

## ASX ANNOUNCEMENT

1 March 2022

### ENTERPRISE 16#1 WELL UPDATE

#### Highlights

- Drilling of the Enterprise 16#1 helium exploration well reached total depth (TD) late Friday U.S. time and wireline logs were run.
- New, deeper gas water contact (GWC) for the Enterprise structure identified along with a 13 ft gas column in the high-quality Lyons formation.
- The new GWC seen in Enterprise 16#1 equates to an approximate 78 ft structural gas column for the Enterprise structure, increased from the 29 ft gas column previously interpreted in the Hill#2 water well.
- Planned well testing post wireline logging delayed due to water inflow into the well bore.
- New well testing procedure in design with targeted implementation in coming weeks.
- Forward work plan fast-tracking helium well permitting at Enterprise prospect unchanged, including planned further strategic water well evaluations at select locations.
- Enterprise 16#1 is the first in a series of 10 wells planned to be permitted and drilled across the Blue Star portfolio during CY2022.

Blue Star Helium Limited (ASX:BNL, OTCQB:BSNLF) (**Blue Star** or the **Company**) advises on the progress of its maiden helium exploration well, Enterprise 16#1 (100% Blue Star), located in Las Animas County, Colorado.

#### Blue Star Managing Director and CEO, Trent Spry commented:

*“We are highly encouraged to have encountered high-quality Lyons reservoir with gas interpreted on logs in our first exploration well in the play.*

*“The top of the Lyons formation and the gas water contact at the Enterprise 16#1 location have come in structurally lower than at Hill#2, but within the range of broader pre-drill mapping confidence levels. This has resulted in an increase to the gas column seen in the Enterprise structure to approximately 78 feet, which can be applied across the field as currently mapped.*

*“Gas monitoring of the well will continue while a testing procedure designed to isolate the water and test the upper part of the Lyons is established. Although frustrating not to have been able to immediately test the well and obtain a raw gas composition, we are targeting being in a position to test the well in coming weeks. Importantly, the well results have already significantly reduced geological uncertainty at Enterprise and confirmed a deeper gas water contact than previously interpreted.*

*“The Enterprise 16#1 results received to date mean that our forward planning for the Enterprise prospect is unchanged, with permitting of additional well locations being fast tracked and strategic water well locations being identified.”*

## Key well outcomes

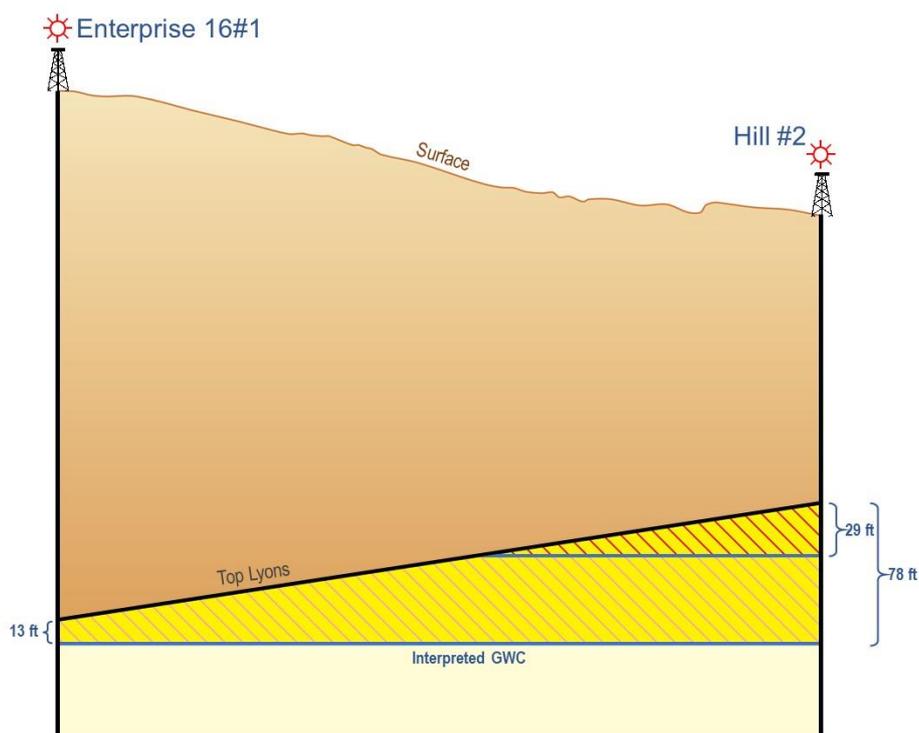
Blue Star is pleased to announce that it has successfully completed the drilling phase of the Enterprise 16#1 helium exploration well and wireline logs have been run. The well has been drilled to a total depth of 1,250 feet and has identified a potential helium zone in the targeted Lyons sandstone formation.

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 well has now been suspended for future gas sampling, fluid level, pressure monitoring and testing.

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 has yet been able to be conducted to obtain a gas sample for compositional analysis. A testing program is currently being formulated to obtain a gas composition from the top of the Lyons, notwithstanding the invasion of the reservoir and fluid in the well bore. Implementation of this testing program is targeted for the next few weeks.

The top of the Lyons and the interpreted GWC in the Enterprise 16#1 well are structurally below the equivalent depths in the Hill#2 water well. The current interpretation is that the new GWC seen in the Enterprise 16#1 well replaces the interpreted GWC in the Hill#2 water well as the structural GWC across the Enterprise structure. This results in a structural gas column for the Enterprise structure of approximately 78 feet being calculated from the top of the Lyons formation at Hill#2 (currently the highest penetration on the structure) to the GWC at Enterprise 16#1 (currently the lowest interpreted GWC on the structure). See figure below.

An alternative interpretation is that the two GWC's seen in the Hill#2 and Enterprise 16#1 wells represent contacts in two different structures. Although a less likely scenario given the proximity of the wells, this alternative will be considered as the well data is integrated and the mapping in the area is updated.



## Drilling program strategy

The forward work plan involving fast-tracking of further helium well permitting at the Enterprise prospect is unchanged (see BNL ASX release dated 28 January 2022, *Drilling and Permitting Update*), including planned further strategic water well evaluations at selected locations.

Enterprise 16#1 is the first in a series of 10 wells planned to be permitted and drilled across the Blue Star portfolio during CY2022.

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

## Enterprise 16#1 drilling details

The well was drilling below the structural GWC seen in the Hill#2 well with poor returns and was drilled into water-bearing Lyons formation at approximately 1,058 feet. The well was shut down for the night (Thursday night U.S. time) at that stage. At the start of drilling the next day the water level in the well had risen to around 940 feet. The well was then drilled to the deepest permitted depth of 1,250 feet, in order to maximise the stratigraphic understanding at this location, and wireline logs were run.

Interpretation of the wireline log data shows that the top of the Lyons formation was penetrated at 1,045 feet, with an interpreted GWC intersected at approximately 1,058 feet. By the time of wireline logging, water from below the interpreted GWC had invaded the top of the Lyons formation and risen to approximately 910 feet (confirmed by the wireline logs). Water invasion naturally has the effect of inhibiting gas flow from the Lyons into the wellbore.

The well is located in Section 16 NESE of Township 29 South Range 62 West in Las Animas County, Colorado. It is drilled pursuant to Oil & Gas Lease No. 112938 between the State of Colorado as lessor and BNL (Enterprise) Inc as lessee dated 21 November 2019 in respect of all of T29S R62W section 16. A royalty of 20% of the gross sales value of all gas produced from the leased land is payable to the lessor. The lease is for a term of 5 years concluding on 20 November 2024 and so long thereafter as oil and/or gas (including helium) is produced in paying quantities from the lease land or the production is suspended due to lack of a market as agreed with lessor. Blue Star's working interest in the well is 100%.

*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](http://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.

