

FUTURE ENERGY, TODAY

Virginia Gas Project

December 2021

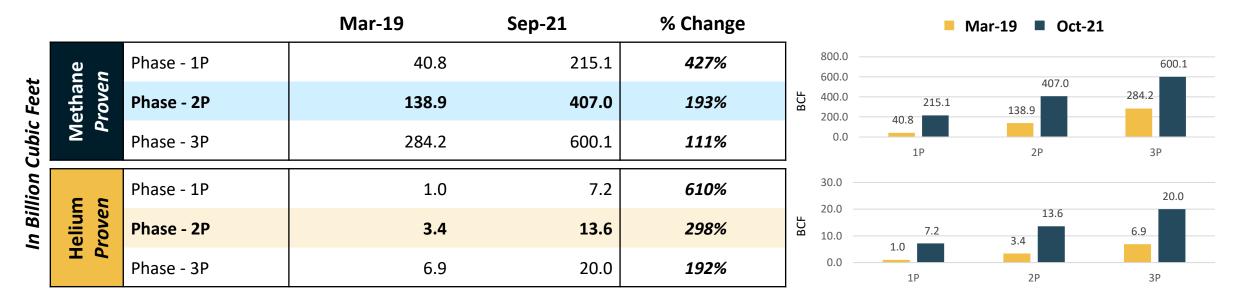
## Renergen

Emerging helium and domestic producer, rapidly advancing and developing flagship Virginia Gas Project, located in Free State in South Africa



### **Significant Growth in Reserves Since 2019**

Significant results delivered with 1P helium reserves having increased by 610% to 7.2Bcf and 1P methane reserves by 427% to 215.1Bcf



Following successful drilling campaigns in 2021, Renergen engaged Sproule to estimate the methane and helium reserves and resources at the Virginia Gas Project

### **How Did The Gas Get There?**

The Production Right is on the rim of the Vredefort Crater, formed by an asteroid strike 1.8 billion years ago, where natural Helium is produced owing to ultra-high uranium concentrations below



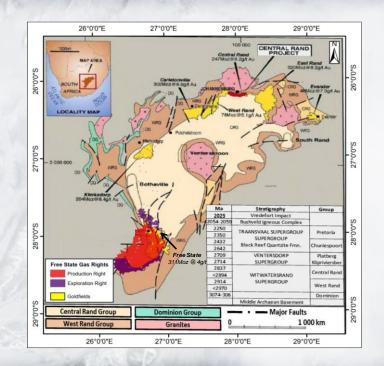
Timing of the asteroid impact and conditions after impact, resulted in a bacteria known as Archaea adapting to the specific surroundings



The bacteria evolved to use the energy from the radioactivity underground to metabolise carbon into methane, similar to chlorophyl using sunlight to metabolise CO2 into sugar and oxygen

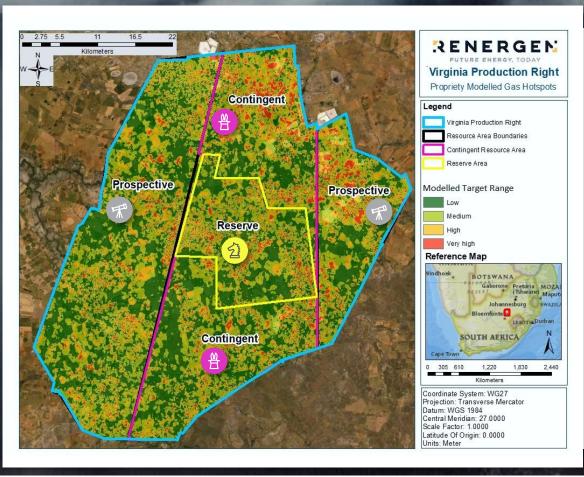


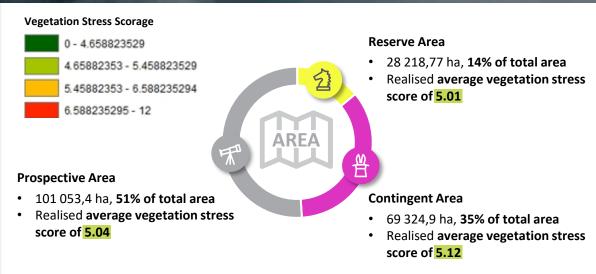
Helium gas is also produced as a by-product of radioactive decay so that the methane and helium are found together in this deposit



# **Drilling Target Modelling**

The gas modelling depicts presence of high value resources in the Contingent and Prospective areas. These are areas that are yet to be explored and potentially have <u>more</u> resources than the Reserve area, with higher scores

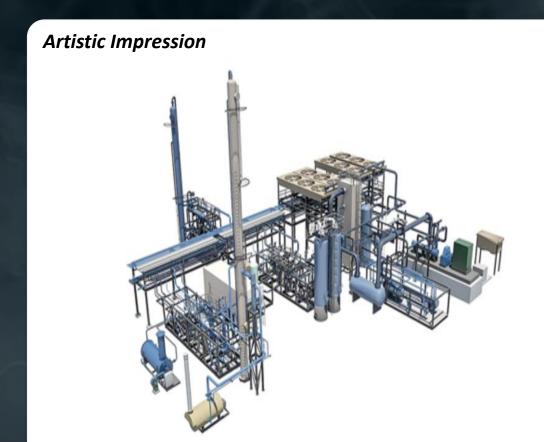




- Of the total area (198 597,09 ha), only 14% (28 218,77 ha) is allocated to Reserve. The remaining 86% (170378,3 ha) of area comprises of 35% (69 324,90 ha) allocated to Contingent and 51% (101 053,40 ha) allocated to Prospective.
- The vegetation score for Contingent (average vegetation score = 5.12) and Prospective (average vegetation score = 5.04) areas are higher than that of Reserve (average vegetation score = 5.01) area. The vegetation score is an indication of the potential resources available

## **Continued Progress of Key Phase 2 Workstreams**

A busy 12 months ahead with plant design, key exploration and development activities commencing





#### **Design Stage**

- Saipem and EPCM have completed FEED
- Reserve Update now completed



### **Drilling Target**

- Will consist of 297 wells, drilled along the main faults and dykes throughout the Production Right
- Anticipated to build up to 44mmscf per day at full production
- Total estimated CAPEX of around US\$800mn



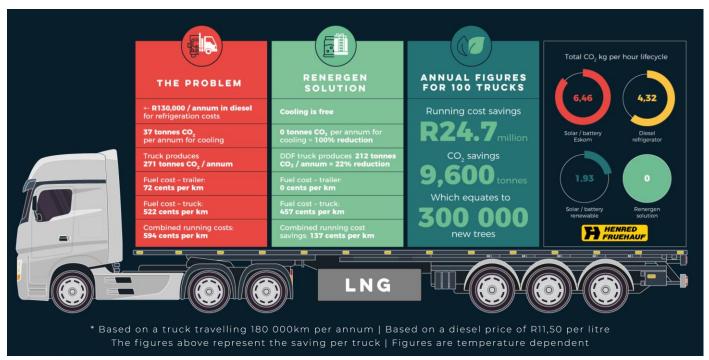
#### **Construction Timeline**

- Anticipated turn on date in 2024
- 65% of Phase 2 anticipated production is pre sold to clients including Linde, Meser, Helium 24 and iSi

### **Domestic LNG Distribution**



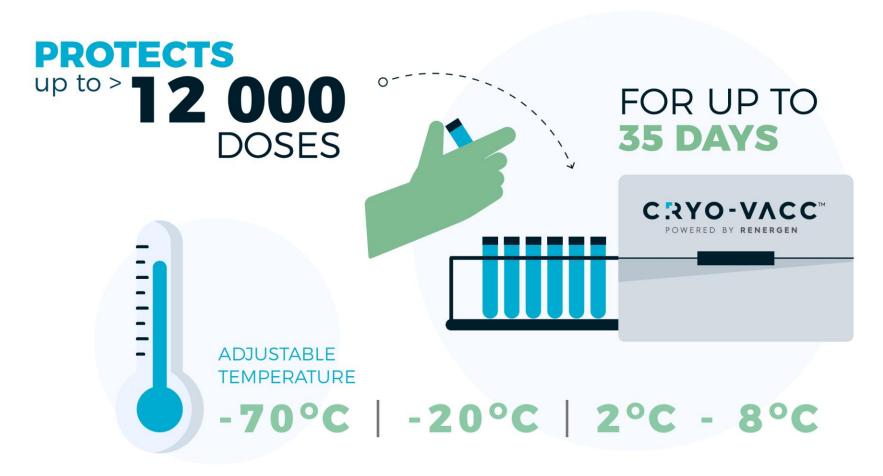
- Renergen's LNG operation is completely vertically integrated, controlling the custody chain of the gas directly into the customers' assets
- Renergen and Total signed an agreement to allow the company to establish LNG filling stations to supply our customers on Total's forecourts on the major highways in SA
- Phase 1 can supply LNG to a maximum of 500 trucks, SA has over 377,000!
- Renergen pioneered an innovative solution for our refrigeration trucking customers, using the exergy from the gasification process to cool the food box, reducing costs and greenhouse gas emissions















# **Advantages**

Renergen has developed the ground-breaking Cryo-Vacc<sup>™</sup>, which enables the safe transportation of vaccines at the required extremely low temperatures and for periods of up to 35 days, without the need for electrical power.



Patented design in application



No Dry Ice



Constructed from aluminium



Durable and safe



Light enough to pick up and transport



Ability to transport from 1000 to 12 000 + doses



Adjustable temperature -70°C | -20°C | 2°C - 8°C



Reduces the number of handovers from the manufacturing stage to final delivery



Protects biologics and vaccines from light exposure



Lockable carry case



Biologics and vaccines can be transported for up to 35 days with the security of controlled and monitored temperatures



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