

ASX ANNOUNCEMENT

30 January 2024

BBB #33 DRILLING COMPLETED AND RIG MOBILISED TO BOLLING #4

Highlights

- BBB #33 drilled to TD within the targeted Lyons formation.
- Wireline logs demonstrate gas-filled reservoir.
- Ongoing well evaluation activities investigating anomalous initial flow and pressure results.
- Drill rig mobilised to next well location, Bolling #4 SESW, with drilling of intermediate section of this well expected to commence mid-week.

Blue Star Helium Limited (ASX:BNL, OTCQB:BSNLF) (**Blue Star or the Company**) advises that the BBB #33 helium well has been drilled to the targeted total depth (**TD**). The well is located at the Company's high-grade Voyager helium development in Las Animas County, Colorado.

BBB #33 is an offset well to the BBB#1 discovery well where drilling encountered a calculated air-free gas concentration of 8.8% helium in a 134ft gas column interpreted in the Lyons formation. BBB #33 is located approximately 750 feet (230m) from BBB#1 (refer BNL ASX release dated 17 November 2021). The air corrected helium concentration seen at BBB#1 is comparable to that seen at the Model Dome historic production field, which is located some six miles south on the same regional structure and averaged approximately 8% helium.

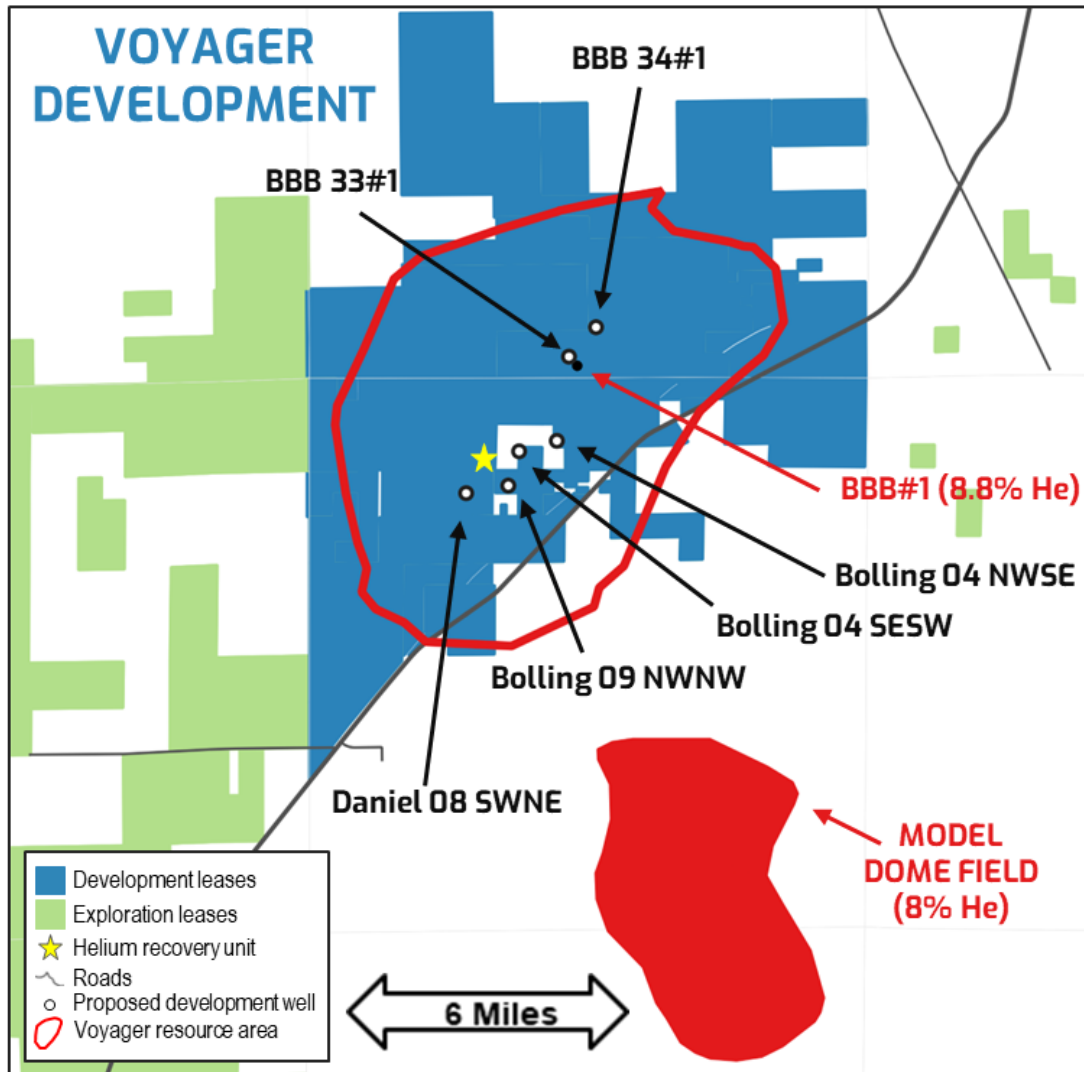
The BBB #33 well was drilled to 935 feet as planned, approximately 51 feet into the top of the high-quality Lyons formation. Wireline logs have been run and confirm the high quality of the Lyons sand (average porosity of approximately 28%) and that the reservoir is gas filled to TD as expected. No movable water was observed while drilling or on the logs.

Initial evaluation through the drill pipe was undertaken (while the rig was on location) with limited-to-no flow observed from the reservoir. Similarly, well pressures are being monitored and have recorded minimal-to-no pressure readings to date. Both these outcomes are considered anomalous given the gas saturation seen on the wireline logs in this well and offset well evaluations suggesting reservoir pressure additionally supported by flowing wells at the historic Model Dome field. There are a range of possible explanations for these results which are under investigation including the potential for wellbore damage having been sustained during drilling activities.

A well head has been fitted as planned and further well evaluation activities are planned over coming week. These activities include a pressure gradient test and vacuum truck treatment to replicate flowing conditions at vacuum wellhead pressure. Any material changes to well status through this evaluation period will be updated to the market.

Over the weekend the drill rig was mobilised to Bolling #4 SESW, the next well location at Voyager. Rigging up has commenced and drilling of the intermediate section at Bolling #4 SESW is expected to commence mid-week.

Bolling #4 SESW is interpreted to be up-dip of the BBB#1 discovery and BBB #33 well. It is also located closer to the planned IACX facility location.



Voyager helium development ECMC approved well locations

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

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About The Voyager Project

Voyager is Blue Star's maiden development project. The BBB#1 well tested the Voyager prospect in November 2021 and encountered a calculated air-free gas concentration of 8.8% helium in a 134ft gas column interpreted in the Lyons formation (see BNL ASX release of 17 November 2021).

Voyager is located only 6 miles from the historic Model Dome analogue production which produces a similar high helium gas composition, averaging 8% concentration.

A significant independent contingent resource of 2C 857 MMscf helium net to Blue Star has been declared (see BNL ASX release of 3 January 2024). Aside from the information contained in this announcement, the Company is not aware of any new information or data that materially affects the information included in that announcement and all the material assumptions and technical parameters underpinning the estimates in that announcement continue to apply and have not materially changed.

It is expected that Voyager will ultimately utilise a 20 well development inventory to maximise the contingent resource.

A midstream solution has been selected for gas processing where IACX will provide gas processing services via an owned and operated helium recovery plant.

Total field and plant operating cost is highly attractive at around US\$100-120/Mcf of helium product gas (full capacity) with targeted helium production of 38 MMcf in first full capacity year (see BNL ASX release of 30 June 2023).

Discussions for distributor and end user relationships are in progress.

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.