CORPUS CHRISTI — The brown boxes sat like building blocks stacked 15 feet high in endless rows of towering metal shelves at a University of Texas research campus in Austin. Hidden here was the final piece of the puzzle that would change South Texas forever.

It lay in shards in one of more than a half million of the cardboard boxes. It was an infinitesimal clue, a mere smattering of dust in a sprawling warehouse the size of three football fields, a staggering library filled with volumes of solid rock.

Only Gregg Robertson knew where to look. Row 57, Bay H, Shelf 4.

There the manila pouches of ash-gray pebbles sat in their box. They probably went unnoticed since 1952, five years before Robertson was born. That's when a Phillips Petroleum drill bit brought the cuttings up from a layer of sediment deposited on the sea floor more than 66 million years ago.

The Phillips well in La Salle County came up dry. The rocks, figured worthless by the oil men, found a niche among other well cuttings stored
at the university’s Bureau of Economic Geology.

Maybe they would make an arcane footnote in an academic journal yet unwritten. Maybe they would remain forever tucked in the little envelope, resting in darkness as they did on that ancient seabed.

Maybe they would, but for Robertson.

He came around to shed light on them half a century later. The independent geologist from Corpus Christi had a nose for detective work and firsthand knowledge of two generations of South Texas oil field adventures. In 2008, he opened the pouch, sent a sample off for analysis, and set off the boom that hit fever pitch in 2012.

For his role in discovering the bounty of the Eagle Ford Shale — a group effort that would have been impossible but for his attention to details that others overlooked — Robertson, 55, was chosen as the Caller-Times 2012 Newsmaker of the Year.

Energy information consultant IHS Inc., in a July study, called the Eagle Ford a contender for the best tight oil play in the United States, referring to the type of light crude oil drawn from shale formations, once thought to be economically unviable.

But you don’t need studies to see the change in South Texas. The discovery transformed sleepy villages into boomtowns, poured millions of dollars into rural school, city and church coffers, turned struggling ranchers into millionaires and gave thousands of people new careers across South Texas. It spurred interest in other unconventional U.S. oil and gas plays that collectively are weaning the nation away from imports.

"People are using it to understand the potential around the world," said Steve Trammel, research director and adviser for IHS. "There could be as much as 500 billion barrels of recoverable ... tight oil play."

The U.S. expanded its oil production in 2012 by the most since the first commercial well was drilled in 1859, Bloomberg reported, shaking a belief that Americans were increasingly hooked on foreign crude and that the world’s oil reserves had peaked and entered their irreversible decline.

New satellite images show the bustling Eagle Ford production zone, in less than four years, turned a dark swath of empty Texas scrubland into a 200-mile-long glowing crescent visible from space.

It was always there, waiting to be turned on.

Someone just needed to find the switch.

THE ARTIST- SCIENTIST
On the 18th floor of the 600 Building in downtown Corpus Christi, Robertson works alongside his wife, Marsha, at the family business, First Rock Inc.

His father was Roland "Rock" Robertson, perhaps best known in the 1960s and '70s as a leader in local Republican politics, including an unsuccessful bid for Texas Senate in 1964. A geologist, he established First Rock in the same building in 1975. Gregg had tagged along on rigs since childhood.

Despite the heritage, Gregg wasn't a shoo-in for the career path of independent petroleum geologist.

A bookcase in the offices overlooking Corpus Christi Bay contains volumes of Shakespeare and Romantic poetry Robertson devoured at The University of the South, an Episcopal liberal arts school in Sewanee, Tenn.

"When I was a senior in high school I really wanted to go into the most romantic, swashbuckling profession that I could think of ... In 1973, the two most dramatic people in the United States were Woodward and Bernstein. ... I had to be an investigative journalist."

He would spend all four years at Sewanee earning an English degree, but after the first three semesters, he was back in Corpus Christi during the summer working with his dad as the business took off.

"I didn't know geology. I was learning it from him. My job was to copy those maps. Those days you had a light table and put one over the other with a pencil and you copied the maps. So I learned what all those lines on the maps meant by copying them for my dad."

In essence, the lines traced Rock Robertson's history of operating against the grain. Until the mid-1960s, all the major oil companies had offices in Corpus Christi. Rock Robertson worked for Mobil, which like other companies was rapidly transferring its workforce to Houston and other urban centers. He was offered a transfer to Los Angeles.

Quipping that "life is too short to live in a jungle," he resigned and struck out on his own, establishing First Rock.

"When you get in that realm you lay it all on the line," Gregg Robertson said. "Whether you're putting your money on the table to drill a prospect, even if you're not, you're putting your reputation on the table. I recognized early on that my dad was very unique in that he would do a lot of work for free just to enhance his reputation, enhance his education."

The free advice often got him a look at data and ideas that he hadn't seen, helping him expand his knowledge of Texas geologic trends. So he built relationships as he built expertise.

"Dad wouldn't sell an idea just to make money," Robertson said. "He had to really believe in it."

While most companies focused on other areas of South Texas, Rock Robertson forayed into an area now called the Giddings Field in the Austin Chalk formation, a place where big companies had given up.
In 1971, Victoria oilman Chuck Alcorn pumped hydrochloric acid down an old dry well at Giddings, between Austin and College Station. It started producing 350 barrels a day, but the nearest producing well was 200 miles away. He wasn't sure where to go next.

Alcorn hired Rock Robertson to map out the trend, based on the reputation Robertson had built through many lean years as an independent.

"My dad's contrarian trend turned out to be the right place to be," Gregg Robertson said.

The Giddings field would eventually become one of the top oil discoveries in Texas in the past half century.

Robertson's work for his father gradually convinced him that geology was his new art.

As he copied the lines, learned the symbols and began to understand how his father, Alcorn and their partners exploited the Austin Chalk, Gregg Robertson realized he had the perfect material for his grad school thesis at the University of Texas, where he was close to a geology degree in 1979. The paper focused on choosing drill sites using seismic data in the notoriously difficult Austin Chalk.

His thesis adviser was the late Bill Muehlberger, a geologist who taught astronauts so they could survey lunar geology and whose maps of North American geologic structures — the fruits of a 15-year project — hang in geoscience buildings across the country.

Robertson recalls Muehlberger catching him in the hallway one day, saying he had five or six phone calls from oil men — his father's competitors — wondering when his thesis would be published so they could get a copy of it.

"That gave me the perfect excuse not to turn it in," he grinned.

He made his oral presentation to the geology faculty at UT and submitted his rough draft. His adviser responded with a letter: "Great thesis, put it in final form and turn it in."

"I counted that as my diploma, came back to Corpus and worked with my dad."

So among all the important maps and papers adorning the walls of the First Rock offices near the top of the 600 Building in downtown Corpus Christi, one is conspicuously absent: the master's degree he technically never completed.

In 1988, he embarked on another writing project, hammering out the first chapter of a novel.

It was, of course, about an independent geologist — a swashbuckling one, Robertson said — working for an oil company drilling on a Southwest Texas formation called the Devil's River Uplift. It's a real formation that crops out in Val Verde County along the Mexican border, but it has no economic value.

In the novel, however, the company starts drilling good wells that lead right up to the border. They start plugging them and calling them dry
horses, not wanting to tip off the Mexican government that the valuable find extends across the river. Political intrigue ensues. The governor of the neighboring Mexican state fights for the mineral rights. His daughter is beautiful and has a fling with the geologist. The CIA gets involved.

Robertson visualized it as a screenplay, the opening scene at dawn by a rig out in a pasture, cows mooing, the rig churning away. The protagonist is sleeping in his pickup, just as Robertson used to do.

One of the well technicians knocks on the window of the pickup, opens the door. Beer cans fall out.

The tech tells him the well is kicking; they've made a discovery.

A HANDSHAKE DEAL

While that plot simmered, Robertson didn't know it, but he was building a foundation for the next big South Texas oil field drama, and it would come full circle, back to the Austin Chalk.

In 2005, major oil companies were targeting an even lower portion of the geologic column in South Texas, the Edwards Formation. One such well had a good showing farther up the hole, in what was assumed to be the Austin Chalk. But further exploration in the chalk yielded poor results.

Robertson knew the well had straddled the chalk and the formation below: Eagle Ford. In those days, "no one connected the dots that shales can be productive," Robertson said.

"My dad and I had played the Austin Chalk since the 1970s and I knew the chalk wasn't any good there. If the chalk wasn't any good there, it must be coming out of the Eagle Ford. And then the light bulb comes on."

In 2008, Houston-based Petrohawk Energy Corp., having had success in the Haynesville Shale along the Northeast Texas-Louisiana border, was hungry for another shale play.

Richard Stoneburner, then chief operating officer, turned to Robertson, an industry friend he'd known since the 1980s, whom he admired for his fairness and willingness to act quickly.

Robertson brought his lead on the Eagle Ford and paired up with the company's geoscientists to conduct further studies and develop a play concept. They felt they had it nailed.

"At the last minute, Stoneburner says you gotta go find some rocks. You gotta find the actual rocks and do the geochemistry on them and make sure it's right."

There was one old well that had produced cuttings that could yield the confirmation Petrohawk wanted. They lay forgotten in a little pouch in
The organic content of the rocks gave credence to their studies. When Robertson and Stoneburner put the team's two months of work into a 15-minute presentation for Floyd Wilson, then Petrohawk CEO, the data were so convincing that Wilson didn't wait. He wanted to start leasing.

"What's your deal?" he asked Robertson.

"You take 90 percent, I'll take 10 percent."

It was a remarkably straightforward, fair offer in an age of self-promotion, Stoneburner said.

"In this case we were all putting our money in equally," he said. "Even though it was Gregg's idea, he acknowledged we all had sweat equity in the deal. A lot of people wouldn't have looked at it that way. They would have been more possessive of the concept and put pressure on to get more interest in the deal."

Robertson, he said, actually shortchanges himself.

"He doesn't bill much of his time. He doesn't operate as a promoter. He just wants to go out and find oil and gas with a good partner."

That attitude handed down from Rock Robertson earned him an immediate handshake from Wilson. No bevy of attorneys, no endless meetings.

"We all charged into it together," Stoneburner said.

It was no small risk for an independent operator like First Rock, Stoneburner notes. Despite the strong lead, there was no real library of evidence, he said.

Meshing the clues — the data in logs from wells already drilled, the seismic studies, production in surrounding areas — is as much a patchwork of art as it is science, said James Donnelly, the database manager at the Bureau of Economic Geology.

"It's extremely subjective and interpretive," he said. "I always thought the best bar fight you could ever see is lock 10 geologists in a room. Because I guarantee you there are going to be 10 different opinions all over the same little six-inch piece of dirt. And they're all correct."

So until the first well came in, there would be no guarantee of success for First Rock and Petrohawk.

"Gregg's a risk taker," Stoneburner said. "He's been independent his whole life. He acknowledged the risk and was willing to take it. That was important."
The next task: Acquire mineral leases without tipping off the competition. Again, Robertson proved indispensable.

They kept their discovery secret, not even letting it leak beyond the top echelons of Petrohawk’s corporate leadership. A name like Petrohawk couldn’t go around buying thousands of acres without turning heads.

But First Rock Inc. could.

Petrohawk channeled millions of dollars into leases through First Rock, and together they assembled 150,000 acres of leases within three months. It was a coup for any industry player, but especially for an independent outfit like First Rock that had always dabbled in wells here and there but never been part of a major corporate-backed stealth play. In the 600 Building, an awe-struck Marsha Robertson processed lease checks with jaw-dropping numbers.

"I didn't know my computer could write those checks," she said.

They had the advantage of a play that happened to lie underneath large rural ranches, making it easier to scoop up chunks of acreage. They had talented land men to get the leases signed. And they had Robertson's lead on a dead field that could come alive again.

"These landowners knew they hadn't had much activity over the years and so any interest was welcome," Stoneburner said.

"Gregg's idea in conjunction with Petrohawk's speed to make a decision is what really made the combination work."

The leases were acquired at about $175 an acre. The price jumped to $475 after Petrohawk announced the first well, Robertson said. In July, IHS reported that companies involved in mergers and acquisitions are exchanging leases at an average of $14,000 per acre with top prices approaching $25,000. Word of the first well's success came to Robertson not by a knock on his pickup window this time, but in an email as he watched his Texas Longhorns dismantle Oklahoma at the annual Red River Rivalry game in 2008.

The Eagle Ford Shale discovery made Petrohawk an attractive buy. BHP Billiton acquired the company in 2011 for $12.1 billion.

**A FATHER'S LEGACY**

Not all the leaseholders are happy, of course. There's a lawsuit Robertson can't talk about.

"But 99.9 percent of the people that I personally negotiated the lease with are still some of the best friends I have," he said. "We're in this for a 30-year relationship and we've got hundreds of wells to drill on some of these ranches and we get along like friends."

Any negative aspects of the past four years have been far outweighed by the vast economic and sociological changes that the Eagle Ford has wrought in South Texas.
Robertson is extremely modest when discussing the region’s economic boom and draws no direct connection between those changes and his work. He acknowledges he helped with the initial discovery, but he’s quick to point out he didn’t bring all the money to town.

"I think it’s a huge leap to connect the Petrohawk-First Rock team and discovery … to the economic impact in South Texas," he said. "You just can’t connect the two … Maybe we’re six degrees removed or something, but it’s not like we had anything directly to do with that."

It’s conceivable that someone else’s work eventually would have set off the chain reaction. Other big companies had already drilled in the Eagle Ford, though not with much commercial success and not in the sweet spots the Petrohawk-First Rock team found.

But reflecting on the transformation of his South Texas homeland, his and his father’s old stomping grounds, brings water to his eyes.

And why not? He has enjoyed that rare satisfaction of not only achieving a remarkable feat in his field, but witnessing its far-reaching consequences unfold in the place he grew up.

"What we absolutely never thought about was the impact it would have on industry," he said. "On culture. The trickle-down effect. I go get a haircut and somebody’s talking about Eagle Ford."

Robertson, who relatives and friends say mirrors his father in not wanting to draw attention to himself, said he hoped for one gain in having this story told: That people would understand great things can start at home, even in a business dominated by giants.

"I thought this was a great opportunity to share with the community that all of this prosperity was locally grown and not from an external source … It’s just homegrown Corpus Christi people and I hope everybody is proud of that," Robertson said.

When the team started putting together the Eagle Ford lease acreage, Robertson would drive Farm-to-Market Road 624 west from Corpus Christi, bound for Cotulla, now in the heart of the play. He figures he drove it 100 times in 2008 and 2009. He’d pass through Orange Grove, then see practically nothing for 85 miles.

Today, the road is an artery connecting the field to the service companies, highways and ports that move fracking sand, drilling equipment and workers.

Now when he stops at a convenience store in Orange Grove, he sees the men in their 20s in the roughneck overalls of the well service companies, drawn here from around a recession-stricken country to this place where hiring signs seem to hang in every window.

"This could be a career for these people," he said. "I wonder if they know that? I wonder if they realize, keep your nose clean, work hard for the company, work up through the ranks. Thirty years from now you'll get the gold watch, retire, you'll have had a very nice life working in that environment in South Texas."

Robertson has said he hopes the prosperity coming to South Texas will especially benefit schools and churches.
Bishop Gary Lillibridge of the Episcopal Diocese of West Texas, which encompasses much of the shale play, said the economic benefits have allowed churches to expand their missions and find new opportunities to help communities. One church, he said, having benefited from Eagle Ford royalties, was able to make a sizable donation to victims of the 2011 Bastrop wildfires, which engulfed more than 1,600 homes.

Lillibridge has known Robertson about 30 years, from when he first served in the ministry at Church of the Good Shepherd in Corpus Christi.

"I have found him to be a very creative, thoughtful and dedicated leader," Lillibridge said.

That creativity showed, he said, about four years ago when Robertson arranged for geology and forestry students from his alma mater at Sewanee to begin taking internships in South Texas through the church's summer camps and conferences. They get course credit studying the ecology of the region, conservation and environmental stewardship, while sharing their knowledge with families through the church camps, Lillibridge said.

Robertson, of course, wishes his father were here to see the changes in South Texas. After all, his own contributions to geology, including the founding of the Oil Industries Library, a repository of information for sharing among especially independent industry professionals, are part of what wrought the changes. He died in 1995 at age 66.

"My father was the same way about working all the time," Robertson said. "But when he really got to basically the age I am right now, 55, was doing extremely well, had all the resources to really enjoy life, he developed Parkinson's disease."

The family's lifestyle has not changed radically. The ranches and the condos were all here before the Eagle Ford development. The work continues — sometimes too much, Robertson said. He still spends early mornings and late nights driving to and from field sites, still clad in a beat-up, oil-stained coat more than 20 years old.

He has not yet returned to the novel he began 24 years ago, but that may be because its storylines still are unfolding.

Robertson is not the swashbuckling youth who woke up in his pickup with a hangover at the well site. But he remains the protagonist in an old-school Texas oil tale driven by individualism, by plots larger than life. He has shown that Texas oil remains an adventure, even in an age of profound new technologies wielded by massive corporations. It still is a place where one risk-taking rock hound with a clue, a handshake, and a bit of stealth can write a new chapter in a 150-year-old epic.

"It would be real easy to sell out and just leave a big pile of cash in the bank for the kids and the grandkids," Robertson said. "But that's not what my dad did. He was right in not doing that … I'd rather make sure my kids and my grandkids have something they have to take care of."

And maybe another 66 million-year-old mystery to crack.

**BY THE NUMBERS**
28.3 million barrels: Eagle Ford Shale oil production in 2011, six times more than in 2010

271.8 billion cubic feet: Eagle Ford Shale natural gas production in 2011, more than double the 2010 amount

21 million barrels: Eagle Ford Shale condensate production in 2011, triple the 2010 amount

$25 billion; 47,097 jobs: Economic impact in the study's 20-county area

$4.9 billion; 3,880 full-time jobs: Economic impact in Nueces County

$47 million; 227 full-time jobs: Economic impact in Jim Wells County

$115 million; 517 full-time jobs: Economic impact in San Patricio County

Source: UTSA Institute for Economic Development Center for Community and Business Research

Staff writer Rhiannon Meyers contributed reporting from Austin.