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Northeast Texas lithium, geothermal energy production could bring generational wealth to region

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Blondie Lady #1 well site Thursday, September 10, 2026, near Mt. Vernon. (Les Hassell/News-Journal Photo)



MOUNT VERNON — When Bruce Thompson moved from Dallas to a sprawling piece of land outside this East Texas town, he knew he would build his home on the site of a former coal mine.

He didn’t know it would turn out to be a gold mine – metaphorically speaking.
About 10,000 or 12,000 feet beneath the surface of his property is a massive volume of salty brine containing valuable minerals and elements — including lithium, the battery ingredient that is in high demand as the U.S. seeks to reduce its dependency on China.

Northeast Texans have been hearing for a few years that lithium production will begin in the region in the years to come, but it turns out there’s more below the surface. While Thompson is preparing to produce lithium commercially in the future, he also expects to produce geothermal energy from the same salty brine by early next year, along with potash and other minerals.
“I think the good Lord knew, when you open a door, we’re just gonna bull through it,” Thompson said. “We did.”
While all of the minerals in the brine are valuable, lithium is the one making headlines. It’s used to make batteries for cell phones, computers and electric vehicles, making it essential to the economy and national defense. Northeast Texas brine has the purest concentrations of lithium in North America, making it a prime target for future commercial production.
The region’s lithium is likely to have a major impact nationwide, and locally, that industry could yield economic dividends the families around here haven’t seen in decades. In other words, Mount Vernon couldn’t be in a better spot on the map.
“It’s right here,” Mount Vernon Mayor Greg Ostertag said.

‘It’s phenomenal’

Like oil and gas drilling, lithium extraction involves drilling into the earth to bring out something valuable. But the goal is completely different.

“Oil and gas operators and drillers, the last thing they want to hit is water,” Thompson said. “And that’s what we’re going after is water.”
Northeast Texas is part of the Smackover Formation, a geologic region which extends from Florida into Northeast Texas. The salty brine below Hopkins, Franklin and Titus counties has the purest concentrations of lithium in North America — around 515 parts per million, according to data from Standard Lithium, one of the leading companies to stake a claim in the region.
In early September, Standard Lithium leaders said they plan to produce up to 70,000 tons of battery-quality lithium carbonate annually in Northeast Texas once production begins in the early 2030s. The company estimates the project will have a 20-year operating life.
Standard has leased more than 110,000 acres in Franklin County alone since 2022. Company leaders estimate the project will require a $3.5 billion capital investment and that it has a net present value of $5 billion.
Standard isn’t the only company that has caught wind of the wealth in the water.

Thompson made a career developing automotive trading and inventory technology. He exited his last company in 2023 and moved to the large tract of coal mine reclamation land outside Mount Vernon, where he expected a leisurely retirement far away from the lights of the big city.

Then he learned about the brine below.

Thompson hired a handful of people to establish his privately held production company, T5 Smackover Partners, of which he's the founder and CEO. They set out to

lease mineral rights from neighbors and drill a test well to see what lies beneath the surface. Having positive results, Thompson completed a $50 million capital campaign this fall to get his project off the ground — or into the ground, rather.

He has leased roughly 13,000 acres of minerals and said he's found even higher concentrations of lithium than Standard has: between 700 and 800 parts per million.

He plans to be the first commercial producer of lithium in the region, but that's still a while away, he said. The technology used to capture lithium — direct lithium extraction — requires that it be sent through a high-tech processing facility to separate the lithium from the brine. That means such a plant needs to be built in the region, which will be a costly endeavor.

In the meantime, Thompson is clearing the way to get the brine out of the ground and get money flowing toward mineral rights owners. By February or March, he expects to begin producing geothermal energy from the heat in the brine.

Geothermal energy is quickly becoming a sought-after power source. Thompson plans to use it to charge large mobile battery energy storage system (BESS) devices, which can be used to power data centers and large-scale power grids.

Based on his projections, Thompson anticipates generating between 15 and 20 megawatts of electricity from each of his drilling pads, with each pad having several wells.

When the salty brine is extracted, the first step is to send it through a heat exchanger, which uses the heat in the brine to turn a turbine, generating electricity. Then the water is reinjected into the ground. (When lithium processing comes online, he'll simply divert the brine through the processing plant before reinjection.)

Thompson also expects to begin pulling potash from the brine by mid-2027. Potash, a key ingredient in crop fertilizer, primarily comes from Canada, but he's found large quantities of it in the region's brine.

Of course, there's lots of lithium to be extracted whenever that opportunity arises. Thompson said he anticipates that his wells will produce a total of roughly 100,000 tons of lithium per year — compared to the 4,000 tons the entire United States produced in 2024, according to the Dallas Federal Reserve Bank.

The best part: The brine isn't drying up anytime soon. Thompson said he expects to harness geothermal energy and produce minerals from beneath Northeast Texas for decades to come.

"It's phenomenal," he said. "I call it holy water because I really had nothing to do with it other than being put in the spot."

Local lithium, national needs

The quest for U.S. lithium is not only economically valuable, but militarily essential.

Lithium is a key ingredient in the batteries inside smartphones, laptops, electric vehicles and battery energy storage systems for large-scale power grids. Those demands aren't shrinking.

Fortune magazine reported Nov. 7 that global lithium demand has increased 400% in the past decade, and it's expected to grow even more by 2035.

There's one problem: China is the world's leading refiner of the key chemical element, and it could use that leverage against the United States. The United States produces about 1% of the world's lithium, all from a mine in Nevada.

"It's critically important to bypass the Chinese bottleneck," Standard Lithium CEO David Park told Fortune. "We've seen them weaponize other critical minerals. We're strategically exposed. If they want to cut us off, they can."

That's why the U.S. Department of War this year began efforts to stockpile critical minerals and substances to reduce the nation's dependence on China. If war breaks out, the United States could be cut off.

U.S. Rep. Nathaniel Moran, R-Tyler, said Northeast Texas lithium production is part of the way America can break free from China's grip on critical minerals. China controls four of the five largest lithium mines in the world and produces roughly 70% of all battery-grade lithium.

"The lithium beneath our feet in the Smackover region is a chance to bring that supply chain home, and to build it right here," Moran said. "Responsible lithium production means good-paying jobs, new investment, and a growing economy for East Texas. It also means our region helps secure the materials that power our military and our economy. America's economic strength and national security depend on our ability to secure critical minerals."

Based on tests of the salty water beneath Northeast Texas, there should be plenty of those minerals available.

'A lot of money coming in'

East Texas has been known for its buried treasure for a century. When the East Texas oil field was discovered in 1930, poor rural families became wealthy almost overnight.

Lithium likewise will benefit mineral rights owners in Hopkins, Franklin and Titus counties, but there won't be an overnight "boom" in activity like people saw with oil and gas. Rather, the companies staking out their claims here aim to produce lithium steadily for decades to come.

That means mineral rights owners are hoping for steady incomes.

At his office in Mount Vernon, where photos and local historical artifacts cover the walls and bookshelves, longtime attorney B.F. Hicks spreads a map across a table and points out where companies are signing leases for lithium in the area.

Several local families brought their lease proposals to him for evaluation before they signed them. Attorneys in the area have helped clients negotiate better lease terms, and mineral rights owners in the area already are benefitting from signing bonuses.

"We do live in rough times for older people who are living on fixed Social Security incomes," Hicks said. "A lot of these [leases] were signed by people whose mother and father had sold the land and kept the mineral rights."

Now, “there’s a lot of money coming in,” he said.
Hicks estimates that roughly 800 families in Franklin County (population roughly 11,000) have signed leases.
He knows two women, both retired teachers, who used the money from their lease signing bonus to take dream vacations to Europe. One woman used it to buy a four-wheel vehicle to drive around her 70-acre farm.
The local historical society is benefitting, too. A woman who died several years ago left her mineral rights to the society over which Hicks presides.
“It was a nice windfall for a great number of people in the county,” Hicks said.
Hicks expects those families to be even better off once commercial production begins, which is when they’ll begin receiving royalties.
Lithium production will also bring jobs to the region. The industry will need educated chemists, engineers and other professionals to operate commercial lithium processing facilities — all good-paying jobs, Hicks said. Construction workers will be needed, too, at the start of construction.
“Even if the lithium falls, and we found some kind of new battery we can make with salt and they can get it from the ocean and we never develop lithium, it brought a chunk of money into my little community,” Hicks said.

‘We’re blessed out here’

Ostertag, the Mount Vernon mayor, has watched the downtown area change in the past decade. The former NBA player has called Mount Vernon home for about a decade and was elected mayor this year. He said he’s looking forward to what the lithium industry will do for his community. Commercial production hasn’t begun yet, so it’s hard to project how much revenue the city will receive. But whatever the amount, it’ll help.
“The tax money it can bring in for us is huge for this little town,” Ostertag said in an interview at his downtown restaurant, Tag’s Hometown Bar & Grill. “We’ve got a lot of projects that we want to work on when it does get here.”
Those projects include adding affordable housing on the south side of town. Those houses will be needed for employees of the lithium projects. City leaders also want to repair a city park, streets and sewer lines.
Those will be the latest developments in this Franklin County city, which already has seen growth and development in the past decade. Mount Vernon’s downtown district has been revamped, and restaurants, lodging establishments and more have moved into the area.
“It’s come back to life big time in the last 10 years,” Ostertag said. “When we first moved here, you could park on the square every day, any day of the week, 365 days per year. Now, on a Friday and Saturday, you’d be hard pressed to find a parking spot.”
While many Northeast Texans have voiced opposition to other energy- and tech-related projects — data centers, solar farms and the like — lithium extraction has broad support, Ostertag said.
“It’s just a totally different animal,” he said.

Thompson talked about the leases he's signed with his neighbors for their brine. He's offering five-year leases with no extensions, so if he doesn't strike something valuable on their land, he'll let them out of the contract.

But with everything in the brine below — from heat to minerals and other elements — striking out seems unlikely.

"That's how we're blessed out here," Thompson said. "That's why I call it holy water. You can't make this stuff up. … You couldn't have thrown a dart on a board and hit a better bullseye."

And in the years to come, wealth from lithium production will be generational.

"It can change their families," Thompson said.