The Texan entrepreneur aiming to launch a multimillion-dollar green ammonia project in Mejillones

James Calaway, who began developing the first private space station in the U.S. during the 1980s, is now pursuing an ambitious green ammonia venture in the Antofagasta region, valued at USD 2.5 billion. Two weeks ago, he visited Chile, meeting with Minister Marcel, energy industry executives, and even former President Eduardo Frei Ruiz-Tagle. He pioneered a major lithium deposit in Argentina and is now leading the largest "white gold" operation in the United States. Some call him a "moral miner," others the entrepreneur who can save the iPhone. He, however, avoids labels.

DF Más. December 8, 2024.
By Mateo Navas.

James Calaway, 67, is a man of contrasts. On one hand, he is a quintessential Texan: the son of a legendary oilman, he drives a tractor and owns a sprawling ranch near Houston. On the other hand, he owns a Tesla, believes in climate change, and distances himself from Donald Trump's upcoming government. "I'm somewhat pessimistic about the U.S. right now. Not everything will be bad, but it won't be very good," he told a group of Chilean entrepreneurs and executives two weeks ago at an exclusive event at El Golf 50, in Las Condes.

Not only that, during the same meeting, he stated that although he used to be a fan of Elon Musk, he wouldn't buy another Tesla: "He's the most enigmatic person I've ever tried to understand. He's a genius, clearly, and the richest man in the world. Thankfully, he's launched rockets and undertaken all sorts of wild projects, but he seems to be a cryptic thinker with peculiar views about the world's future that need careful scrutiny given his newfound influence."

The reference to the founder of SpaceX and Starlink is not coincidental: like Musk, but 40 years earlier, James Calaway also wanted to send humans into space. In 1981, he co-founded Space Industries Incorporated alongside Max Faget, a prominent NASA

engineer. The company developed the first private space station in the U.S. Everything was on track: they raised capital and lobbied the U.S. government to become a key tenant of the project. In 1988, the Reagan Administration requested $700 million in the annual budget to participate, but Congress rejected the proposal, and the station was never built.

“It was a great disappointment for me,” Calaway recalls to DF Más, sitting in a conference room at MAE, the company he founded and chairs, now aiming to establish a green ammonia project in Mejillones, in the Antofagasta region.

In Search of Kuwait

Despite the setback with Reagan’s administration, Space Industries diversified. “We pivoted because we had 200 engineers working on this and ended up building many things that went to space. Ultimately, we sold the company to Martin Marietta Corporation for a significant amount of money.”

This was the first of many successful ventures Calaway achieved. Since then, he has founded and led various companies. For instance, he helped develop the software company Forefront Group, which later went public with an IPO valued at $160 million. Then, he joined his twin brother John at Edge Petroleum, which also went public on Nasdaq.

But those years, seemingly filled with success and wealth, were complicated, he says: “I lost part of my purpose in life.”

In 2007, things changed. He first encountered the concept of vehicle electrification and was fascinated by the idea of creating cars powered by electricity. Initially, he thought about founding an electric vehicle company like Tesla. “But I couldn’t go that far,” he admits. He then shifted to batteries but also faced challenges. Finally, he zeroed in on what all these industries had in common. “What they all needed was a lot, a lot of lithium,” he recalls.

To that end, he hired three experts in the field. He told them: “I know where the Saudi Arabia of lithium is: the Atacama Salt Flat. I want to find Kuwait.” Calaway referred to an emerging and secondary player in lithium development, akin to Kuwait in the oil sector. That led them to Argentina.

“A small public Australian company called Orocobre had drilled two 30-meter holes in the Olaroz Salt Flat in Argentina. They had to report the water chemistry from these holes as they were a public company. The day before the announcement, the firm’s value was $27 million. The day after, it was the same. No one noticed. My team, upon seeing this, were astonished. They said, ‘We don’t know much about this salt flat; there might be issues, but the chemistry is fantastic.’”

That was all Calaway needed. “I called Orocobre’s CEO and met with him at the first International Lithium Conference held in Santiago. I said: ‘I want to buy as many shares

of your company as you can sell. Also, I want to be your chairman. Let's build this company together.' Eventually, he agreed to sell me 15% of the firm because that's what he could do without requiring shareholder approval in Australia."

From $27 million, Calaway says, Orocobre's value reached $2.5 billion. But it wasn't an easy journey: "I practically lived in Argentina dealing with the crazy Kirchneristas. It was a terrible time." Nevertheless, it became one of the region's leading lithium deposits.

Argentina, the U.S., and Chile

After selling his stake in Orocobre, Calaway retired. However, that retirement lasted only a few months. In 2016, he got a call from an American entrepreneur developing a lithium project in Nevada, inviting him as an investor. He accepted.

That was eight years ago, and only five weeks ago, they received final approval to begin construction in the U.S. "Everyone in Chile talks about how terrible it is to get permits, but this is a universal issue," Calaway notes. "The problem with permits is they create existential risks for companies because if you don't get them, no matter how good your idea or investment is, you're doomed."

If successful, Ioneer will be a $1.5 billion project that will "quadruple U.S. lithium production." Forbes, in its April edition, dubbed him "the miner who could save the iPhone's future," due to the high concentration of "white gold" at the site.

While working on Ioneer, Calaway had another idea: developing a green hydrogen and ammonia project in Chile. He began collaborating with Chilean engineer Gonzalo Moyano, whom he had met through another solar energy project.

Unlike most of the industry, which focused on Magallanes, they chose Mejillones, recognizing its existing ammonia industry and robust infrastructure.

USD 2.5 Billion

They started working four years ago, and the project began to take shape in 2023. The company was named MAE (Mejillones Ammonia Energy), and the project is called Volta. In February, after three years of technical and environmental studies, they submitted the Environmental Impact Study (EIA) to the Environmental Impact Assessment System (SEIA).

The project involves constructing a green hydrogen plant as an intermediate input for producing green ammonia. So far, estimates are on track: the first shipments of green ammonia are expected in 2027 and will target both local and international markets.

It is projected that, at full capacity, the green ammonia plant will contribute to reducing over 1 million tons of CO_2 emissions per year—equivalent to the pollution from more than 200,000 internal combustion vehicles annually. Additionally, the project involves an

investment of over USD 2.5 billion, generating approximately 1,700 jobs during the construction phase and around 500 direct and indirect jobs during full operation.

They have already received their first round of questions from SEIA. “Part of the success in project approval is listening to people. Many times, they don’t understand something or have concerns. So, we try to listen a lot,” Calaway says.

He adds, “We have worked very hard to ensure the community has enough simulations to understand how safe it is.”

During his visit to Chile in mid-November, Calaway participated in various events and maintained a busy schedule of meetings. He met with former President Eduardo Frei Ruiz-Tagle, the Minister of Energy Diego Pardow, and the Minister of Finance Mario Marcel. “I’ve been very impressed by how kind they’ve been to me, genuinely listening and paying attention to some of the things we have to say.”

What is your perspective on Chile as a place to do business?
“I’ve been doing business here for 13 consecutive years. Obviously, I think it’s a place to do business. The capital markets are very efficient at risk allocation, and they don’t set particularly high premiums for Chile. If you go to Argentina, you’ll pay two or three times the amount of capital. That said, I think Chile, like any country, needs to continue working on improving the security of permits and timelines. The energy transition will be highly intensive. It won’t be easy and will require us to produce a lot of things. And you are in a unique position: but to achieve this, efforts must be focused in that direction.”

Calaway concludes: “Part of the magic is that Chile has the best wind and solar energy on the planet. The reason I knew how good Atacama was is because I asked why all the astronomical telescopes were there. And it’s because there’s almost no humidity, so the amount of radiation per square meter is extraordinary. It’s like Saudi Arabia’s oil—something gifted by nature. The Saudis didn’t do anything; they just said, ‘We have the cheapest oil in the world,’ and capitalized on it. I believe Chile can do the same. Maybe I’m wrong, but what I’m trying to do right now—and the reason I’m putting my money into this company—is because I think Chile will be essential for synthetic materials derived from wind and solar energy.”

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Mining Company Sued by the State for Aquifer Damage Seeks Alternative Water Source to Avoid Closure

With around 4,000 employees, the Zaldívar mining company has been sued by the State for environmental damage to the Montarqui-Negrillar-Tilopozo aquifer. The company proposes to continue using water from the aquifer for four more years while replenishing it from another aquifer and searching for a definitive solution.

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By: María del Mar Parra

For "irreparable environmental damage" to the Montarqui-Negrillar-Tilopozo aquifer, which feeds the Atacama Salt Flat, the State Defense Council (CDE) has filed a lawsuit against three mining companies. One of them, Zaldívar Mining, part of the Luksic Group, has submitted a project to continue using the aquifer for four more years while searching for a definitive water source to maintain operations until 2051.

The mining company's proposal involves continuing to use water from the aquifer until 2028 while exploring new water sources to operate from 2029 onwards, allowing operations to continue for 22 more years. Without this plan, the company could face closure in 2025.

To compensate for the aquifer's use, the company offers to reinject an equivalent amount of water from another aquifer in the Neurara sector, where it holds water rights. During these four years, Zaldívar plans to explore alternative water sources, including seawater desalination, as a long-term solution.

This proposal is currently under environmental assessment and an indigenous consultation process to address the concerns of Atacameño communities, who are co-plaintiffs in the State's environmental damage lawsuit.

A recent addendum to the project addresses observations from the public, authorities, and technical agencies, including the proposal to reinject extracted water into the aquifer from another sector.

"Our goal is to achieve the best possible project and secure approval that not only prevents the company's closure next year but allows us to continue operating for

another 25 years if conditions permit," said the company's general manager, Leonardo González.

Damage to the Aquifer

Zaldívar is one of three mining companies sued by the State Defense Council for "irreparable environmental damage" in the Atacama Salt Flat due to water extraction from the aquifer feeding the salt flat.

The CDE's team presented reports from the General Directorate of Water and the Environmental Superintendency, "which verified through on-site inspections the water reduction in the area as a combined effect of extractions by the three mining companies," the CDE explained.

This claim is further supported by a study conducted by researchers from the University of Chile, which describes how the Atacama Salt Flat is sinking by 1 to 2 cm annually due to brine extraction. Researchers warn that this soil compaction reduces the salt flat's ability to retain water, exacerbating the ecosystem's water stress.