noblehelium.com.au

# Green helium for hi-tech world.



Ready to drill on Q3 2023.



#### Disclaimer

This presentation has been prepared by Noble Helium Limited (ACN 603 664 268) (**Noble Helium** or **Company**) and contains background information about Noble Helium's current situation at the date of this presentation. The presentation is in summary form and does not purport to be all inclusive or complete.

Noble Helium has issue a prospectus dated 18 February 2022 in connection with its proposed initial public offering of shares and listing on the Australian Securities Exchange (**Prospectus**). Accordingly, this presentation should be read in conjunction with the Prospectus. Any person who wishes to apply for shares in Noble Helium will need to apply under the Prospectus by completing an application form accompanying the Prospectus. Comprehensive details regarding Noble Helium and its projects are set out in the Prospectus.

Recipients should conduct their own investigations and perform their own analysis in order to satisfy themselves as to the accuracy and completeness of the information, statements and opinions contained in this presentation. This presentation is for information purposes only. Neither this presentation nor the information contained in it constitutes an offer, invitation, solicitation or recommendation in relation to the purchase or sales of shares or other securities in any jurisdiction. This presentation is not a prospectus, product disclosure statement or other offering document under Australian law (and will not be lodged with the Australian Securities and Investments Commission) or any other law.

This presentation does not constitute investment or financial product advice (nor tax, accounting or legal advice) and has been prepared without taking into account the recipient's investment objectives, financial circumstances or particular needs and the opinions and recommendations in this presentation are not intended to represent recommendations of particular investments to particular persons. Recipients should seek professional advice when deciding if an investment is appropriate. All securities involve risks which include (among others) the risk of adverse or unanticipated market, financial or political developments. Details regarding the risks associated with an investment in the Company are set out in the Prospectus.

This presentation may include forward-looking statements. Forward-looking statements are only predictions and are subject to risks, uncertainties and assumptions which are outside the control of Noble Helium. Actual values, results or events may be materially different to those expressed or implied in this presentation. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements.

No reserves have been assigned in connection with the Company's property interests to date, given their early stage of development. Unrisked Prospective Helium Volumes have been defined. However, estimating helium volumes is subject to significant uncertainties associated with technical data and the interpretation of that data, future commodity prices, and development and operating costs. There can be no guarantee that Noble Helium will successfully convert its helium resource to reserves and produce that estimated volume.

#### Competent Person's Statement

noblehelium.com.au

The prospective volumes are for helium, which are not hydrocarbons. However, Netherland, Sewell & Associates, Inc. have used the definitions and guidelines set forth in the 2018 Petroleum Resources Management System (SPE-PRMS) approved by the Society of Petroleum Engineers as the framework to classify these helium volumes as "prospective". The SPE-PRMS is specifically designed for hydrocarbons, which helium is not, however the principles and methods for hydrocarbon gas resource estimation are directly applicable to helium gas volume estimation.

The prospective helium volumes included in this presentation should not be construed as petroleum reserves, petroleum contingent resources, or petroleum prospective resources. They represent exploration opportunities and quantify the development potential in the event a helium discovery is made. The information in this presentation which relates to prospective helium volumes is based on, and fairly represents, in the form and context in which it appears, information and supporting documents prepared by, or under the supervision of, Alexander Karpov and Zachary Long .

Alexander Karpov is an employee of Netherland, Sewell & Associates, Inc. Alexander Karpov attended Texas A&M University and graduated in 2001 with a Master of Science Degree in Petroleum Engineering, and attended the Moscow Institute of Oil and Gas and graduated in 1992 with a Bachelor of Science Degree in Petroleum Geology. Alexander Karpov is a Licensed Professional Engineer in the State of Texas, United States of America and has in excess of 26 years of experience in petroleum engineering studies and evaluations. Alexander Karpov has sufficient experience to qualify as a qualified petroleum reserves and resources evaluator as defined in the ASX Listing Rules.

Zachary Long is an employee of Netherland, Sewell & Associates, Inc. Zachary Long attended Texas A&M University and graduatedin2005 with a Master of Science Degree in Geophysics, and attended the University of Louisiana at Lafayette and graduated in 2003 with a Bachelor of Science Degree in Geology. Zachary Long is a Licensed Professional Geoscientist in the State of Texas, United States of America and has in excess of 16 years of experience in geological and geophysical studies and evaluations. Zachary Long has sufficient experience to qualify as a qualified petroleum reserves and resources evaluator as defined in the ASX Listing Rules.

Alexander Karpov, Zachary Long and Netherland, Sewell & Associates, Inc. have each consented to the inclusion in this presentation of the matters based on this information in the form and context in which they appear.



#### The pitch

A ground-floor investment in the potential discovery and development of the world's largest green helium reserve.



#### More than balloons and blimps.



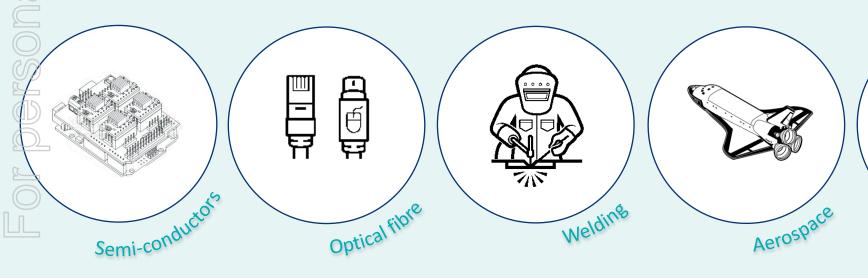


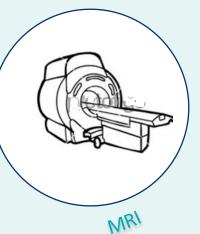


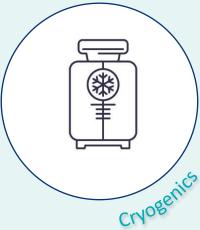


#### There's no technology without helium.

It's an irreplaceable input for many important technologies with significant demand growth from manufacturers of semiconductors used in computers, mobile phones, cars, (even kids' toys).







#### The value of the global helium market is growing.

The global helium market size is expected to grow from an estimated \$5 billion in 2023 to over

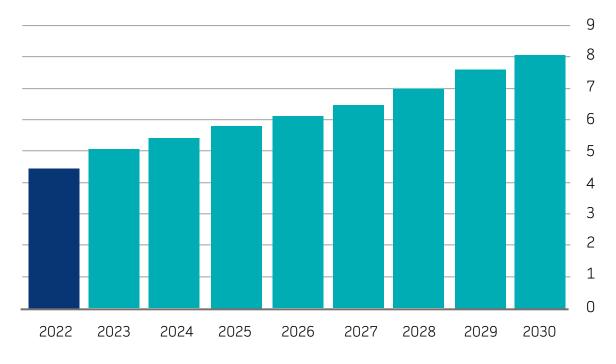
### \$8.00 billion in 2030

at a CAGR of 6.6%.

ASX **NHE** 

Estimated global helium market US\$ billions





**Source:** The Business Research Company, Helium Global Market Report 2023 Published January 2023

## Helium supply is fragile. Very fragile.

Currently experiencing the fourth worldwide helium shortage since 2006.



**USA** - BLM federal reserve depleted



Russia – around one third of world supply by 2027 but troubled by Amur plant startup fires coupled with growing geopolitical tensions.



Qatar – 30% of world supply. Embargoed for six weeks in June 2017



ASX NHE

Algeria – normally 8% of world supply; Skikda LNG feed redirected to Europe.

Decoupling from gas production, and geopolitical diversification is the best solution for a secure global helium supply chain.

## The helium price is surging with transition to market pricing and fragile supply.

March 2023

ASX NHE

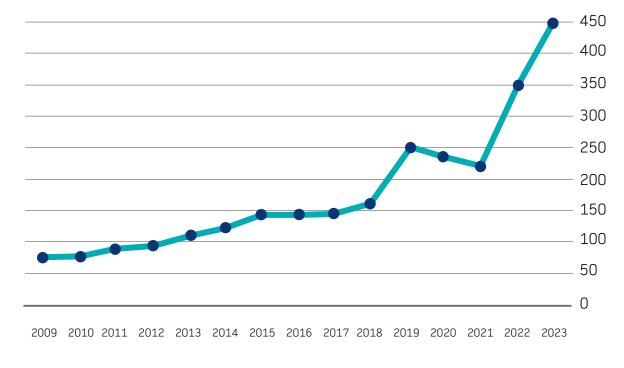
Long-term contract bulk liquid helium pricing

## US\$450/Mscf

That's 50 times the price of LNG!

#### Historical price of bulk liquid helium

US\$/thousand standard cubic feet (Mscf)



Source: Kornbluth Consulting LLC



#### The maths.

As a gas, helium has similar exploration/ production costs per Mscf as traditional oil and gas but requires significantly less capital as much smaller volumes are required for a highly profitable project.

Discovering a 6Bcf recoverable helium resource is a company maker!

## Worked example

To achieve an annual production of

850,000

Mscf of liquid helium

The estimated total CAPEX 2023-2027 would be

US\$305m

And the estimated total OPEX (2027) would be

US\$25m

Estimated ultimate recovery

12Bcf

Over 20 years 33% year 13 to depletion

Pricing

US\$450

Mscf of liquid helium

#### First full year production

	US\$M
Revenue	\$382.50
OPEX	\$25.00
Depreciation	\$15.25
Gross Margin	\$342.25

## Noble Helium is owner operated and led by two oil and gas pioneers.





#### Justyn Wood, Chief Executive Officer

The Exploration Geophysicist who helped put the East African Rift System on the world oil and gas map.

Built Noble Helium over many years and holds more than a third of the company's shares, so is heavily incentivised to deliver value for shareholders.

He knows the ground the company is working on.

Justyn has nearly 30 years of E&P industry experience in both technical and management roles at Hardman Resources, Chevron Australia, Repsol Australia and Oil Company of Australia.

Made key contributions to the first oil discoveries in South America's Guyana margin as well.



#### Shaun Scott, Chairman

Helped pioneer Queensland coal seam gas industry from "novelty" status to a \$20 billion per year export industry.

As CEO of Arrow Energy Ltd, Shaun led the growth of that business from a \$20m coal seam gas explorer until its \$3.5 billion acquisition by Shell and Petro-China.

Highly experienced independent non-executive director on publicly listed and private company boards. Currently a non-executive director of ASX listed Comet Ridge Ltd.



#### Plus we have a wealth of global resources experience in our team.



ASX NHE

#### Kent Masters. Anchor Investor

A core early investor in Noble Helium, Kent is Chairman, CEO and President of Albermarle, one of the world's largest lithium companies.

As former Executive Director of Linde, the world's largest industrial gas company by market share and revenue (capped at ~US\$160B), Kent held responsibility for the Americas, Africa, East Asia, South Pacific. And helium.

He knows his industrial gases and has a network that stretches across the world and includes project developers and off-takers.



#### Professor Andrew Garnett, Non-Exec Director

Prof. Garnett is currently the Director of the University of Queensland's research Centre for Natural Gas (CNG), working closely with the main LNG project proponents in Queensland, Australia. Has over 25 years of international experience in senior technical, management and executive roles in the upstream oil and gas sector including with Shell and Schlumberger.



#### **Eddie King,** Non-Executive Director

Executive and non-executive board member of a number of ASX-listed resources companies., including Bindi Metals, Queensland Pacific Metals, Six Sigma Metals, Pure Minerals, and European Cobalt. Serves as a director of CPS Capital, a corporate finance and stockbroking firm with offices in Perth and Melbourne.



#### We're also working with two of the world's foremost helium geoscientists.

Noble Helium commissioned, and has exclusively licensed, the world's first 'Helium Atlas' from Global Helium Resources, who's two foremost helium experts – Dr. Jon Gluyas of Durham University and Dr. Chris Ballentine of Oxford – were key in its development.

- A detailed global study of helium potential.
- The Atlas has confirmed Tanzania as the most prospective, untested helium system in the world.
- Access to Drs Gluyas and Ballantine and the 'Helium Atlas' will also help Noble Helium in selecting future helium project acquisitions.

We're writing the book on helium. Literally.



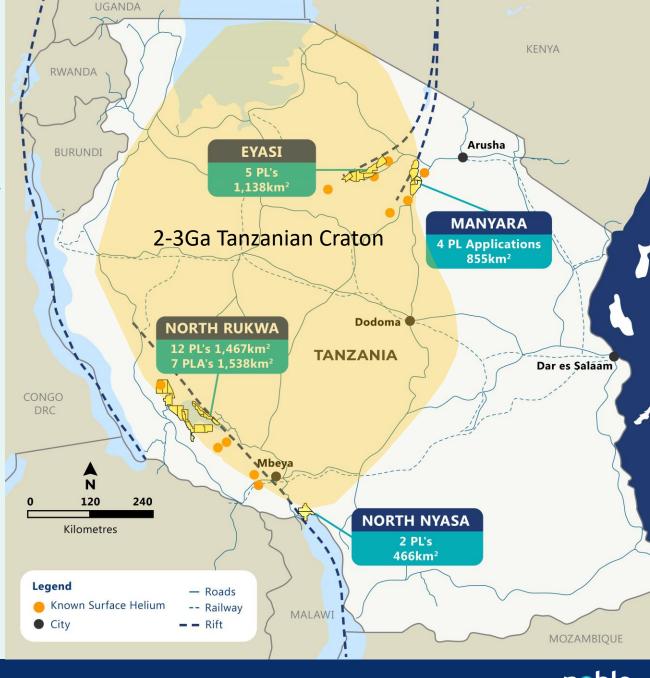


## Four primary helium projects along Tanzania's East African Rift System.

等等[图]建设在第四门的现在分词

If Noble's resource can be proven, it has the tential to be the world's third largest helium reserve behind the USA and Qatar, and the targest ever helium reserve not associated with hydrocarbons.



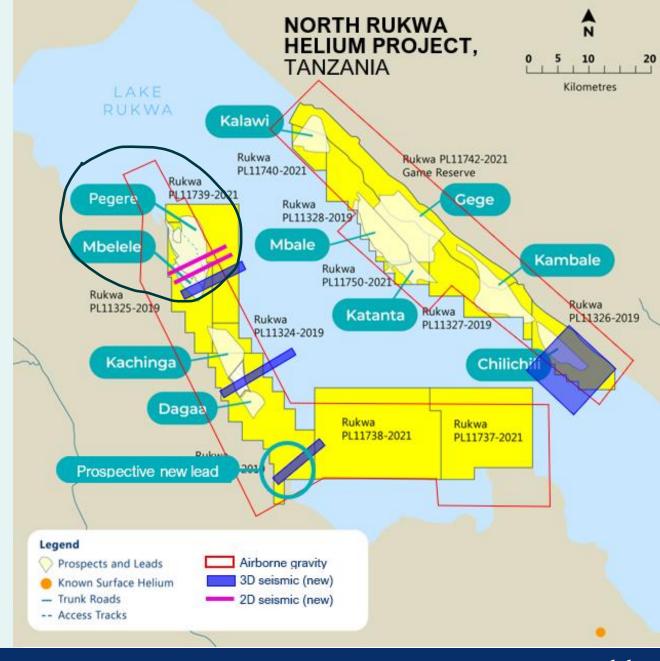




## We're drilling our first two holes next quarter.

The two targets, Mbelele-1 and Pegere-1, host a combined unrisked mean recoverable helium lume of **16.5 billion cubic feet**, representing less than 10% of the North Rukwa Project's helium resource.





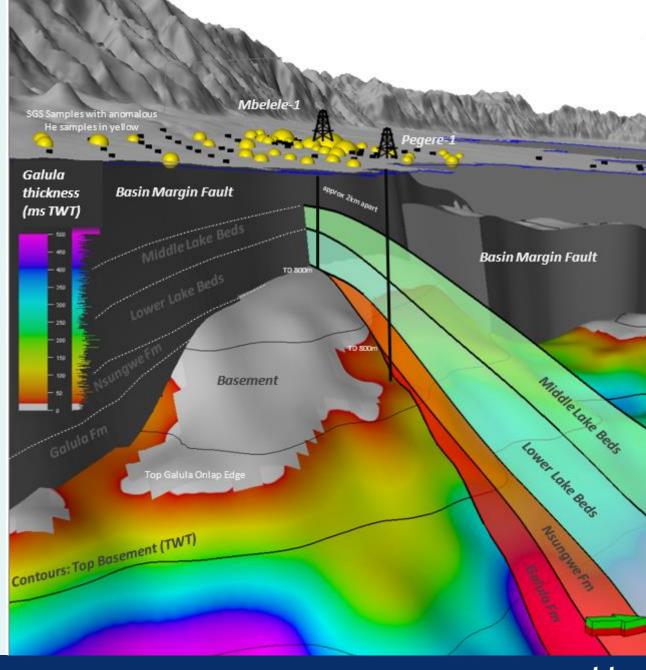


## We've spent seven years pinpointing these wells.

- Selected for their high probability of discovering gas-phase helium.
- Pegere-1 will offer the opportunity to also be an appraisal well for Mbelele-1.
- Rig secured.

ASX NHE

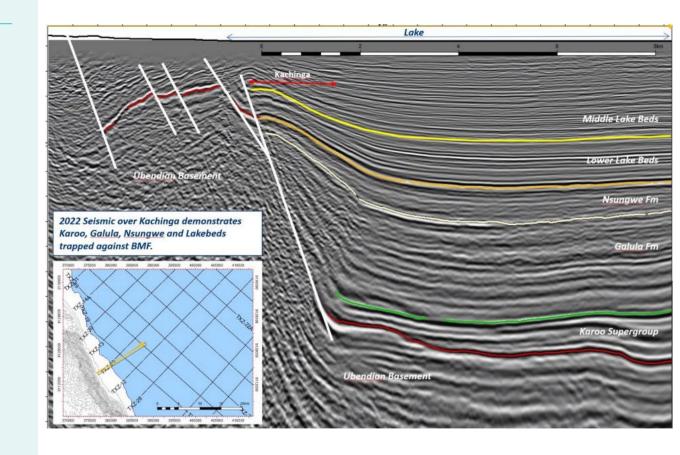
Farm-out partners shortlisted.





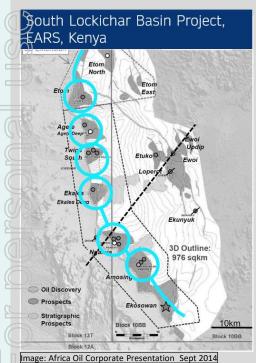
### Another large BMFC added to the potential drillable prospect inventory.

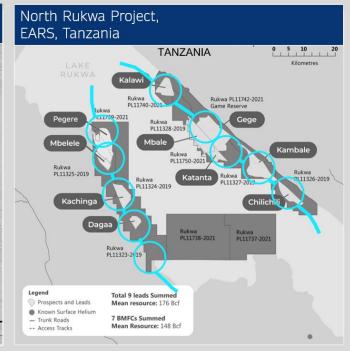
- Recent seismic and geophysical data confirms Kachinga and Dagaa are one, large Basin Margin Fault Closure (BMFC) Lead with a Companyestimated summed unrisked mean Prospective Helium Resource of 22.5Bcf.
- A new Lead identified in the south of the North Rukwa basin continues to build analogy to other (1) "String of Pearls" plays previously discovered along the East African Rift System.





## We're confident we have a "String of Pearls" play.





### A little geology lesson won't hurt you.

- Tanzania's Rukwa Basin, which hosts the North Rukwa Project's potentially world-scale helium resource, lies within the East African Rift System (EARS). In Uganda and Kenya, the EARS has a 80% success rate from nearly 40 exploration wells, including a 100% success rate in Basin Margin Fault Closures for oil and gas wells (14 from 14) since first oil in 2006.
- EARS discoveries often present as a "String of Pearls" play made up of multiple successful wells along a trend.
- Another EARS company, Africa Oil Corp, hit a "String of Pearls" in 2012 when a successful result from its first lead was replicated along a string of leads (See Figure 3 Below).
- Noble Helium's exploration to date has discovered up to 10 leads along two strings, one on each side of the North Rukwa Project where there are Basin Margin Fault Closures. Our thesis is that if a successful result can be delivered on the first "pearl"/drillhole, there is a higher likelihood the other geologically similar pearls will deliver as well.

#### Easy path to market.

- Helium liquefaction plant on site.
- Truck midstream liquid helium iso-containers on black-top road to Port of Dar es Salaam for global distribution.
- Direct access to national power grid and water (Lake Rukwa)





### Our green helium doesn't come from fossil fuels.

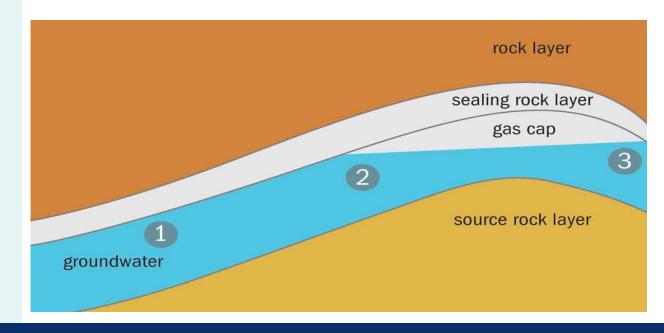
Surface gas sampling in and around the Noble's tenements indicate that helium trapped Inderground is "Green Helium" (associated with mitrogen rather than hydrocarbon gas).

- 95% of the world's current helium supply is associated with fossil fuel energy production.
- Critical materials such as green helium has sustainability credentials which are highly desirable.



#### Primary or Green Helium

In Tanzania, Primary Helium is being released from basement with Nitrogen and being trapped as a mixed gas in layers of reservoir and seal rocks, just like a conventional natural (methane) gas field.



## Host communities at our heart.

They win. We win.

Tanzania has long been regarded one of the most stable places in Africa to do business.

- Recent uncertainties have now been resolved.
- President Samia Hassan is returning Tanzania to stability and attracting foreign investment. Two \$200m mines announced, BHP farmin and recently the US\$30b LNG green light.

#### Knowledge transfer and community engagement programs

- 100% Tanzanian national FTEs incl Country Manager Joe Uisso.
- 3 x Geotechnical studies with University of Dar es Salaam.
- 160 locals directly employed on 3D seismic program.
- Sponsored a training course on geophysical exploration techniques for Students from University of Dar es Salaam.
- Stationery and sports equipment donations eight schools.
- Upgraded Gua–Isome road providing locals with vehicle access for first time.











#### Corporate snapshot.



Shares on issue

223m

19 April 2023

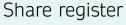
Cash

A\$6.2m

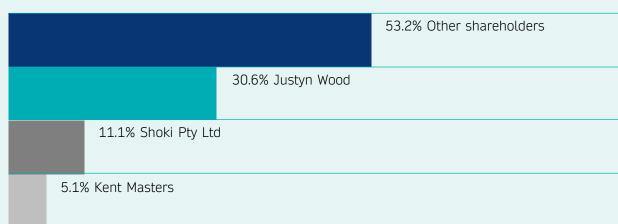
31 December 2022

Total options

31 December 2022



Figures shown are approximate as at 3 February 2023



#### Invest in the future of helium.

A ground-floor investment in the potential discovery and development of the world's largest green helium reserve.

Drilling in Q3.



#### Contact

T: + 61 (0)8 9481 0389

(E.; info@noblehelium.com.au

#### Registered Office

ASX NHE

Noble Helium Limited

Level 8, London House

216 St. Georges Terrace, Perth

Western Australia 6000