Initial Soil Gas Survey Results Confirm Helium, Natural Hydrogen and Methane in PEL 803

Highlights

- **Field validation of the presence of natural hydrogen, helium and methane in PEL 803**
- **The results will enable robust risking and ranking of leads and prospects**
- **Helium was measured up to 36ppm, over 7 times background**
- **Hydrogen was measured up to 1105ppm* (background is <1 ppm) and methane was measured up to 5000 ppm (background is ~2ppm).**
- **63 soil gas samples have been collected for third party laboratory analysis, with the results expected to further confirm the prospectivity of PEL 803**

Prominence Energy Chief Operating Officer, Dr Krista Davies said:

"The confirmation of hydrogen, helium and methane across PEL 803 is a significant early-stage de-risking milestone for the project. These results are what we were hoping to see, as they validate our geological model and demonstrate the presence of an active subsurface gas system across the licence area.

Importantly, the scale and consistency of the anomalies, combined with their apparent association to key geological features including Hiltaba granites and major structural corridors, provides a strong technical basis for advancing exploration. The integration of instantaneous and recharge measurements, together with autonomous monitoring, provides a robust framework of measurements.

While these are early results, the data positions PEL 803 as a highly prospective asset for both natural hydrogen and helium. The next phase of work will focus on integrating these results with geophysical datasets to define and rank drill-ready targets."

Prominence Energy Ltd **(ASX: PRM) ("Prominence" or "the Company")** is pleased to announce the initial field results from the recently completed soil gas survey across its PEL 803 licence area (Figure 1). The survey confirmed the presence of helium, hydrogen and methane in PEL 803 soil gases. Survey conditions were characterised by elevated soil moisture (average 20%) which is known to

* Instantaneous hydrogen measurements may be subject to artifact generation from the sampling process

suppress gas migration[4,5,6]. As such, measured concentrations are considered conservative, suggesting the underlying system may be more strongly charged.

Soil Gas Results

The survey confirmed the presence of natural hydrogen, helium and methane across PEL 803, validating Prominence's geological models and assisting to de-risk exploration in PEL 803.

The maximum instantaneous (T0) helium concentration recorded was 27 ppm, representing more than five times atmospheric background levels. The maximum helium concentration measured after 24 hours (T1) was 36 ppm, exceeding seven times background levels in air.

Hydrogen measurements showed a maximum instantaneous (T0) concentration of 1,105 ppm*. The maximum recharge (T1) hydrogen concentration was 25 ppm at Point 92, representing a relatively steady hydrogen signal between instantaneous and recharge measurements typical of natural hydrogen micro-seepage [1].

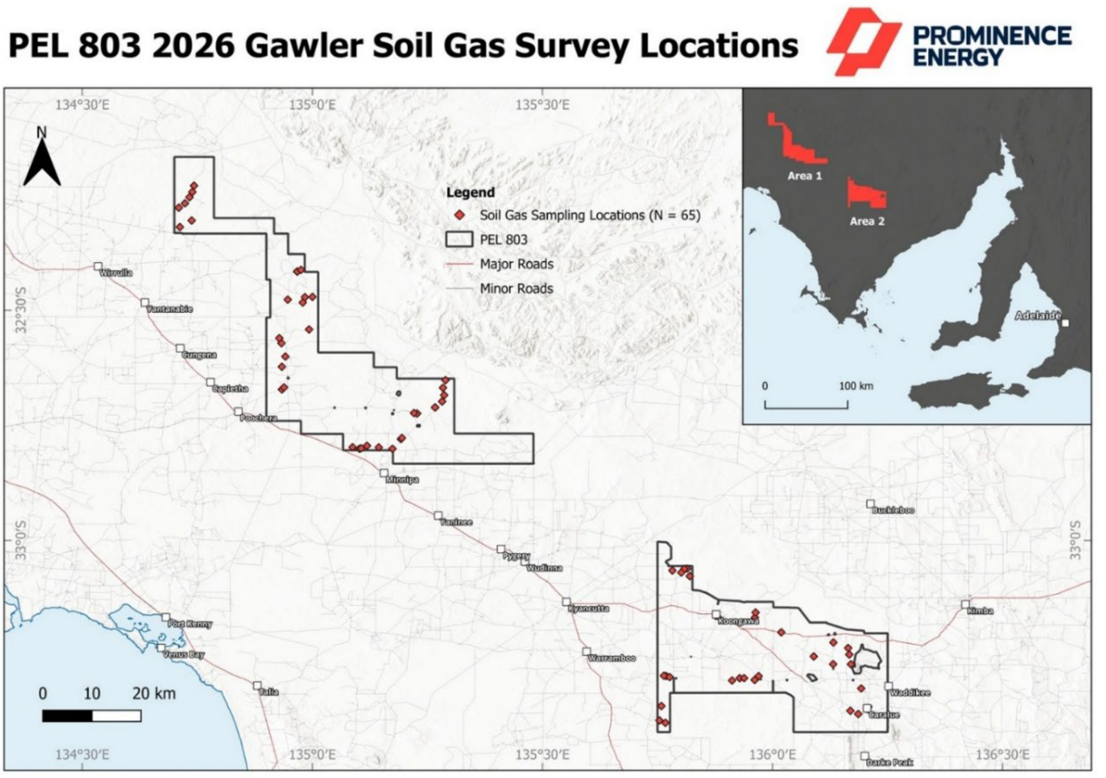

Figure 1: PEL 803 Soil Gas Survey Locations, Eyre Peninsula, South Australia

Methane concentrations reached a maximum instantaneous (T0) value of 5,000 ppm, while the maximum recharge (T1) methane concentration was 2,000 ppm, around 1000 times normal

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background levels. Where helium, hydrogen and methane exist in micro-seepage, it may exist as deeper sub-surface accumulations.

Geological Interpretation

The spatial distribution of helium, hydrogen and methane across PEL 803 is consistent with an integrated subsurface gas system comprising source, migration and potential accumulation components. The co-occurrence of these gases, together with their systematic relationship to key geological features, indicates a working fluid system, materially increasing confidence in the presence of deeper subsurface accumulations.

Elevated helium concentrations are spatially associated with interpreted Hiltaba Granite bodies (Figure 2), supporting a radiogenic origin linked to uranium and thorium enriched basement rocks[2]. The presence of helium at surface indicates not only a viable source but also effective migration pathways, a critical de-risking factor for helium exploration.

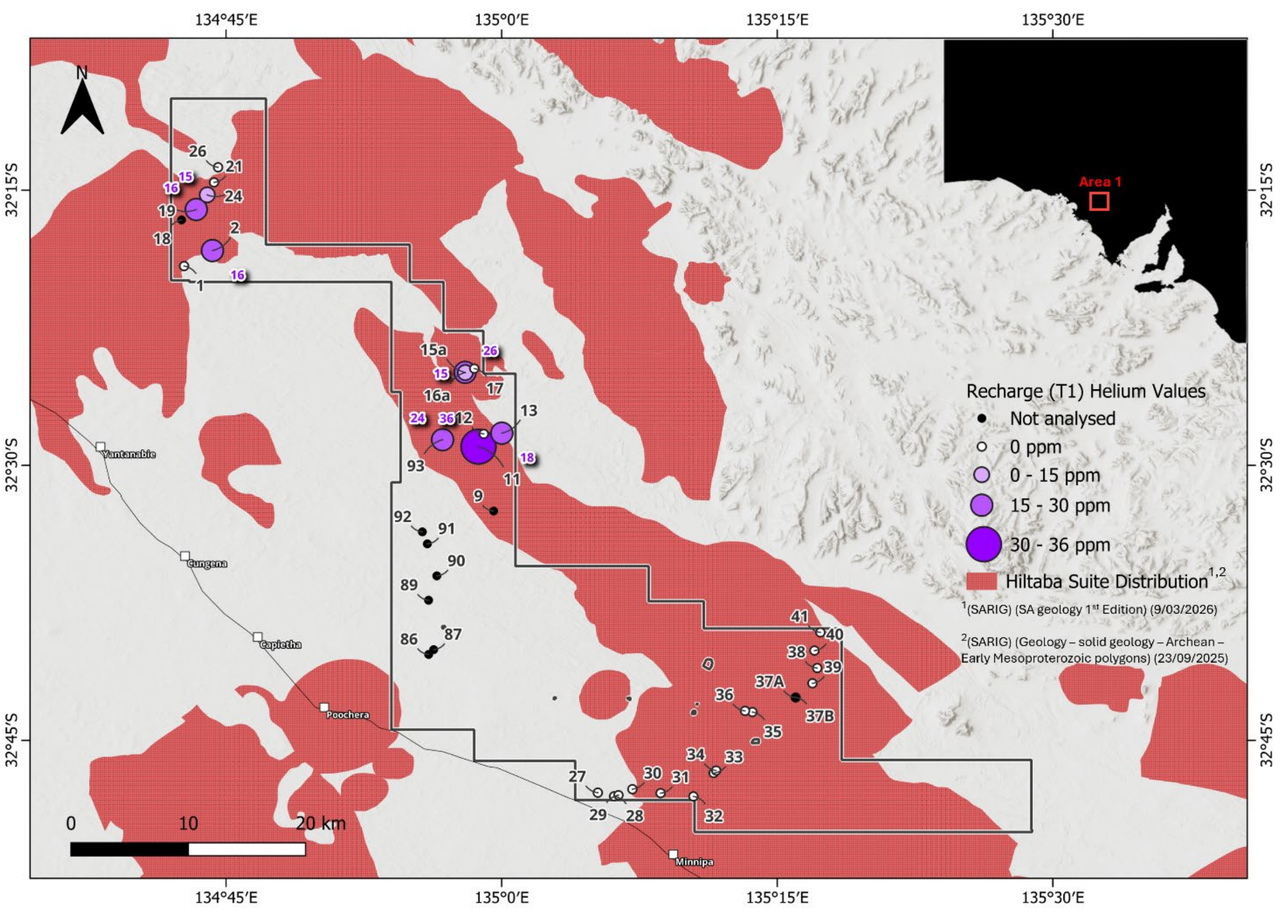

Figure 2: Measured helium recharge (T1) in PEL 803 Area 1 compared to the interpreted distribution of the Hiltaba Granite Source rock

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Methane concentrations are associated with areas of increased sedimentary thickness (Figure 3), consistent with a sedimentary source component, with the highest anomaly linked to a regional gravity high, indicating a potential structural influence on migration or trapping. The presence of methane alongside hydrogen and helium introduces multi-commodity potential and enhances the overall project value.

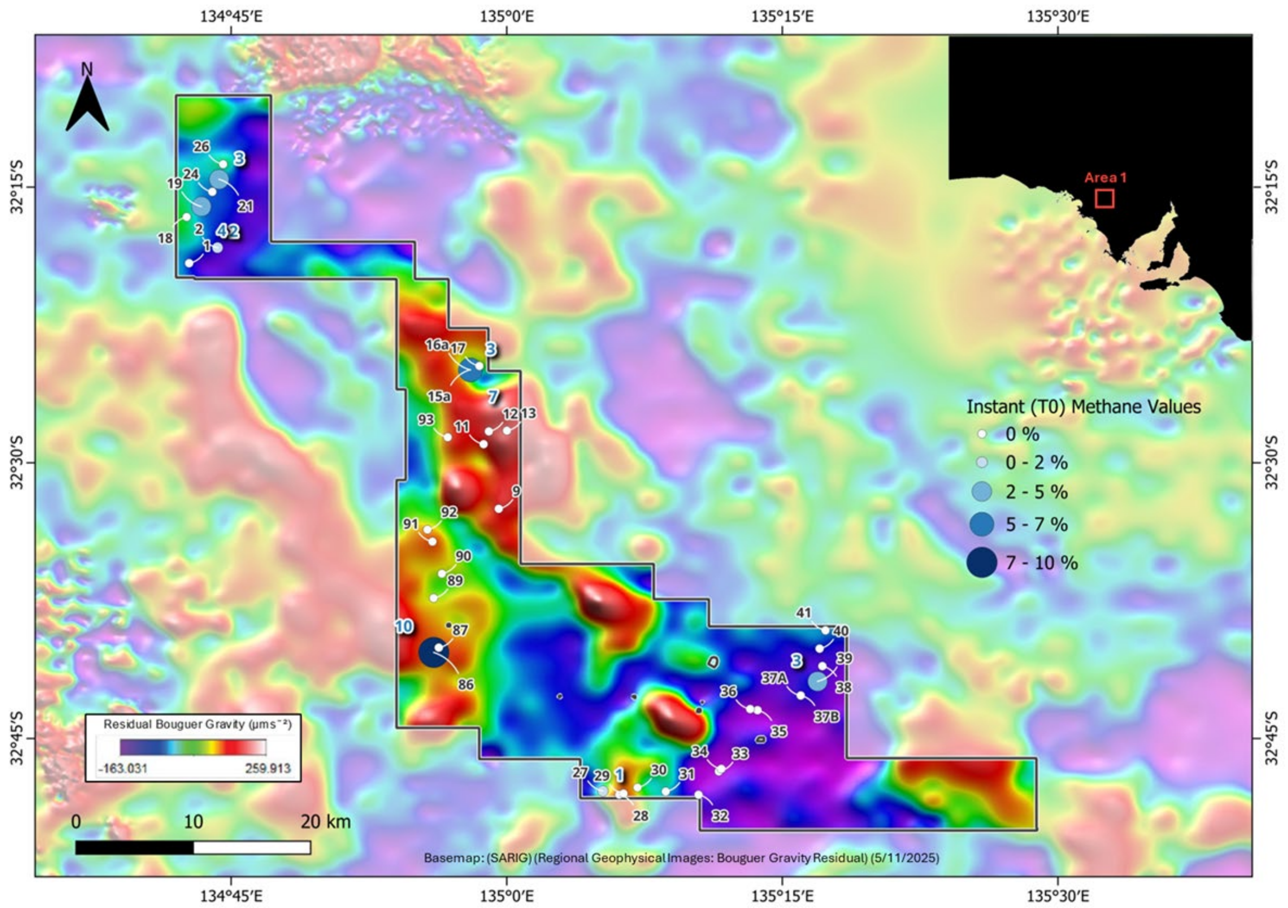

Figure 3: Measured methane instantaneous (T0) in PEL 803 Area 1 compared to the Residual Bouger Gravity (Source: https://catalog.sarig.sa.gov.au/dataset/mesac99). Methane is measured as a percentage of the LEL (lowest explosive limit), which is 50,000ppm.

Hydrogen anomalies are aligned along major structural lineaments interpreted from magnetic data (Figure 4), suggesting that basement-rooted faults act as primary migration conduits. This structurally controlled distribution supports a model of focused vertical seepage, consistent with natural hydrogen systems[3, 4], and provides a framework for targeted follow-up exploration.

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Collectively, these results demonstrate an active, structurally controlled gas system with identifiable source rocks and migration pathways, supporting progression toward ranked, drill-ready targets.

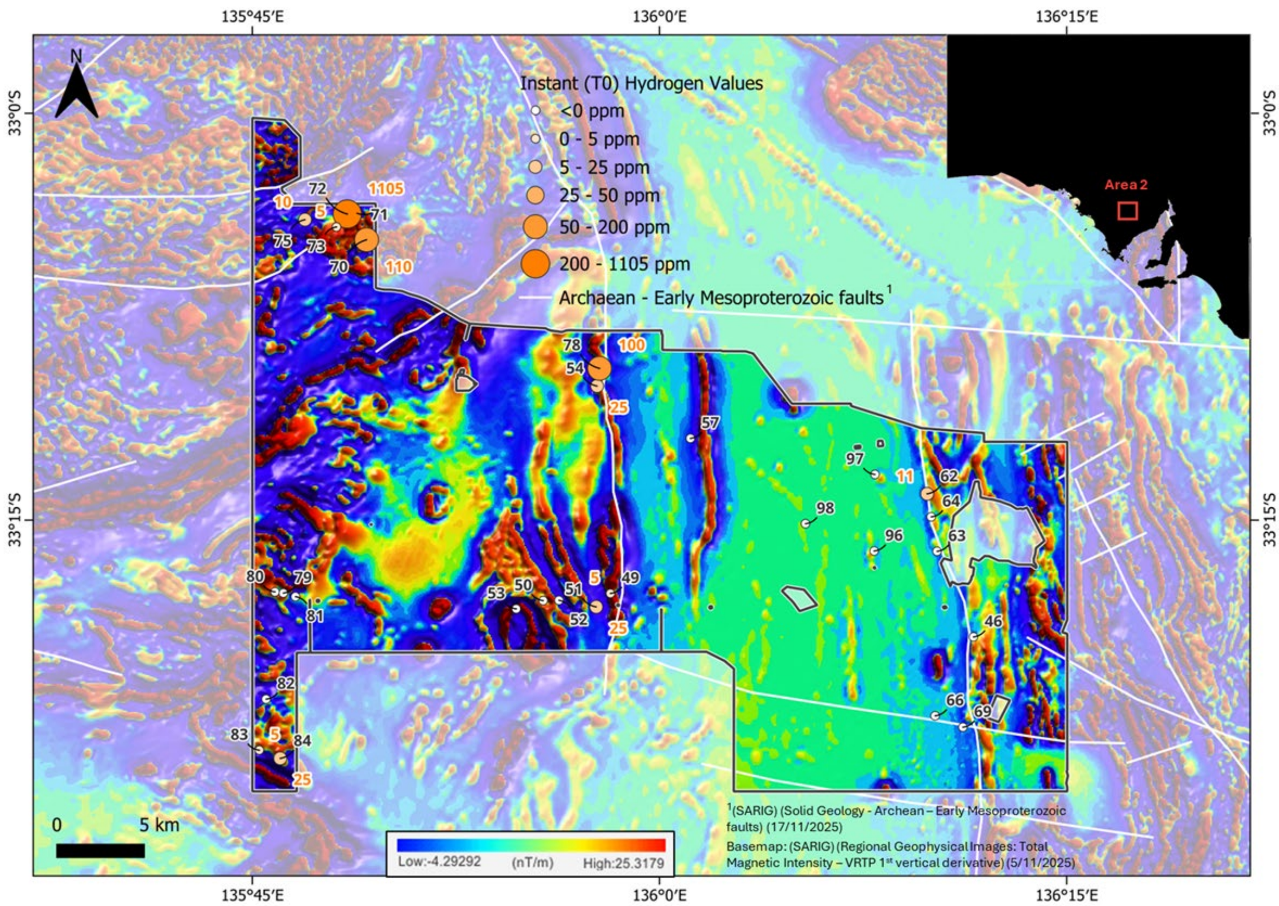

Figure 4: Measured hydrogen instantaneous (T0) in PEL 803 Area 2 compared to the regional Total Magnetic Intensity VRTP 1st vertical derivative and Archean to Early Mesoproterozoic fault interpretation.*

Autonomous Monitoring

In addition to discrete soil gas sampling, autonomous soil gas monitoring devices were deployed at five locations to capture high-frequency temporal variations in gas concentrations. This approach provides insight beyond single-point measurements, enabling assessment of whether detected gases represent transient artefacts or continuously recharging subsurface systems.

At Point 37b, an initial hydrogen concentration of 50 ppm was recorded under high soil moisture conditions (~70%), which are typically unfavourable for gas migration [5, 6]. An IVY autonomous monitoring device was installed at this location, recording measurements at 15-minute intervals over

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approximately 24 hours (Figure 5). Hydrogen concentrations increased from 18 ppm to 84 ppm within one hour of installation, followed by a decline and subsequent re-increase the following day.

This cyclic behaviour, characterised by short-term fluctuations and recharge following an overnight decrease, is consistent with dynamic natural hydrogen seepage systems rather than static or artefactual signals[1, 3].

Importantly, the observation of repeatable hydrogen recharge under conditions that suppress gas migration provides strong evidence for an active and continuously replenished subsurface source. This materially de-risks the project by demonstrating that measured anomalies are not isolated or one-off events, but instead reflect an ongoing system capable of sustaining gas flux over time.

The integration of autonomous monitoring with spatial soil gas data strengthens confidence in the presence of a working subsurface gas system, supporting progression toward targeted exploration and drill-ready prospect definition.

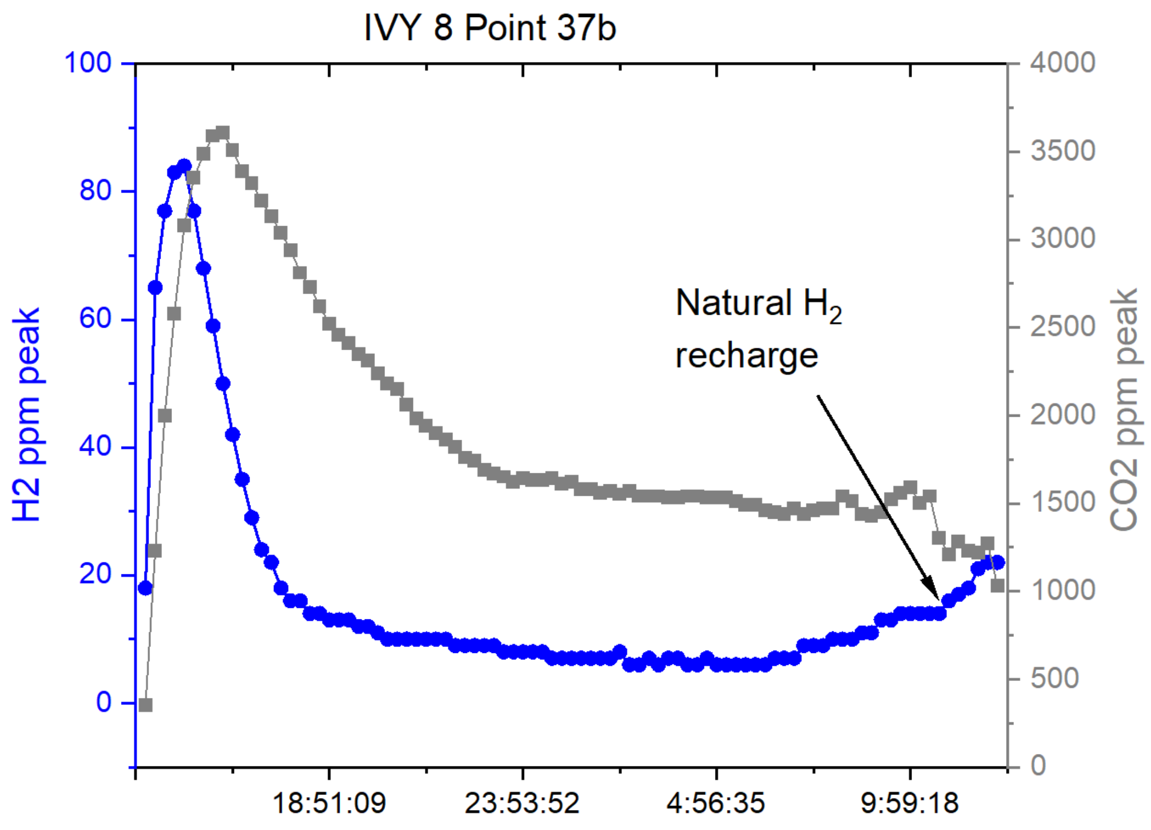

Figure 5: Natural hydrogen measurement at Point 37B. Hydrogen increases to 84 ppm 1 hour after installation. Left hand axis is hydrogen (ppm). Right hand axis is CO_2 (ppm).

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Next Steps

Laboratory gas chromatography analysis of the 63 collected samples is underway and will provide higher-precision compositional data to validate and refine the field results. These results represent an important near-term catalyst, expected to further confirm the strength and consistency of the observed anomalies.

The integrated geochemical dataset will be combined with existing gravity and magnetic interpretations to refine the geological model and define, risk and rank high-priority leads. This work is focused on identifying discrete, drillable targets, representing the next key value inflection point for the project.

Follow-up field programs will be designed to focus on structurally controlled anomalies and areas of multi-gas coincidence, improving targeting confidence and reducing exploration risk.

Collectively, these steps are aimed at progressing PEL 803 from early-stage validation to drill-ready prospect definition, positioning the Company to test the subsurface system and unlock the broader value potential of the portfolio.

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Authorised for release by the Board of Prominence Energy Ltd.

About Prominence Energy

Prominence Energy Ltd is an ASX-listed energy company headquartered in Perth. PRM's investment strategy is to identify very high ROI opportunities that can be secured at an early stage at close to "ground floor" valuations. In addition to conventional oil and gas projects, PRM considers helium, green energy and clean hydrogen opportunities.

About Natural Hydrogen

Natural hydrogen (also known as white or geologic hydrogen) is formed from natural processes within the earth and accumulates underground. It can be identified using conventional, low-cost, non-invasive exploration methods and represents a zero-carbon fuel, producing only water vapour when combusted.

About Helium

Helium is a naturally occurring noble gas generated through the radioactive decay of uranium and thorium within ancient crustal rocks, particularly Archean granites. Helium is a high-value, non-renewable resource with essential applications in medical imaging, semiconductor manufacturing, space technologies and cryogenics, and is currently subject to global supply constraints.

Forward-looking Statements

This document may contain certain forward-looking statements which are based on Prominence Energy Ltd's expectations, estimates and assumptions as at the date of this document. Forward-looking statements are subject to risks and uncertainties that may cause actual results to differ materially from those expressed or implied. These risks include, but are not limited to, geological and technical uncertainties, operational and regulatory outcomes, environmental conditions and market factors. Forward-looking statements speak only as at the date of this document and Prominence undertakes no obligation to revise or update them to reflect future events or circumstances.

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Supplementary Information

Table 1: Measurement ranges and sensor resolutions for handheld equipment used in this survey, iBridMX6 [7] ,Draeger X-am-8000 [8], IVY [9] and PHD 4 [10].

		H_2	CH_4	CO_2	H_2S	CO	NO	He
MX6	*Range (ppm)*	0 – 2,000	0 – 50,000	0 – 50,000	0 – 500	0 – 1,500	-	-
	Resolution (ppm)	1	500	100	0.1	1	-	-
X-am 8000	*Range (ppm)*	0 – 2,000	0 – 1,000,000	0 –50,000	-	0 – 2,000	0 – 200	-
	Resolution (ppm)	5	10,000	50	-	1	0.1	-
IVY	*Range (ppm)*	0 – 2,000	0 – 50,000	100 – 50,000	0 – 100	-	-	-
	Resolution (ppm)	10	50	40	0.6	-	-	-
PHD 4	*Range (ppm)*	-	-	-	-	-	-	2 – 250*
	Resolution (ppm)	-	-	-	-	-	-	N/S

- Not analysed | *Low Sensitivity | N/S Not Stated

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