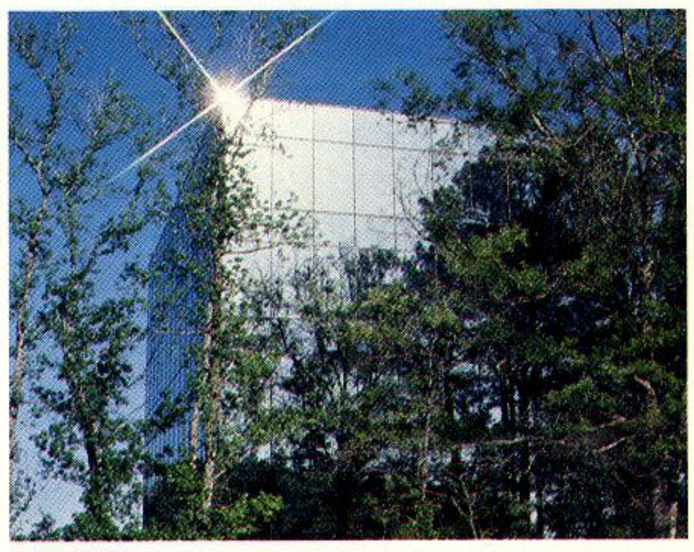
"The only rush-hour traffic is a squirrel in the driveway," boasts a posted sign placed near a well-manicured golf course. These subliminal messages must work. During last year's housing slump The Woodlands increased home sales by 18 percent while Houston fell by 20 percent.

"It was our best year in residential development since The Woodlands opened in October 1974," said Ed Lee, The Woodlands Development Corp. president. "Most of our homebuyers used to be from the Houston area, but last year 65 percent moved from other cities or states." The Woodlands has 300 apartment units built last year and 450 additional units are under construction, including subsidized housing for the elderly and handicapped.

For the shoppers, life begins at The Wharf, an indoor shopping mall adjacent to a small lake which houses a gourmet supermarket and restaurant, an ice-skating rink and numerous stores. The Woodlands has five schools from elementary to high school grades, three churches and 11 denominations.

Golfers are drawn here each spring by the nationally televised Houston Open, played on one of two championship golf courses. Weekend hackers can rely on former professional golfer Doug Sanders, the resident pro, for helpful advice. The Woodlands has hosted the national AAU swimming championships at the Swim and Athletic Center, run by former U.S. Olympic diving coach Dick Smith. The ATP Lipton Doubles tennis tournament is held here annually on the 30 outdoor and indoor courts.

Last year, an estimated 33,000 guests visited The Woodlands Inn, an executive conference center which has served as a retreat for representatives of most of the Fortune 500 companies. Visitors here in the secluded resort are usually unaware of all the activities surrounding them. They probably would be more surprised to learn

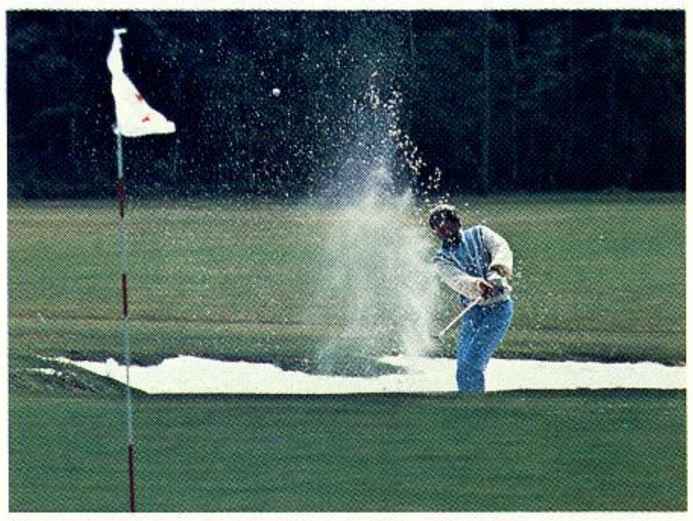


A contemporary touch gleams out from behind the trees.

that they are participating in one of the larger solar energy projects in the Southwest.

A $350,000 Department of Energy grant was used to install 10,000 square feet of float-plate collectors on The Woodlands Inn, to provide more than half of the water heating needs for 242 guest units, the kitchen, spa and indoor swimming pool. It's estimated to save 735,300 kilowatt-hours per year. Another solar collector system was installed in the Woodlands Swim and Athletic Center with a similar DOE grant.

In addition, several builders have installed solar-assisted systems of various designs in a half dozen homes here. The Woodlands also takes advantage of site placement to enhance energy conservation.



Golfers can shoot a round on two championship courses. Natural beauty surrounds gracious living (lower right).

For example, an 80,000 square foot office building to be completed this year and leased to the Western Division of Superior Oil Co. has no parking lots on the south and west sides of the building. Instead there are tall pine trees providing five stories of shade to reduce summer heat and to maximize natural warmth in the winter.

Another DOE grant financed a comprehensive study of energy efficiency for a proposed $1.3 billion Metro Center, or what is more aptly called "a downtown in the forest." The center will include a regional shopping mall, office parks, greenbelt areas, two lakes and a riverwalk. The year-long study, conducted by the Southwest Center for Urban Research, compares the mechanics of heat pumps to other kinds of temperature conversions and evaluates several techniques. The report will be made available for study by the nation's developers.

Gulf States Utilities has watched, assisted with and marveled at the energy conservation activities in The Woodlands. GSU's most direct involvement has been in the National Energy Watch (NEW) program, which promotes energy efficiency in new and existing homes.

Although many homes being built today are designed with energy conservation in mind, The Woodlands has more than an average number of homes that meet NEW standards.

JoAnn Smith, GSU's manager of consumer information, said that one reason The Woodlands has so many NEW-certified homes is that the development was planned with energy-saving as a primary goal.

"The streets are laid out in such a way that there aren't as many worries about the exposure of east-west glass to the sun," Smith said. "In addition, there are many trees that help shade the homes."

"The Woodlands is proof positive that grassroots energy planning can pay off," Smith said.

After five years, commercial development is beginning to show significant gains in The Woodlands. A total of 2.1 million square feet of commercial construction is either completed or nearing completion. An 818-acre industrial park is located across the interstate near a railroad spur. Among the 166 employers in the Woodlands are light manufacturers, distributors and professional companies like Eckerd Drugs, Kraft Foods, Betz Process Chemicals, Schlegel Corp. and State Farm Insurance.

"Any company interested in relocating to the Southwest should look at The Woodlands. We've been able to attract and keep quality personnel who could work anywhere in the country, but they enjoy living here," Mitchell said.

Mitchell acknowledges the creation of new jobs will be a key factor in ensuring the success of The Woodlands. The minority population here is still low, about 3 percent compared to 38 percent in Houston, and the middle to high income are predominant. Providing jobs of all income levels will help attract the blue collar, the clerical worker and the executive to The Woodlands, Mitchell believes.

As an act of faith and of determination, Mitchell is moving his corporate headquarters this fall into a new 150,000 square-foot office building in The Woodlands. From his office high atop One Shell Plaza in downtown Houston, Mitchell has a panoramic view of the largest city in the country with no zoning code, and some of the problems which have resulted.

"Some day, I think we'll see other corporations tackling these same kinds of projects. It's up to the private sector; the government can't make it work. We've seen what's happened to our cities despite massive federal aid. I believe some day we can break the poverty cycle, but it will take another three generations to do it," Mitchell said.

"This is no utopia, don't kid yourself. People may think they can escape their problems by moving somewhere else, but they won't solve their problems," Mitchell said. "But here we roll up our sleeves and get to work solving those problems. I hope The Woodlands will be seen some day as a better place to live than anything we've seen so far." □

SOLAR POWER: The sun but

by Kim McMurray

Many people who suffered through the Great Heat Wave of 1980 may think they know all they need to know — or care to know — about the sun.

Electric utilities in the South and Southwest had their own problems during the weeks-long period when there were no clouds to block the sun's powerful rays. The Gulf States Utilities Company system, among others, was strained to capacity and customers were encouraged to curtail their use of electricity during the afternoon hours when demand was the heaviest.

But even before the sun demonstrated its superiority this summer, GSU and other electric utilities had recognized that it had enormous potential — as an energy source that could help the United States reduce its dependence on expensive oil and natural gas.

President Carter wants solar power to provide one-fifth of the nation's energy by the year 2000. GSU and other electric utilities agree with many energy experts that the Carter goal is too ambitious, but millions of dollars are being spent by the utilities in an attempt to make the sun a viable and practical fuel source.

Only the Department of Energy is doing more in the solar area than the electric utility industry. In its 1979 Survey of Electric Utility Solar Energy Activities, the Electric Power Research Institute — the industry's research arm — said the 180 electric companies in the U.S. had reported participation in 735 solar projects representing more than 1,900 actual solar applications.

Solar spending by electric utilities hit $211 million by the end of 1979 with $19 million committed in that year alone. Projects involving solar heating and cooling led the way with 154 utilities undertaking 511 projects.

Why should electric utility companies be studying solar energy when the federal government is spending millions doing the same thing?

W. Donham Crawford, GSU chairman of the board and chief executive officer, provided one answer when he addressed a national solar conference in Topeka, Kansas, in May.

"Utilities in this country serve diverse groups of customers and operate in areas with a wide variety of climates and other conditions," Crawford noted. "The availability of sunlight has a heavy influence on their solar attitudes."

Each utility must decide for itself, through local studies and research projects, what solar technologies are feasible for the area it serves.

There are some people who oppose utility participation in the solar field because they think electric companies could thwart competition and put smaller solar firms out of business.

In his remarks to the National Conference on the Integration of Solar Energy into Utility System Planning and Strategies, Crawford said it is "absurd" to suggest that utilities be completely shut out of the solar development field.

"Solar users will have to rely on utilities to provide energy when there isn't enough sunlight," he pointed out. "The potential impact of solar installations could have a bearing on how much additional capacity the utility requires. With fossil fuel prices sure to continue climbing and with hydrocarbons needed for certain uses where there are no alternatives, prospects for the advancement of technologies such as solar to help meet the demand for energy appear to be promising. I see no valid reason why utilities should not assist in its development."

In reality, the question of utility involvement is a moot one. The millions of dollars being spent on thousands of projects show that utilities are already in the forefront of the solar movement.

GSU is no exception. The company has several solar studies and projects underway and, in December of 1979, became the first electric company in Texas to institute an experimental rate for customers who install solar water or space-heating units to supplement existing electric units.

The credit which customers receive on their monthly bills is calculated by estimating the kilowatt-hours saved by having the solar unit installed as well as the cost of fuel that the company will not have to purchase to provide electricity for their heating units.

Only a dozen or so GSU customers have installed solar water heaters, but many more apparently would like to have them. A market research study conducted earlier this year revealed that 19 percent of GSU's residential customers "are extremely or very likely to purchase solar water heaters."

In an effort to answer some of the customers' questions about this emerging technology, the company is conducting a solar water heating study involving 14 units installed in homes in Baton Rouge, Beaumont and Lake Charles.

Equipment from six manufacturers is being tested to judge the effectiveness of each. Not only will this project help determine the impact of solar water heating on the GSU system, it will give customers valuable information about what type solar equipment they should buy.

In addition, the firm of Theodore Barry and Associates is conducting a study that will pinpoint which solar technologies are feasible for GSU customers.

The broad category of "solar power" also includes wind and hydroelectric energy, and GSU is

prospects are bright the issue is clouded

involved in both areas.

The company has ordered a 25 kilowatt windmill that will be installed at a coastal site in Texas this fall. An attempt will be made to tie the electricity generated by the windmill into the GSU system. Under federal law, utility companies are now required to purchase power from customers who generate their own electricity.

GSU has been in the hydroelectric field for years, obtaining 52 megawatts of power from the Sam Rayburn Dam and 46 megawatts from Toledo Bend, both of which are in East Texas. Other hydro projects are being discussed.

Although solar's future is certainly bright, there are a few clouds that may slow its development.

Zoning is one potential roadblock. As GSU's chairman told the national solar conference in May, "Zoning statutes and ordinances will have to be changed to allow for the use of certain solar and conservation equipment. Building codes which do not provide for solar technologies could be a major barrier to their development. Of the more than 10,000 municipal building codes in the country, only a handful have been adapted to take solar power into account."

"Many city building codes include restrictions that, among other things, would preclude the placement of solar collectors where they would be visible from the street," the GSU chief executive officer noted.

Another stumbling block involves access rights to the sun.

"In most states, access rights are not legally guaranteed and are not a transferrable property right," Crawford said. "Without guaranteed solar rights, individuals will be hesitant to make large capital investments in an energy source vulnerable to the growth of a neighbor's trees or the construction of a high-rise apartment."

These are largely political issues that ultimately will have to be decided by elected officials, he added.

Utilities also are concerned about the possibility that solar energy systems might decrease electricity (and natural gas) sales during off-peak periods. Utilities that experience their heaviest demand in the winter are worried about a peak occurring on the coldest day of the year, when it is cloudy and the solar system can contribute little or nothing.

"That means the electric or gas company must have available costly back-up capacity that would be rarely utilized," Crawford told the Topeka conference. "A reliable energy storage system must be developed to deal with this problem. Such a storage system conceivably could lead to lower rates as well."

Solar energy's biggest obstacle, however, is its cost. There are many tax credits and special rates designed to make it easier for consumers to go solar, and the cost of solar devices will decline as the industry gains more maturity.

In the meantime, however, solar equipment remains beyond the reach of most consumers. The Mitre Corporation concluded, in fact, that attaining President Carter's goal of 20 percent reliance on solar energy by the year 2000 would cost a staggering $1 trillion—roughly one-third of the total investment capital expected to be available to U.S. industry between 1980 and 2000.

Achieving the President's goal would require solar collectors to be installed on nearly half of the nation's residential and commercial buildings and on about one-seventh of its industrial facilities, according to the Mitre study.

Mitre's own estimate is that, by the turn of the century, solar technologies (including hydroelectric) will supply about 12 percent of the nation's energy demand.

Although GSU and the electric utility industry in general do not think the President's goal is attainable, they are doing their best to speed the development of sun power.

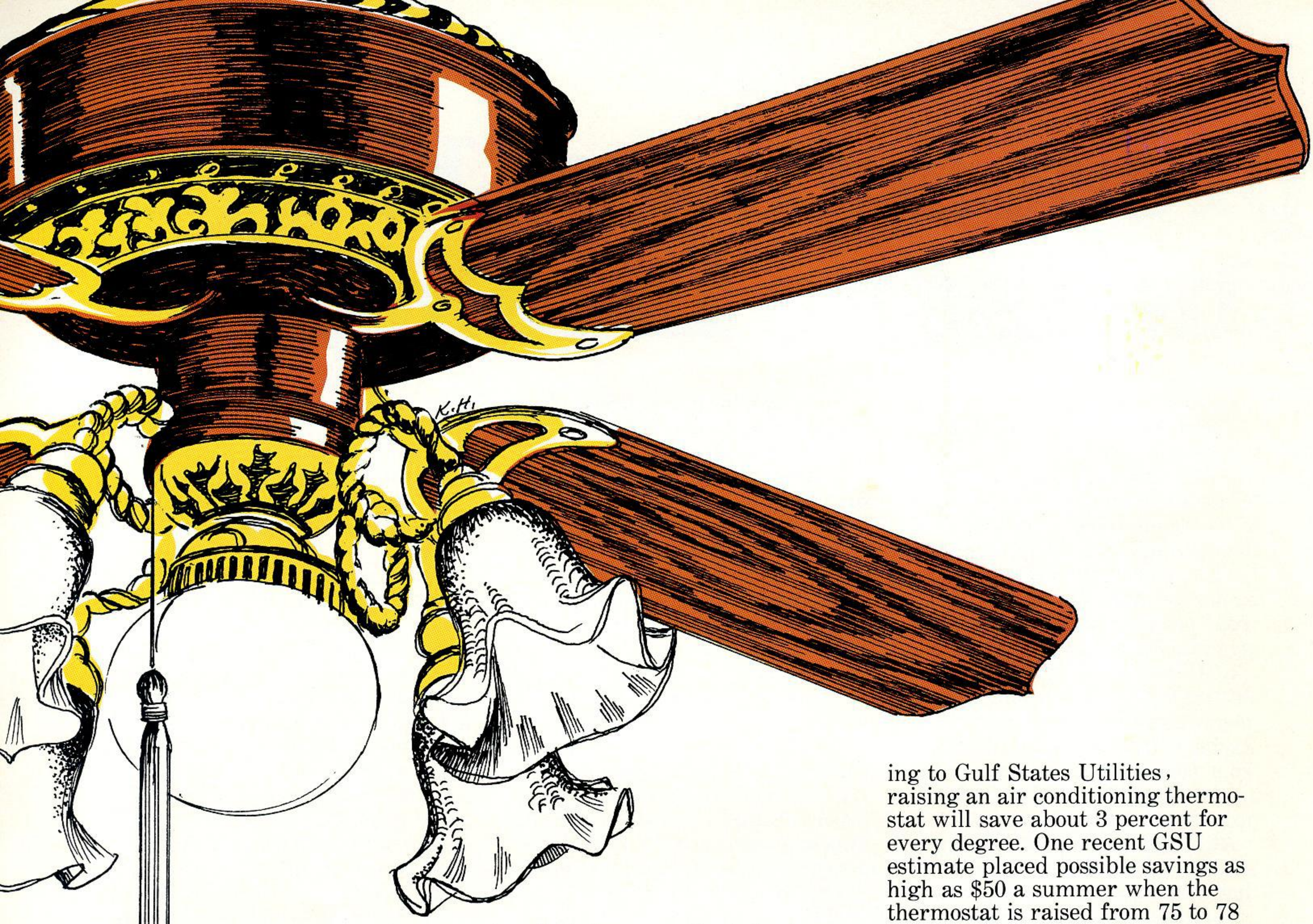
Crawford believes the utility industry's role in solar's future is clear: "Take the near-term solar applications which have proven workable and carry them into the demonstration phase, where technical and engineering problems can be overcome before entry into the commercial market. At the same time, we must continue, at a quickening pace, the research and development necessary to make conversion of solar energy economically feasible. In the final analysis, solar will have to stand on its own feet."

There is no doubt solar power can make a valuable contribution to the nation's energy needs. Solar water heating systems are approaching economic parity with electric water heaters. Solar-assisted heat pumps should be in commercial use in new construction this fall. Other space conditioning systems are not much further away.

Similar rapid progress in using the sun to generate electricity is unlikely unless there is a massive, concerted effort by both the private and public sectors.

But, as Crawford pointed out in his May presentation, "the most important solar breakthrough of all is attainable **now.** It would occur if government, industry, consumer groups and solar 'militants' sat down and resolved their differences through compromise and reason."

Only through such a meeting of the minds can it be proven that one of the solutions to the energy crisis **does** rise in the morning and set at dusk.□



Soaring temperatures, rising utility bills and a yearning for "the good old days when life was simple" are only a few of the reasons for the skyrocketing sales of electric ceiling fans.

First introduced around the turn of the century, ceiling fans have made a big comeback — with sales this summer breaking almost as many records as the thermometer.

"People are buying fans because there is a big difference between the cost of running a fan and running an air conditioner," explains John Rice, owner of The Fan Shoppe in Beaumont. "Every month, sales have increased."

In Dallas, the city probably hardest hit by the searing summer heat wave, Leslie Edmondson of the city's largest fan shop, reports: "We've broken national sales records.

"All summer, we've gotten repeat customers," she added."The difference in their utility bills is so significant after they buy a fan or two that they come back for two or three more."

When properly installed and used, ceiling fans can be energy savers. **Gulf States Magazine** talked to manufacturers, sales personnel, repairmen and energy conservation experts as well as ceiling fan owners to collect information that may help you cool your home and and take the heat out of your electric bill at the same time.

The money-saving trick to using a ceiling fan is simply that of adjusting the thermostat. A fan will not actually lower the temperature in a room. It speeds up the air movement and, therefore, the evaporative process, so that people **feel** several degrees cooler than they would if the air were still. This allows the user to turn up the air conditioner thermostat (thus using less energy) and still maintain the same level of comfort.

"A fan will cool the room by about eight degrees, due to the wind chill factor. You can set the air conditioner at 78 to 80 degrees, and still be comfortable," Rice pointed out.

Some fan owners report sizeable savings on summer utility bills; they are the ones who have adjusted thermostats substantially. According to Gulf States Utilities, raising an air conditioning thermostat will save about 3 percent for every degree. One recent GSU estimate placed possible savings as high as $50 a summer when the thermostat is raised from 75 to 78 degrees.

Though sizes vary, a ceiling fan will use less electricity than a 150-watt light bulb, so operating a fan is economical. Running a 150-watt fan for 12 hours a day costs $2.70 a month, at five cents a kilowatt-hour.

From their backyard shop, Juste and Verlie LaFluer have been building and shipping ceiling fans out all over the United States for 28 years. The Opelousas, Louisiana, couple say that they have not been able to advertise this summer because they can't fill all the orders they already have. And business probably won't slack off in the fall.

"We sell a lot of fans for winter use, too," relates Verlie. "In winter, a fan used on the lowest speed will hold down the heat."

Ceiling fans used in winter help maintain a uniform temperature in the room because they force warm air down from the ceiling. Since warm air rises, the temperature difference from floor to ceiling may vary by one degree per foot of ceiling height. A fan set on low speed helps eliminate this stratification.

However, because a breeze from a fan will increase moisture evaporation in winter just as in summer, the air movement may cause people

to feel chilly. Increased, not decreased, humidity might make people feel more comfortable in winter.

Many people do use ceiling fans in the winter, though, and adjust their heating thermostats downward, saving energy and shaving points off utility bills. GSU studies rate winter savings at 2 percent for every degree the thermostat is lowered.

ENERGY SAVING IS A BREEZE

Gulf States Magazine also gathered some helpful shopping and installation tips for potential ceiling-fan buyers. Here are a few points to keep in mind:

- Size is a key element when choosing a fan for a room. There are two standard fan sizes, 36 and 52 inches. A 36-inch fan will perform fine in a room that is about 12 feet by 12 feet, but a 52-inch fan is needed for a room that is 15 or 20 by 20. Larger rooms than that may need two fans strategically located.
- Some ceiling fans may be only decorative, with motors that are not large enough to move air efficiently. Potential buyers can check fans for cubic-foot-per-minute (CFM) ratings,approved by the National Electrical Manufacturers Association. The ratings vary, but a good guideline is about 4,000 CFM on high speed and 3,000 on low for a 36-inch fan. Good ratings for a 52-inch fan are around 7,000 CFM on high speed and 4,000 on low. A fan's motor should be the heavy-duty, induction type that will not interfere with radio or television reception.
- Many fans are designed so that they can be reversed, but it is an optional feature. Reversing a fan will direct the air upward and away from the fan. It would be useful, for instance, if the fan were hanging over a dining room table. Then, reversing it would help keep food hot. Some fans have reversible motors; others have adaptors that change the pitch of the blades. Although the reverse feature is becoming more standard, it may not be worth the extra expense. A non-reversing fan used on low speed in winter will work as well as a reversing fan does to push warm air down.
- Lights are another option; they can be bought with fans or added later. Whenever a light is attached to a ceiling fan, the fan and the light will require two separate pull strings or wall switches if they are to operate independently. Wall dimmer switches that were designed to control lights may not regulate fans correctly, but there are dimmer switches especially designed for ceiling fans.
- Some ceiling fans have a luxurious five speeds; others have dimmer-switch controls that offer many variable speeds. However, only two speeds, high and low, are necessary for year-round fan use.
- Ceiling fans placed on porches or patios and near pools are useful not only for cooling but also for warding off insects.

The directions for installing a ceiling fan should be read thoroughly. Installation may not be quite as simple as advertised. It is helpful to talk to at least one other person who has installed a fan. Anticipating possible problems will help when a fan is to be installed.

For example, vaulted ceilings are perfect showcases for ceiling fans, but getting them up there is no easy task. A 10- by 12-foot stepladder, at least, is needed to work safely on a vaulted ceiling.

- When installing a fan, be sure that the circuit breaker is thrown for the area where the fan will be hung. Simply turning off the wall switch is not adequate protection against electrical shock.
- A ceiling fan can weigh up to 50 pounds and should be hung from at least a 2-by-6. If the ceiling beam or attic joist from which the fan will hang is smaller than 2 by 6, additional bracing should be used. If extra support is needed when a fan is replacing an existing light fixture, a 2-by-6 can be added across the ceiling joist in the attic. The fan is then attached to the joist with an eye bolt.
- Even with an eight-foot ceiling, at least six and a half to seven feet of clearance is needed under the fan. Pipe nipple, which can be bought in any hardware store, can be used to lengthen or shorten a fan's suspension system.
- Fan blades come in matched-weight pairs so that the fan will be balanced after it is hung. To check whether it is hanging levelly, hold a yardstick near (but not touching) the blades while the fan is running on low speed. The blades all should pass the same place on the yardstick as they turn. If the fan is hanging levelly but "wobbles" when running, the motor may be malfunctioning and should be checked.
- Oil the fan after it is hung, not before, to prevent tipping the fan and spilling oil onto the blades or floor during installation. □

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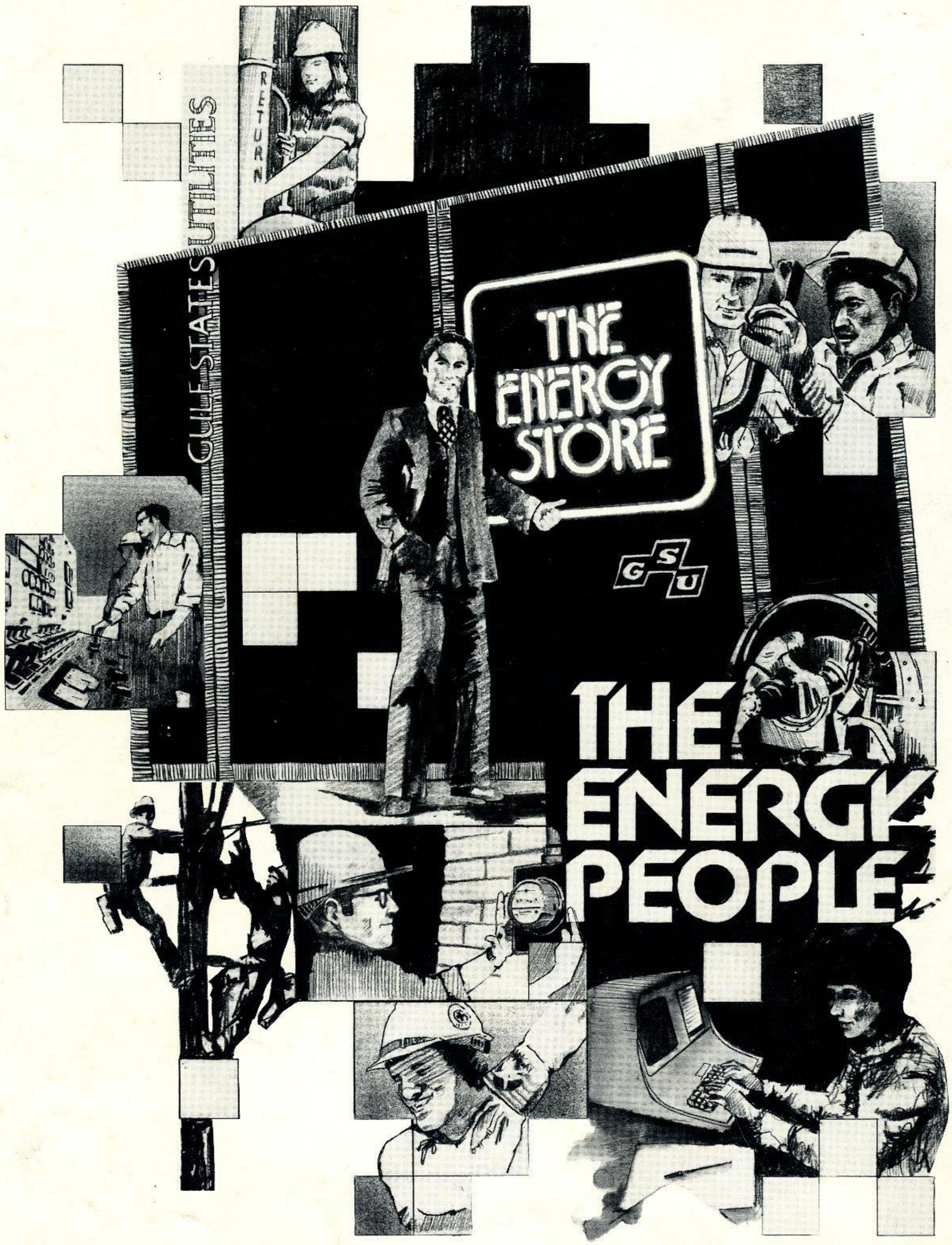

Fuels like oil and natural gas needed to make electricity at Gulf States Utilities are not limitless. They aren't cheap either. Effective conservation of energy will reduce the amount of natural resources used for electrical energy now being wasted. But we need your help. GSU has an ongoing program to help customers save energy (and money) at home. Visit the GSU Energy Store at Parkdale Mall for more information. The Energy People at GSU work for tomorrow each day.

THE ENERGY PEOPLE
GULF STATES UTILITIES