

2022 Operational Review & 2023 Forward Plans

Highlights

- All planned programs for 2022 completed or approaching completion, in time to inform the 2023 drilling program
- New data and studies confirm the extraordinary helium prospectivity of the North Rukwa and potential for a global-scale primary helium resource
- Eyasi licences awarded
- North Nyasa licences demonstrate good helium potential from early studies
- Process to select top two drill options in North Rukwa underway following completion of 3D seismic program
- Drilling Manager and team in place for North Rukwa drilling program early Q3 2023 with multiple rig options under consideration
- Fully funded through drilling preparations, with farmout process underway – multiple interested parties with professional support group LAB Energy Advisors LLC engaged to ensure competitive process

Noble Helium Limited (ASX:NHE) (“Noble Helium”, “NHE” or “the Company”) is pleased to provide an operational update on its exploration activities in Tanzania.

The key focus of the Company in 2022 was to advance exploration activities at its flagship North Rukwa Project, with the aim of addressing every structural closure for its helium prospectivity to ensure selection of the two most promising drill candidates in 2023.

Noble Helium’s Co-Founder and CEO, Justyn Wood, commented:

“It has been a transformative year for the Company. After successfully listing on the ASX, we have systematically executed our exploration program while building key relationships and capacity. It is extremely satisfying that the results of all this work appear to confirm the extraordinary primary helium prospectivity of the North Rukwa basin.

“In closing, I wish to thank all members of our team, both employees and advisors. It has been a busy year, but with the skills and depth of experience we have onboard, we’ve executed a well-designed, efficient, and effective program that has placed the Company in a strong position for a very successful 2023. It takes a quality team to make this happen.”

For personal use only

North Rukwa Exploration

During the year, the Company systematically completed a series of exploration programs designed to address each component of the helium system of the North Rukwa and understand the basin’s potential for primary helium, particularly within its Basin Margin Fault Closures (BMFCs). The new data and study results, combined with the legacy oil and gas exploration data, have confirmed the extraordinary primary helium prospectivity of the North Rukwa area and its potential for a global-scale primary helium resource.

Data from the Airborne Gravity Gradiometry, Soil Gas Survey, and 3D seismic, along with geotechnical studies undertaken in partnership with the University of Dar es Salaam, James Cook University and Oxford University are now being incorporated into the Company’s Petrel™ based geological model to develop the two best drilling options for 2023.

Noble Helium has commenced preparations for the upcoming drilling campaign, with a seasoned drilling manager and team now in place, targeting commencement of drilling in Q3 2023. The Company is fully funded through these drilling preparations and a farmout process is underway, with multiple parties expressing interest.

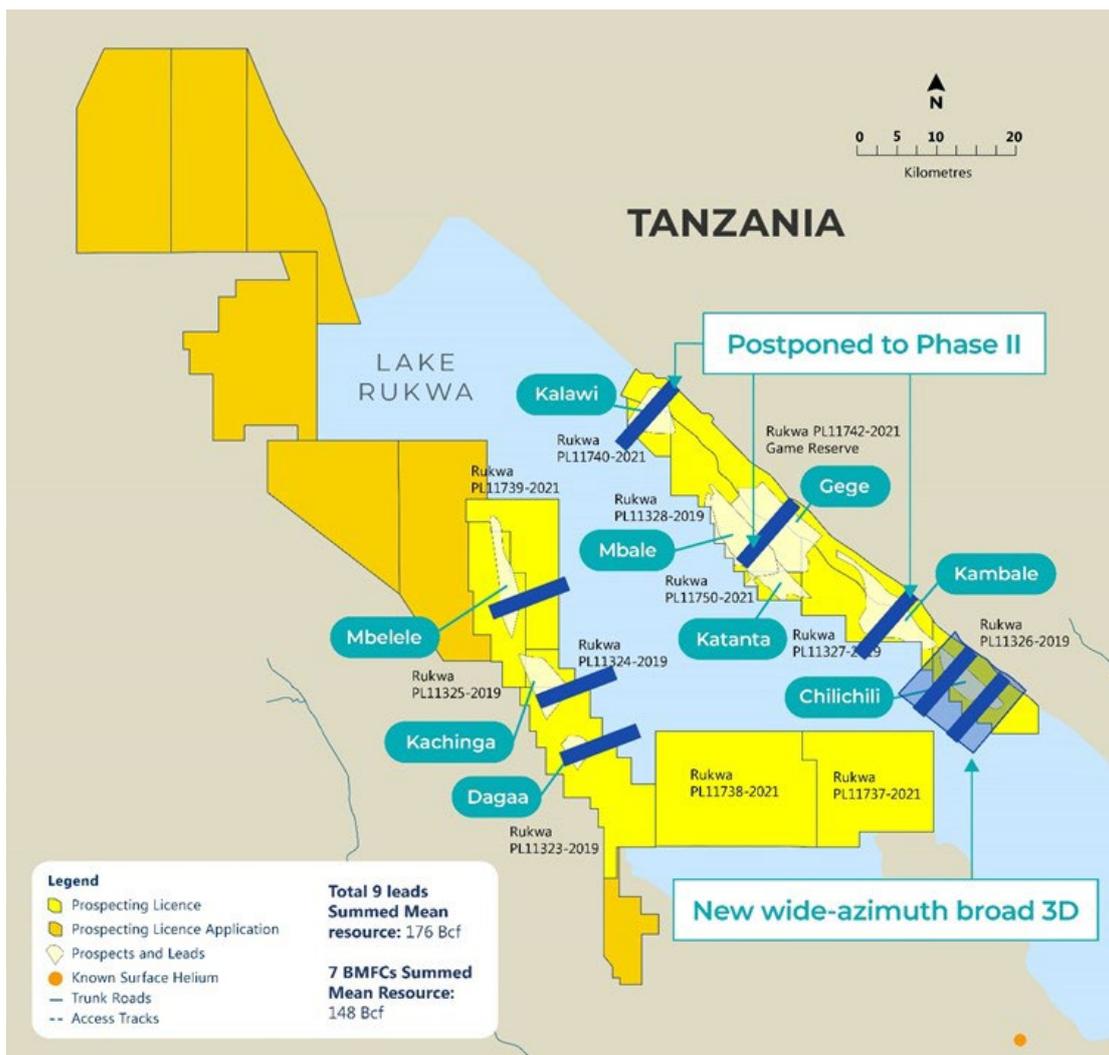


Figure 1 – North Rukwa Project Tenement and approximate 3D Seismic Swath Locations

For personal use only

North Nyasa and Eyasi Projects

The University of Dar es Salaam also successfully completed a Soil Gas Survey over the North Nyasa Project in Q4 2022. The results demonstrate areas of anomalous helium concentrations at up to 7.8 parts per million (ppm), or over 40% above background. This additional helium can only be explained as the result of micro-seepage from underground, supporting the North Nyasa project's helium prospectivity.

The Company will now carry out a detailed analysis of the North Nyasa SGS data. In combination with the legacy airborne gravity gradiometry and 2D seismic exploration dataset, the Company has a goal to develop a Prospective Resource Estimate in 2023, following the same process that achieved an independently certified unrisked summed mean Helium Prospective Resource of 176BCF at the Company's North Rukwa Helium Project.

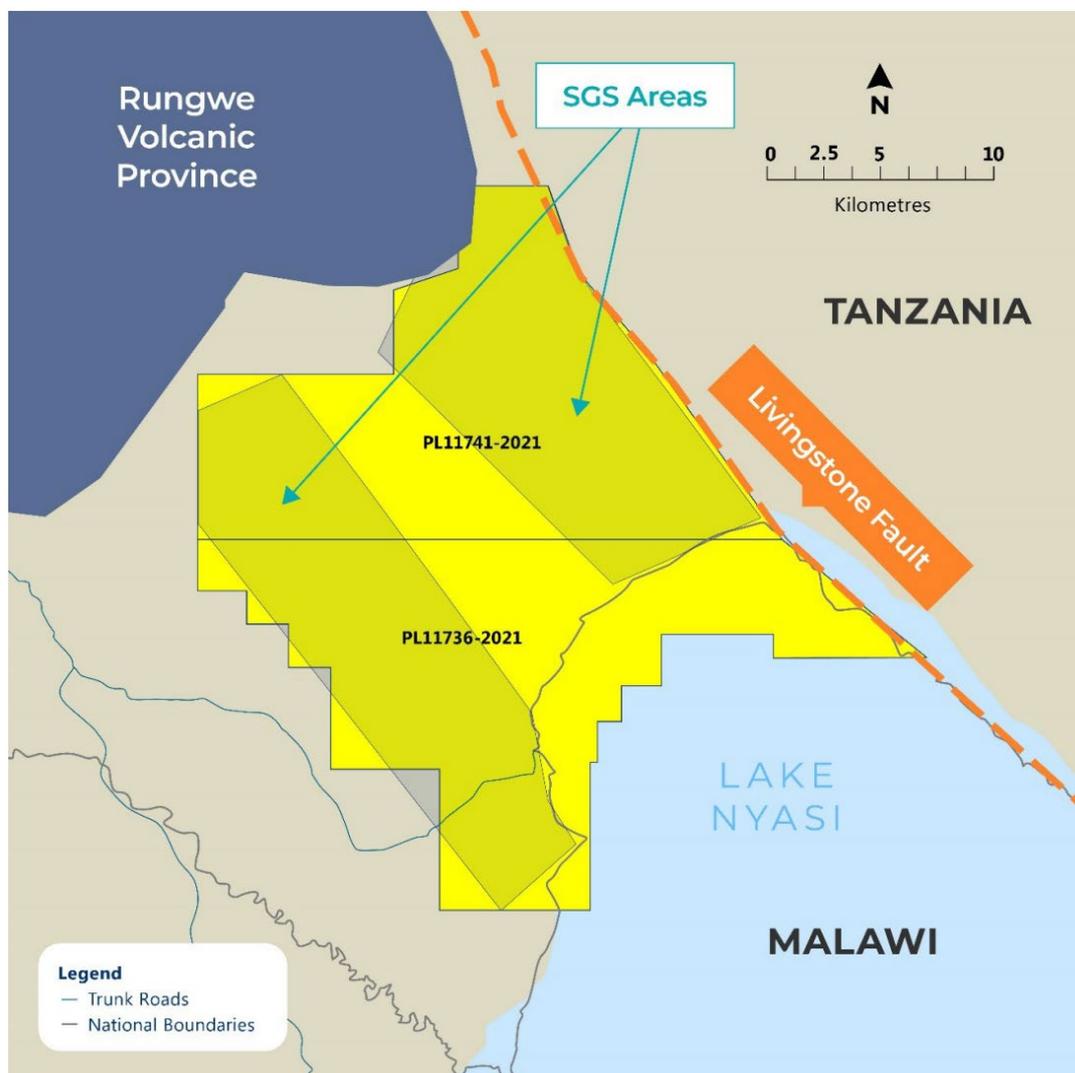


Figure 2 – North Nyasa Project Tenement Area

In August 2022, Noble Helium's wholly owned subsidiary, Antares Tanzania Limited, was awarded five new PL's totalling 1,138km² in the Eyasi Basin, in northern Tanzania. The Eyasi Basin is located in the eastern arm of the East African Rift, with many geological similarities

For personal use only

to the Company's highly prospective Rukwa Basin holdings. Helium has been measured in Eyasi basin hot springs at up to 5.7%, versus the widely held onshore US commercial cut-off of 0.3%. The Company is now preparing for exploration activities in the next dry season, aiming to establish a prospective helium resource by the end of 2023.

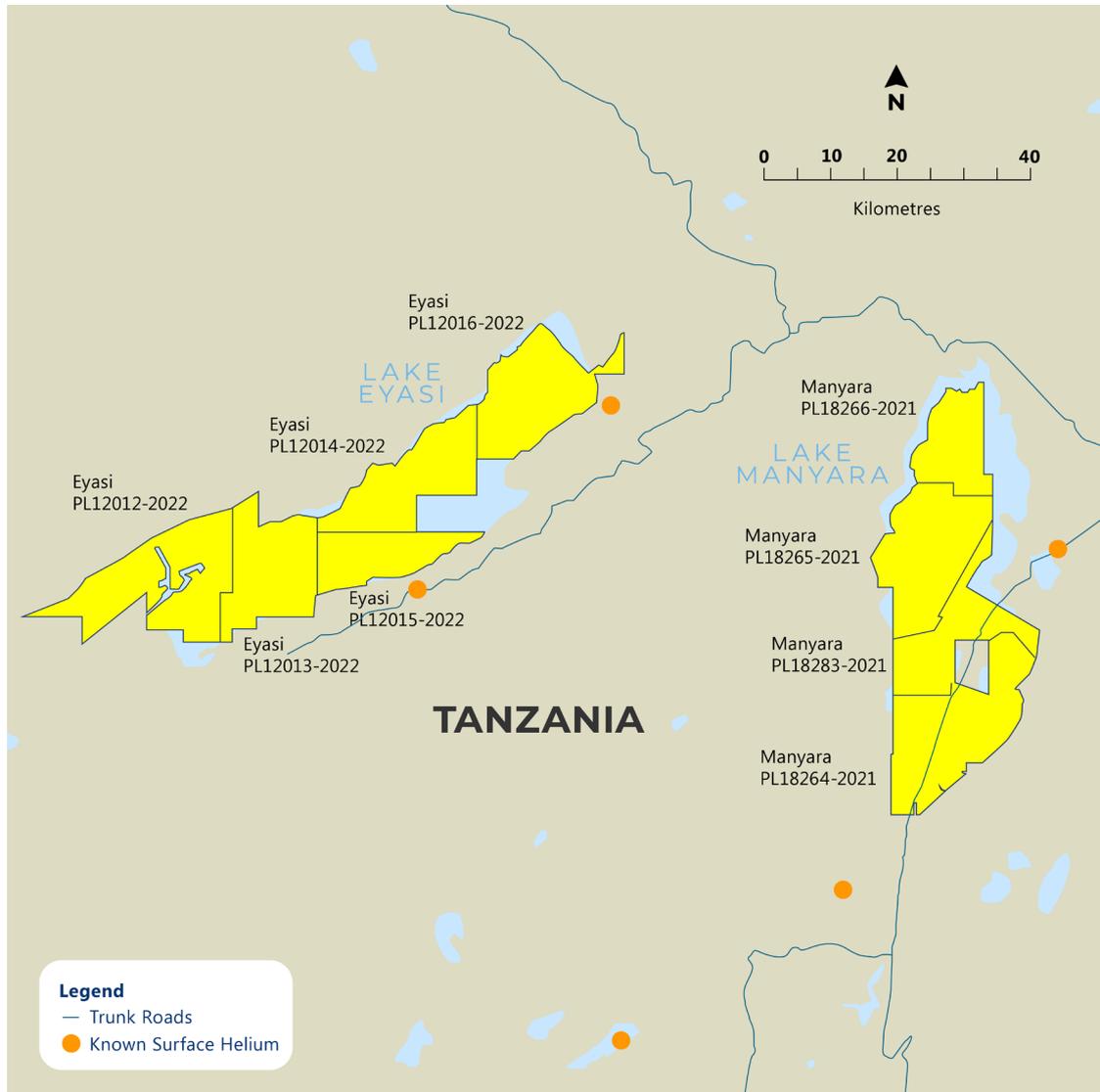


Figure 3 – New Eyasi Basin PL's and Manyara Basin PL Applications

Near Term News Flow

With the Company now preparing to drill in the North Rukwa in Q3 2023, the following activities are expected to be released to the market over the coming months:

- Detailed announcement of drilling candidates for the 2023 campaign
- Completion of North Rukwa farmout process
- Execution of rig contract

This announcement has been authorised for release on ASX by the Company's Board of Directors.

For further information:

Justyn Wood

Co-Founder and CEO

E: justyn@noblehelium.com.au

M: +61 410 626 261

Zander Beacham

White Noise Communications

E: zander@whitenoisecomms.com

M: +61 433 515 723

Disclaimer

Forward-looking statements

This announcement may contain certain "forward-looking statements". Forward looking statements can generally be identified by the use of forward-looking words such as, "expect", "should", "could", "may", "predict", "plan", "will", "believe", "forecast", "estimate", "target" and other similar expressions. Indications of, and guidance on, future earnings and financial position and performance are also forward-looking statements. Forward-looking statements, opinions and estimates provided in this presentation are based on assumptions and contingencies which are subject to change without notice, as are statements about market and industry trends, which are based on interpretations of current market conditions. Forward-looking statements including projections, guidance on future earnings and estimates are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance.

For personal use only

About Noble Helium

Noble Helium is a Tanzania-focused helium explorer looking to provide carbon-free and geopolitical-free helium to the global market for this scarce, tech-critical and high-value industrial gas. Noble Helium has a substantial landholding of premium helium exploration acreage totalling 5,464km² across four key project areas in the East African Rift System (EARS) basins of Tanzania: North Rukwa, North Nyasa, Eyasi and Manyara.

The Company's flagship project, North Rukwa, already has an independently certified, summed unrisked mean Prospective Helium Resource of 176 billion cubic feet (equivalent to approximately 30 years' supply), with the benefit of legacy oil and gas exploration data. Rukwa Basin has the potential to be the world's third largest helium reserve behind USA and Qatar.

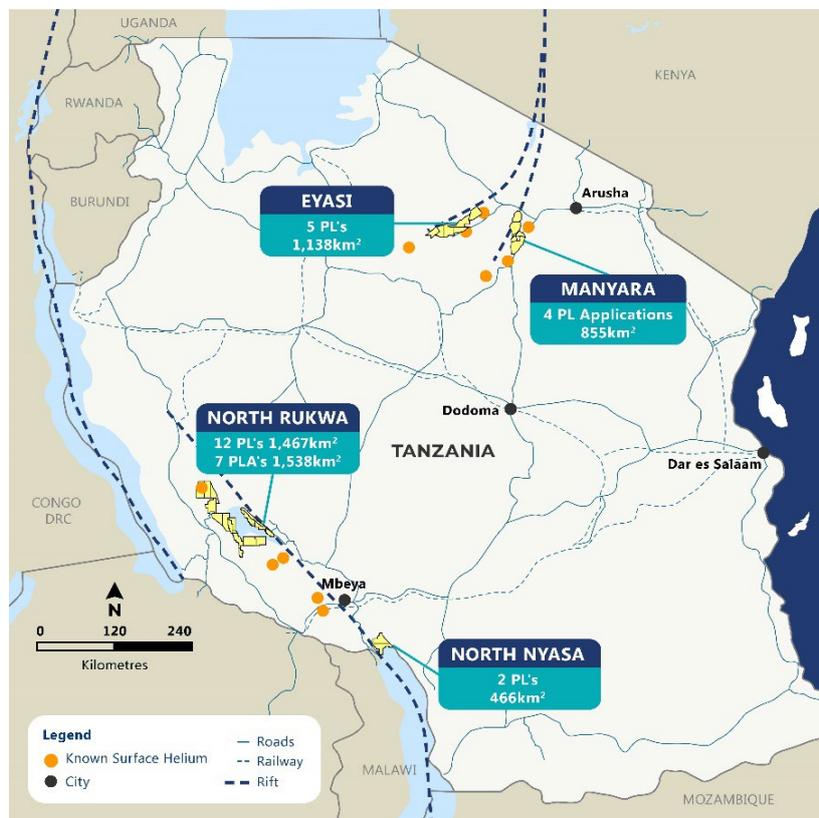


Figure 4 – Noble Helium Project Locations

The potential for helium to have been retained within the rift basins of Tanzania is considered significant. After the first oil discoveries in Uganda in 2006, in which Noble Helium's CEO played a key role, a succession of oil and gas exploration wells in the EARS basins of Uganda and Kenya demonstrated an extraordinary discovery rate of 80%, or 4 in 5 from over 30 wells. More than 4 Billion BOE has been proven, and both countries are now progressing to commercial production.

Neighbouring Rukwa Basin explorer Helium One Global plc has recently announced plans to redrill its Tai-1 well, which demonstrated multiple helium shows from surface to basement in August 2021. Tai-1 is located 30km to the south of the Company's licences.

Additionally, Noble Helium has commissioned the first ever helium Atlas, with an exclusive five-year agreement allowing the Company to identify additional prospective areas to target for diversification. The helium Atlas uniquely positions Noble Helium as a world leading helium explorer.