

3<sup>rd</sup> July 2025

ASX RELEASE

## High Concentrations of Helium Found in Blythe 13-20

- **Unexpectedly high helium concentrations of up to 4.4% were recorded in mud gas samples at Blythe 13-20, a level not previously observed in this part of Kansas. Hydrogen concentrations peaked at 16.5%<sup>1</sup>.**
- **Extends the Helium play in Eastern Kansas from the Sue Duroche 3 area significantly.**
- **Helium is critical to future-facing industries including semiconductors, aerospace, MRI technology, and quantum computing, with no viable substitutes due to its unique inertness and cryogenic properties.**
- **Kansas is the leading producer of helium in the US with decades of continued production from the Hugoton natural gas field with concentration ranges of 0.25 to 2.5% helium<sup>2</sup>.**
- **Blythe 13-20 will now be converted to an appraisal well in coming weeks to clean the well up and install downhole monitoring equipment to provide information to assist in the design of an initial testing program planned to be after the wells have been drilled and the subsurface data has been analysed.**

**HyTerra Limited (ASX: HYT) (HyTerra or the Company)** has increased the firm wells in the drilling sequence to a total of three wells drilled from April through July 2025 at the Nemaha Project in Kansas, USA. This exploration program funding is sourced from an investment in the Company by Fortescue Future Industries Technologies Pty Ltd.

**Avon McIntyre, Executive Director** says *“The discovery of high helium concentrations in an area previously untested for this potential is a highly encouraging result. While hydrogen concentrations peaked at 16.5%, lower than historical highs nearby, additional data will be acquired as we proactively monitor the well downhole. This well is located at a midpoint between the Mid-Continent Rift and the Nemaha Ridge, and we may have drilled into a helium and hydrogen migration pathway between these two main features. Now we move away from twinning historic wells to drill McCoy 1 on the crest of the Nemaha Ridge to further unlock the broader potential of this system”.*

<sup>1</sup> Mud gas logs and samples carry residual uncertainty due to the nature of gas detection, drilling parameters and equipment, and behaviour of the gas due to geological and operational processes. Samples are air corrected to account for atmospheric contamination when collected at surface. Corrected hydrogen and helium values were calculated by HyTerra using a methodology endorsed by Isotech Laboratories Inc.

<sup>2</sup> <https://www.usgs.gov/centers/national-minerals-information-center/mineral-industry-kansas> & <https://geoconvention.com/wp-content/uploads/abstracts/2023/93836-expanding-the-giant-a-review-of-th.pdf> Concentrations vary across a large natural gas field over time and area.

## Blythe 13-20 Update

The Company is pleased to announce that Blythe 13-20 was drilled to a total depth of 5,300ft MDKB (1,615m) on time, on budget, with no HSE incidents. The well was drilled into a new geological play in the Company's acreage, and drilled through approximately 3,028ft (923m) of sedimentary rocks and 2,260ft (689m) of Pre-Cambrian basement. The Blythe 13-20 well site is located around 1,400m east of the historic Scott-1 well drilled in 1982 (*Figure 1*), which reported hydrogen concentrations of up to 56% in the sedimentary section<sup>3</sup>. Blythe 13-20 was drilled 3,100 ft (945m) MDKB deeper than Scott-1. The Company has 6,860 net acres in the vicinity of the well site.

An extensive formation evaluation program was executed by Schlumberger (**SLB**). This program entailed recording mud gas log data in real time while drilling, taking mud gas samples at surface, extensive wireline logging, and collecting cuttings samples. The learnings from Sue Duroche 3 and detailed pre-planning resulted in a successful data acquisition program.



*Figure 1:* The Blythe 13-20 (background) well site is located around 1,400m east of the historic Scott-1 well (foreground) drilled in 1982.

The real time mud gas log recorded hydrogen and helium gas at different intervals during drilling. The mud gas samples collected at surface were sent to an independent laboratory (Isotech Laboratories Inc.) for verification and quantification.

<sup>3</sup> Guelard, J., Beaumont, V., Rouchon, V., Guyot, F., Pillot, D., Jezequel, D., et al., 2017. Natural H<sub>2</sub> in Kansas: deep or shallow origin? *Geochem. Geophys. Geosyst.* 18, 1841-1865. H<sub>2</sub> and He percentages reflect published values for gases recovered from the wellbore. Uncertainty remains on historic well operations, sampling techniques, and analyses. H<sub>2</sub> and He values are rounded to the nearest percent.

Hydrogen concentrations peaked at 16.5% in the sedimentary section and 4.1% in the basement (Table 1). Helium was not detected in the sedimentary cover. In the basement, helium concentrations peaked at 4.4%. Based on these results, the Company has decided to convert the Blythe 13-20 well into an appraisal well with a work over rig to be mobilised to site in July. This will include down-hole drilling fluid cleanup and the installation of downhole monitoring equipment to provide information to assist in the design of an initial testing program planned to be after the wells have been drilled and the subsurface data has been analysed.

### Kansas: America's Helium Powerhouse

Kansas is a strategic hub for helium production in the USA. The supportive regulatory environment and industry demand is coupled with local skills and equipment that has been producing and transporting helium from Kansas reservoirs for decades.

The first globally significant discovery of helium, with a volume concentration of 1.84%, dates back to 1903 in Dexter, Kansas<sup>4</sup>. The Dexter helium discovery is located due south of Blythe 13-20 well site, near the southern extent of the Nemaha Ridge. Currently, Kansas dominates domestic USA helium production with eight production plants<sup>5</sup>.

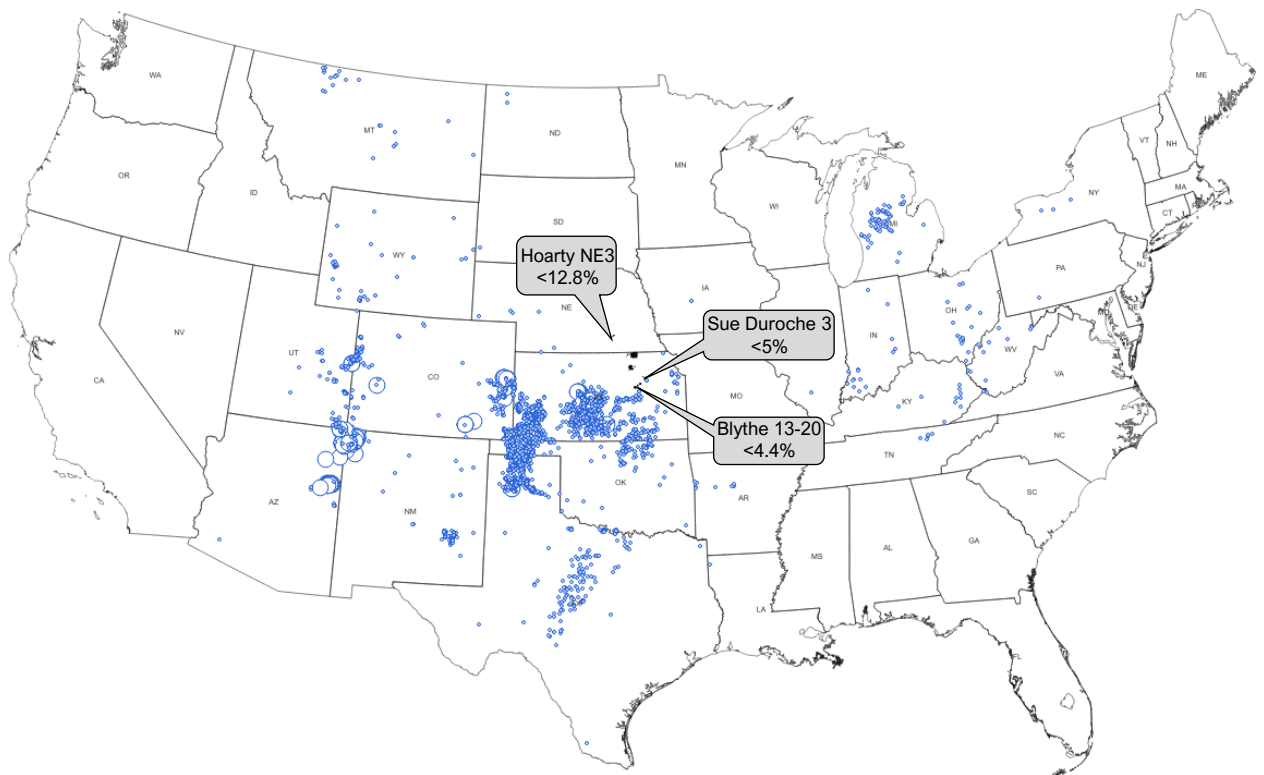


Figure 2: Map showing USGS well gas database (Helium) for lower 48 states<sup>6</sup>. Large circles represent Helium recovered in wells at concentrations over 4%, and smaller circles represent Helium concentrations between 0.3 – 4%. The highest helium concentrations recovered from each well in HyTerra’s portfolio is shown for comparison.

<sup>4</sup> Y., Li, J., Zhang, J., Zhang, J., Fu, L., Liu, S 2024. A comprehensive review of helium geology. Gas Science and Engineering 130-205423.

<sup>5</sup> <https://discoveryalert.com.au/news/helium-production-united-states-state-analysis-2025/>

<sup>6</sup> <https://www.usgs.gov/data/dataset-helium-concentrations-united-states-wells>

## Helium, a valuable and useful resource

Helium, a non-renewable and vital natural resource, holds significant global importance due to its unique physical and chemical properties. It is inert, non-flammable, non-toxic, lighter than air, and has the lowest boiling point of any element. It is critical for medical applications, aerospace and military purposes, electronics and semiconductor manufacture, as well as scientific analyses and many other industries.

Healthcare applications consume approximately 32% of U.S. helium production, primarily for cooling MRI magnets and specialized breathing treatments. A single MRI machine requires initial filling of approximately 1,700 litres of liquid helium and regular top-ups due to boil-off.

The electronics industry uses about 18% of domestic helium for semiconductor manufacturing, where it provides inert atmospheres for silicon wafer production and cooling during various fabrication steps.

Aerospace and defence applications account for 17% of consumption, including rocket pressurization, satellite instrument cooling, and leak detection in high-performance systems.

The remaining helium supplies diverse applications including welding (13%), research and development (10%), and other industrial uses (10%)<sup>7</sup>.

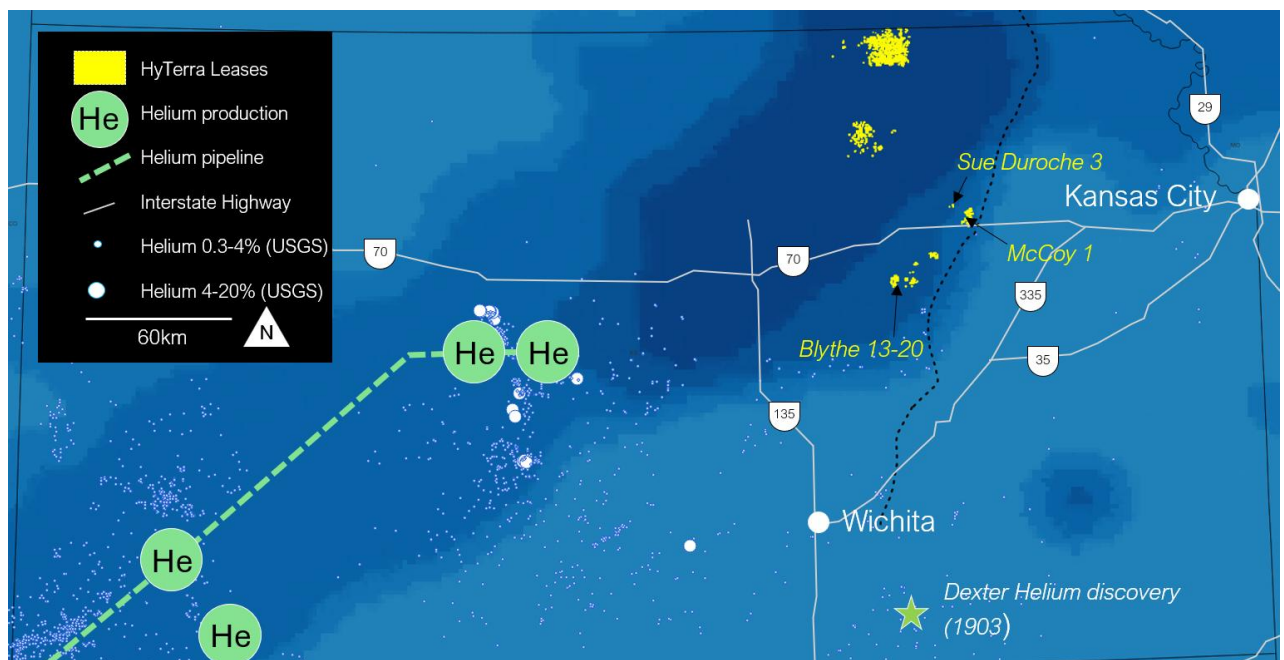


Figure 3: Kansas Helium occurrences, major production facilities and their location relative to HyTerra leases and wells. There are multiple helium production facilities in Kansas, the closest being 140km west of the Blythe 13-20 well location.

<sup>7</sup> <https://discoveryalert.com.au/news/helium-production-united-states-state-analysis-2025>

Table 1 – Listing Rule 5.30 information

Name	Blythe 13-20			
Reference datum	NAD 27			
Latitude	38.8182075			
Longitude	-96.7800001			
Permit	SE/4 Sec. 20-T14S-R06E			
Entity holders	HYT Operating LLC (100%)			
Type and duration of test <sup>7</sup>	Mud gas samples			
Phase recovered	Gas			
Zones tested	Sedimentary		Pre-Cambrian	
Formation	Multiple Palaeozoic sedimentary formations		Pre-Cambrian Basement (undifferentiated)	
Gross thickness <sup>8</sup>	~3028ft		~2260ft	
Geological rock type	Limestones, Shales, Dolomites and Sandstones		Pre-Cambrian Basement	
Depth of the zones tested	Between 0ft and 3028ft		Between 3028ft and 5300ft	
Resources	Hydrogen	Helium	Hydrogen	Helium
Air corrected gas composition <sup>1,9</sup>	2.8% (mean) 16.5% (max)	0.0% (mean) 0.0% (max)	1% (mean) 4.1% (max)	1.1% (mean) 4.4% (max)
Volumes recovered, flow rates, choke size	N/A			
Fracture stimulation	None			
Material non-hydrocarbons	N/A as affected by additives in drilling mud			

<sup>7</sup> Refers to gas extracted at surface from the drilling mud while this operational activity was being conducted.

<sup>8</sup> Insufficient information is presently available to determine net pay thickness, petrophysical and image log analysis is ongoing.

<sup>9</sup> Mean value is the non-zero values average composition from the samples taken and does not necessarily imply that this gas composition is present through all of this interval. Well head or downhole gas sample will be required to determine original gas concentrations at different depths of interest.

**This announcement has been authorised for release by the Board of Directors.**

**For more information:**

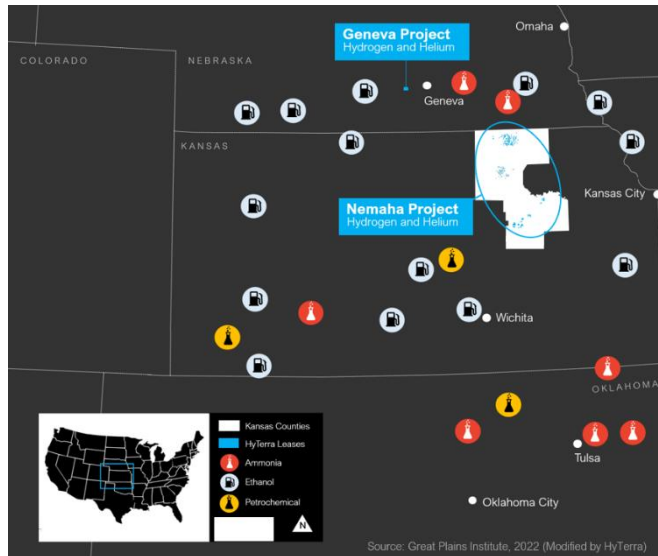
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## HyTerra. A World of Opportunity.

**Exploring for natural hydrogen and helium resources near major industrial hubs.** HyTerra was the first

company to list on the ASX with a focus on white hydrogen, which is generated naturally by the Earth. White hydrogen potentially has much lower production costs and carbon emissions than man-made hydrogen.



Our Nemaha Project in Kansas, USA, holds 100% owned and operated leases across the emerging Nemaha Ridge natural hydrogen and helium play fairway. Our Geneva Project in Nebraska, USA, is a 16% earn-in interest in a Joint Development with Natural Hydrogen Energy LLC targeting natural hydrogen and helium. Both projects could be connected via existing transport infrastructure to multiple nearby off-takers, including ammonia manufacturers, and petrochemical plants.

For more information please see the latest corporate presentation: [www.hyterra.com](http://www.hyterra.com)

### Important Risk Commentary:

It is important to note that there remains both geological and potential development risks with these projects and the Company's commercial and business objectives. This is an emerging frontier with the potential to unlock significant low-carbon hydrogen gas supplies but with equally significant risk and uncertainty. Key risks include the presence, concentrations, recovery, and commercial potential of both hydrogen and helium gases. For more information on risks please refer to the ASX release 'Entitlement Issue Prospectus' on April 8th, 2024: <https://wcsecure.weblink.com.au/pdf/HYT/02793318.pdf>.

### Forward Looking Statements:

This release may contain forward-looking statements. These statements relate to the Company's expectations, beliefs, intentions or strategies regarding the future. These statements can be identified by the use of words like "anticipate", "believe", "intend", "estimate", "expect", "may", "plan", "project", "will", "should", "seek" and similar words or expressions containing same. These forward-looking statements reflect the Company's views and assumptions with respect to future events as of the date of this release and are subject to a variety of unpredictable risks, uncertainties, and other unknowns. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, many of which are beyond our ability to control or predict. These include, but are not limited to, risks or uncertainties associated with the discovery and development subsurface gas reserves, cash flows and liquidity, business and financial strategy, budget, projections and operating results, gas prices, amount, nature and timing of capital expenditures, including future development costs, availability and terms of capital and general economic and business conditions. Given these uncertainties, no one should place undue reliance on any forward-looking statements attributable to HyTerra, or any of its affiliates or persons acting on its behalf. Although every effort has been made to ensure this release sets forth a fair and accurate view, we do not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. Nothing contained in this announcement, nor any information made available to you is, or and shall be relied upon as, a promise, representation, warranty or guarantee as to the past, present or the future performance of HyTerra.