Sproule

Prospective Resource Evaluation

Evaluation of Certain Helium Prospective Resources on the Tetra4 Virgina Gas Project, Free State, South Africa as of July 1, 2020

Renergen

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July 01, 2020

Mr. Stefano Marani
Chief Executive Officer
Renergen Limited
1 Bompas Road
Dunkeld West
Johannesburg, 2196
Republic of South Africa

Re: Evaluation of Certain Helium Prospective Resources on the Tetra4 Virgina Gas Project, Free State, South Africa

Dear Mr. Marani:

Sproule has been requested by Renergen (the Company) to review the report "Conceptual study of helium in the Renergen Virginia area, South Africa" by Dr. Stuart Gilfillan and Professor Finaly Stuart (10 June 2020) (the Edinburgh Report) and utilize it, if possible, to estimate helium Prospective Resources under the SPE-AAPG PRMS standards. This evaluation, based on the analysis methodology described herein using technical data supplied by the Company, has an effective date of July 1, 2020. The Prospective Resources presented in Table 1 below are estimates of gross recoverable helium volumes which are undiscovered, but the likelihood of their existence can be estimated. Following PRMS conventions, the 1U volume of Prospective Resources represents the volume with a 90% chance of being recovered or exceeded, the P90 confidence level. Similarly, the 2U volume corresponds to the median recovery, the P50 case. And the 3U volume is the category for the largest 10% of the Prospective Resources, the P10 case.

TABLE 1 Prospective Helium Resources – Virginia Gas Project

Gross Recoverable Helium, Bcf	1U	2U	3U
Virginia Gas Project	32.52	106	344
Total Recoverable	**32.52**	**106.28**	**344.22**

The estimated quantities of helium resources that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration appraisal and evaluation is required to estimate the existence of a commercial quantity of potentially movable helium. Prospective Resources carry significant exploration risk. All Prospective Resources volumes presented in this report are un-risked.

Previously Sproule (formerly known as MHA Petroleum Consultants) has evaluated the methane and helium reserves and resources of the subject licences for Renergen in 2018 and 2019. Helium Reserves and Contingent Resources were reported as components of the non-hydrocarbon gases of the project however, no Prospective Helium Resources were assessed.

The independent resource and reserve estimates contained in this report are prepared in accordance with the Society of Petroleum Engineers (SPE) Petroleum Resources Management (PRMS) guidance and provides a Technical Value, defined as an assessment of a mineral asset's future assessment at the valuation date under a set of assumptions deemed most appropriate by a practitioner excluding any premium or discount to account for market considerations. These estimates are also in accordance with the Australian Stock Exchange (ASX) rules (specifically Chapter 05 for Oil and Gas Companies) and in conjunction with the SPE PRMS guidance and specific additional rules. Our evaluation is based upon data supplied by the Company, supplemented where necessary by Sproule's corporate awareness of current South Africa industry costs and best practices.

STATEMENT OF RISK

The accuracy of resource, reserve, and economic evaluations is always subject to uncertainty. The magnitude of this uncertainty is generally proportional to the quantity and quality of data available for analysis. As a prospect, project, or well matures and new information becomes available revisions may be required which may either increase or decrease the previous estimates. Sometimes these revisions may result not only in a significant change to the reserves and value assigned to a property, but also may impact the total company reserve and economic status. The independent resources, reserves and economic forecasts contained in this report were based upon a technical analysis of the available data using accepted geoscience and engineering principles. However, they must be accepted with the understanding that further information and future reservoir performance subsequent to the date of the estimate may justify their revision. It is Sproule's opinion that the independent estimated resources, reserves, economics, and other information as specified in this report are reasonable and have been prepared in accordance with generally accepted geoscience and petroleum engineering and evaluation principles. Notwithstanding the aforementioned opinion, Sproule makes no warranties concerning the data and interpretations of such data. Neither Sproule, nor any of our employees have any interest in the subject properties and neither the employment to do this work, nor the compensation, is contingent on our estimates of the resources or economic evaluations for the properties in this report. This report was prepared for the exclusive use of the Company and will not be released by Sproule to any other parties without the Company's written permission (other than the stated purpose set out above). The data and work papers used in this preparation of this report are available for examination by authorized parties in our offices.

QUALIFICATIONS

Jeffrey B. Aldrich is a Senior Geoscientist with Sproule Incorporated in Denver and is a Certified Petroleum Geologist, #6254, by the American Association of Petroleum Geologists (AAPG) and a Licensed Professional Geoscientist, #394; He is an active member of the AAPG and the Society of Petroleum Engineers (SPE). He has over forty years as a practicing petroleum geologist/geophysicist and over twenty years of experience in oil and gas reserve evaluations. He is an instructor in the PetroSkills Alliance and is the Course Director for “Prospect and Play Analysis”, “Evaluating and Developing Shale Reservoirs”, “Unconventional Resource and Reserve Estimation”, and “Coalbed Methane Reservoirs”. He holds a Bachelor of Science degree in Geology from Vanderbilt University and a Master of Science degree in Geology from Texas A&M University.

John Seidle is a Senior Reservoir Engineer with Sproule Incorporated in Denver, Colorado. He has more than thirty-five years of experience in unconventional gas and oil reservoir engineering in domestic and international plays. His current duties include unconventional reservoir engineering, reserve studies and economic evaluations, unconventional well performance analysis, and serving as an expert witness for litigation and regulatory hearings. Dr. Seidle is an instructor for industry classes, primarily unconventional reservoirs. Privileged to work with others on over 29 technical papers, he is the author of “Fundamentals of Coalbed Methane Reservoir Engineering”. John is editor and chapter author of SPEE Monograph 4, “Estimating Ultimate Recovery of Developed Wells in Low-Permeability Reservoirs”. He received a PhD in Mechanical Engineering from the University of Colorado, is a member of SPE, AAPG, and SPEE, and is a Registered Professional Engineer in Colorado, Oklahoma, and Wyoming. Unconventional reservoir experience includes USA, Canada, Australia, China, India, South Africa, New Zealand, Colombia, Mexico, France, UK, Turkey, Poland, Mongolia, Ukraine.

SUMMARY OF THE EDINBURGH REPORT

The Edinburgh report is a thorough evaluation of the helium generation potential of the basement and Karoo aged stratigraphy within the bounds of the Virginia Gas Development Licenses held by Tetra4 in the Free State of South Africa. This report estimates helium generation both prior to and after the Vredefort impact event at 2023 MA. Sproule agrees with the authors assumption that any helium generated pre-impact was most likely lost in the time immediately after the impact and thus we have only considered volumes generated post impact. To quote from the report:

A total volume of 1,864 to 3,147 BCF (STP) of helium produced since the Vredefort impact event at 2023 Ma, assuming that this event resulted in the complete loss of previously accumulated helium. 3) A total volume of 253 to 426 BCF (STP) of helium produced since the deposition of the Karoo sediments,

assuming that all of the helium accumulated prior to deposition commencing at 274 Ma had been lost due to the absence of a seal to prevent helium escape to the atmosphere

METHODOLOGY

Spoule evaluated the volumes of helium that are available for Prospective Resources in the Virginia Gas Development Project by use of a probabilistic methodology to account for the early stage exploration phase and the wide range of uncertainty in many variables. Technically recoverable helium resources were calculated as the product of a) the range of volumes of helium generated as discussed in the Edinburgh report, b) migration/entrapment factors to describe captured helium yet remaining in the Project and, c) a recovery factors which represents the fraction of trapped helium which can be recovered using current technology with no consideration of price. The resulting 1U, 2U, and 3U Prospective Resources (the P90, P50, and P10 volumes of technically recoverable helium resources) are shown in Table 1 above.

The helium generation volumes were taken from the Edinburgh report using a lognormal distribution using the lower estimate for only pre-Karoo Witwatersand, Dominion, and basement granites. The high end estimate included post Karoo generation for the above stratigraphy. The helium is held in a reservoir fracture network that has been extensively mapped by Shango (2020) The primary migration pathway is also the reservoir. Sproule has modeled the helium migration to and entrapment in the methane rich gas mixture held in the fracture network as a lognormal distribution with a large degree of uncertainty, with a range from as little as 2% of the generated helium available for commercial recovery to high value of 50% based on research in the field area (Hiemstra 1968) and other helium fields (Brown 2010, Anderson 2017, McCaffrey 2020).

Helium is commonly produced in conjunction with natural gas. To our knowledge, no field produces solely helium, precluding estimation of recovery factors by direct analogy. Natural gas reservoirs recovery factors widely accepted in the industry range from about 10% for low permeability, highly faulted, complex reservoirs to 60% or higher for high permeability reservoirs with no faults, pinchouts, or other flow barriers. Initial reservoir pressure in the Virginia Gas Project has not yet been determined with precision but appears to indicate a normal to slightly underpressured reservoir with a gradient ranging from 0.433 psi/ft down to 0.35 psi/ft. Assuming the industry accepted rule of thumb abandonment pressure gradient of 0.2 psi/ft yields a recovery factor on the order of one-third. Our recovery factor distribution utilized a most likely (P50) recovery factor of 30% with a higher end elevated due to the field wide system of compression being installed. These low, most likely, high recovery factors, 10%, 30%, and 60%, defined a triangle distribution for the Monte Carlo realizations

It was a pleasure performing this study for Renergen. Should you have any questions on our work, please feel to contact either of the undersigned.

Sincerely,

Jeffrey B. Aldrich
Sr. Geoscientist

John P. Seidle
Sr. Reservoir Engineer

REFERENCES

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Brown, A., Formation of High Helium Gases: A Guide for Explorationists*, AAPG, Search and Discovery Article #80115 (2010).

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Dr Stuart Gilfillan Professor Finlay Stuart, Conceptual study of helium in the Renergen Virginia area, South Africa, Report for Renergen , June 2020

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Shango Report for Renergen "Conceptual Study of the Uranium and Thorium Contents on Renergen's Virginia Prospect, South Africa"

Petroleum Resource Management System (PRMS), Society of Petroleum Engineers, June 2018