ASX ANNOUNCEMENT

1 July 2024

STATE 16 WELL STATUS AND DEVELOPMENT UPDATE
GALACTICA PROJECT

Highlights

- Independent engineering consultants advise the State 16 well is capable of a maximum rate of 441 Mscfd with more stabilised rates constrained for production optimization projected to be between 250 Mscfd and 350 Mscfd.
- A new Galactica Pegasus OGDP containing 5 additional development wells has passed the ECMC's completeness and technical review. Expected to deliver into initial helium gas processing facility at Galactica.

Blue Star Helium Limited (ASX:BNL, OTCQB:BSNLF) (**Blue Star** or the **Company**) is pleased to provide a status update on flow rates at the State 16 SWSE 3054 helium discovery at its Galactica helium project in Las Animas County, Colorado.

Blue Star Managing Director and CEO, Trent Spry, said

"We are very pleased with the results of the State 16 well, drilled on schedule, and at a significantly lower cost than previous wells. This directly benefits our economics as we continue to refine our drilling and commercialization models.

"The State 16 well analysis returned results inline with our modelling. The impressive flow rates support production optimization as we drill additional development wells and maximize helium gas output at our processing facility.

"The new Galactica Pegasus OGDP, which has just passed the ECMC's completeness and technical review, is key to providing development well locations between the State 16 development well and the Galactica facility.

"Our operations team and engineers are advancing all aspects of the development, which excitingly, now includes the purification and sale of CO_2 into another market which has suffered critical supply chain issues."

Reservoir Engineering / Production Update (JXSN and State 16 Flow Analysis)

The Company advised the market in its announcement of 4 June 2024 (Significant Helium Discovery at State 16 Well) that the results were being analysed by the Company's independent engineering consultants where a maximum stabilised rate and drawdown will be modelled for incorporation into development planning and economics.

The Company is pleased to advise that the State 16 well results have been integrated with the test data from the JXSN#1, JXSN#2, JXSN#3 and JXSN#4 discovery wells drilled by Blue Star and compared to the public information available from the adjacent Red Rocks development.

Results show that at the State 16 well the calculated permeability for the Lyons formation is 405 mD, with a producing wellhead pressure of 6 psia the well would be capable of 441 Mscfd. The range of permeabilities calculated in the JXSN discovery wells and State 16 well is 300 to 750 mD which would result in initial flow rates at 6 psia wellhead pressure of between 334 and 780 Mscfd.

As part of the development planning various vacuum compression will be considered for each well from 11 psia (-1 psig) wellhead pressure to 6 psia (-6 psig) wellhead pressure, resulting in stabilised flow rates ranging from 250 Mscfd to 615 Mscfd based on the range of permeabilities seen to date. For the State 16 well (405 mD) these rates would equate to 250 Mscfd to 350 Mscfd. These rates represent constrained rates to maximise the initial production rate plateau which is standard practice in gas developments to maximise recovery and reservoir pressure maintenance while providing a more constant feed rate to be achieved through the plant.

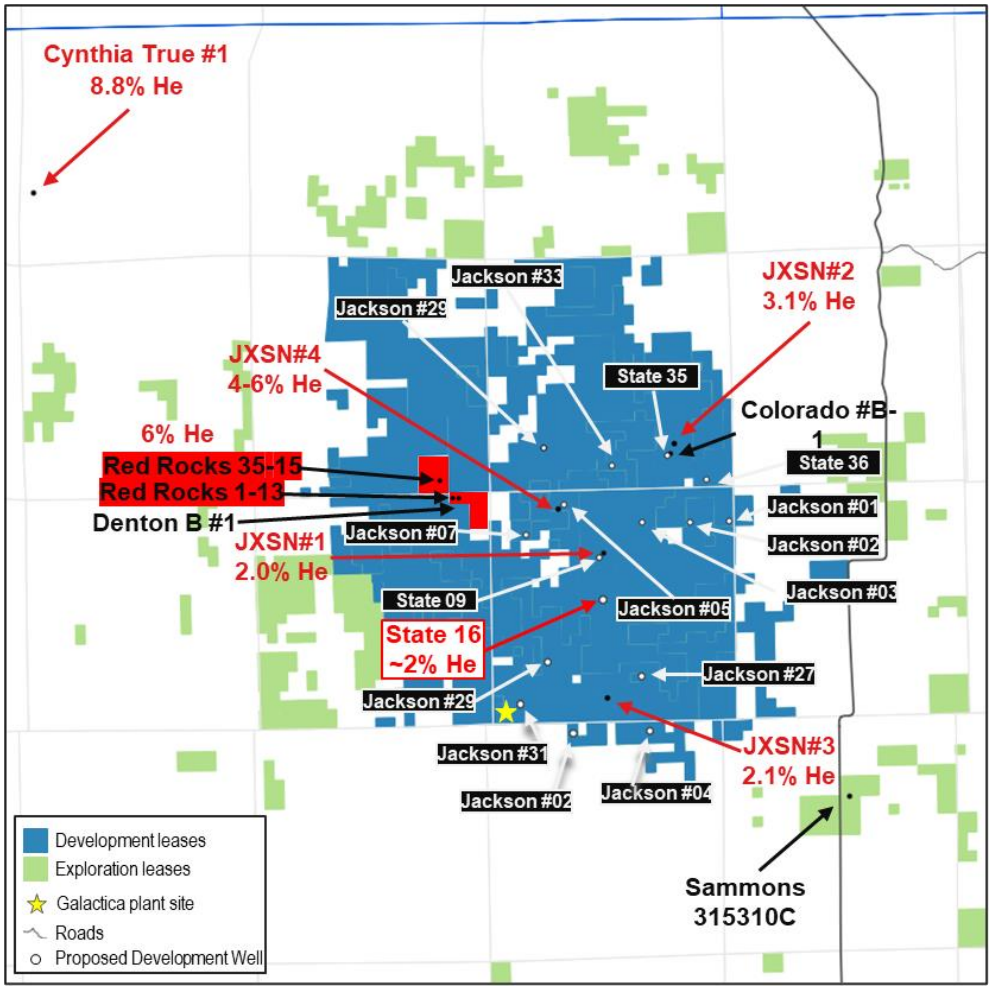
The well is currently completed for tie-in to production facilities. Commercial discussions with interested buyers for purified product have been ongoing since Q423.

Additional Galactica Development Wells

The Company's application for a new oil and gas development plan (**OGDP**) for 5 additional wells at Galactica (**Galactica Pegasus OGDP I**) has passed the completeness and technical review of the Colorado Energy and Carbon Management Commission (**ECMC**). The Company expects ECMC to set a hearing date for later this year.

The 5 additional development well locations in Galactica are identified on the map below. These wells are located to the south and southwest of the State 16 well toward the proposed Galactica plant site (also shown on the map) and are expected, together with State 16, to form part of the initial gas gathering into the Galactica helium production facility.

This work continues to de-risk the greater Galactica/Pegasus development which is further de-risked by the successful third-party commercialisation of the adjoining Red Rocks helium project, via an IACX midstream leased process facility arrangement.



Galactica/Pegasus Developments

The Galactica project is part of the greater Galactica/Pegasus development, discovered by Blue Star in 2022. The Galactica/Pegasus development is a large-scale project with multiple potential product streams. 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% helium (see Table 1 and BNL ASX releases dated 7 June 2022, 29 September 2022 and 5 October 2022). The State 16 results are included in the table.

Table 1: Key results from recent Galactica/Pegasus State 16 and exploratory wells

Key parameters	JXSN#1	JXSN#2	JXSN#3	JXSN#4	State 16
Helium concentration (%)	1.98	3.14	2.14	4.20 & 6.06	1.90
Gas column in Lyons formation (ft)	217.5	101+	230	233.5	96+
Net pay in Lyons formation (ft)	143.5	101	153.4	133.5	96
Stabilized initial flow rate (Mcfd)	412	202	412	125	285

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.

Appendix 1

LR 5.30	Rule Requirement	Company Statement
(a)	Name and type of well	State 16 SWSE 3054 helium well
(b)	Location of well and details of lease	Location: Section 16 SWSE Township 30 South Range 54 West (see map on previous page). Lease: Oil and Gas Lease No.112989 between the State of Colorado and Blue Star's wholly owned subsidiary, Las Animas Leasing Inc (**LAL**). The lease has an effective date of 21 November 2019, the total area of the leases is 640 gross acres (640 net acres), the term is 5 years from the effective date and so long thereafter as gas is produced in paying quantities, the rental is payable annually at a rate of $2.50 per acre per year, the royalty is 20% and LAL's working interest in the lease is 100%.
(c)	Working Interest	100%
(d)	Net pay (if gross pay reported)	Production hole section from 1,111.5 to 1,211 feet, containing approximately 96 feet of high-quality gas filled sandstone
(e)	Geological rock type of formation	Lyons sandstone
(f)	Depth of zones tested	1,111.5 to 1,211 feet
(g)	Types of tests and duration	Flow tests comprising a 12 hour natural flow period followed by a 12 hour flow period under vacuum compression after which a 48 hour pressure build up was performed.
(h)	Hydrocarbon phases recovered	Nil
(i)	Any other recovery	Helium, Carbon Dioxide, Nitrogen
(j)	Choke size, flow rates and volumes measured	Natural flow at up to 208 Mcfd through a 1" orifice plate. Vacuum flow at up to 313 Mcfd through a 1.375" orifice plate.
(k)	Pressures associated with flow and duration of test	See announcement text and paragraph (n) below.
(l)	Number of fracture stimulation stages	Nil
(m)	Material volumes of non-hydrocarbon gases	See paragraph (j) above.
(n)	Any other material information	Gas Sample Analysis While flowing gas samples were taken from a 2" nipple directly after the flow meter. The sample analysis was caried out by Gas Analysis Service, Farmington NM using a single thermal conductivity detector (TCD) for gas compositional analysis for the determination of C1-C6+ hydrocarbons, helium, nitrogen and CO2 adopted from Gas Processors Association standard 2261-00. Concentrations of the compounds are measured using thermal conductivity detectors using ultra-high purity hydrogen as a carrier gas.

		A number of secondary samples were also sent to Dolan Integration Group of 11025 Dover Street, Suite 800, Westminster, Colorado, for cross calibration. Gas compositional analysis methodology for the determination of C1-C6+ hydrocarbons and permanent gases (nitrogen, oxygen, argon, carbon dioxide, helium and hydrogen) are adopted from Gas Processors Association standard 2261-00. Concentrations of the compounds are measured using an Agilent 7890 gas chromatograph equipped with dual thermal conductivity detectors (TCD), each of which uses either ultra-high purity hydrogen or nitrogen as a carrier gas. The laboratory reports un-normalized concentrations in parts per million (ppm). The laboratory runs multiple mixed calibration gases with each sample, so it has multi-point calibration curves for each compound reported. Flow Testing Flow tests were conducted with a ABB XFC 6413 Total Flow Meter using AGA 1992 calculation method . Flow rate calculations used an assumed gas gravity of 1.3 (37.661 molecular weight) based on offset wells and a pressure base of 14.7 psia. Natural flow tests were conducted over a 12 hour period flowing through a 1" orifice plate to atmospheric pressure. Vacuum flow tests were conducted over a 12 hour period flowing through a 1.375" orifice plate to atmospheric pressure. In this announcement, Mcfd means thousand standard cubic feet per day. In relation to the State 16 SWSE 3054 well, see previous BNL ASX announcement of 4 June 2024. In relation to the JXSN wells, see previous BNL ASX announcements of 17 May 2022, 7 June 2022, 29 September 2022 and 5 October 2022.