# RENERGEN

FUTURE ENERGY, TODAY

# Quarterly Activity Report

Emerging producer of liquid helium and liquefied natural gas



March 2021

# **Highlights**

Significant highlights from this quarter, in chronological order, include:



Commencement of Phase 2 studies



Launch of Cryo-Vacc<sup>™</sup> prototype



Wild card well P007 strikes gas



MDR1 strikes gas



Cryo-Vacc<sup>™</sup> entering clinical validation trials



Helium concentrations of 4.38% and 3.15% respectively recorded in the new wells

Despite the many challenges 2021 has already brought, the Company is fully aligned and focused on bringing Phase 1 into production, and completing the studies for Phase 2 in order to assess its feasibility



# Cryo-Vacc<sup>™</sup>

The Company has made significant progress in a very short space of time, developing the concept on the 4th of December 2020, with a working prototype entering clinical validation just after the middle of March 2021

Validation was limited to a week in order to complete the process prior to the vaccine roll-out tender being awarded in South Africa

- Results of the validation are anticipated in the coming days; this is a process through independent experts. The Company advises shareholders we have no visibility on when the validation will be granted. At this point, the tender announcement date has not yet been made public
- Renergen has not participated directly in the tender in South Africa, but has partnered with DPD Laser locally who is using Cryo-Vacc<sup>™</sup> to support its customers participating in the tender
- DPD Laser is part of the French company Groupe Le Poste which has an annual turn-over of EUR 25bn per annum and is a global leader in medical supply distribution



Once all data from the validation has been provided and assimilated, Renergen will begin offering Cryo-VaccTM globally logistics companies that have expressed an interest

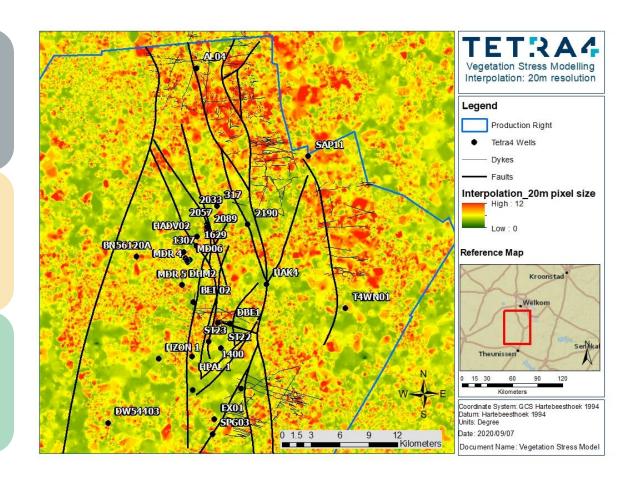
## **Drilling**

Current drilling includes MDR1, P2V2 (suspended), P012, P010, R2D2 (new) and P007

MDR1 was announced as a blower on 11th March 2021 with 164,000 scf/d and a helium content of 3.15%

**P010 and P012** are progressing well, and should take another 4-6 weeks to reach target zones

**P007** was our "wild-card" well and had a spectacular strike with 200,000 scf/d and helium content of 4.38%, which helps in proving many aspects of the field



#### MDR1

MDR1 was highly successful in identifying the gas bearing fracture, adding significant additional flow and producing an above expected helium concentration

- Originally an old exploration hole c. 300m west of the main gas-bearing fracture
- The well is 300m from MDR5 (an existing blower) and 600m from HDR1 (the current CNG plant).
   Despite this proximity to existing wells, on flow testing of the wells it appears that the existing blowers are unaffected by the new well, which is positive for the Reserve update
- Drill plan was to enter the hole and kick-off below the casing at the base of the Karoo, building inclination at a rate of 3 degrees per 30m towards the gas-bearing fracture using a rig with steering capabilities
- The hole was commenced after P2V2, but still while P2V2 was being drilled using a percussion rig in the Karoo, thus ensuring both holes were being drilled simultaneously
- Whilst a very accurate form of drilling, the rate of penetration was very slow due to (i) large water losses despite the use of lost circulation drilling fluids, and (ii) the rock below the Karoo (the Wits) is very hard and abrasive
- The conclusion is however that the Wits doesn't allow for drilling with downhole steering economically or quickly



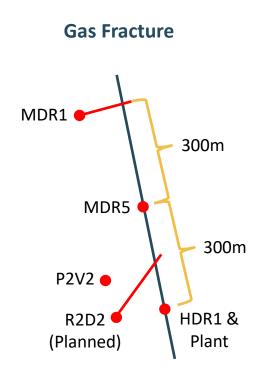
#### **P2V2**

#### P2V2 was commenced prior to MDR1

Planned at an inclination to intersect the main gas-bearing fracture midway between existing blowers MDR5 and HDR1, the latter being where the current CNG facility is in operation

The well was drilled using standard percussion techniques, but the drillers weren't able to maintain an inclination acceptable to the Company

Once the base of the Karoo had been intersected, the Company took the decision to put P2V2 on hold until the completion of MDR1, which was going to be drilled using a rig with steering capabilities, following which the rig would be moved to P2V2 to compensate for the lack of inclination



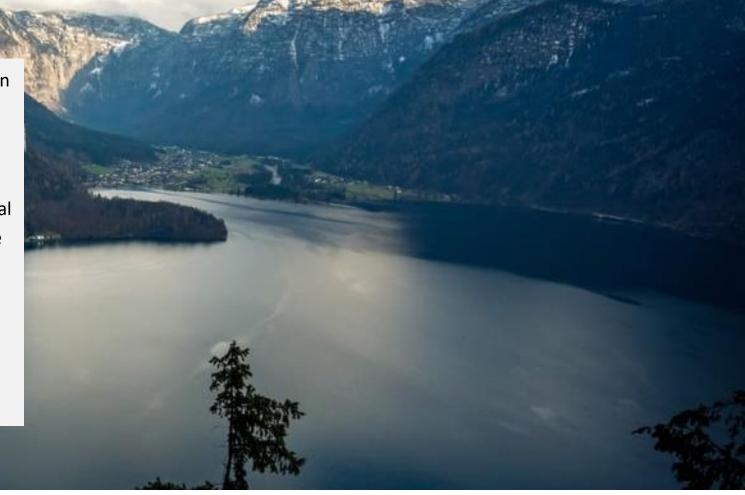
Despite the directional drilling coming at no additional cost of the Company, following the extremely challenging drilling conditions experienced on MDR1 and slow rate of penetration, the Company has decided to drill P2V2 again from surface deploying the drillers and techniques from P007

The new hole revised coordinate will be renamed R2D2 (to avoid confusion on surface), and will intersect the gas-bearing fault line 150m north of HDR1 and 150m south of MDR5, and is anticipated to reach the base of the Karoo in the first week of May

#### **P007**

A highly speculative well drilled based on predictions from a model developed in-house using non-invasive techniques

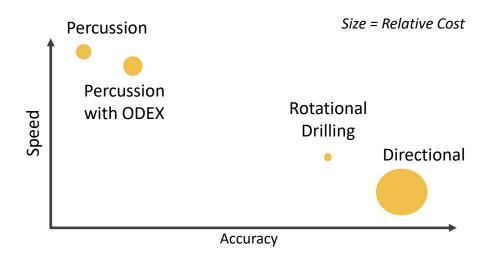
- The well was drilled using percussion with an overburden drilling system (ODEX) from the surface in order to maintain the angle of inclination
- This drilling method proved to have a level of accuracy somewhere between standard percussion and directional drilling, but is significantly faster and more cost effective
- Where a fracture is accurately mapped, this will be the Company's preferred drilling technique until a new technology proves more efficient
- 007 is a significant blower producing around 200,000 scf/d with a helium concentration of 4.38%



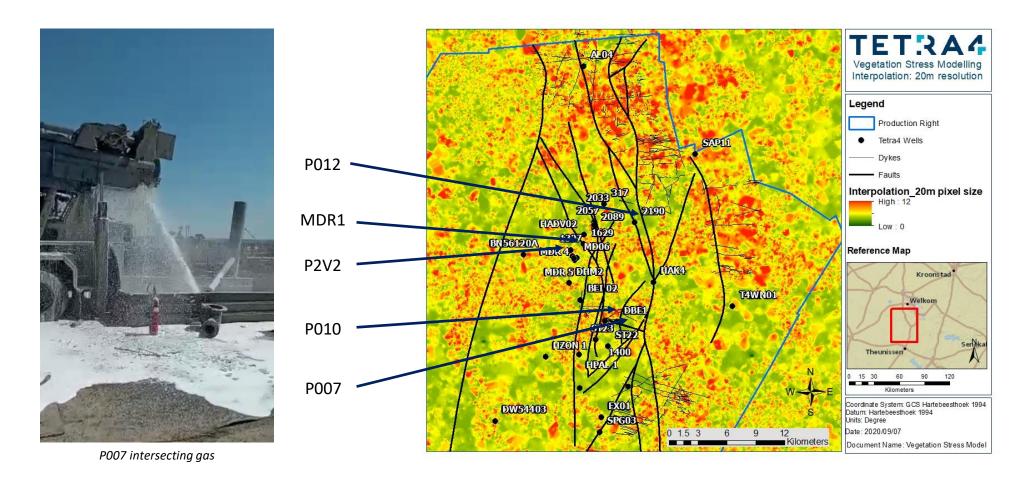
## P010, P012 and Summary

These are wells being drilled by a third drilling contractor, deploying surface rotational drilling (also known as core drilling)

- The surface rotational drilling has proved to be a very accurate drilling technique, maintaining a good inclination
- The drilling is however also slow, with a rate of penetration between that of percussion and directional drilling
- Both wells are progressing well and within timelines, with 4-6 weeks remaining before target depths will be achieved



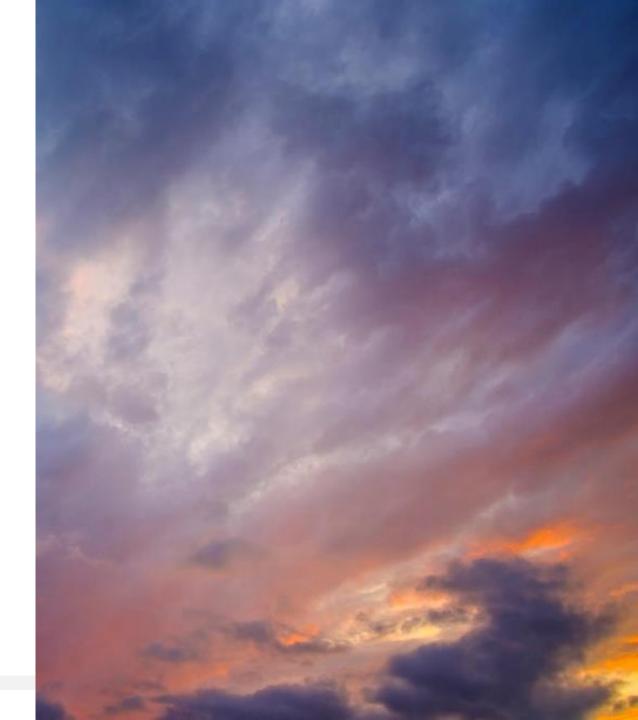
### **Well Locations**



#### **Milestones Tracker**

At Renergen, we believe that accountability is a critical element in building trust

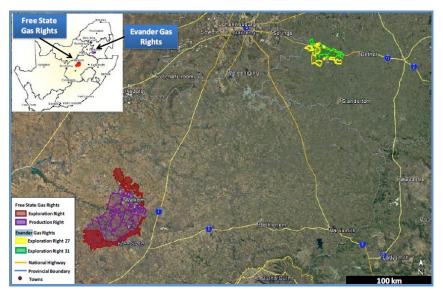
- The Company launched a <u>milestones tracker</u> on its website to show its progress in the delivery of Phase 1 of the Virginia Gas Project
- This unique tool allows investors to see how long until the next critical step in the process, as well as what the scorecard has been to date
- As has been announced on several occasions, the next two
  milestones were affected due to the COVID-19 lock-downs
  delaying global logistics chains in delivery of crucial equipment for
  the construction of the plant. Further information will be made
  available on their progress once more certainty is available
- www.Renergen.co.za/milestones/



#### Other Items of Business

At present there are no major updates since the last quarterly report

- The Company continues to take every precaution to ensure the safety of its staff
- The Virginia Gas Project Production Right and Evander Exploration Rights are highlighted in the map below. No new rights were acquired or disposed of in the period
- Expenditure has not exceeded the projected Use of Funds from the Offer document for the listing on the ASX in June 2019



#### **Production Right:**

• 12/4/07PR

#### **Exploration Rights/TCPs:**

- 12/3/2/29ER
- 12/3/2/32ER
- 12/3/2/33ER
- 12/3/2/64ER
- 12/3/2/94ER
- 12/2/171TCP

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