***SUBSURFACE CARBON MINERLISATION***

Following the success of the 2023 drilling programme, Weora has completed characterisation of the main lithologies that make up the Greenhills Ultramafic Complex. This comprehensive geological dataset, combined with recent test work on the hydrogeology, geochemical properties, and laboratory carbonation provide a detailed understanding as to the potential for in-situ carbon mineralisation at Greenhills. A feasibility study is underway for a pilot $CO_2$ injection project. We are working with international partners and hope to complete the feasibility study in the coming months.

***WATER BASED CDR – VYCARB***

Weora is collaborating with US based startup Vycarb on a proposed project to generate fully measured and permanent carbon dioxide removal and storage (CDR) in Southland. Vycarb's technology provides a measurement-controlled approach to mineralising carbon dioxide that is dissolved in water. This presents a promising approach to generate safe, cost effective, and verifiable CDR at scale, helping companies like Weora participate in and drive the carbon negative economy and climate solutions here in Aotearoa.

We are particularly excited about Vycarb's approach, to deploy CDR with alkaline minerals in water, leveraging the ocean carbon sink for scale while enabling robust monitoring and verification to demonstrate safety and efficacy. As such, we are pleased to partner with them on a first of its kind CDR project. We hope to deploy a 100 to 1000 ton-per-year pilot plant in the next 12 months using Vycarb's technology and Weora's magnesium rich ultramafic rocks. A community stakeholder event was positively received when held in Invercargill last month to discuss the pilot project.

***PERMIT UPDATE***

Weora now holds six prospecting permits covering a total area of 180.3km$^2$. These permits consist of the Greenhills, Westdome, Whakatu, Redhills, Waikato, and King Country prospect areas. All of the permit areas are identified as strategic due to their geology, and proximity to infrastructure and coastal waters for mineral carbonation. Desktop work and fieldwork on these newly acquired permits is already underway, demonstrating Weora's commitment to accelerating its exploration efforts and applying the knowledge from its Greenhills site to other areas. Weora is waiting on confirmation of the remaining two permit applications, Oriti and Pokeno which are expected to be granted within next few months.

*Photos from recent Weora field programmes*

***GEOLOGICAL HYDROGEN***

Weora recently supported a pilot study conducted by GNS Science to evaluate New Zealand's natural geologic hydrogen ($H_2$) potential. Collaborating with GNS and CSIRO, a global leader in geological $H_2$ research, Weora contributed by providing field teams and access to its Southland permits for reconnaissance fieldwork. The study employed CSIRO's soil gas flux methodologies to detect surface anomalies that could signify hydrogen production at depth within the Weora licence portfolio. Results revealed the presence of small quantities of $H_2$ at several locations. Follow up work is underway and planned to continue for the rest of the year.

***GROWING THE GEOLOGY TEAM***

Weora has welcomed some new members to the geology team:

- **Dr Marshall Palmer** brings with him over a decade of experience in geochemistry, petrology and economic geology in the New Zealand Context. His previous research has focused on mineralisation across and ultramafic rocks within the South Island of New Zealand.
- **Dr Chris Tulley** is structural geologist with a background in academia and industry experience in exploration consulting. Chris brings a wealth of knowledge in ultramafic rock mechanics, vein systems and fluid rock interactions.

***UPCOMING WORK FOR THE REST OF 2024:***

- Undertake fieldwork across newly granted and NSW permits with Carbozorb, Weora sister company.
- Complete subsurface injection feasibility study at the Greenhills permit area.
- Acquire approvals for pilot Vycarb project deployment.
- Follow up Geological $H_2$ exploration.