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### ASX RELEASE

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# **Carbon Management Project Joint Venture**

**State Gas Limited (ASX: GAS)** announces that it has agreed terms with minerals company Rockminsolutions Pty Ltd for a Joint Venture for a Carbon Management project in Central Queensland.

After initially entering into a Memorandum of Understanding last year<sup>1</sup>, the parties have now deepened their relationship into a Joint Venture.

The Joint Venture will investigate the potential of the Buckland Basaltic Sequence, located within EPM 27596 (within and adjacent to the western area of State Gas' Rolleston-West Project ATP 2062), to enable significant decarbonisation through carbon mineralisation, either in- and ex-situ.

Basalt rocks are highly reactive and contain the elements needed for permanently immobilising carbon dioxide through the formation of carbonates such as calcium carbonate and magnesium carbonate. In these forms, the carbon is stable and safe.

The Buckland Basaltic Sequence is an extensive area of Tertiary aged basaltic ignimbrites (volcanic ash deposits) up to 330m thick. The particular characteristics of this deposit (as non-welded ignimbrites) suggest very high permeability and porosity, facilitating the availability of the minerals within the basalt to react rapidly with carbon dioxide.

The size and thickness of the Buckland Basalt Formation provides the potential for very significant quantities of carbon to be mineralised.

The Joint Venture will initially investigate the potential of the Buckland basaltic ignimbrite for a range of ex-situ mineral carbonation purposes such as soil mineral carbonation, while also investigating its potential as a supplementary cementitious material to make low-carbon cements. Important information as to potential of the deposit for in-situ mineral carbonation - applying the process currently being successfully implemented by Carbfix<sup>2</sup> in Iceland - will be revealed as a consequence of this initial work.

State Gas Executive Chairman, Richard Cottee, said that the Company was very pleased to progress its relationship with Rockminsolutions, and embark upon this Carbon Management initiative.

"While State Gas remains focussed on development of its Reid's Dome and Rolleston-West Gas Projects, the carbon mineralisation approach has the potential to be a gamechanger in carbon management", he said. "Carbon management is an increasingly pressing need as we move towards a net zero world, and I am very pleased State Gas is playing its part."

"I am very positive about the future of this initiative", he added. "Investigating a broad range of potential opportunities maximises our chances of success. Rockminsolutions has particular

<sup>&</sup>lt;sup>1</sup> State Gas ASX release dated 5 October 2021

<sup>&</sup>lt;sup>2</sup> See <u>www.carbfix.com</u> and State Gas ASX release dated 5 October 2021

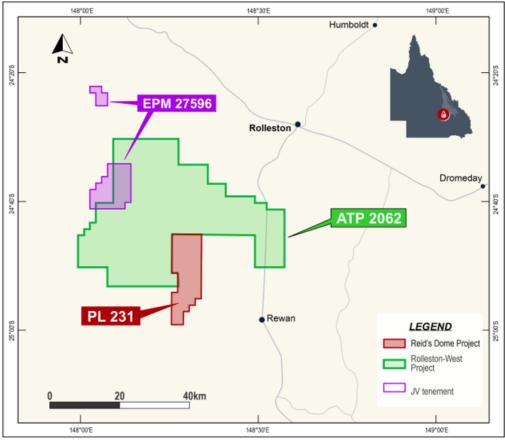
strengths in basalt geology, and combining these with State Gas' operational expertise will optimise the outcomes."

The Carbfix in situ mineralisation process is one attracting significant international attention, with the US Department of Energy demonstrating the technology at Washington state, and Rio Tinto recently announcing a project in Minnesota, USA<sup>3</sup>.

The process involves dissolving the carbon dioxide in water, creating a stable solution which can be readily pumped into formations much shallower than those required for traditional carbon sequestration. The high porosity of the Buckland Basalts is expected to facilitate the retention of the carbonated water without the need for a geological seal. As a result, the Carbfix process has the potential to provide a more secure carbon storage solution at substantially lower cost than traditional processes. In its trials in Iceland, Carbfix has found this process has resulted in more than 95% of carbon mineralising underground within two years.

Under the terms of the Joint Venture State Gas will undertake investigatory works to progressively farm-in to Rockminsolutions' EPM 27596. Initial works of drilling two chipholes into the formation are expected to be undertaken this year. These holes will provide samples for laboratory analysis and to commence the ex-situ studies.

Should the potential of the Formation for carbon management be proved, the options for development include establishment of hydrogen manufacture, direct air capture, or creation of a commercial carbon management hub in Central Queensland.



Map showing location of Joint Venture Project ... ¶

<sup>&</sup>lt;sup>3</sup> https://www.riotinto.com/news/releases/2022/DOE-backs-Rio-Tinto-led-team-to-explore-carbon-storage-at-Tamarack

This announcement was approved for release by Mr Richard Cottee, Executive Chairman.

# **ABOUT STATE GAS**

**STATE GAS LIMITED** (ASX: **GAS**) is a Queensland-based gas exploration and development company focussing on the Bowen Basin in Central Queensland. State Gas is 100%-owner of the contiguous Reid's Dome (PL-231) and Rolleston-West (ATP 2062) Gas Projects, both of which contain both CSG and conventional gas. The Projects, together some 1,595km<sup>2</sup>, are located south of Rolleston, approximately 50 and 30 kilometres respectively from the Queensland Gas Pipeline and interconnected east coast gas network. Neither project is restricted by domestic gas reservation requirements.

State Gas is implementing its strategic plan to bring gas to market from Reid's Dome and Rolleston-West to meet near term forecast shortfalls in the east coast domestic gas market.

## ABOUT ROCKMINSOLUTIONS

**ROCKMINSOLUTIONS PTY LTD** is a mineral exploration company with expertise in basalt. It has obtained mineral exploration permits (EPM) 27596 and EPM 27970 over the Buckland Basaltic Sequence south west of Rolleston, in Central Queensland. Prior to establishing Rockminsolutions the principals of the company owned the Mt Sylvia diatomaceous earth mine and basalt quarry near Gatton QLD, where they became aware of the potential of basaltic formations for a range of beneficial uses.

Rockminsolutions is investigating the potential of the Buckland Basaltic Sequence to be applied to achieve decarbonisation through sequestration of carbon via mineral carbonation reactions, enhanced weathering, and use as a supplementary cementitious material to make low-carbon cements.

#### FOR FURTHER INFORMATION

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