

ADVERTISING FEATURE

## Resources of the future



Trent Spry is CEO of Blue Star Helium, which has three prospects in Colorado moving to development as early as 2023.

# Explorer buoyant over helium projects

Hydrogen may have captured investors' attention for its role in green energy storage, but another gas starting with 'h' is becoming just as important in the emerging high-tech, low-carbon economy.

The second element on the periodic table after hydrogen, helium is a crucial input for semiconductor manufacturing and is also used in medical applications such as magnetic resonance imaging (MRI) scanners.

Formed from decaying uranium, the lightweight and difficult-to-mine gas is also integral to rocketry and, of course, balloons.

Helium is also entering critical undersupply, the result of surging demand coupled with past underinvestment and a series of 'banana peel' mishaps. These include a fire and an explosion that crippled the major Amur plant in far eastern Russia and a gas leak at a facility in Cliffside, Texas.

The world's biggest helium producer, Qatar has been beset by unplanned maintenance and other issues.

In the United States, the Bureau of Land Management historically supplied 40 per cent of the nation's helium from a strategic reserve in Texas.

But the BLM—which has also been affected by unplanned maintenance—has been winding down this reserve for decades. The agency makes its last delivery next year, leaving domestic users scrambling for new supply.

In a very public sign of the problem, last month the University of Nebraska's Cornhuskers football team asked fans to refrain from the traditional release of red balloons after each touchdown.

More seriously, the country's weather service

has had to curtail twice-daily balloon releases of observation balloons.

For the ASX-listed Blue Star Helium, there's no better time to be actively exploring its tenements across its Las Animas project in Colorado's eponymous county.

In a short time, Blue Star's high-impact exploration program has resulted in four discoveries, with three prospects moving to development as early as 2023.

"Our charter is all about delivering low-cost helium projects in the undersupplied US market and we have a clear commercial pathway to doing this," says Blue Star chief executive Trent Spry.

Over five prospects, the company reports independently assessed current helium resources of 13.4 billion cubic feet, on a P50 (50 per cent probable) basis.

The resource does not include the Voyager prospect, where the company's discoveries include a 134-foot (41-metre) column grading 8 per cent helium—one of the highest concentrations in the world.

"We have also had three more discoveries over our Pegasus and Galactica prospects ... with 200 foot-plus columns," Spry says.

Las Animas includes Model Dome, a known helium-producing field discovered in the 1920s. The area produced for less than two years before the government locked it up for military use.

With most explorers focused elsewhere, Blue Star started acquiring tenements in 2019, initially without any competition.

"People weren't really looking at the area because Model Dome was locked up," Spry says.

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Trent Spry

"We were getting things at a great price, but once we lit the county up with leases the competition started coming in."

"We also had to do a lot of forensic geology to guide our tenement acquisitions, including unearthing paper logs and handwritten notes in the dusty bowels of the Denver Earth Research Library."

With operating partner Vecta Oil & Gas, Blue Star is poised to start drilling a maiden well at Serenity, south of the Pegasus and Galactica discoveries. Serenity is not included in Blue Star's current P50 resource.

Alongside this effort, the company is also pursuing permits to enable production, based on a modular processing plant that could be scaled up over time.

While 95 per cent of helium output is a byproduct of LNG production, Blue Star's gas occurs alongside nitrogen and CO2.

This is advantageous, because the nitrogen can

be vented harmlessly into the atmosphere, while the CO2 can be sequestered or sold to industrial users such as soft drink makers.

Given this composition, the project won't require a liquefaction plant, but a simpler and cheaper membrane-based process.

"Four or five production wells will be tied into the initial plant via a low-cost pipeline gathering system," Spry says.

"The current estimated cost of the plant is \$US15 million, while each well would cost around \$US400,000 to complete."

Spry says the company has a number of funding options, including debt, plant leasing or offtake-style arrangements with gas aggregators.

Meanwhile, the helium floor price has moved from \$US300/million cubic feet (mcf), a few months ago to around \$US600/mcf.

"Semiconductor makers will pay almost anything and there's anecdotal evidence of them paying \$US3000-5000/mcf on the spot market," he says. "We will most likely enter offtake contracts at \$US300-600/mcf, but will aim to keep a significant percentage of our production for spot sales."

Spry says the prospectivity and near-term production profile of Las Animas belies the company's modest \$40 million market capitalisation that's backed by \$13.6 million of cash (as at the end of March).

"Our 300,000 gross acres cover both the key prospects we have mapped and areas where we think there are deeper basement plays," he says.

"Given that, there's almost nothing in Las Animas we won't have a piece of."



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