Green helium for a high-tech world.

ASX Release

25 July 2023

Mbelele Resource Increase

Highlights

- Seismic "DHIs" result in significant internal resource estimate increase at Mbelele Prospect
- Maiden drilling program to focus on Mbelele with two wells to accelerate path to commercialisation

Noble Helium Limited (ASX:NHE) ("Noble Helium" or **"the Company") provides an update on the targets for the upcoming drilling campaign at its North Rukwa Project in Tanzania, which continues to proceed as planned for spud in Q3 2023.**

Noble Helium Chief Executive and Co-Founder, Mr Justyn Wood commented:
"*As a large, standalone BMFC with two independent sub-culminations, the Mbelele Prospect has matured to be the ideal first test of the helium system in the Company's North Rukwa Prospecting Licences."*

"While there is always risk in exploration, thanks to a comprehensive de-risking campaign, new data and now our upward-revised internal pre-drill volume estimates present a compelling argument to focus on Mbelele in our maiden drilling campaign. A discovery at Mbelele-1 will be immediately appraised 4km away at Mbelele-2, to support potential early commercialisation that would fund further drilling at Pegere, Kachinga, Chilichili."

"With all of the components of the drilling program now in place, and commercialisation options emerging, we look forward to providing regular updates to the market in our progression toward spudding Mbelele-1 in just two months."

As previously announced, the Mbelele 3D depth volume is demonstrating multiple, laterally persistent, horizontal amplitude shutoffs in Neogene sediments within the Basin Margin Fault Closure (BMFC). Such seismic responses are consistent with independent gas-water contacts at multiple levels[1]. The Company has continued to reprocess, review and interpret the new 3D and 2D seismic data at Mbelele Prospect (Figures 1 and 2), resulting in a significant upgrade to the Company's internal view of the unrisked helium prospective resource, up from a mean 8.1 Bcf to a mean resource of 15.7 Bcf, comparable to the previously announced 16.5 Bcf summed mean for both the Mbelele and Pegere Prospects. The Company will provide an independently certified Resource once

[1] Refer ASX release dated 22 May 2023 *North Rukwa Project Operational Update*

helium concentrations, flow rates and other volumetric parameters for the greater Mbelele structure have been measured in the upcoming wells.

Mbelele now clearly represents a potential standalone helium development targeting circa US$7billion in the ground at the current long term bulk liquid helium price of US$450/Mscf. This commercialisation opportunity could place the Company in production in just 12 to 18 months from discovery, with little CAPEX required. To support this objective the Company will now drill two wells at the Mbelele Prospect during its upcoming maiden North Rukwa campaign, rather than the previously advised plan to drill one exploration well at Mbelele and a second at Pegere[2].

Near-term follow up BMFC targets on the North Rukwa's western margin "String of Pearls" include the Pegere Prospect (mean resource 8.5 Bcf), the combined Kachinga/Dagaa Prospect (mean 22.5 Bcf). BMFCs on the eastern margin include Chilichili (mean 10.5 Bcf) and Kambale (mean 20.7 Bcf). Fourteen BMFCs have been drilled for oil and gas in the rift basins of the East African Rift System since 2006, with an extraordinary 100% success rate - 14 discoveries from 14 wells.

The Mbelele Wells

Mbelele-1 will be drilled to TD of circa 500m, targeting Upper, Middle and the top of Lower Lake Bed formations, each of which demonstrate potential gas-related responses in the new seismic at the uppermost culmination of the Mbelele BMFC structure (Figure 1) such as push-down, frequency loss and phase reversals.

Mbelele-2 will appraise the same Mbelele-1 reservoirs approximately 4km southeast and approximately 100m down-dip (Figure 1). Similar to Mbelele-1, the upper section at Mbelele-2 displays potential gas-related seismic responses within the greater Mbelele structure such as common-depth amplitude terminations (Figure 2) with coincident AVO anomalies.

Helium anomalies in the overlying soil gas coincident with the Mbelele structure can only be the result of micro-seepage of helium from the subsurface. Charge modelling by Oxford University indicates the helium to be in gas phase, contained within predominantly nitrogen gas. The Oxford modelling suggests we should see helium concentrations of 3-5% at Mbelele.

In addition to the appraisal component, Mbelele-2 will be drilled to a TD of approximately 850m, targeting reservoirs of the Lower Lake Beds, which as previously announced demonstrate potential gas-related responses in the new 3D seismic such as multiple flat amplitude shutoffs and AVO anomalies (Figure 2). These potential multiple gas-water contacts / gas pools within the BMFC represent significant resource upside that had not been factored into the earlier Mbelele internal mean Prospective Resource of 8.1 Bcf.

[2] Refer ASX release dated 23 March 2023 *Two targets identified for maiden drilling program Q3 2023*

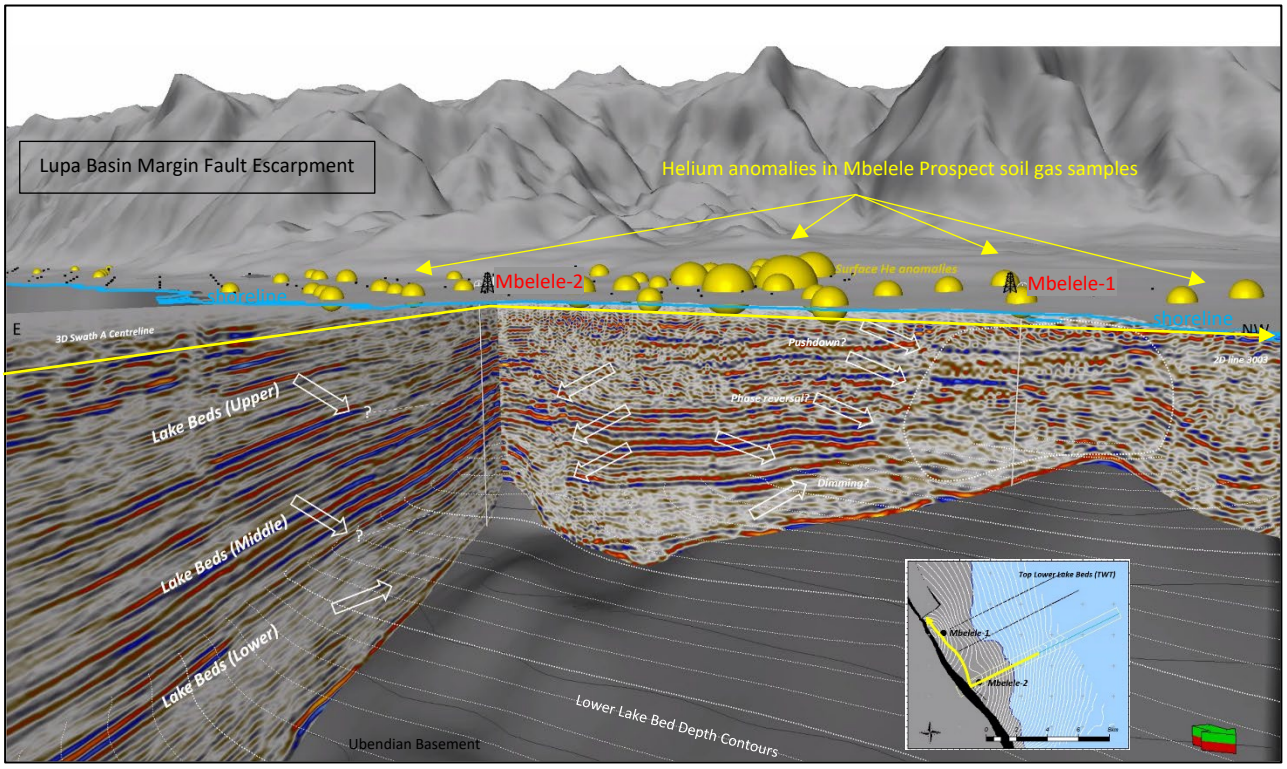

Figure 1. Mbelele well locations on 3D & 2D seismic, showing potential gas-related responses.

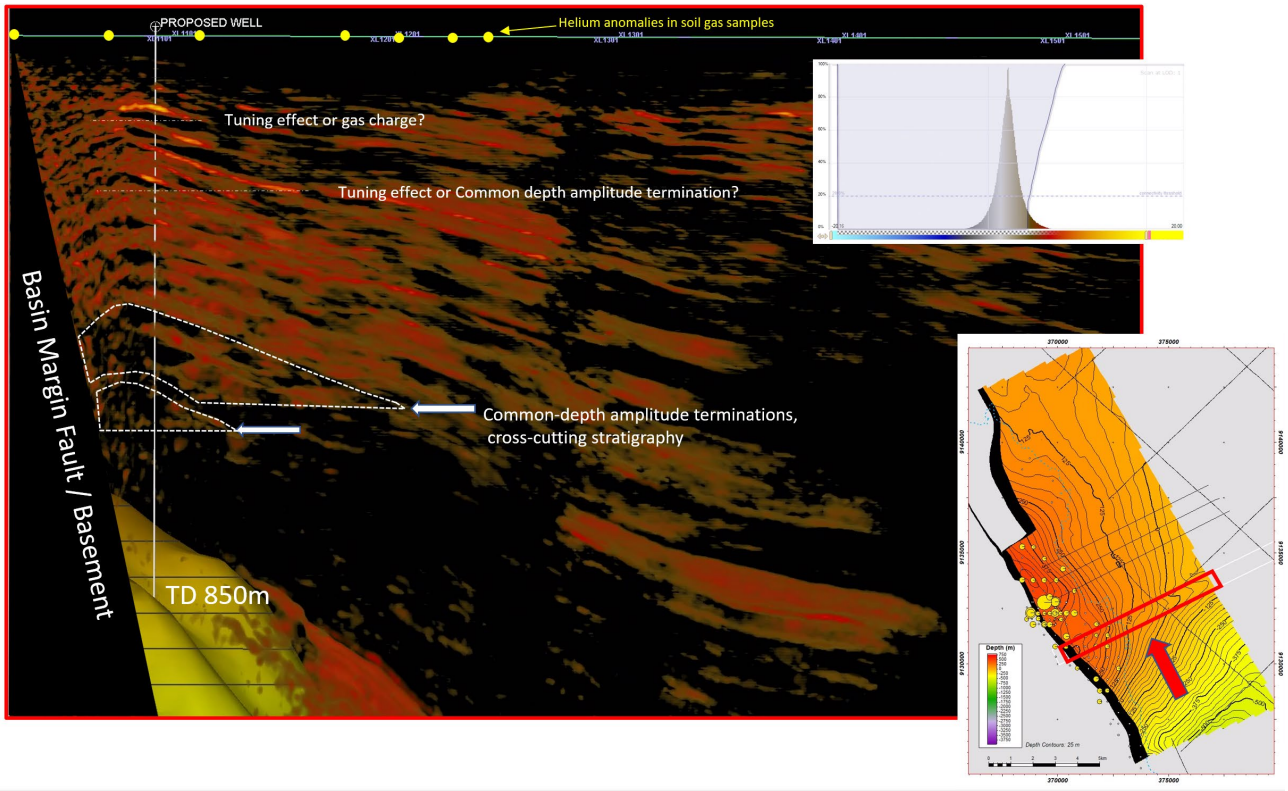

Figure 2. Spatial Stack of Mbelele 3D seismic swath, demonstrating potential gas presence in the subsurface reservoirs, with helium anomalies in the overlying soil gas samples.

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

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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.

Competent Persons Statement

The technical information provided in this announcement has been compiled by Mr. Ashley Howlett, Exploration Manager, Professor Andrew Garnett, Non-Executive Director, and Mr. Justyn Wood, Chief Executive Officer, all of Noble Helium Limited. The resource estimates have been prepared in accordance with the definitions and guidelines set forth in the Petroleum Resources Management System, 2018, approved by the Society of Petroleum Engineers.

Mr Howlett is a qualified geologist with over 20 years technical, and management experience in exploration for, appraisal and development of, oil and gas resources. Mr Howlett has reviewed the results, procedures and data contained in this announcement and consents to the inclusion in this announcement of the matters based on the information in the form and context in which it appears.

Cautionary Statement for Prospective Resource Estimates

With respect to the Prospective Resource estimates contained within this report, it should be noted that the estimated quantities of gas that may potentially be recovered by the future application of a development project relate to undiscovered accumulations. These estimates have an associated risk of discovery and risk of development. Further exploration and appraisal is required to determine the existence of a significant quantity of potentially moveable helium.

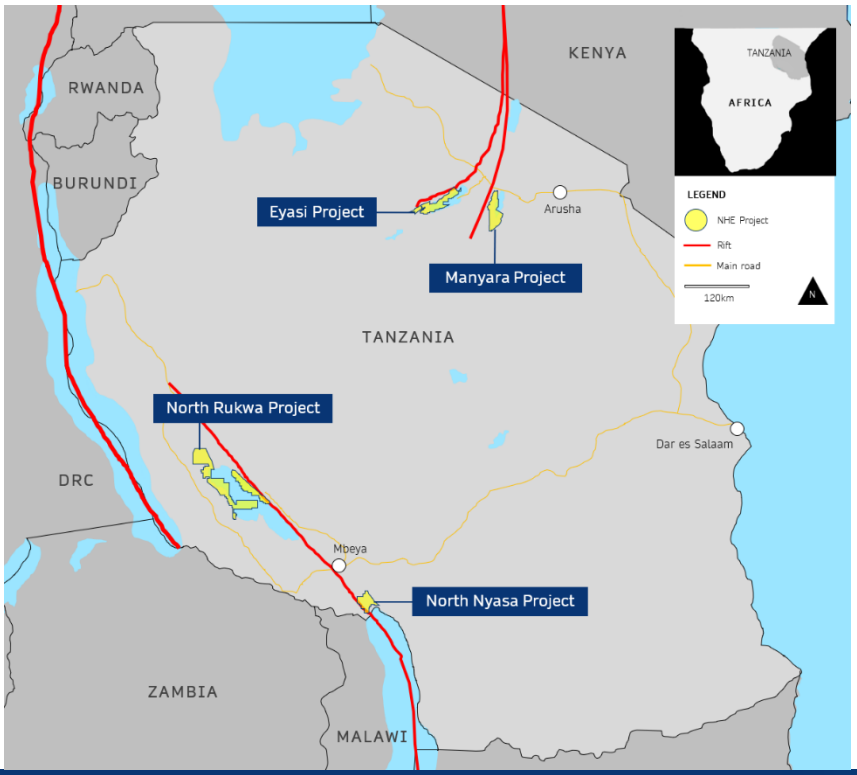
Green helium for a high-tech world.

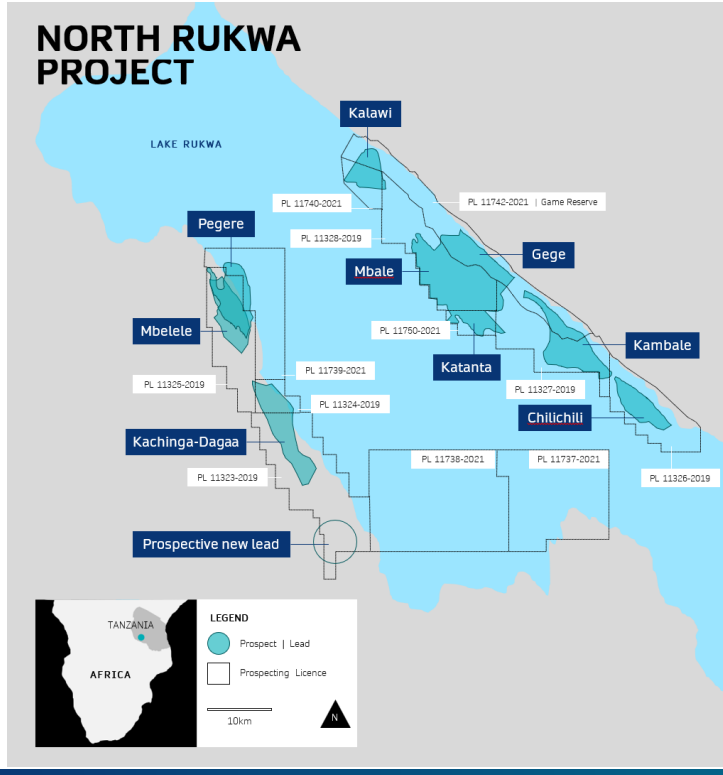
Noble Helium is answering the world's growing need for a primary, ideally carbon-free, and geo-politically independent source of helium. Located along Tanzania's East African Rift System, the Company's four projects are being advanced according to the highest ESG benchmarks to serve the increasing supply chain fragility and supply-demand imbalance for this scarce, tech-critical and high-value industrial gas.

Our flagship North Rukwa Project has an independently certified, summed unrisked mean Prospective Helium Resource of 176 billion cubic feet (equivalent to approximately 30 years' supply). The project lies within the Rukwa Basin, which has the potential to be the world's third largest helium reserve behind USA and Qatar.

Priced at up to 50 times the price of LNG in liquid form, helium is now essential to many modern applications as an irreplaceable element in vital hi-tech products such as computer and smartphone components, MRI systems, medical treatments, superconducting magnets, fibre optic cables, microscopes, particle accelerators, and space rocket launches – NASA is a major consumer. Rising demand and constrained supply are fuelling growth prospects within the global marketplace, particularly for cleaner "green helium" sourced from non-carbon environments. At present, more than 95% of the world's helium is produced as a by-product of the processing of hydrocarbon-bearing gas.

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 Atlas uniquely positions Noble Helium as a world leading helium explorer.





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