



11 December 2023

Jesse-1A Flows Helium to Surface

- Jesse-1A unexpectedly flows significant helium to surface during initial re-entry operations
- Preliminary swabbing prior to isolation and flow-testing resulted in a significant reservoir gas blow indicating an enhanced ability of the reservoir to flow helium gas to surface
- Operations to isolate and comprehensively flow-test the upper Leadville reservoir(s) are now underway

Grand Gulf Energy Ltd (ASX:GGE) (“Grand Gulf” or the “Company”) is pleased to advise that following preliminary swabbing (undertaken prior to scheduled flow testing), the Jesse-1A well has unexpectedly flowed significant helium to surface at concentrations consistent with the previous downhole sample of 1% helium.



Figure 1: Jesse-1A flare stack venting reservoir helium to surface
<https://grandgulfenergy.com/jesse-1a-flows-helium-to-surface/>



Managing Director Dane Lance commented:

“The Company is thrilled to encounter gas flowing free to the surface with high helium concentrations from preliminary swabbing at Jesse-1A. This is highly encouraging and a massive step forward in the Jesse appraisal and development programme.

The compelling commercial pillars of the Red Helium project remain unchanged. In the event of a successful flow-test Grand Gulf has the potential to quickly move to production, potentially within 6 months, requiring minimal capex given the existing gathering infrastructure and offtake agreement.

We look forward to keeping our shareholders informed as we move to the exciting next phase of isolating and flow-testing the upper Leadville reservoir in what could be a transformative period for the Company.”

Jesse-1A Preliminary Swab Test

A preliminary swab test to characterise wellbore and reservoir status was performed as part of the programme to re-enter and flow test the upper Leadville reservoir in the Jesse-1A well. The swabbing returned unexpected strong reservoir gas flows with high helium concentrations to surface resulting in high pressure gas blow requiring venting through the flare stack (see Figure 1).

During drill stem testing conducted in 2022, a downhole sample of Jesse reservoir gas measured 1% helium confirming a helium discovery¹.

During recent swab testing, samples of free reservoir gas were collected at the casing head, with the most recent sample collected measuring 0.78% helium². Helium concentrations had been steadily increasing over the duration of swabbing and are thus considered consistent with the previous 1% helium downhole sample concentration, coupled with some minor dilution from CO₂ degassing of formation brines in the early flow test period.

The bottomhole pressure observed at Jesse-1A is consistent the strong virgin pressures observed at the prolific Doe Canyon helium field located 15 miles to the east.

Jesse-1A – Next Steps

With preliminary swabbing complete, the Company will now isolate the lower, potentially water-wet Leadville zone with a cement and packer system, to facilitate a comprehensive helium gas flow test of the upper Leadville helium reservoir target with results expected prior to year end.

¹ ASX announcement 19 October 2022 – Jesse 1A Downhole Sample Increases Helium Grade

² Measured gas sample composition: 0.78% He, 8.0% N₂, 87.8% CO₂, 3.4% CH₄



Jesse-1A Background

The maiden Red Helium project wild-cat helium exploration well, Jesse-1A, was drilled in May 2022 targeting a 10.9 billion cubic foot (bcf) Leadville prospective helium resource³, with the discovery announced in June 2022. The well intersected a greater than 200-foot gross gas column with 101 feet of net pay (independently audited) and 1% helium in the primary Leadville Mississippian dolomite target⁴.

In the event of a successful flow test with good reservoir isolation and wellbore integrity, the well will be completed in the current configuration to provide early production for the Red Helium project.

The total cost of the Jesse-1A operation is modest and will be met with existing funds.

This ASX announcement has been authorised for release by the Board of Grand Gulf Energy Ltd.

For more information about Grand Gulf Energy and its projects, contact:

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³ Sproule as announced on ASX on 8 December 2021. The Company is not aware of any new information or data that materially affects the information included in the referenced ASX announcement and confirms that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

⁴ ASX announcement 19 October 2022 – Jesse 1A Downhole Sample Increases Helium Grade



About Grand Gulf Energy:

Grand Gulf Energy Ltd (ASX:GGE) is an independent exploration and production company, headquartered in Australia, with operations and exploration in North America. The Red Helium project represents a strategic pivot to a pure-play helium exploration project, located in Paradox Basin, Utah, in the prolific Four Corners region. For further information please visit the Company's website at www.grandgulfeenergy.com

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 are required to determine the existence of a significant quantity of potentially moveable helium.

Competent Person's Statement

The information in this report is based on information compiled or reviewed by Mr Keith Martens, Technical Director of Grand Gulf. Mr Martens is a qualified oil and gas geologist/geophysicist with over 45 years of Australian, North American, and other international executive oil and gas experience in both onshore and offshore environments. He has extensive experience of oil and gas exploration, appraisal, strategy development and reserve/resource estimation. Mr Martens has a BSc. (Dual Major) in geology and geophysics from The University of British Columbia, Vancouver, Canada.

Forward Looking Statements

This release may contain forward-looking statements. These statements relate to the Company's expectations, beliefs, intentions or strategies regarding the future. These statements can be identified by the use of words like "anticipate", "believe", "intend", "estimate", "expect", "may", "plan", "project", "will", "should", "seek" and similar words or expressions containing same. These forward-looking statements reflect the Company's views and assumptions with respect to future events as of the date of this release and are subject to a variety of unpredictable risks, uncertainties, and other unknowns. Actual and future results and trends could differ materially from those set forth in such statements due to various factors, many of which are beyond our ability to control or predict. These include, but are not limited to, risks or uncertainties associated with the discovery and development of oil, natural gas and helium reserves, cash flows and liquidity, business and financial strategy, budget, projections and operating results, oil and natural gas prices, amount, nature and timing of capital expenditures, including future development costs, availability and terms of capital and general economic and business conditions. Given these uncertainties, no one should place undue reliance on any forward-looking statements attributable to GGE, or any of its affiliates or persons acting on its behalf. Although every effort has been made to ensure this release sets forth a fair and accurate view, we do not undertake any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise.