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Helium One Global Ltd
04 September 2024

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04 September 2024

Helium One Global Ltd

("Helium One" or "the Company")

Sustained helium flow at ITW-1 following successful completion of EWT operations

Helium One Global (AIM: HE1), the primary helium explorer in Tanzania, is pleased to confirm a helium discovery following completion of its extended well test ("EWT") operations at Itumbula West-1 ("ITW-1") which successfully flowed a sustained average of 5.5% helium (air corrected) from the fractured Basement and flowed a sustained average of 5.2% helium (air corrected) to surface from the faulted Karoo Group.

Highlights

- Successful completion of EWT operations at ITW-1 and demobilisation now underway
- Fractured Basement interval flowed a sustained average of 5.5% helium (air corrected) to surface and up to a maximum of 6.7% helium (air corrected)
- Faulted Karoo Group interval flowed a sustained average of 5.2% helium (air corrected) to surface and up to a maximum of 7.9% helium (air corrected)
- The fractured Basement interval also flowed up to 1.1% hydrogen to surface
- The well flowed naturally at a maximum flow rate of 2,701 barrels per day ("bpd") of fluid on a 36/64ths of an inch choke setting which equates to 834 standard cubic feet per day ("scf/d") of helium
- Internal modelling demonstrates that this could increase to 20,000 bpd of fluid with artificial lift in the development phase. On this basis, the Company estimates the actual flow rate would increase to 6,176 scf/d of helium, when applying an average concentration of 5.5% helium
- The fractured Basement interval flowed naturally for a period of six days with helium gas in solution, and little air contamination in what has been determined to be a pure helium/nitrogen mix
- Gas samples were also collected for additional laboratory analysis when required
- Preliminary internal financial modelling demonstrates positive project economics with artificial lift and additional development wells
- The Company is now integrating the results of the EWT and finalising its feasibility study ahead of submitting a Mining Licence ("ML") application
- Zero Lost Time Injuries ("LTI") during the EWT operations at ITW-1
- Non-productive time ("NPT") for the Company owned Epiroc Predator 220 drilling rig during EWT operations was 2.5%

Lorna Blaisse, Chief Executive Officer, commented:

"This is yet another huge milestone for the Company and we are delighted to have successfully flowed helium, of significant concentration, to surface from both intervals during the EWT. The well was flowed naturally during the testing and based on the recorded flow rates, with the addition of artificial lift in the production phase this becomes a globally significant helium project in southern Rukwa.

I'd like to extend my thanks to the teams who have worked exceptionally hard over the past twelve months ensuring that, as a Company, we overcame the challenges of securing a suitable drilling rig, successfully delivered a two-well exploration programme, successfully carried out a drill stem test on ITW-1 and then moved very quickly into an EWT to establish viability for this project. This is a significant achievement in a very short time frame, and I am delighted to now be moving this project forward and bringing it a step closer to development.

The Company extends their thanks and appreciation to the Ministry of Minerals, the Mining Commission and University of Dar es Salaam for their engagement and ongoing support of this project. We'd like to also extend our appreciation to the local communities we work within in southern Rukwa for their support during each phase of the operations."

Details

The Company has now successfully completed its EWT at ITW-1 across the two target intervalsThe first tested interval was the faulted Karoo Group which flowed a sustained average of 5.2% helium (air corrected) to surface and up to 7.9% helium (air corrected). Subsequently, the fractured Basement interval has now been tested and flowed a sustained average of 5.5% helium (air corrected) to surface and up to 6.7% helium (air corrected). The well also flowed up to 1.1% hydrogen to surface from the fractured Basement interval.

The fractured Basement interval flowed naturally for a period of six days with helium gas in solution, and little air contamination in what has been determined to be a pure helium/nitrogen mix. The well flowed naturally at a maximum flow rate of 2,701 bpd of fluid on a 36/64ths of an inch choke setting which equates to 834 scf/d of helium. Internal modelling by the Company demonstrates that this could increase to 20,000 bpd of fluid with artificial lift in development phase. On this basis, the Company estimates the actual flow rate would increase to 6,176 scf/d of helium, when applying an average concentration of 5.5% helium.

The gas compositional analysis of 5.2% helium (uncorrected) was associated with 1.6% argon, 4.9% oxygen and 88.3% nitrogen. This data was subsequently air corrected to yield 6.7% helium. These results were evaluated using an onsite Mass Spectrometer and verified from downhole samples by a field PVT laboratory at the well site.

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Downhole temperature measurements recorded up to 88°C from the production logging tool, which is consistent with the drill stem test results and likely to be derived from hot Basement-derived fluids. It is believed that these fluids are carrying the helium in solution preferentially along faults and fractures from deep within the Basement source.

Following the completion of the EWT across the fractured Basement, a short co-mingled test of both intervals was conducted. Gas samples were collected at regular intervals throughout the EWT operation and will be used for additional laboratory analysis as and when required.

There were zero LTI incidents during the entire EWT phase. NPT for the Company owned Epiroc Predator 220 drilling rig during EWT operations was 2.5%, which equates to 21 hours of critical path activity and falls well within the allocated 'maintenance time' for a remote project in sub-Saharan Africa.

Next Steps

Preliminary economic and subsurface modelling by the Company demonstrates positive economics with artificial lift, and what is anticipated to be in the region of twenty to thirty development wells in the production phase. The data continues to be evaluated by the Company's subsurface team and will be integrated into a Feasibility Study, which will form the Mining Licence application, and demonstrate to the Mining Commission of Tanzania the viability of the Itumbula Project. The Application will be submitted in the next two weeks.

For further information please visit the Company's website: www.helium-one.com

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Notes to Editors

Helium One Global, the AIM-listed Tanzanian explorer, holds prospecting licences across three distinct project areas, with the potential to become a strategic player in resolving a supply-constrained helium market.

The Rukwa, Balangida, and Eyasi projects are located within rift basins on the margin of the Tanzanian Craton in the north and southwest of the country. The assets lie near surface seeps with helium concentrations ranging up to 10.6% helium by volume. All Helium One's licences are held on a 100% equity basis.

The Company's flagship southern Rukwa Project is located within the Rukwa Rift Basin covering 1,900km^2 in south-west Tanzania. This project is considered to be entering an appraisal stage following the success of the 2023/24 drilling campaign, which has proved an established helium system where the Itumbula West-1 exploration well successfully flowed 4.7% helium to surface in Q1 2024.

Following a successful operation to extend the depth of the well, and a follow-on extended well test undertaken in July and August 2024, the Company has now flowed significant quantities of helium to surface and is in the process of filing a Mining Licence application with the Mining Commission of the Tanzanian Government. Helium One is listed on the AIM market of the London Stock Exchange with the ticker of HE1 and on the OTCQB in the United States with the ticker HLOGF.

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