



Green helium for a  
high-tech world.

## ASX Release

21 September 2023

### Drilling rig on site at Mbelele, North Rukwa Project

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#### Highlights

- Marriott rig and SLB equipment onsite at Mbelele-1
  - Marriott Drilling and SLB crews in camp or enroute
  - World first test for helium in the proven EARS BMFC play imminent
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**Noble Helium Limited (ASX:NHE) (“Noble Helium” or “the Company”) reports that Marriott Rig #16 is at the Mbelele-1 well site and commissioning for spud at the Company’s North Rukwa Helium Project in Tanzania.**

Having cleared customs at the port of Dar es Salaam last week, the drilling rig, ancillary equipment and SLB’s services equipment are now arriving onsite and being “rigged up” in preparation for drilling. Depth to Basement for the planned Mbelele-1 well is circa 500m true vertical depth (TVD) and circa 850m TVD for Mbelele-2.

The Mbelele Prospect is estimated to host an unrisksed summed mean Prospective Helium Resource of 15.7 billion cubic feet (Bcf) in high quality Neogene reservoirs, trapped within a Basin Margin Fault Closure (BMFC)<sup>1</sup>.

**Noble Helium CEO and Co-Founder, Mr Justyn Wood**, said the BMFC play type in East Africa had a proven 100% discovery rate.

*“Our excitement is building every day as we edge closer to the day that the drill bit starts turning. Our ambition is to open the North Rukwa as a new and globally significant primary helium province with minimal technical and operational risk,” Mr Wood said. “Our confidence is high that this is likely just the beginning.”*

*“Mbelele, is just one of ten major BMFC leads or structures identified at the project which host the Company’s independently certified summed unrisksed mean of 176Bcf.<sup>2</sup>”*

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<sup>1</sup> Refer ASX release dated 25 July 2023 *Mbelele Resource Increase and Table 1 below.*

<sup>2</sup> Refer ASX Release 23 March 2023 *Noble Helium to test two “company-making” targets in maiden drilling program in Q3 2023 and Table 2 below.*



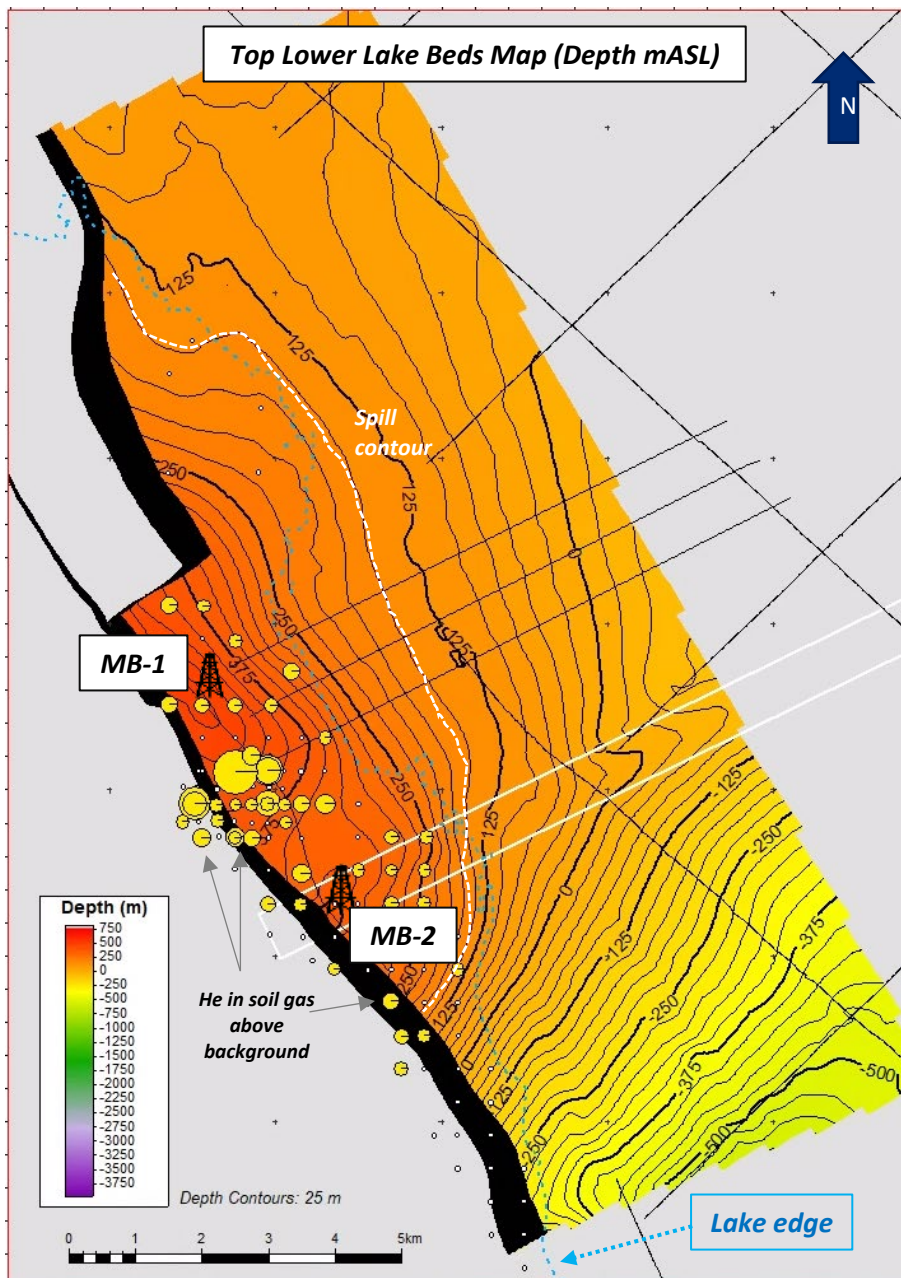
**Figure 1.** Clockwise from top left: Mbelele-1 site entry – safety first; installation of Mbelele-1 surface conductor; Mbelele-1 wellhead unloading; Drilling Camp sunrise over Lake Rukwa

The Marriott drilling crew is now accommodated at Noble Helium’s upgraded drilling camp at Msia, with various SLB service crews either at camp or enroute. Approximately 100 personnel will be in camp, including circa 60 local hires in various roles, for the duration of the drilling program.

As previously announced<sup>1</sup>, these wells have been designed to test for helium content and extent within the reservoirs of the Mbelele Basin Margin Fault Closure (BMFC). Both wells are located within the structurally coincident cluster of soil gas helium anomalies over Mbelele (Figure 2).

Mbelele-1 will test circa 450m of Neogene aged Upper, Mid and Lower Lake Beds before intersecting basement. Mbelele-2 will appraise these reservoirs, then drill an additional 400m of Lower Lake Bed sediments that are not present at the Mbelele-1 location before again intersecting basement. Anomalous, potentially gas-related responses are present in the seismic for both wells.





**Figure 2.** Mbelele wells on Top Lower Lake Beds depth map

The Company has engaged University of Dar es Salaam (UDSM) to play an integral role in evaluation of the mud gases and fluids intersected in the Company’s maiden wells, and is also pleased to be providing knowledge transfer opportunities to UDSM geology and drilling engineering faculty members during this potentially historic program.

Our integrated services provider SLB will collect twin gas samples at reservoir conditions, one of which will be analysed onsite while the second will be sent to a noble gas laboratory in the US for independent verification. The entire drilling program is designed to allow the Company to confidently move forward with commercialisation planning during the wet season, with the rig stacked at minimal cost to be able to mobilise rig to drill immediately in the next dry season.

Mbelele Prospect	Unrisked Recoverable Helium in gas phase (Bcf)			
	<i>Low Estimate</i>	<i>Best estimate</i>	<i>Mean estimate</i>	<i>High estimate</i>
Neogene Reservoirs	1.8	8.2	<b>15.7</b>	36.8

*Table 1: Company Estimated Unrisked Prospective Helium Resource range for Mbelele*

North Rukwa Prospects and Leads	Unrisked Recoverable Helium in gas phase (Bcf)			
	<i>Low Estimate</i>	<i>Best estimate</i>	<i>Mean estimate</i>	<i>High estimate</i>
Summed Totals	19.6	100.7	<b>175.5</b>	405.7

*Table 2: NSAI Estimated Unrisked Prospective Helium Resource range for NHE North Rukwa*

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

**For further information:**

Justyn Wood  
 Co-Founder and CEO  
 Noble Helium Limited  
 justyn@noblehelium.com.au  
 +61 410 626 261

Gareth Quinn  
 Managing Director  
 Republic PR  
 gareth@republicpr.com.au  
 +61 407 711 108

### 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 unrisksed 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.

