

ADVANCED PRIMARY HELIUM OPPORTUNITY

- Strategic early-mover in the world's largest helium market
- Successful low cost, high impact exploration results
- Developing discoveries at Voyager, Galactica & Pegasus
- Voyager development, first helium sales from Q4 2023
- High grade helium exploration portfolio large resource upside

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ASX:BNL | OTCQB: BSNLF

AGM Presentation: 26 May 2023

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Prospective Resources

Net Recoverable Helium (MMcf)	1U (P90)	2U (P50)	3U (P10)
Galactica Prospect	2,131	4,395	6,849
Pegasus Prospect	1,970	3,423	5,092
Argo Prospect	276	2,108	3,065
Enterprise Prospect	372	2,204	5,494
Galileo Prospect	495	1,292	2,329
Total BNL Net Recoverable Helium	5,244	13,422	22,829

Contingent Resources

Net Recoverable Helium (MMcf)	1C (P90)	2C (P50)	3C (P10)
Voyager Prospect	299	643	1,228

Note 1: The estimated quantities of helium that may potentially be recovered by the application of a future development project relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to determine the existence of a significant quantity of potentially moveable helium.

Note 2: The resource estimates have been prepared using the probabilistic method and are presented on an unrisks basis. In a probabilistic resource distribution, 1U (P90), 2U (P50), 3U (P10) estimates represent the 90% probability, 50% probability and 10% probability respectively that the quantity recovered will equal or exceed the estimate assuming a success case in the prospect. Resource totals have been arithmetically added.

Notes specifically in relation to Galactica, Pegasus and Argo

Note 3: The estimates of prospective resources in respect of Galactica, Pegasus and Argo prospects are reported as at an evaluation date of 4 June 2021 and are more fully described in the Company's announcement of 10 June 2021. Aside from the information contained the Company's ASX releases dated 17 May, 7 June, 29 September and 5 October 2022 and the installation of a helium processing facility at the third party owned Red Rocks project adjoining the Company's Galactica Prospect, 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.

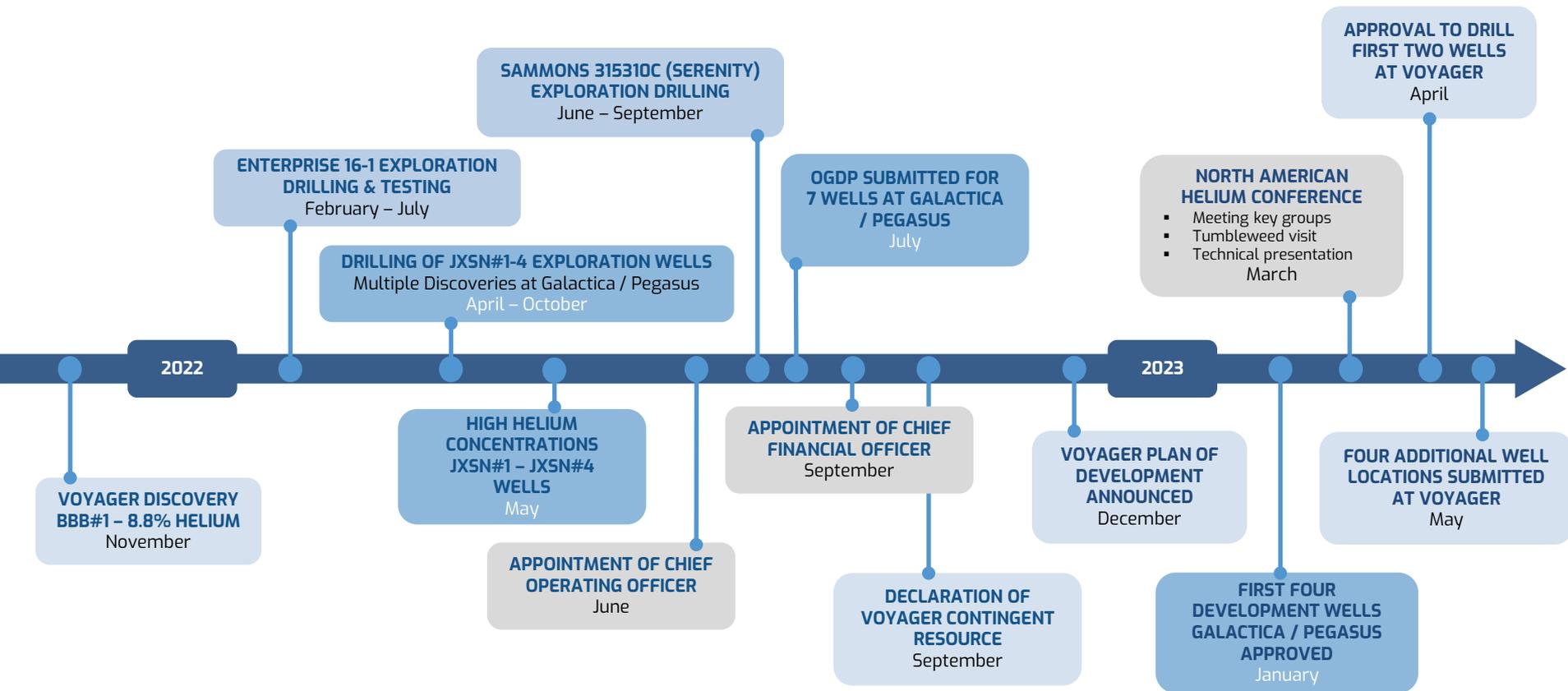
Notes specifically in relation to Enterprise and Galileo

Note 4: The estimates of prospective resources in respect of Enterprise and Galileo prospects are reported as at an evaluation date of 1 November 2020 and are more fully described in the Company's announcement of 16 November 2020. 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.

The Board has authorised this announcement to be given to ASX. Security holders and other interested parties can contact Trent Spry, Managing Director and CEO at info@bluestarhelium.com.au

A YEAR IN REVIEW

Significant advancement of key workstreams



LAS ANIMAS: PREMIER US HELIUM ASSETS...

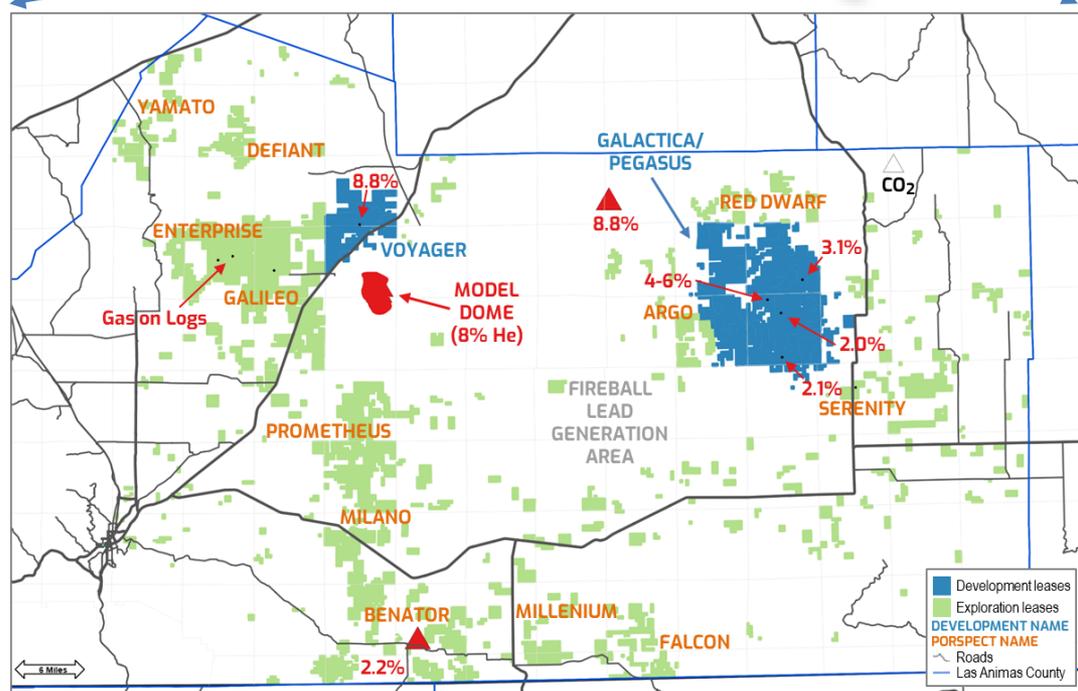
Extensive landholding and prospect portfolio in highly prospective location



643 MMCF CONTINGENT HELIUM RESOURCES

13.4 BCF PROSPECTIVE HELIUM RESOURCES

- Strategic, large-scale land position secured
- 311,108 gross acres leased (225,693 net acres)
- Outstanding drilling success – proven helium resources
- Highly attractive helium concentrations
 - Historic Model Dome analogue – helium: 8%
 - Historic Cynthia True discovery – helium: 8.8%
- Blue Star discoveries
 - Voyager discovery – helium: 8.8%
 - Galactica/Pegasus discoveries – helium: 2-6%
- Excellent geology, ready local infrastructure and proximity to key downstream customers
- Exploration upside; 2023 plan - advance exploration portfolio, including additional independent prospective resource evaluations



A space shuttle is shown launching from Earth, ascending through a large, billowing cloud of white smoke and fire. The shuttle is white with a red nose cone and is positioned on the left side of the frame. The background is a deep blue space filled with stars and a bright blue horizon line representing the Earth's surface. The overall scene is dramatic and emphasizes the power and scale of space exploration.

VOYAGER MAIDEN DEVELOPMENT

**LOW-COST, WELL-DEFINED
COMMERCIALISATION PATHWAY**

VOYAGER: A PREMIUM INITIAL HELIUM DEVELOPMENT

First helium production Q4 2023



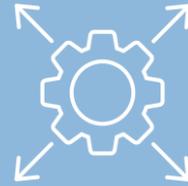
Midstream solution for initial development facility at high-grade Voyager discovery



Leased facility operated by experienced US helium mid-stream service provider



Low upfront project development capex



Processing capacity readily scalable by addition of membranes / further PSA units



Targeting premium spot / short term market prices



First helium output and sales targeted for Q4 CY2023

THE VOYAGER HELIUM DEVELOPMENT

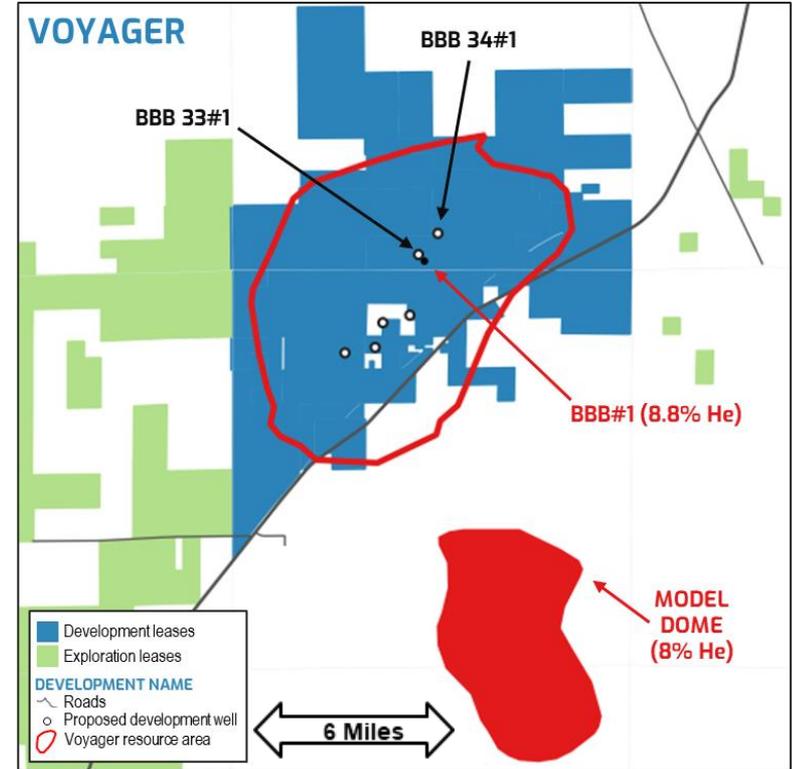
High-grade helium discovery appraisal and development

- **BBB#1 well discovery at Voyager prospect in Nov 2021;** calculated air-free gas concentration of 8.8% helium in a 134ft gas column discovered in the Lyons formation
 - Globally high in-situ helium concentration; similar gas composition to historic Model Dome analogue production
- **Significant contingent resource declared (Sep 2022)**

Voyager Field			
	1C	2C	3C
Net Recoverable Helium (MMcf)	299	643	1,228

Note: -25% increase in net mineral leases added since contingent resource booked

- **Permits to drill approved** for first two development wells (off-setting BBB#1 discovery well)
- Further 4 development wells locations submitted for approval
- Drilling to commence August 2023
- On track for first helium production and sales from Voyager during Q4 CY2023



VOYAGER: MOVING RAPIDLY TO FIRST HELIUM

Evaluation and commercialisation timeline

Q4 2022

Delivered Voyager Plan of Development

Voyager Discovery
BBB#1 8.8% He
(Nov. 2021)

Q1 2023

OGDP permitting approval for development wells BBB 33#1 and BBB 34#1

Q2 2023

Submission of second OGDP for 4 development well locations

In-fill leasing

Voyager facility lease agreement

Q3 2023

Drilling of first development wells, plus southern exploratory well

Flow and pressure testing

Q4 2023

Drilling of 1-2 further development wells

Gathering system deployment

Installation and commissioning of process facility



First helium output and sales Q4 2023

GALACTICA / PEGASUS PROJECT: THE NEXT STAGE

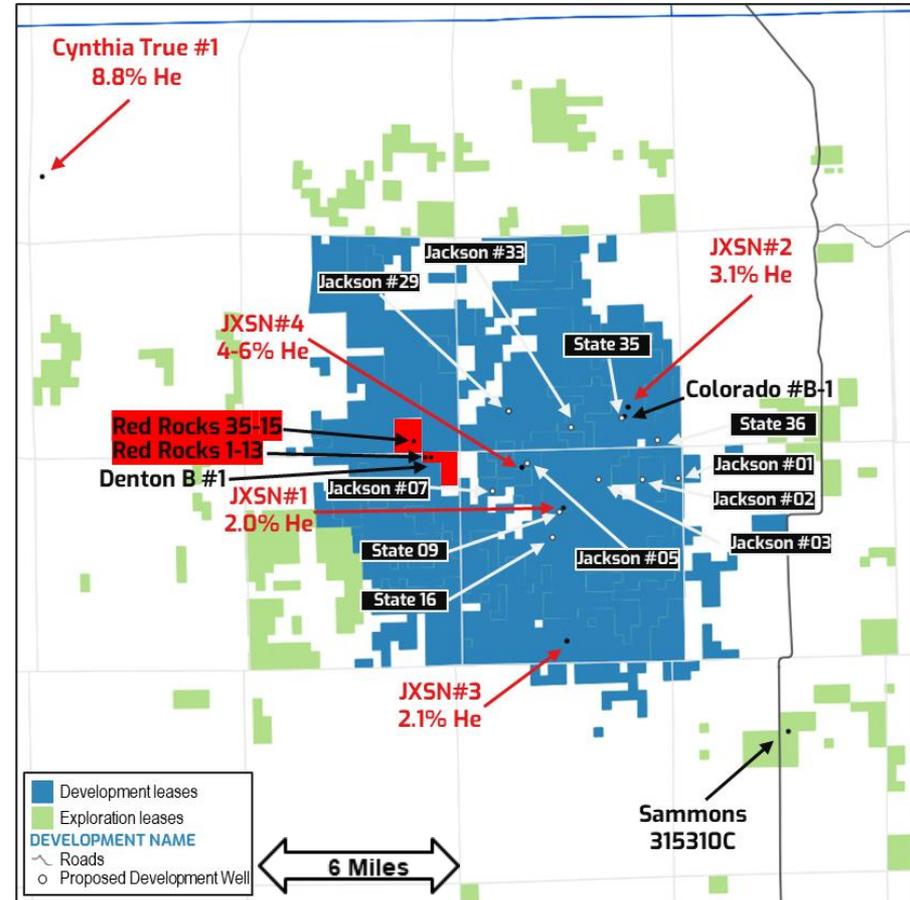
**LARGE-SCALE, MULTI- PRODUCT
DEVELOPMENT**



THE GALACTICA/PEGASUS DEVELOPMENT AREA

Large scale, multi-product development

- **Helium discoveries in JXSN#1 – JXSN#4;** gas bearing columns of up to 230 feet and up to 6% He
- Confirmed previous interpretations of historical well logs at Denton B#1 and Colorado #B-1 wells
- JXSN well flow rates as high as 412 Mcfd
- **Adjoining Red Rocks project is proof of BNL concept**
 - Third party producing two wells into IACX plant from c880 acres only and selling helium gas
 - Red Rocks situated within Galactica prospect
- **Galactica / Pegasus Development;** Extensive well permitting pipeline underway
- Resource update integrating Red Rocks discovery wells and production
- Plan of Development in progress



THE NEXT DEVELOPMENT

Commercialising Galactica/Pegasus

Larger-scale project with multiple potential product streams

- Initial facilities planned to be permitted in parallel with the Voyager development.
- **Initial Galactica/Pegasus plant configuration and commercialization strategy underway**

Current Evaluation Workstreams

- Further engineering and market work underway to refine planned development configuration and forecast helium and CO₂ production and cost estimates
- Range of development pathways under consideration, including a leased and third party operated plant option.
- Expansion expected to include a CO₂ by-product stream.

Permitting Progressing In Parallel

- Final drilling permits received for helium wells State 09, 16, 35 & 36, which are to be drilled as offset development wells to the JXSN#1 and 2 discoveries
- Drilling permit applications submitted for a further 7 development wells.
- Further 20 drilling locations identified for permitting.

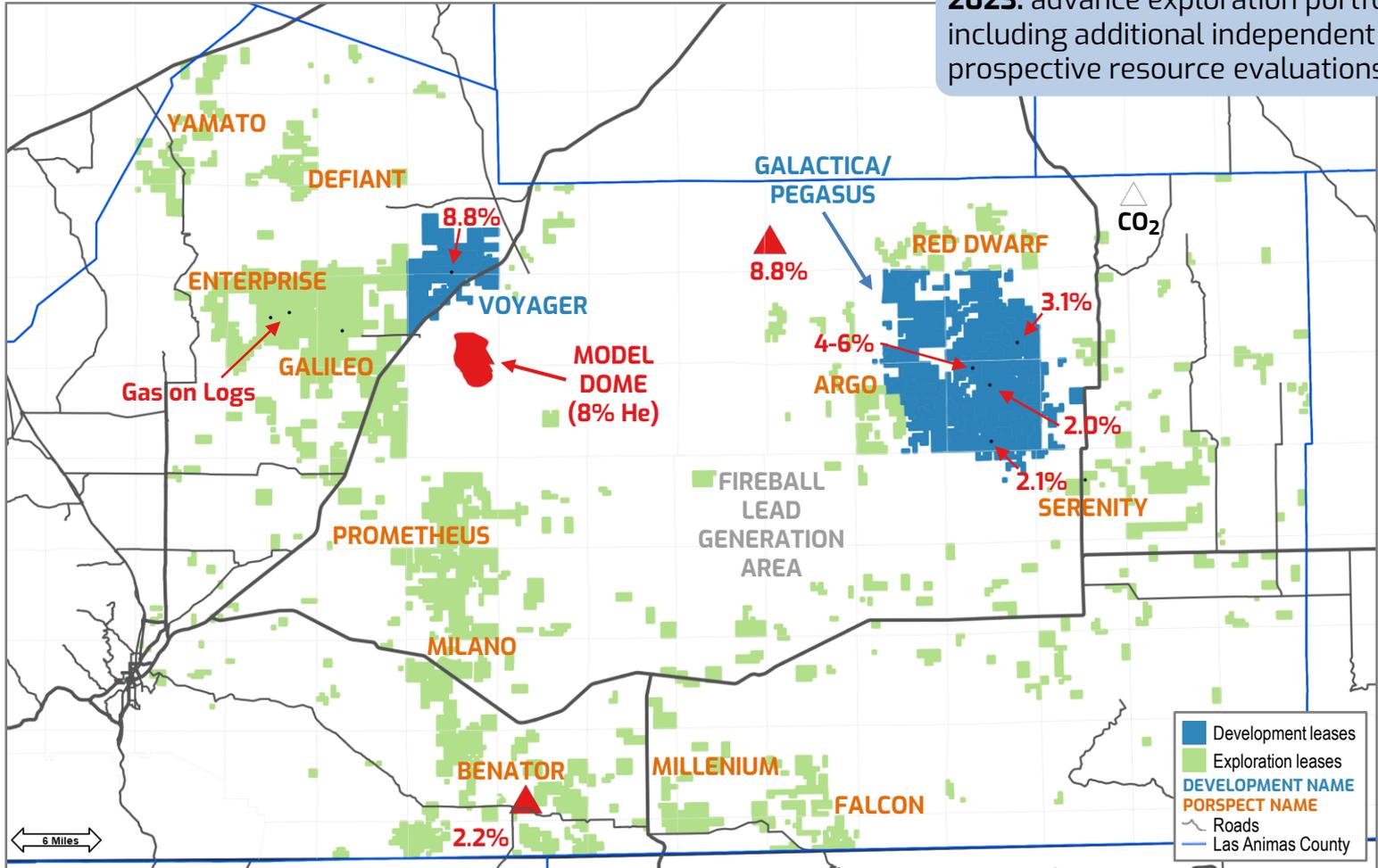
EXPLORATION UPSIDE

LARGE-SCALE, MULTIPLE
PRODUCT DEVELOPMENT



BLUE STAR'S LAS ANIMAS LEASEHOLD

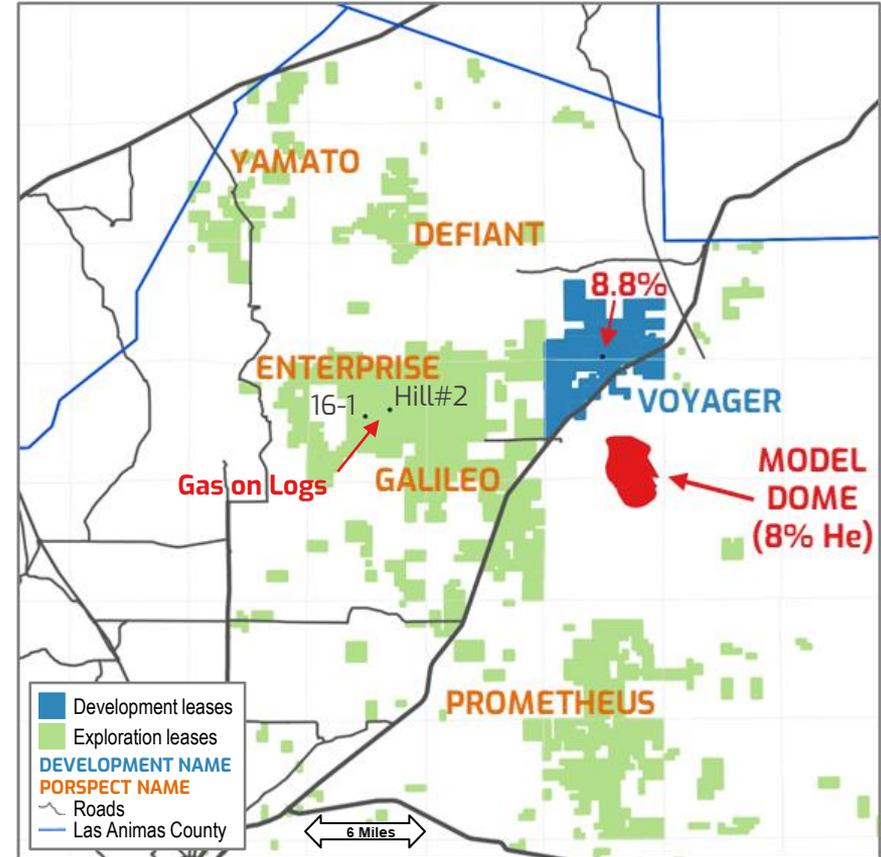
2023: advance exploration portfolio, including additional independent prospective resource evaluations



ENTERPRISE PROSPECT

Discovered gas on logs in two wells

- Hill#2:
 - 29 ft gas column in the high-quality Lyons formation interpreted on wireline logs
- Enterprise 16-1 (drilled Feb 2022)
 - 13 ft gas column in the high-quality Lyons formation interpreted on wireline logs
 - Some helium gas was seen while drilling but gas samples were not obtained due to water invasion. Subsequent operations did not obtain representative samples of any free gas interpreted to exist based on wireline log interpretation and the water level stabilized above the perforations at end of operations
 - The well has been P&A and the pad reclaimed and the OGDG location may be used for a test of the deeper horizons
- Interpretation
 - Current re-mapping shows the structural high to lie south-east.
 - Follow-up wells will target this structural high where significantly larger gas columns are expected
- Forward Plan:
 - Exploratory well located southeast to test gas up-dip in Lyons formation.
 - Follow-up helium appraisal and development well locations being evaluated ahead of success.



BLUE STAR: ADVANCED PRIMARY HELIUM OPPORTUNITY



DEFINED PATHWAY TO PRODUCTION: Completed plan of development at high-grade Voyager discovery (643 MMcf contingent helium resource); initial midstream pathway with leased process facility; first helium output in Q4 2023



LOW CAPITAL AND HIGH RETURNS: Voyager midstream development pathway is capex-lite, expertise-rich, and projected to deliver high returns and maximum product market pricing and flexibility



HIGH-VALUE PRODUCT IN SHORT SUPPLY: Helium is a high-value, finite resource in structural undersupply in the US; prices have responded by increasing substantially over the past two years



SUSTAINABLE HELIUM RESOURCE: Primary helium production possesses effectively zero hydrocarbon (methane) content compared to majority of global He supply produced as a by-product of natural gas production



EXTENSIVE EXPLORATION UPSIDE: 13.4 Bcf prospective helium resources from six prospects; further prospects being advanced, ongoing development of contingent helium resource via multiple commercialisations



APPENDICES

CORPORATE SNAPSHOT

CLEAN CAPITAL STRUCTURE

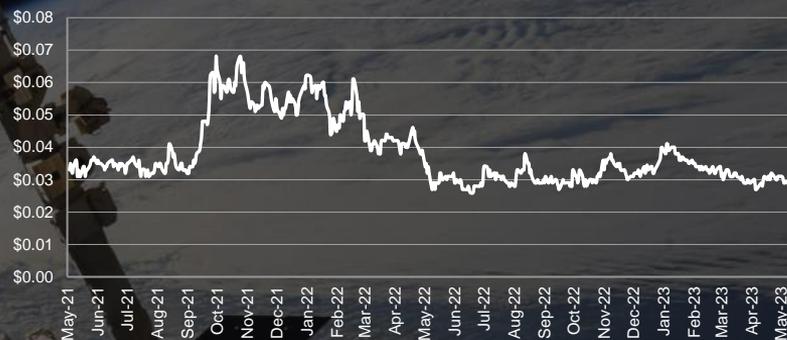
ASX Ticker	BNL
OTCQB ticker	BSNLF
Share price (ASX close, 17 May 23)	2.8 c
Issued share capital	1,586 MM
Options	34 MM
Performance Rights	91 MM
Basic market capitalisation	A\$44.4 MM
Cash (31 March 23)	A\$5.40 MM

SUPPORTIVE SHAREHOLDER BASE

Board	4.1 %
Hugh Warner	3.0 %
Nikola Krkovski	2.9 %
Cecil Dowson	2.9 %
Top 20	35.4 %

As at 31 January 2023

SHARE PRICE PERFORMANCE



EXPERIENCED BOARD AND MANAGEMENT

Ross Warner – Executive Chairman

Lawyer and corporate executive with 15+ years in oil and gas, more particularly in the United States, UK and Indonesia

Trent Spry – Managing Director & CEO

Experienced geoscientist with 20+ years in oil, gas and helium, exploration, development and new ventures

Neil Rinaldi – Non-Executive Director

Executive leader and finance professional with 20+ years in asset acquisitions and disposals, company structuring and growth strategy

Peter Kondrat – Chief Operating Officer

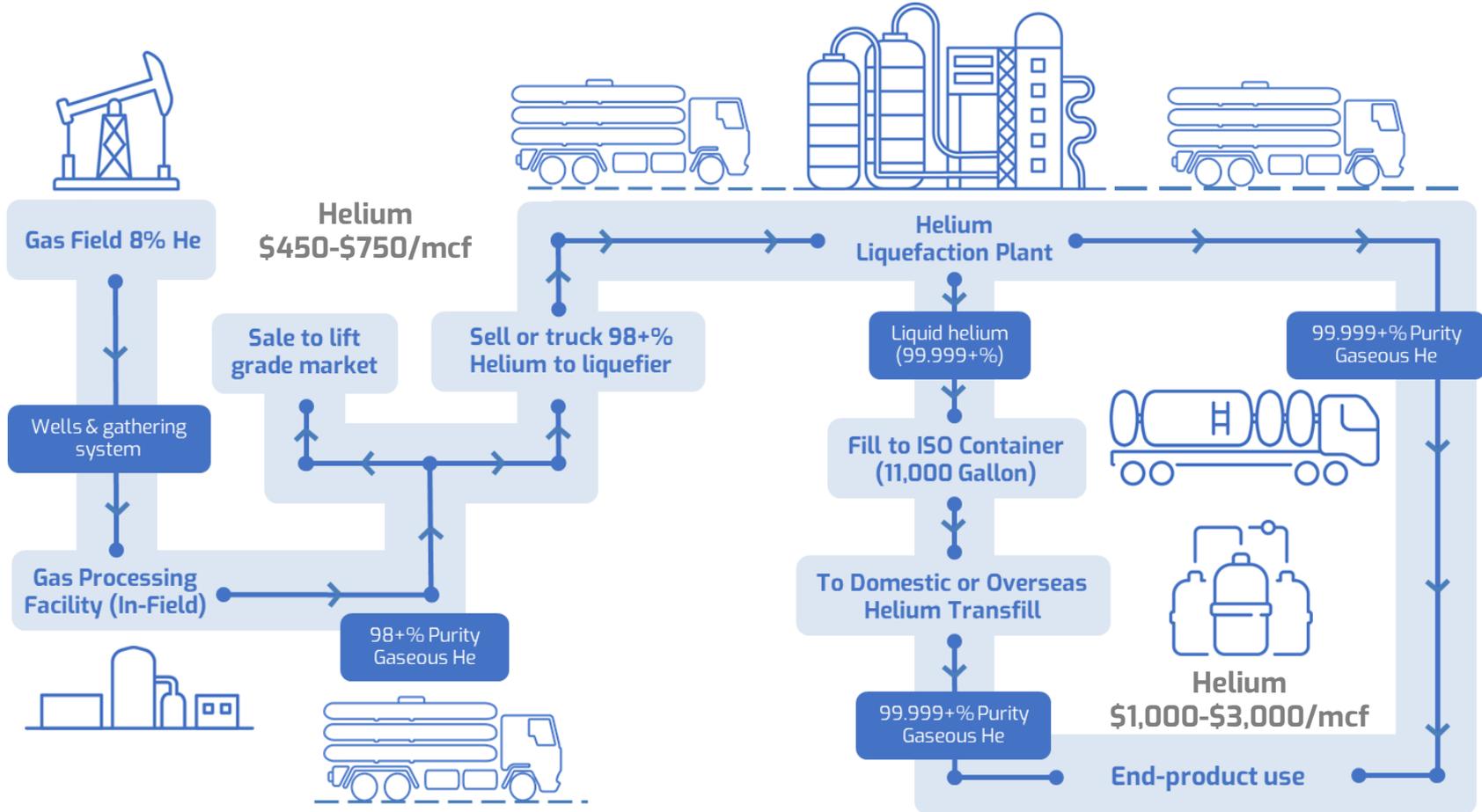
Extensive helium operating and development experience, including most recently as President/COO of US helium E&P business, Tacitus LLC

Scott Fenoglio – Chief Financial Officer

Seasoned executive and industry professional with 20+ years in the oil & gas and financial services industries. Previously the CFO of Ossidiana Energy.

REFINED PRODUCTION PROCESS

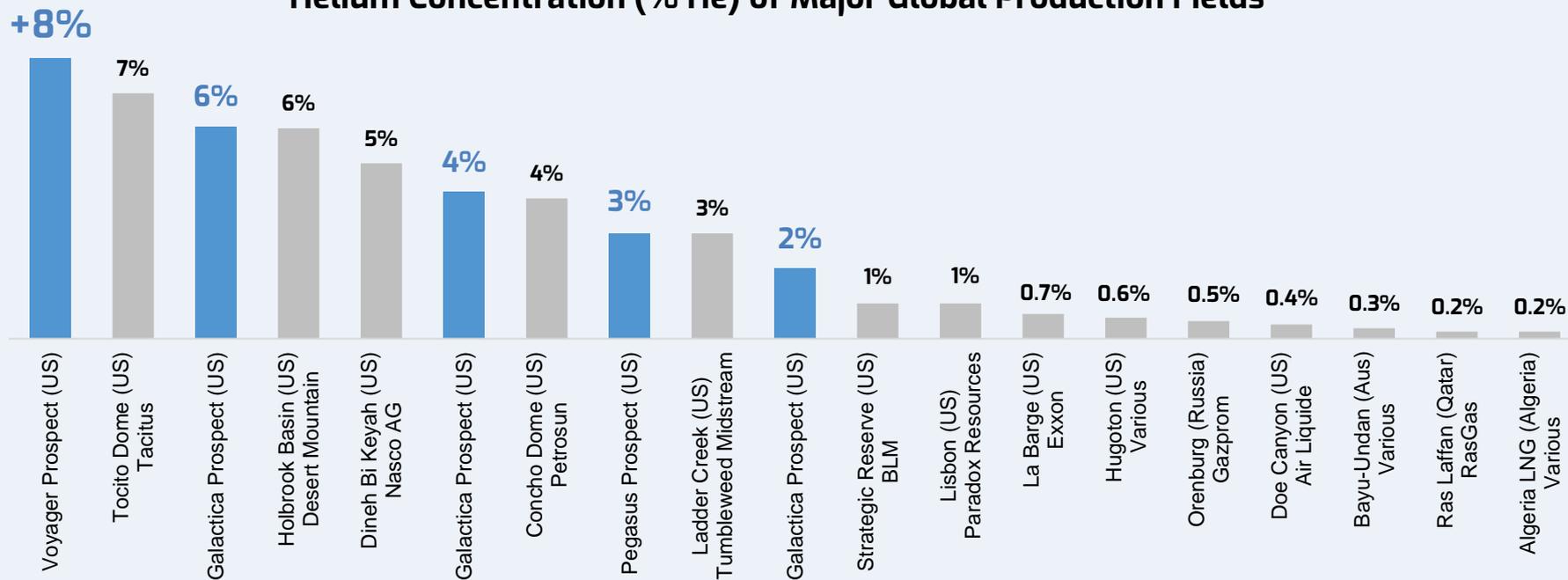
World-class extraction methodology and Helium value chain



... AT STAND-OUT HELIUM GRADES

Globally high helium concentration levels

Helium Concentration (% He) of Major Global Production Fields



STRUCTURAL UNDERSUPPLY IN THE U.S...

Growing helium shortage

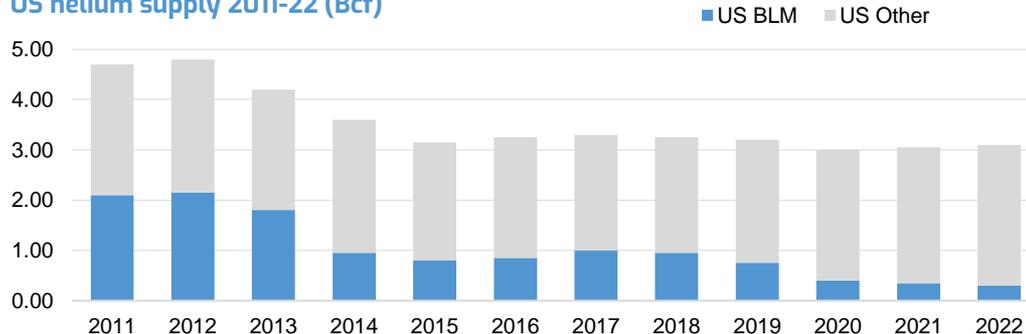
DOMESTIC SUPPLY CHALLENGES

- U.S. strategic reserve (BLM) progressively sold-off – minimal residual
- Supply now critically strained from recent further interruptions globally
- Most worldwide He supply is a by-product of hydrocarbon extraction; price inelastic plus climate targets expected to significantly impact new supply

SURGING DEMAND FROM SEMICONDUCTOR INDUSTRY – DOMESTIC AND OFFSHORE

- Push from U.S. Govt. to dramatically increase domestic semiconductor manufacturing with +US\$50bn investment (security of supply dynamic)
- Semiconductor manufacturers committing to investing +US\$50bn in new fabs in U.S.
- Additional capacity flagged globally from major semi-conductor players

US helium supply 2011-22 (Bcf)



Source: AAAS; US Department of Interior's BLM and Office of Minerals Evaluation, Edison Research, Hannam Partners Research

Current Status: Supply challenged



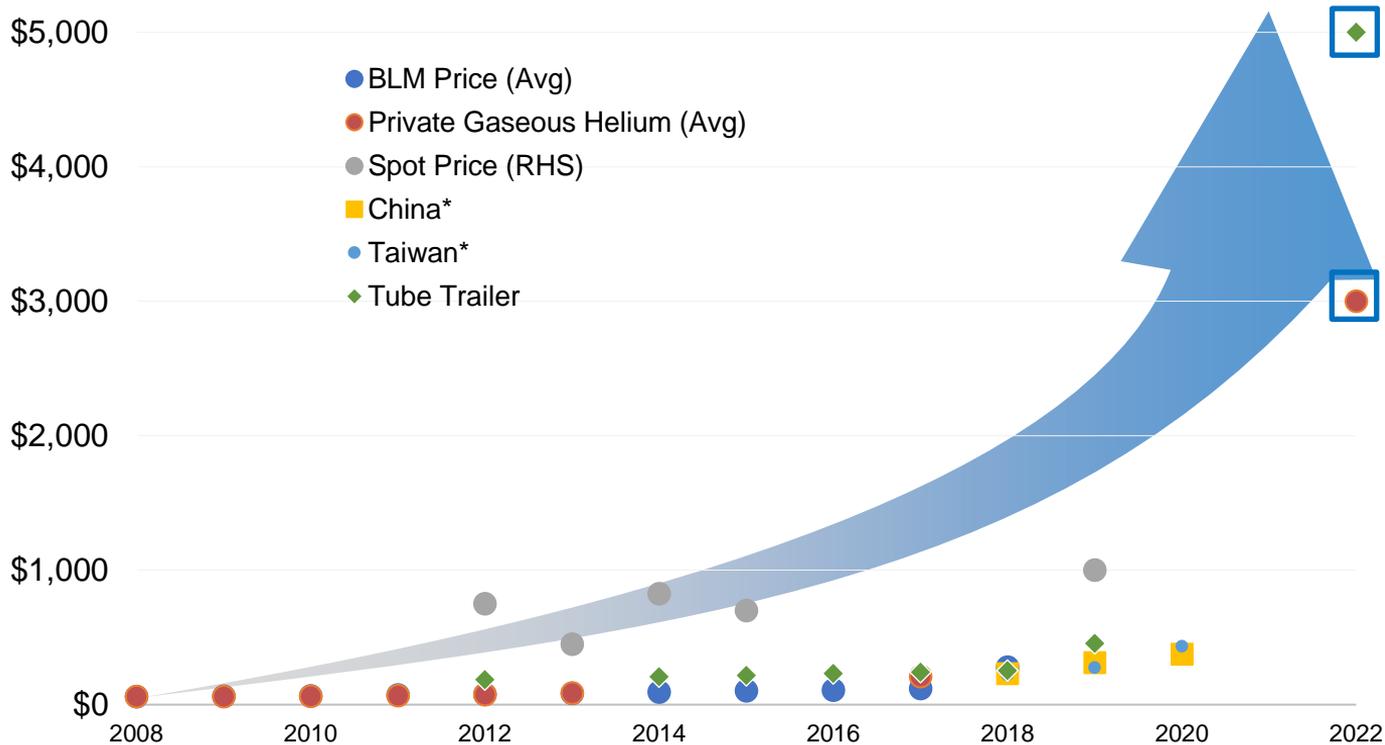
Uncertain global supply outlook following:

- explosion & fires at Gazprom's Amur gas processing plant plus Russian sanctions
- BLM storage facility unplanned stoppages
- Exxon plant 25% supply scheduled summer maintenance
- explosion at Kenawa Haven Plant, Kansas
- Algeria stopped processing helium and re-routed gas feedstock to Europe
- reduced production from Qatar due maintenance shutdown

Several helium majors reportedly declared force majeure and rationing supply to their customers

...HAS SEEN STRONG RECENT PRICE MOMENTUM

Supply shocks and scarcity have delivered fly-up increases in market helium prices



- Scarcity of supply has caused sharp increases in pricing
- Current short term contract and spot prices ranging between US\$650 – US\$3,000/Mcf for 98+% He
- Price (in)elasticity effecting end user ability to buy, with helium being un-substitutable in many applications

Source: BLM, Asian Customs Data, Bancroft Capital Research; private parties

MARKETING STRATEGY

Premium spot and short term market target to deliver optimal, price-of-the-day buyers



Leasing option avoids substantial debt funding and undesirable execution of long-term price-concession offtake contracts



Current spot and tube trailer pricing quotes substantially higher than typical long-term contract pricing



Strategy delivers flexible access to premium helium price markets and enables leverage to tight ongoing supply dynamics