Soil gas survey confirms Methane, Helium and Hydrogen present at Rickerscote Prospect and on PELs 253 & 81

10 December 2025

HIGHLIGHTS:

- **Soil gas survey on Rickerscote Prospect in South Australia's Officer Basin has demonstrated elevated readings of hydrogen (25-30ppm) at deployed soil sensor sites ("IVY 2 and 9"), confirming the presence of natural hydrogen.**
- **No hydrogen or methane flux detected along the main southern bounding fault, supporting its interpretation as an effective sealing feature.**
- **A single transient methane anomaly reaching 5,600 ppm was recorded at IVY 10, which is attributed to a genuine, short-lived geological gas pulse derived from depth, supporting potential deep-sourced charge.**
- **Spot helium sampling returned up to 11 ppm at water bore OMVB8 (local background ~1.6 ppm), providing an additional positive indication near the Rickerscote Prospect.**

Whitebark Energy Limited (ASX:WBE) (**Whitebark** or the **Company**) is pleased to announce the final interpretation of the soil gas survey completed across the Rickerscote Prospect and adjacent areas in the Officer Basin, following the deployment of 10 Hydrogen Sensors. As per the announcement on 25 September 2025, the survey was conducted between 23 September and 26 October 2025 and the results were subsequently interpreted by Cryptid Energy Consultants, who are experts in natural hydrogen.

The program aimed to evaluate the presence of natural hydrogen micro-seepage and associated gases, and to assess whether any surface gas flux correlates with key subsurface structural elements, particularly the main southern bounding fault that forms the critical sealing component of the Rickerscote Prospect. The soil gas sampling survey was completed safely and on schedule for PEL81, fulfilling the Year 1 Permit commitment.

Rickerscote is a seismically defined sub-salt closure spanning more than 180 km² (up to ~400 km²) and carrying previously reported prospective volumes of ~710 million kg hydrogen, ~97 Bcf helium and ~153 mmboe hydrocarbons[1]. The first well is capable of transforming the company and will be a significant 'play opener' for the Officer Basin.

Hydrogen Results

The hydrogen data in Figure 1 represent continuous measurements from ten autonomous IVY units (multi gas sensors). Each trace records hydrogen concentration in parts per million (ppm), with a lower detection threshold of 10 ppm. Despite the low concentrations recorded, consistent diurnal variability is apparent in most series, particularly in IVYs 6, 9, and 10, mirroring the strong day-night thermal cycles observed in the environmental data.

Spatially, the data show no single dominant source, but some units, particularly IVYs 2 and 9, record slightly higher and more coherent excursions up to 25–30 ppm, implying localized zones of greater

soil permeability or subtle m[1]icro-seepage. Others, such as IVY 4,6, 7, and 11, all of which occur along the prospect bounding fault, remain near baseline throughout the period.

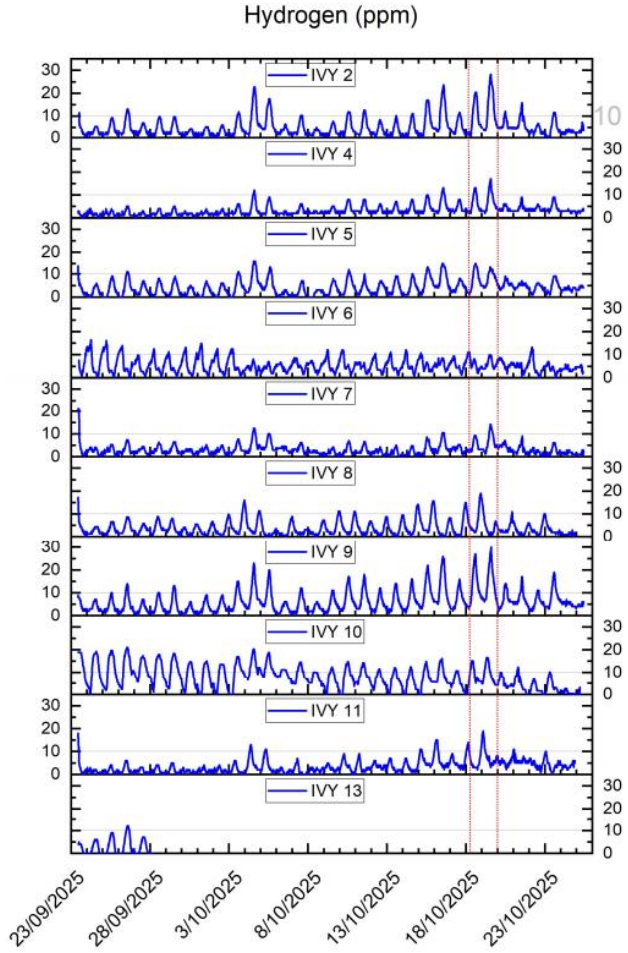

Figure 1: Hydrogen concentrations for all locations over the Rickerscote Prospect, 23rd of September to 26th of October 2025. Note: IVY 13 was not set up correctly and did not record for the full duration of the survey.

Methane Results

The methane data shows no measurable concentrations above the 50-ppm detection limit across nearly all IVY units during the monitoring period. Readings remained at or near zero, indicating no sustained methane emission or background enrichment within the monitoring area.

A single transient event was recorded by IVY 10 at 6:46 pm on the 25th of September 2025, when methane briefly reached 5,600 ppm before immediately returning to baseline. The absence of corresponding signals at nearby IVYs and the short duration of the spike suggest a localized phenomenon. Given that no anthropogenic activity or interference occurred at the site, this event may reflect a natural, short-lived methane release from the soil, possibly related to minor organic decomposition, gas trapped in soil pores, or a micro-seepage pulse.

This isolated event provides a useful data point that supports continued evaluation of potential deep-sourced charge.

Collectively, these findings indicate that near-surface gas fluxes over the Rickerscote Prospect are primarily governed by environmental and microbial processes rather than persistent geological

[1] Refer to ASX announcement '*Hydrogen & Helium Potential of the Rickerscote Prospect*' dated 12 August 2025

emissions. The results suggest effective containment of subsurface gases within the Pindyin–Alinya reservoir–seal system, consistent with a geologically tight seal.

Helium Results

In addition to the deployment of the IVY detectors, the team performed a limited and opportunistic Helium survey using the PHD4 Helium detector. This survey sampled the soil profile up to a depth of 1m or so using a hand-held auger at 5 geographically dispersed locations, coinciding with a subset of the IVY sites. The results of this survey did not exceed background (~1.6 ppm).

The team visited 3 water bores on the 26th of October 2025 and sampled the headspace gas derived from a water sample taken from two of these wells OMVB8 and BP44 (Figure 2). Bore 4839 on PEL 253 had silted out and was dry. Bore BP44 had a maximum Helium reading of 2.7 ppm (inferred background) and bore OMVB8 had a higher maximum Helium reading of 11 ppm.

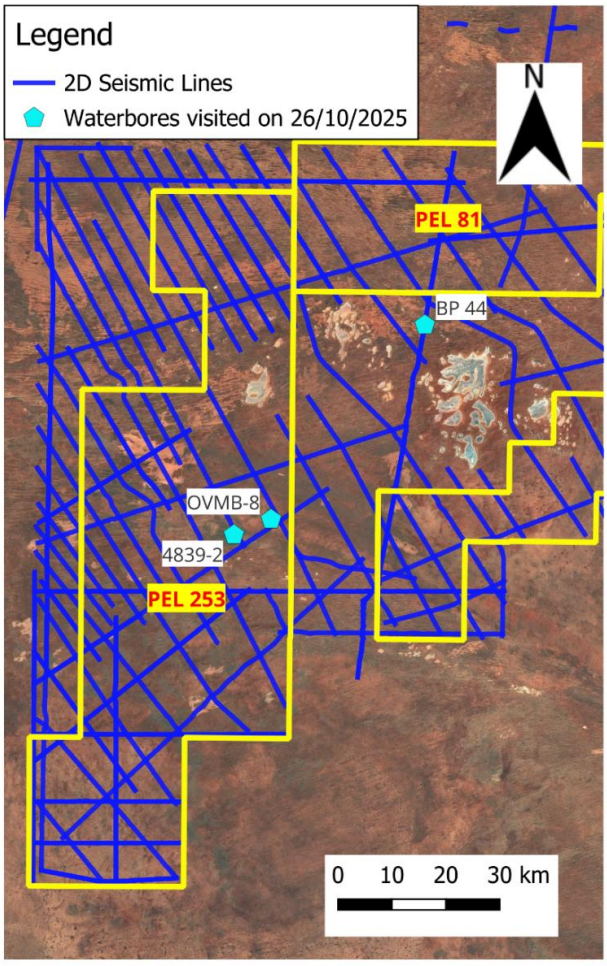

Figure 2: Location of the water bores visited on the 26th of October 2025

CEO Nik Sykiotis commented:

"We are delighted with the successful completion of the soil gas survey over PELs 81 and 253. The results add to the growing body of evidence pointing to an active petroleum, natural hydrogen and helium system operating at Rickerscote and provide valuable data as we prepare for the next phase of exploration."

"The results of the soil gas survey are another positive indicator for the presence of a substantial gas accumulation at Rickerscote. We believe these results increase our opportunity to attract the right farm-in partner to progress and drill Rickerscote-1 in the 2026 calendar year."

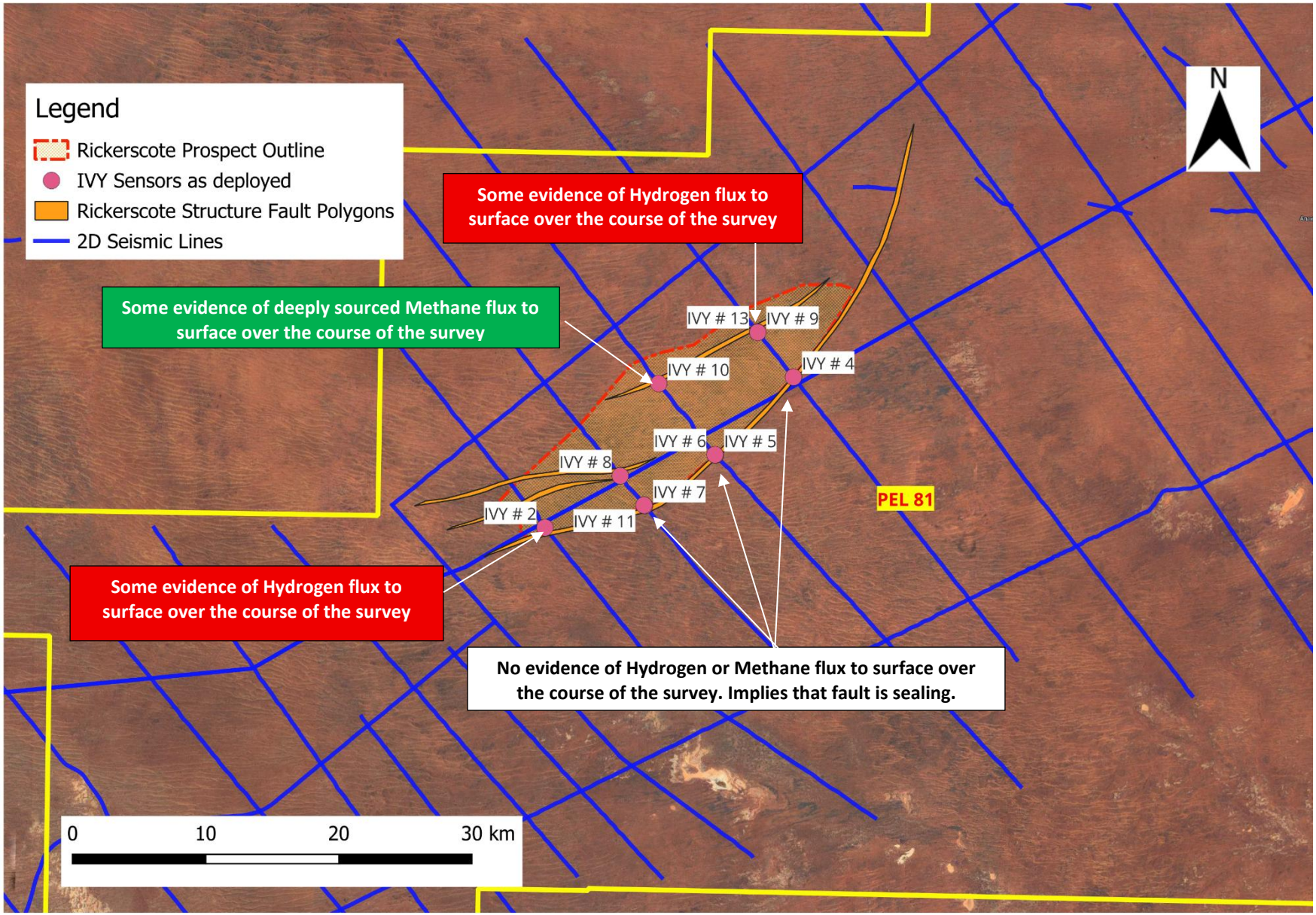

Figure 3: Location of the deployed IVY multi gas sensors over the Rickerscote Prospect.

Rickerscote

The Rickerscote Prospect is the largest prospect in the Alinya Project which comprises multiple, stacked reservoir objectives, and exceeds 180km^2 (and up to 400km^2) of closure or productive area. It is one of onshore Australia's largest, undrilled, seismically defined, sub-salt structures onshore Australia.

This ASX announcement has been approved and authorised for release by the Board of Whitebark Energy Limited.

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About Whitebark Energy Limited

Whitebark Energy Limited (ASX:WBE) ("Whitebark" or the "Company") is an ASX-listed exploration and production company focused on delivering conventional oil and gas to support global energy transition and building a clean energy future through natural hydrogen exploration and geothermal power. The company has extensive exploration in the Officer Basin located in South Australia; a substantial contingent gas resource in Western Australia; and geothermal exploration applications over proven conventional hot water production locations in southwest Queensland.