

ASX Release

9 April 2024

Mbelele shallow gas cap zone shows increasing production potential.

Highlights

- Mud-log data provides further evidence of helium potential.
- Commercial flow rates from recently completed reservoir modelling.
- Short list of local low-cost drilling contractors finalised.

Noble Helium Limited's (ASX:NHE) plans to monetise the prolific helium potential of its North Rukwa Project in Tanzania have received a boost with Mbelele's shallow, free gas cap zone showing commercial production potential.

Review and analysis of mud-gas readings obtained during the drilling of Mbelele-1 clearly indicate helium readings significantly above background from around 75m to 125m (see *Figure 1*). Further, recently completed reservoir modelling demonstrates the potential for commercial flow rates from this part of the Mbelele structure.

Lab results have previously confirmed high helium concentrations up to 2.46% at Mbelele. The next step is to perform a low-cost test on Mbelele-1's shallow section, where downhole samples using the Modular Dynamic Tester (MDT) could not previously be acquired. Results will inform both early commercialisation opportunities and future, deeper, potentially richer targets.

Noble Helium Managing Director & CEO, Mr Shaun Scott, said evidence was building that the Mbelele free gas cap had the potential to be monetised in the short term.

"For any helium resource to be commercial you need to have high helium concentrations and critically, it needs to be contained in productive reservoirs with the necessary permeability and porosity for gas to flow at commercial rates – based on the evidence to date Mbelele ticks these boxes," Mr Scott said.

"While further flow testing and sampling are required to confirm the ultimate flow rates and gas composition, this is an excellent starting point as we unlock the potential of the North Rukwa a unique, and prolific pure helium producing system."

Green helium for a hi-tech world.

Mr Scott said Noble had shortlisted a number of suitable local drilling contractors with fit-for-purpose equipment to execute a very low-cost test program. Meanwhile, discussions with potential off-takers to manage logistics and fund downstream facilities are ongoing.

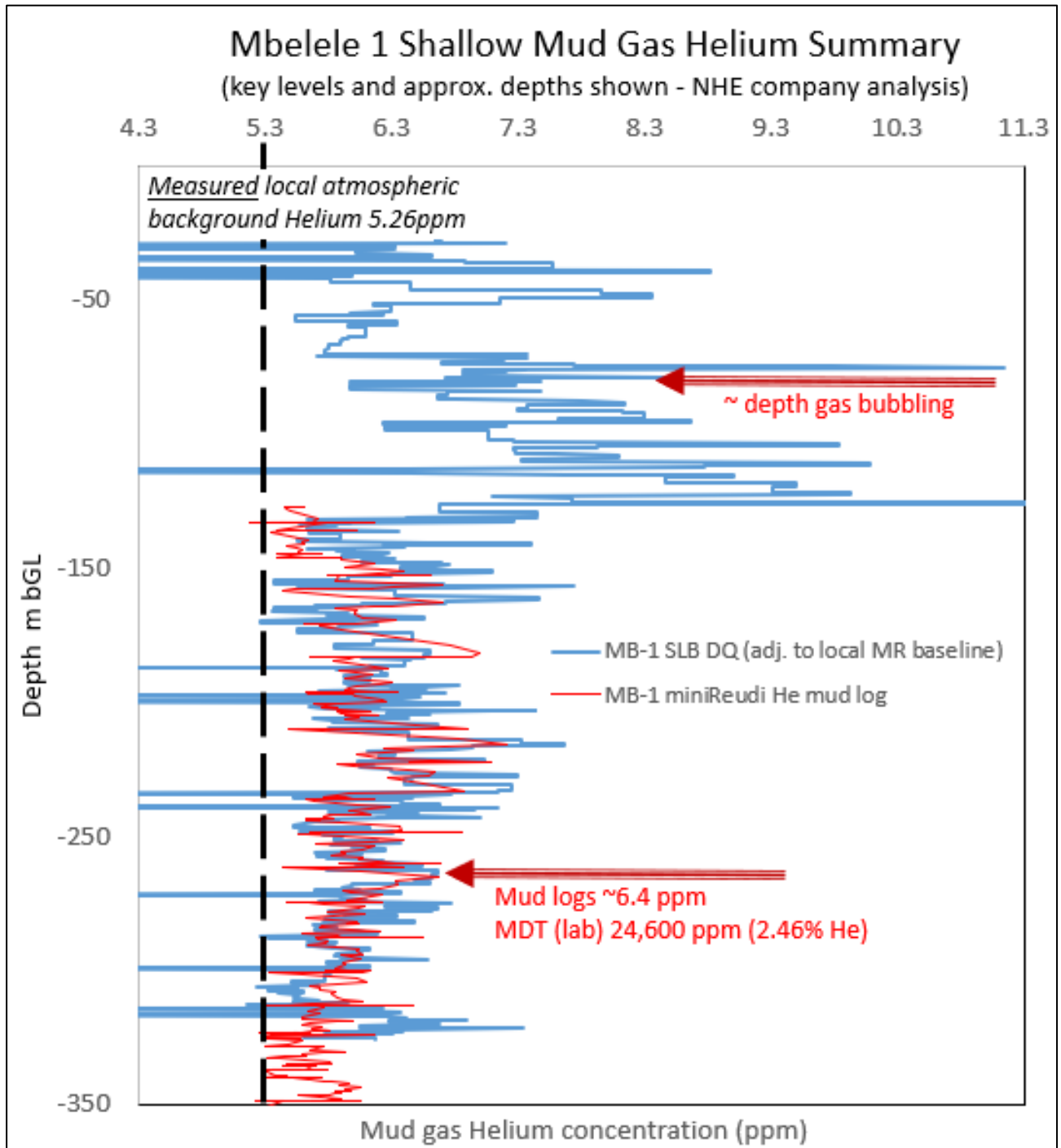


Figure 1. Mbelele-1 Mud-logs – elevated Helium readings, highest concentrations in ‘gas cap’ zone.

During the drilling of Mbelele-1, gas was seen bubbling in mud from approximately 80m. To preserve hole conditions for the deeper targets, the drilling mud weight was increased, and the bubbling / inflow of gas ceased. Analysis of the effect of the change in mud weight is consistent

with a prospective shallow gas “column” of the order of 20m. High helium mud gas readings persisted to around 125m with a median reading over the interval of ~7.7parts per million (PPM).

Helium gas PPM readings from mud logs above background are statistically significant but cannot be directly compared to gas compositional percentages which would be measured in uncontaminated, high quality, pressurised samples via specialised laboratory tests. For example, as shown in Figure 1, MDT lab measurements of 24,600 ppm (2.46%) were obtained from a depth which had significantly ‘high’ mud gas readings of ~6.4ppm.

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

For further information:

Shaun Scott
Managing Director & CEO
Noble Helium Limited
info@noblehelium.com.au

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 any 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.

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.

