

ASX ANNOUNCEMENT

12 March 2024

LAS ANIMAS HELIUM PORTFOLIO DEVELOPMENT STRATEGY

Voyager Project

- Data collected during recent testing of the BBB#33 and Bolling #4 wells has been integrated and evaluated by Sproule and the Company's independent engineer. Results confirm high quality flow potential of the Lyons reservoir.
- Positively, initial type curves based on low reservoir pressure encountered in these two wells and consistent with the test data have been estimated and first past high-level economics run. Currently sensitivity testing with various type curves, operational and economic parameters is being undertaken.
- Voyager helium project paused while evaluation of forecast Voyager project economics under adjusted operating parameters being considered.
- Mobilisation and installation of leased IACX helium process plant for Voyager on hold pending above.

Galactica/Pegasus Project

- Maiden development well to be drilled at Galactica/Pegasus helium project (targeted for Q2 2024); funded from existing cash reserves.
- Four existing Blue Star discoveries at Galactica/Pegasus via exploration wells JXSN#1 to JXSN#4 delivered gas flowing at 125 - 412 mcf/d and high air-corrected concentrations of 2.0 - 6.1% He.
- Potential development of Galactica/Pegasus project significantly de-risked by successful third-party commercialisation of adjoining Red Rocks helium project, also via an IACX midstream leased process facility arrangement.

Blue Star Helium Limited (ASX: BNL, OTCQB: BSNLF) (**Blue Star or the Company**) provides an update on the progress of investigations into the unexpected initial flow and pressure outcomes from the BBB #33 and Bolling #4 development wells recently drilled at Voyager and maiden development well drilling at Galactica/Pegasus.

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

"The Voyager project was chosen as the first development for our Las Animas helium acreage due to the interpreted high-concentration of helium in its discovery exploration well, BBB #1 (8.8% He), as well as the proven high-concentration (average 8% He) and robust flow rates (up to 2,000 mcf/d) from the historic Model Dome production field analogue wells located only 6 miles from Voyager.

"As a result, we are naturally disappointed with the unexpected initial outcomes from the first two helium development wells at Voyager. While we continue to work through economic evaluation based on positive flow and helium concentration under vacuum conditions and the associated adjusted development and operational parameters and cost estimates – we have elected to pause the development of the Voyager project. This decision allows us the time necessary to applying these learnings to our projected economics for Voyager – all before making further concrete decisions in relation to the development of this asset.

“One of our strengths as a business is the quality and breadth of our Las Animas portfolio and the exploration success the Company has achieved to date. While development of Voyager is paused, we have taken the decision to drill a maiden development well at our Galactica/Pegasus project to the east. Galactica/Pegasus has the benefit of four exploration well discoveries (drilled by Blue Star) with strong helium concentrations and proven flow rates.

“Upon drilling of this well at Galactica/Pegasus, and completion of the current evaluation of Voyager project economics in light of the BBB #33 and Bolling #4 well results, we will be in the strongest possible position later this half to confirm the optimal initial development pathway for our Las Animas acreage – including the best utilisation of our secured IACX helium process facility.”

Voyager project

Data collected during recent testing of the BBB#33 and Bolling #4 wells has been integrated and evaluated by Sproule and the Company’s independent engineer. Results confirm high quality flow potential of the Lyons reservoir. Positively, initial type curves based on low reservoir pressure encountered in these two wells and consistent with the test data have been estimated and first past high-level economics run. Currently sensitivity testing with various type curves, operational and economic parameters are being undertaken.

While post well testing on vacuum has yielded success in terms of flow rates, the anticipated need for compression and vacuum at the wells earlier in field life (than previously anticipated) has implications for forecast production volumes per well as well as operating cost estimates. Evaluation of Voyager project economics under a range of potential adjusted development and operating parameters is underway accordingly.

While these workstreams are in progress, Blue Star has elected to pause its development of the Voyager project. Planned mobilisation and installation of the leased IACX helium process plant for Voyager has also been put on hold pending results of the ongoing evaluations. These decisions will be reassessed upon the conclusion of the ongoing investigations described above.

Galactica / Pegasus project

The Galactica/Pegasus development discovered by Blue Star in 2022 is a larger-scale project with multiple potential product streams. Engineering and market work continues to refine the initial planned development configuration and forecast helium and CO₂ production and cost estimates.

There are currently a range of development pathways under consideration, including a leased plant and third party operated option. The final development is expected to include a CO₂ extraction route and by-product stream.

Four existing Blue Star discoveries at Galactica/Pegasus via exploration wells JXSN#1 to JXSN#4 delivered gas flowing at 125 - 412 mcf/d and high air-corrected concentrations of 2.0 - 6.1% He, with details tabled below. These wells also proved the Company’s previous interpretations of gas on logs at historic wells, Denton B #1 and Colorado #B-1, also located on the Galactica/Pegasus structure.

Potential development of the Galactica/Pegasus project is significantly de-risked by the successful third-party commercialisation of adjoining Red Rocks helium project, also via an IACX midstream leased process facility arrangement.

While the development of Voyager is paused, we have taken the decision to drill a maiden development well at the Company's Galactica/Pegasus helium project (targeted for Q2 2024).

Key parameters	JXSN#1	JXSN#2	JXSN#3	JXSN#4
Helium concentration (%)	1.98	3.14	2.14	4.20 & 6.06
Gas column in Lyons formation (ft)	217.5	101+	230	233.5
Net pay in Lyons formation (ft)	143.5	101	153.4	133.5
Stabilized initial flow rate (Mcf/d)	412	202	412	125

Note: the JXSN#4 well was recorded flowing at 124.6 mcf/d during drilling and sampling. Shut-in pressures were the same as observed in the previous JXSN wells which flowed between 202 and 412 mcf/d.

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 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.