



## Kornbluth: North American helium start-ups are approaching first production

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In recent years, driven by recurring shortages and historically high prices for helium, we have seen an unprecedented number of helium exploration start-ups around the world – but especially in North America.

A lot of this activity has been focused on the Four Corners area in the southwestern United States, as well as the Canadian provinces of Saskatchewan and Alberta. While a few of the early movers, including **North American Helium**, **Thor Resources**, **Canadian Helium** and **Navajo Transitional Energy Corporation** (formerly Tacitus), have been producing helium for a few years, a handful of exploration start-ups, all publicly traded, have announced plans to commence production of gaseous helium later this year or early in 2024. If these companies successfully follow through on their announced plans, these start-ups could collectively add 100 million to 150 million cubic feet (MMCF) of production to North American supply by mid-2024.

**Avanti Helium**, based in Calgary, AB and with activity focused on the Greater Knappen area of southern Alberta and Montana and southwestern Saskatchewan, has recently announced plans to have a helium recovery unit (HRU) in operation by Q4 of 2023 to process gas from its Sweetgrass Project. Avanti has secured property in Liberty County, Montana for its HRU. Avanti has ~78,000 acres in the Greater Knappen area that is prospective for gas that is typically 98% nitrogen, with ~1% helium. Avanti has also announced a tolling arrangement with Paradox Midstream LLC. As Paradox recently announced plans to file for Chapter 11, Avanti may need to find a different tolling partner if it intends to sell bulk liquid helium. Avanti has not yet announced the supplier or expected capacity of its HRU.

**Blue Star Helium**, based in Subiaco, Western Australia, has been exploring for helium in Arizona, Colorado, New Mexico and Utah. Blue Star's Voyager project in Los Animas County, Colorado is their most advanced effort and the company has recently announced a three-well drilling program with intentions to have an HRU in operation by Q4 of 2023. Blue Star has not announced the supplier or expected capacity of its HRU.

**Desert Mountain Energy**, based in Vancouver, British Columbia, has focused on producing helium from its acreage in the Holbrook Basin in northeast Arizona. Construction of an HRU purchased from Generon has been completed and the McCauley Plant is currently being commissioned. Desert Mountain Energy has touted the fact that the McCauley Plant will be powered by solar power, with back-up power provided by hydrogen produced from the McCauley Field. Desert Mountain Energy expects to produce gaseous helium with minimum purity of 99.995%. The production capacity of the McCauley Plant has not been announced.

**First Helium**, based in Calgary, Alberta, has been exploring for helium in Alberta, Canada. It has been developing its Worsley Project in northern Alberta and the Lethbridge Project in southern Alberta. The Worsley Project, where First Helium holds over 60,000 acres, is more advanced and the company is targeting a late Q1 2024 start-up for initial delivery of crude helium with a minimum purity of 95%. During May, the

company also announced that it had entered into a long-term take or pay agreement with an unnamed "major global industrial gas supplier". First Helium has not identified the supplier of its HRU or the expected plant capacity.

**Royal Helium**, based in Saskatoon, Saskatchewan, has helium projects in Saskatchewan and Alberta, Canada. Royal's Steeveville Project, located in southern Alberta, which it acquired as part of their 2022 acquisition of Imperial Helium, is more advanced and the company has previously announced an expected start-up during Q2 of 2023. Royal's HRU, which is being built by Arjae Design Solutions, will have raw gas throughput of 10 to 15 MMCF per day and is expected to produce gaseous helium with 99.999% purity.

As we move forward, it will be very interesting to see which of these companies are able to follow through on the plans communicated in their press releases and which of them fall short. Based on prior experience, it is safe to assume that the timing of some of the helium plant start-ups will slip from the dates set out. It is also noteworthy that these companies have not been forthcoming with respect to their expectations for helium production capacity, presumably because they do not want to be seen as falling short of their projections at a future date.

In any case, we seem to be entering a period where there will be an increasing number of small helium producers entering the market. This will provide more frequent opportunities for Tier 2 gas companies to secure supply directly from producers and gradually erode the dominance of the helium majors.

#### **About the author**

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