ASX ANNOUNCEMENT

5 April 2022

EXPLORATION UPDATE

DRILLING STARTING AT GALACTICA/PEGASUS, VOYAGER FAST TRACKED FOR DEVELOPMENT & ENTERPRISE 16#1 TO BE TESTED

Highlights

- 4-5 well exploratory water well program at Galactica/Pegasus prospects commences with JXSN#1 and JXSN#2 ahead of helium exploration wells planned for mid-year
- Voyager prospect being fast tracked for development after breakthrough success of BBB#1 exploratory water well returned a 134 ft gas column in the Lyons formation with a calculated air-free helium concentration of 8.8%
- Enterprise 16#1 well completion and testing program approved by COGCC, currently in the process of securing a workover rig to commence work
- Drilling of Sammons 315310C well (Blue Star 50% AMI) to commence at Serenity prospect this quarter after receipt of Form 2 which is expected shortly
- Rolling permitting and drilling campaign advancing with 47 permits in process and 10 helium wells (including Enterprise 16#1) targeted to be permitted and drilled during CY2022 with exploratory water wells front running across the portfolio

Blue Star Helium Limited (ASX:BNL, OTCQB:BSNLF) (**Blue Star** or the **Company**) provides an update on the progress of its key helium exploration activities in Las Animas County, Colorado.

Blue Star Managing Director and CEO, Trent Spry commented:

"The continuation of our successful exploratory water well program this year reflects the large benefits that we are able to both deliver and receive from undertaking this combined ESG and geologic evaluation initiative.

"Exploratory water wells enable us to obtain extensive data that, as was the case at the BBB#1 water well, allow us to accelerate helium well location selections for appraisal and development drilling. At the same time, we are delivering landholders in the local Las Animas community critical new water resource data and valuable water infrastructure for their long-term private and commercial use. We look forward to further success as the program across Galactica and Pegasus is carried out.

"Voyager has been fast tracked for development after the breakthrough success of the BBB#1 exploratory water well which returned a 134 ft gas column in the Lyons formation with a calculated air-free helium concentration of 8.8%. This is a similar gas composition to the historic Model Dome field which had one of the highest in-situ helium concentrations both in the U.S. and globally. We look forward to updating shareholders on the development plans shortly.

"The Enterprise 16#1 well successfully identified a deeper gas water contact at the Enterprise prospect than was previously interpreted. The completion and testing program has been finalised and approved by COGCC and we look forward to executing it shortly.

"Meanwhile, our other permitting activities continue apace. We are aiming to permit and drill 10 helium exploration wells across the Blue Star portfolio this year, which started with the recent drilling of the Enterprise 16#1 well. The next well set to be drilled is Sammons 315310C in our AMI with Vecta over the Serenity prospect. We look forward to the expected drilling of that well during the current quarter."

Exploratory water wells

Blue Star is focussed on rapidly advancing further drill planning and permitting across its key prospects for CY2022, including a mix of both exploratory water wells and helium exploration wells (which can be completed for production) (refer BNL ASX release dated 28 January 2022, *Drilling and Permitting Update*).

Drilling of exploratory water wells by the rancher in a new 4-5 well program at the Galactica/Pegasus prospects has now commenced with the first two wells (JXSN#1 and JXSN#2) shown on Figure 1 below. These exploratory water wells will front run helium exploration, appraisal, and production drilling at the Pegasus/Galactica prospects, where Blue Star also has a further potential 29 helium exploration well locations in its permitting pipeline.

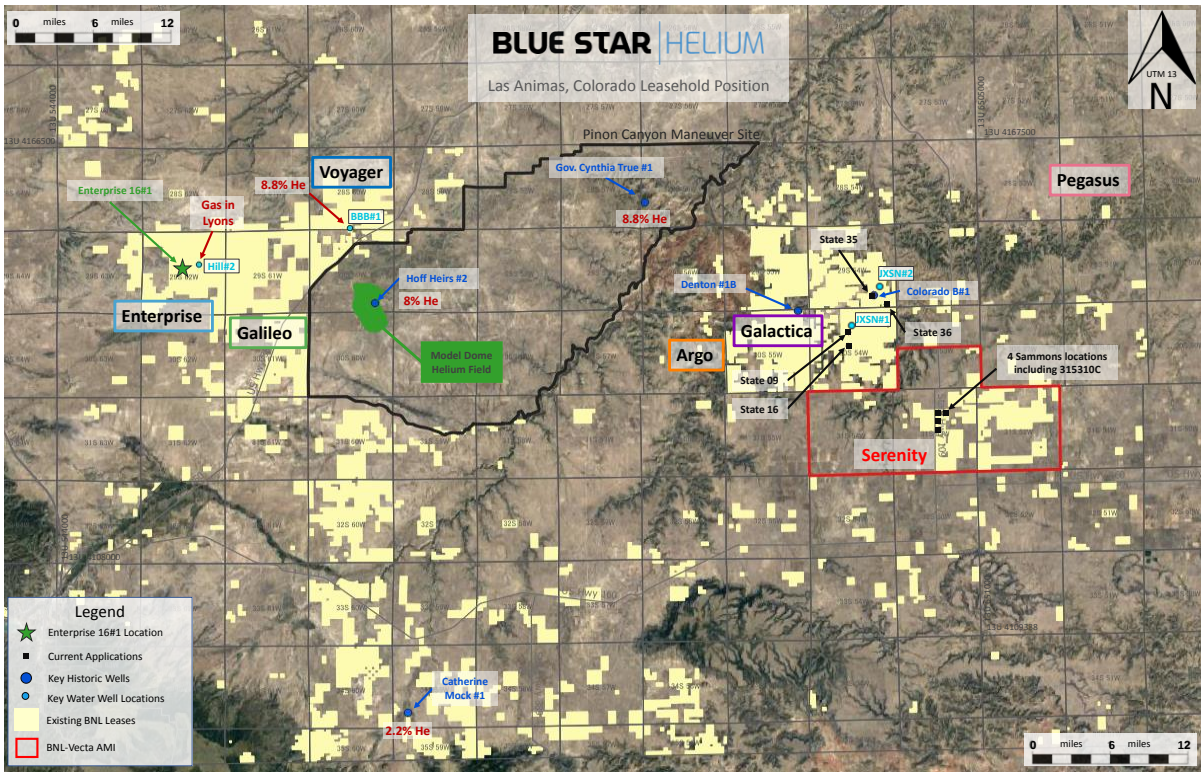

Figure 1: Blue Star's Las Animas County lease holdings and key well locations

The continuation of exploratory water well drilling in CY2022 is a function of two major dynamics. The first is that last year's campaign proved to be a highly successful element of Blue Star's Environmental, Social and Governance (ESG) focussed activities within Las Animas County. The second is the substantial data that may be obtained from the program contributes to Blue Star's geologic evaluation and prospect advancement, as was the case at the breakthrough BBB#1 well

at the Voyager prospect, allowing for confident acceleration of helium well location selections for appraisal and development drilling.

The BBB#1 well returned a 134 feet gas column in the Lyons formation with a calculated air-free helium content of 8.8%, a similar gas composition to the proximate historic Model Dome analogue production and one of the highest in-situ helium concentrations both in the U.S. and globally. For further details on BBB#1 refer to BNL ASX release dated 21 December 2021, *Water Well Drilling Identifies Significant Gas Columns at Voyager and Enterprise*.

The exploratory water wells provide structural information, modern wireline logs, define water contacts and are lower cost and considerably quicker to advance from planning through to drilling than helium exploration wells. In some cases, as described above in relation to the BBB#1 well, these wells can return gas compositional data and critical validatory results that allow acceleration of appraisal and development helium well location selections.

The water wells are drilled by a contractor pursuant to a drilling contract between the contractor and the rancher. The Company is not a party to this contract. The well is the property of the rancher and the Company does not have an economic interest in it. The Company will agree to fund the well if the rancher selects a location that may be of interest to the Company, the Company has leased the underlying minerals and the rancher agrees to let the Company obtain any available data from the drilling program. Water wells are drilled for the sole purpose of producing water for use by the rancher. Water wells may not produce helium and may not be converted into producing helium wells.

Helium exploration wells

Blue Star is focussed on rapidly advancing further drill planning and permitting across its key prospects for CY2022. Helium exploration wells are designed to maximise data acquisition relating to prospect validation, raw gas composition, pressure data, flow data and where appropriate may be completed for production.

The recent Enterprise 16#1 helium well is the first in a series of 10 helium exploration wells planned to be permitted and drilled across the Blue Star portfolio during CY2022. More details on future testing at Enterprise is provided below.

The next helium well expected to be drilled is Sammons 315310C (Blue Star 50%), which is located in the Blue Star-Vecta Area of Mutual Interest (AMI) on Blue Star's Serenity prospect. After Form 2 approval which is expected shortly, Sammons 315310C is expected to be drilled in Q2 CY2022 (see BNL ASX release dated 25 February 2022, *Sammons OGDP Approved*).

The Company has advanced its permitting of additional helium wells as set out in the table below.

Well Permitting Schedule								
Prospect	**Location Selection**	**Survey**	**Permit Preparation**	**COGCC Review**	**COGCC Hearing**	**Form 2**	**Issued**	**Total**
Enterprise	1	2	1				1	**5**
Galactica	6	9		2				**17**
Galileo			3					**3**
Pegasus		9	1	2				**12**
Serenity						4		**4**
Voyager	1		5					**6**
Total	**8**	**20**	**10**	**4**	**0**	**4**	**1**	**47**
Change since 28 Jan 22	-20	+15	+5	-	-4	+4	-	

Enterprise 16#1 well testing update

As previously announced (refer BNL ASX release dated 1 March 2022, *Enterprise 16#1 Well Update*), the Enterprise 16#1 helium exploration well was drilled to a total depth of 1,250 feet and identified a potential helium zone in the targeted Lyons formation. Based on wireline logs, the top of the Lyons formation was penetrated at 1,045 feet with an interpreted gas water contact (**GWC**) intersected at 1,058 feet (equating to an approximate 13 feet gross and net gas column in the well bore). The GWC seen in Enterprise 16#1 equates to an approximate 78 ft structural gas column for the Enterprise prospect, increased from the 29 ft gas column previously interpreted in the Hill#2 exploratory water well. Some helium gas was seen while drilling, however due to subsequent water invasion of the top part of the Lyons formation where gas is interpreted from logs, no test was initially able to be conducted to obtain a gas sample for compositional analysis.

Subsequent to drilling and logging operations the Company has returned to the well and successfully conducted pressure testing. The results provide the Company with the only modern pressure data in the area and valuable virgin pressure data ahead of completion and testing operations.

A tailored completion and testing program has been formulated over recent weeks with the objective of obtaining a gas composition from the top of the Lyons, notwithstanding the invasion of the reservoir and fluid in the well bore.

The completion and testing program has been finalised and all necessary filings have been approved by the COGCC. The Company is now in the process of securing a workover rig to conduct the work. The rapid increase in oil and gas industry activity given recent global events has resulted in increased demand for rigs and crew.

This ASX Announcement has been authorised for release by the Board of Blue Star Helium Limited.

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About Blue Star Helium:

Blue Star Helium Ltd (ASX:BNL OTCQB:BSNLF) is an independent helium exploration and production company, headquartered in Australia, with operations and exploration in North America. Blue Star's strategy is to find and develop new supplies of low cost, high grade helium in North America. For further information please visit the Company's website at www.bluestarhelium.com

About Helium:

Helium is a unique industrial gas that exhibits characteristics both of a bulk, commodity gas and of a high value specialty gas and is considered a "high tech" strategic element. Due to its unique chemical and physical qualities, helium is a vital element in the manufacture of MRIs and semiconductors and is critical for fibre optic cable manufacturing, hard disc manufacture and cooling, space exploration, rocketry, lifting and high-level science. There is no way of manufacturing helium artificially and most of the world's reserves have been derived as a by-product of the extraction of natural hydrocarbon gas.