

**20 May 2026**  
**ASX Announcement**

**Potential to Accelerate Helium Development at Ramsay  
Supported by World-Leading Purity Results, Independent  
Commercial Modelling and Amid Tightening Global Supply**

**Highlights**

- Based on the extensive work completed by Gold Hydrogen (set out below), the Company is progressing **commercialisation studies** across multiple pathways, including **green methanol, power generation, and fuel cell applications** for Natural Hydrogen, as well as **bottled industrial / commercial-grade Helium** production.
  - The Ramsay Project has delivered multiple high-value datasets, including:
    - **2023 airborne survey,**
    - **2023 fluid inclusion study,**
    - **2024 seismic survey,** and
    - **ongoing drilling and well-testing results,** supplemented by extensive historical data.
- Independent consultants have also completed **separate Prospective Resource estimates for Hydrogen and Helium** across the Ramsay Project area (refer Tables 1 and 2 appended).
- Drilling and well-testing to date have confirmed **exceptional gas purities**, with **Natural Hydrogen up to 97%** and **Helium up to 36.9%** (both air-corrected). **Helium-3 has also been detected** in samples analysed by international laboratories. Based on published information available, the Company considers these results to be **world-leading**.<sup>Ref 1</sup>
- **Worley Consulting (Worley)** has completed an **independent high-level commercial assessment** of three indicative Helium production scenarios, based on inputs provided by the Company, for its **100%-owned Ramsay Project** on the Yorke Peninsula, South Australia.<sup>Ref 2</sup>
- Modelling undertaken by Worley indicates that, based on the inputs provided by the Company, Ramsay may have the potential to be **commercially viable with as few as two wells**, assuming sustained Helium flow rates of **~29 thousand standard cubic feet (Mscf) per day per well**. Scaling to **ten wells** is indicated by Worley to **improve the NPV, IRR and payback for a gaseous product**.
- **Quantum Technology Corp (Canada)**, a specialist in modular, skid-mounted Helium and Hydrogen purification plants, with operating facilities across North America and Europe (via Cryo Diffusion SAS, France), has provided **access to commercial-scale pilot plants**.

- While continuing to advance its medium- to long-term Natural Hydrogen opportunities, the Company has identified the potential for an **accelerated Helium development** at Ramsay. The Worley assessment provides preliminary inputs into evaluating this option.
- The Company will continue working with Worley to refine these models in parallel with the **next flow-testing campaign**, currently expected to commence in **June 2026**.
- Subject to flow-testing outcomes and potential **contingent resource definition**, Gold Hydrogen intends to progress an **accelerated FEED process**, positioning a **Helium-focused development at Ramsay** as the initial commercial platform for longer-term Natural Hydrogen and Helium exploitation.
- **Australia and New Zealand currently import 100% of their Helium**, following the closure of the Darwin LNG Helium plant in late 2023. Helium is a **high-value, non-manufacturable commodity**, with structurally rising demand driven by advanced industrial and technological applications.<sup>Ref 3</sup>
- Recent disruption at **Qatar's Ras Laffan facility** has temporarily removed an estimated **30–35% of global Helium supply** for an expected **12–18 months**, coinciding with accelerating demand from **AI, data centres, semiconductors, MRI and defence sectors**.<sup>Ref 4</sup>

#### Comments from the Chairman

Gold Hydrogen Chairman, the Hon. Alexander Downer AC, said:

*“Helium currently sits on Australia’s Strategic Materials List, but that is a holding pattern, and the events of recent weeks have laid bare just how exposed Australia is. We import 100% of a gas that is essential to chips, MRI, defence and AI infrastructure, and the global supply chain recently lost roughly a third of its production overnight. It is time to move Helium from the Strategic Materials List back onto Australia’s Critical Minerals List, where it belongs.”*

*“Independent commentary, including a recent piece by the Australian Strategic Policy Institute, has put the issue plainly: no Helium, no chips.<sup>Ref 5</sup> Gold Hydrogen has a unique opportunity, and a responsibility, to help Australia rebuild a sovereign Helium capability and to be part of the solution for our allies and trading partners.”*

#### Comments from the Managing Director

Gold Hydrogen Managing Director, Neil McDonald, said:

*“With Helium recorded across our Ramsay Project with air-corrected purities of up to 36.9%, against a typical commercial cut-off of 0.3% (albeit as a by-product), and with global supply under unprecedented pressure, Gold Hydrogen sees a strong case for moving quickly to capitalise on the opportunity for domestic Helium production in Australia. We are excited at the potential for accelerating a Helium development at Ramsay; working with Worley on commercial modelling parameters, aiming to move towards production wells off the back of a successful flow testing program, and ultimately re-establishing Australia’s domestic production and supply of Helium.”*

### Comments from Worley

Jessica Dwyer, Director Chemicals, Fuels and Low Carbon APAC at Worley Consulting, said:

*“Worley is pleased to be working with Gold Hydrogen on the Ramsay Project. Our initial high-level commercial assessment indicates that, on the inputs provided by the Company, the project has the potential to be commercially viable under the modelled scenarios. We look forward to progressing an accelerated Front End Engineering Design with Gold Hydrogen following the upcoming flow testing program, with the objective of continuing to advance the case for Australian Helium production.”*

### Comments from Quantum Technology Corp.

Calvin Winter, President said:

*“Quantum Technology Corp. is pleased to be working with Gold Hydrogen in providing proven cost effective modular Helium and Natural Hydrogen purification skids to transform raw well gas to high pressure pure Helium gas and / or Natural Hydrogen gas at commercial purities.”*

### Further Details

The Board of Director of Gold Hydrogen Limited (ASX: GHY) is pleased to provide an update in relation to its future potential commercialisation pathways, including an independent high-level commercial assessment of three potential Helium production scenarios for its Ramsay Project undertaken by Worley, based on the inputs provided by the Company.<sup>Ref 2</sup>

### Gold Hydrogen’s Ramsay Project

Since the Company’s successful IPO in January 2023, numerous workstreams have been undertaken as part of its ongoing exploration and appraisal efforts to determine the prospectivity of, and future potential commercial pathways for, the Natural Hydrogen and Helium gases available at its flagship Ramsay Project in South Australia.

The key workstreams and studies undertaken by Gold Hydrogen to date include:

- static and dynamic sub-surface modelling;
- a 10,529 line kilometre airborne survey, and its subsequent interpretation;
- reservoir rock characterization studies to determine permeability, porosity, etc;
- a 575km 2D seismic survey;
- soil gas sampling programs;
- drilling the Company’s first four (4) wells with associated image and magnetic resonance logging, gas sampling and laboratory analysis;
- exploration well testing of the Ramsay 1 and Ramsay 2, together with gas sampling analysis from Australian and international laboratories;
- fluid-inclusion studies to determine the existence of Natural Hydrogen and / or Helium across the broader Ramsay project area as well as the Company’s regional application areas.

In addition, independent consultants have provided the Company with separate Prospective Resource estimates for both Hydrogen and Helium within the Ramsay Project area, as outlined in **Table 1** and **Table 2** appended.

On the basis of the various data streams available to the Company as a result of the above activities, it is confident in the existence of both Natural Hydrogen and Helium across the broader Ramsay Project footprint. Further work must be undertaken to confirm the Company's ability to viably access and bring these gases to surface in sufficient quantities to support future the commercial development of the Project. This will be one of the key objectives of the Company's upcoming flow testing campaign.

### **Potential Future Commercialisation Pathways**

As previously disclosed, Gold Hydrogen continues to engage with a range of domestic and international parties in relation to its aspirations to commercialise the Ramsay Project. These discussions have produced a number of potential future commercialisation pathways, contingent on the success of the upcoming well testing campaign.

Some of the potential commercialisation pathways currently under consideration include the following:

#### **Potential Natural Hydrogen Pathways**

Two Natural Hydrogen commercial pilot-level pathways are being considered in parallel, sequenced so that the first pathway would directly support the potential for Helium production, and the second potentially scaling into Liquid Natural Hydrogen export and Green Methanol over time. Quantum Technology Corp of Canada has confirmed it can supply modular Natural Hydrogen purification equipment, in addition to the Helium plant discussed under Helium Pathway 2.

##### **Natural Hydrogen Pilot 1 — Natural Hydrogen to Energy for Helium Production**

This pilot is currently being scoped, and would deploy a Hydrogen Fuel Cell on site at Ramsay, converting Natural Hydrogen produced from the well stream into electricity, to power a modular Helium purification plant. If this pathway is pursued, it would be intended to be operational alongside the Project's first Helium production (see below). Beyond its direct role powering the Helium plant, the pilot would establish an integrated Natural Hydrogen-to-electrons reference installation for off-grid power applications in remote Australia.

##### **Natural Hydrogen Pilot 2 — Natural Hydrogen to Compressed Gas, Scaling to Liquid Natural Hydrogen and Green Methanol**

In parallel, the Company is progressing a compressed gaseous Natural Hydrogen pilot pathway, comprising a modular Quantum Technology QPure-H<sub>2</sub> purification plant feeding fuel-cell-grade Hydrogen into 350-bar tube trailers for a potential Hydrogen trucking trial with a major international automotive partner. This pilot would be positioned as a direct sovereign substitute for imported diesel on one of Australia's highest-volume freight corridors. Subject to the performance of this pilot project and offtake demand, the Company aspires to a scale-up pathway into two longer-dated streams: (i) grid-scale liquefaction for Liquid Natural Hydrogen export to Japan, under discussion with established Japanese industrial partners; and (ii) a Green Methanol stream, currently under a feasibility assessment discussion with a major international chemicals partner for a potential facility on the Yorke Peninsula.

## **Potential Helium Pathways**

### **Helium Pathway 1 — Scaled Helium Development**

This pathway involves the consideration of a scaled gaseous and/or liquid Helium development on the Yorke Peninsula. As described further in the Worley section below, Worley's indicative modelling considered scenarios ranging from two (2) wells up to a ten (10) well gaseous project, and up to twenty (20) wells for a full commercial development. The Company's objective under this pathway is to work with Worley on an accelerated FEED process, with well count, plant capacity, product form (gaseous versus liquid Helium) and phasing to be optimised against the actual upcoming Ramsay flow testing outcomes. This pathway is positioned for the potential of a larger scale, longer-dated development optionality for Helium at Ramsay.

### **Helium Pathway 2 — Quantum Technology Commercial Helium Pilot**

In parallel, the Company has received a preliminary budget proposal from Quantum Technology for a modular, skid-mounted Helium purification plant designed to be potentially matched to the best one to two (1–2) wells from the upcoming Ramsay flow testing program. Quantum Technology is an experienced supplier of modular Helium plants, with reference facilities in North America, and a product range covering single-well and multi-well configurations. The Quantum pilot would be positioned as a smaller-scale, lower capital, faster-to-market option that could potentially deliver first commercial Helium production from Ramsay, with the aim of re-establishing domestic Helium supply to the Australian market.

The Quantum pilot would also be expected to provide valuable operating data — on sustained well deliverability, recovery rate, plant performance and product quality — that would directly inform and de-risk the larger development (Helium Pathway 1). The two potential pathways are therefore complementary rather than alternative: a near-term Quantum pilot to generate first cash flow and field data, with the subsequent option to scale-up via Helium Pathway 1 as the Company's resource base and the offtake market both mature over time.

Both pathways remain subject to the successful completion of the Ramsay flow testing program, regulatory approvals, completion of FEED, the definition of a Contingent Resource, the negotiation of offtake arrangements, and a final investment decision by the Board. The Company will provide further updates to the market in due course.

## **Worley Helium Study**

The Company has previously disclosed the fact that it has been working with Worley in relation to potential commercial production modelling scenarios for Helium. The high-level assessment undertaken by Worley, based on the inputs provided by the Company, to date has provided a high-level technical definition of the production plant, order-of-magnitude capital cost estimates, and commercial modelling of NPV, IRR and payback period for both gaseous and liquid Helium product cases.

Importantly, the scenarios assessed by Worley are indicative modelled cases based on typical process arrangements, typical recoveries and well stream conditions provided by the Company. However, they are not based on a defined resource, and in accordance with ASIC and ASX guidance, the Company cannot currently make any specific disclosures associated with any of the preliminary project economics.

The modelled scenarios ranging from two (2) wells up to a ten (10) well gaseous project indicate Ramsay has the potential to be commercially viable if they can sustain a Helium flow rate of 29 thousand standard cubic feet (Mscf) per day each.

This modelling will be specifically refined post completion of the upcoming Ramsay flow testing program and any subsequent definition of a Contingent Resource for Helium. As part of concept developments and undertaking a commercial assessment, the Worley modelling demonstrates the potential for the commercial extraction of Helium at the Ramsay Project using currently available technology. This assessment therefore assists Gold Hydrogen with the opportunity to book a Contingent Resource on the back of successful flow testing results from its upcoming campaign.

#### **World-Leading Helium Purity**

Gold Hydrogen has previously confirmed Helium samples from the Ramsay Project at air-corrected purities of up to 36.9%.<sup>Ref 1</sup> This is significantly above the 0.3% cut off rate that is generally applied to Helium extraction within Natural Gas Fields. Independent validation by Oxford University has also confirmed the presence of Helium-3 at concentrations of up to 901 ppt. The Company believes its results to be amongst the highest in the world, based on published information available.<sup>Ref 1</sup>

#### **A Tightening Global Helium Market**

Helium is a non-substitutable strategic gas underpinning semiconductor manufacturing (including extreme ultraviolet lithography), AI infrastructure and data centres, MRI and other medical imaging, aerospace, defence systems, quantum computing and cryogenics.

Australia and New Zealand currently produce no Helium domestically and rely entirely on imports. The closure of the Darwin LNG Helium plant at the end of 2023 left the region with no sovereign Helium supply.<sup>Ref 3</sup>

Domestic demand from AI, data centres, MRI, medical and defence applications was already growing strongly prior to recent supply disruption. Strikes affecting Qatar's Ras Laffan complex have now removed an estimated 30–35% of global traded Helium supply for an expected 12–18 months.<sup>Ref 4</sup> Qatar and the United States together supply close to 90% of the global market, and it has been reported that there is no readily available substitute source at this scale.<sup>Ref 5</sup>

#### **Significant Interest in GHY Helium**

Gold Hydrogen is currently fielding a number of enquiries from interested parties encompassing Helium offtake, Helium plant vendors, potential investors, and the Australian Federal Government. Whilst there are a number of Helium exploration projects in Australia, Gold Hydrogen is the only known project with multiple wells, proven Helium occurrences and upcoming flow testing occurring in mid-2026.

### **Next Steps**

1. Completion of the Ramsay well testing program, with site equipment currently schedule to mobilise in late May 2026.
2. If the Company's upcoming flow testing campaign is successful, refinement of the Worley commercial scenarios using actual flow test results, and a defined contingent resource for Helium.
3. Selection of Helium production plant capacity, product type (gaseous vs liquid) and phasing.
4. Commencement of an accelerated pre-FEED / FEED process with Worley to support a final investment decision.
5. Continued engagement with strategic partners, landowners, the South Australian Government and Indo-Pacific allies.

### **Important Notices and Disclaimers**

**Hypothetical scenarios.** The high-level commercial scenarios prepared by Worley and referenced in this announcement are hypothetical, using high-level technical definition, prepared on the basis of typical process arrangements, typical recoveries, inputs provided by Gold Hydrogen including well drilling and completion costs, well stream conditions and forecast Helium market pricing. They do not constitute a feasibility study, a reserve or resource estimate, or a forecast of project economics. The scenarios will be refined following completion of the upcoming flow testing program and any subsequent definition of a contingent resource.

**No resource estimate.** No SPE-compliant reserves or resources are reported in this announcement. Hence the Company cannot publish any modelled production rates, well counts, capital costs, NPV, IRR and payback figures at this time.

**Forward-looking statements.** This announcement contains forward-looking statements regarding the Company's aspirational plans and intentions. Such statements are subject to known and unknown risks and uncertainties, and actual results may differ materially. Gold Hydrogen does not undertake to update any forward-looking statements except as required by law.

### **Important Risk Commentary**

It is important to note that there remain both geological and potential development risks associated with the Ramsay Project and the Company's commercial and business objectives. These risks relate to the presence, recovery and potential volumes of both Natural Hydrogen and Helium, but also due to the location of the gas systems within agricultural areas and the proximity to National Parks on both Yorke Peninsula and Kangaroo Island, requiring significant landholder and community engagement. The worldwide, Federal and South Australian Government and industry efforts to secure Hydrogen as an alternative energy source provides confidence that any technical and social concerns may be overcome.



## **About Gold Hydrogen**

Gold Hydrogen is focused on the discovery and development of world class Natural Hydrogen and Helium gases in a potentially extensive province in South Australia. This region had its Natural Hydrogen and Helium potential confirmed by the Company via its maiden 2023 / 24 drilling and well testing campaigns.

The domestic and global demand for Hydrogen and Helium, combined with new exploration techniques and experienced personnel, provides Gold Hydrogen with an extraordinary opportunity to define and ultimately develop a new Natural Hydrogen and Helium gas province.

The combined Natural Hydrogen permit area of the Gold Hydrogen group is in excess of 75,000km<sup>2</sup>. Gold Hydrogen holds one granted petroleum exploration license (the Ramsay Project - PEL 687) and an exclusive application area (PELA 792). In addition, its two 100% owned subsidiary companies (White Hydrogen Australia and Byrock Resources) hold an additional seven (7) exclusive application areas for Natural Hydrogen and Helium exploration within South Australia.

Gold Hydrogen is also the preferred applicant for four (4) gas storage exploration licenses applications (GSELA) covering an area of 8,107km<sup>2</sup> within the Yorke Peninsula portion of PEL 687 in South Australia. These storage licence applications are in addition to the granted exploration licence and application licences. A 100% owned Gold Hydrogen subsidiary, Sustainable Minerals Group Pty Ltd, also holds a mineral lease on the Yorke Peninsula potentially prospective for iron-oxide, copper and / or gold mineralisation.

The group's permit areas are characterised by low population densities, cooperative stakeholders and aspects of the natural environment suited to the exploration and development of a future Natural Hydrogen gas province. Gold Hydrogen places considerable importance on close liaison with landholders, traditional owners and all other stakeholders, and this approach has led to the grant of its key tenement PEL 687 in South Australia. The Company intends to continue to invest in these efforts.

This announcement has been authorised for release by the Board of Directors.

On behalf of the Board  
Karl Schlobohm  
Company Secretary

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### Release References

- (a)** ASX announcement of 17 October 2024 ‘Ramsay Project – Helium Testing Update’ (Helium recorded at the wellhead at air-corrected purities of up to **36.9%**). Refer Table 3 appended for technical details.

**(b)** ASX announcement of 2 December 2025 ‘Ramsay 3 Drilling Successfully Completed – World Class Elevated Levels of Natural Hydrogen Confirmed up to **97%** Purity’ (air corrected). Refer Tables 4A and 4B appended for technical details.

**(c)** ASX announcement of 30 October 2024 ‘Helium-3 Confirmed at Ramsay Project’, (including independent isotopic analysis by the University of Oxford with **Helium-3** concentrations up to 901 ppt). Refer Table 5 appended for technical details.
- Worley Consulting, ‘Natural Helium Commercial Scenarios Summary Report’, 411010-01261-PM-REP-0001, Rev 0.
- Gasworld, ‘Australia ceases helium production as its sole plant shuts down’, December 2023; Bayu-Undan to Darwin Pipeline / Darwin LNG, final cargo loaded 11 November 2023. The BOC Darwin helium plant was the only helium production facility in the Southern Hemisphere and supplied approximately 3% of global helium prior to closure.
- Chemical & Engineering News (C&EN), ‘Iran war threatens global helium supply’, March 2026; Fortune, ‘Iran war cuts off helium from Qatar’, 21 March 2026; Reuters / CNBC, March 2026. Qatar Energy halted production at Ras Laffan Industrial City on 2 March 2026 and declared force majeure on 4 March 2026 following Iranian drone and missile strikes; further strikes on 18–19 March 2026 caused “extensive damage” to the Pearl GTL facility and additional LNG infrastructure. Industry analysts (including Kornbluth Helium Consulting and Exiger) estimate that approximately one-third of global helium supply has been removed from the market, with restart timelines measured in months to years and helium spot prices having doubled since the crisis began.
- Arup George, ‘No helium, no chips: why Australia needs to make the gas again’, The Strategist, Australian Strategic Policy Institute, 1 April 2026. The article notes that Qatar and the United States together supply close to 90% of global helium, that Australia removed helium from its Critical Minerals List in December 2023, and that Australia’s only helium production facility (the Darwin LNG plant) shut down the same year.

**Table 1 – Prospective Resource Statement for Natural Hydrogen**

Gold Hydrogen's Ramsay Project: Prospective Resources* of Hydrogen in '000 Tonnes – 30 Sept 2021										
PEL	Prospects	SPE PRMS Sub-class	1U Low Estimate	2U Best Estimate	Mean	3U High Estimate		Pg	Pd	Pc
PEL 687	All Prospects and Leads		207	1,313	4,187	8,820		22 %	48 %	10 %
<b>Yorke Peninsula</b>										
PEL 687	Ramsay FB	Prospect	124	931	2,712	6,989		22 %	50 %	11 %
PEL 687	Ramsay Lst	Prospect	10	70	191	492		26 %	50 %	13 %
PEL 687	Maitland	Lead	7	26	40	92		17 %	35 %	6%
<b>Kangaroo Island</b>										
PEL 687	Navigator	Lead	34	152	280	678		19 %	40 %	8%
PEL 687	Kanmanto	Prospect	32	134	237	569		25 %	40 %	10 %

\* This estimate of Natural Hydrogen Prospective Resources must be read in conjunction with the notes below, and it should be noted that the estimated quantities of Natural Hydrogen that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery and a risk of development. Further exploration, appraisal and evaluation is required to determine the existence of a significant quantity of potentially recoverable Natural Hydrogen.

**Notes:**

1. This reserves statement presents Gold Hydrogen's Prospective Resources. Gold Hydrogen currently has no Reserves and no Contingent Resources.
2. Estimates are assessed to comply with the ASX Listing Rules for Prospective Resources and SPE-PRMS 2018 with the understanding that naturally occurring Hydrogen may be considered a hydrocarbon since it has energy content and can be used stand alone and/or blended with sales gas. "U" implies Prospective Resources.

3. Per ASX Listing Rules 5.28.4 and 5.28.5 estimates are unrisks and aggregated arithmetically by category, hence caution that the aggregate low estimate may be a very conservative estimate and the aggregate high estimate may be a very optimistic estimate due to the portfolio effects of arithmetic summation.
4. Probabilistic methods are used to prepare the estimates. The distribution of the estimates is the “full distribution” and has not been truncated by application of the MEPS (minimum economic pool size concept).
5. The Reference Point is at the wellhead/edge of lease (i.e. wellhead facilities) so the estimates have no deduction for flare, vent or fuel consumed in operations.
6. Pg (Chance of Geologic Discovery), Pd (Chance of Development) and Pc (Chance of Commerciality = Pg x Pd) are calculated as a weight average of the P50’s of the H2 (‘000 Tonnes) of the prospects.
7. Pg incorporates Play Risk and Prospect Risk.
8. Pd incorporates an assessment across all SPE-PRMS Commerciality Criteria (i.e. not just economics).
9. Information in the table is rounded. Some totals in the tables may not add due to rounding.
10. This reserves statement:
- is based on, and fairly represents, information and supporting documentation prepared by the qualified petroleum reserves and resources evaluators listed in note 14 below. Details of each qualified petroleum reserves and resources evaluator’s employment and professional organisation membership are set out in note 14 below;
  - has been approved by Luke Titus, who is a qualified petroleum reserves and resources evaluator and whose employment and professional organisation membership details are set out in note 14 of this reserves statement;
  - is issued with the prior written consent of Luke Titus and Teof Rodrigues & Associates (“TRA” - involving Teof Rodrigues, Paul Strong, and Greg Horton, whose employment and professional organisation membership details are set out in note 14 of this reserves statement) as to the form and context in which the estimated Natural Hydrogen resources and the supporting information are presented.
11. There is no change to information or additional information, since the effective date of 30 September 2021, that Gold Hydrogen and TRA are aware of that would materially change the estimates in this reserves statement.
12. Gold Hydrogen engages independent experts TRA to evaluate reserves and resources.
13. Qualified Petroleum Reserves and Resources Evaluators are:

<b>Name</b>	<b>Employer*</b>	<b>Professional organisation</b>
Luke Titus	Gold Hydrogen	SPE
Teof Rodrigues	Teof Rodrigues & Associates	SPE, PESA
Paul Strong	Teof Rodrigues & Associates	GSL, AAPG, PESA
Greg Horton	Teof Rodrigues & Associates	SPE

\* As at 30 September 2021

**Table 2: Prospective Resource Statement for Helium**

Gold Hydrogen Prospective Resources* of Helium in Bcf - Ramsay Project (PEL 687 Yorke Peninsula) 21 February 2024										
PEL	Prospects	SPE PRMS Sub-class	Formation	1U Low Estimate	2U Best Estimate	Mean	3U High Estimate	Pg	Pd	Pc
PEL 687	All Prospects		All Formations Total	7	41	96	243	17%	60%	10%
PEL 687	Ramsay Fault Block	Prospect	Kulpara Formation	0.8	3.6	7.0	17.1	29%	60%	17%
			Winulta Formation	0.1	0.6	1.6	4.0	12%	60%	7%
			Fractured Basement	0.7	3.8	6.9	16.7	13%	60%	8%
			<b>Total</b>	<b>2</b>	<b>8</b>	<b>15</b>	<b>38</b>	<b>20%</b>	<b>60%</b>	<b>12%</b>
PEL 687	South of Ramsay Fault Block	Prospect	Kulpara Formation	2.1	12.8	30.5	77.6	23%	60%	14%
			Winulta Formation	0.3	2.4	7.7	19.8	8%	60%	5%
			Fractured Basement Hilbata Suite	1.6	10.3	25.5	65.2	12%	60%	7%
			Fractured Basement Yorke Peninsula Heel	1.4	7.7	17.0	42.7	12%	60%	7%
			<b>Total</b>	<b>5</b>	<b>33</b>	<b>81</b>	<b>205</b>	<b>16%</b>	<b>60%</b>	<b>10%</b>

\* This estimate of Helium Prospective Resources must be read in conjunction with the notes below.

These Helium Prospective Resources are estimated quantities of Helium that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both an associated risk of discovery (Pg) and a risk of development (Pd). Further exploration, appraisal and evaluation is required to determine the existence of a significant quantity of potentially recoverable Helium.

Notes:

1. This table presents Gold Hydrogen's Prospective Resources for Helium in the Ramsay Field of Yorke Peninsula only. Gold Hydrogen currently has no Reserves and no Contingent Resources.
2. Estimates are assessed to comply with the ASX Listing Rules for Prospective Resources and SPE-PRMS 2018. SPE have provided guidance regarding the Extension of PRMS Principles to Non-Hydrocarbon/Non-Traditional Situations including Helium (and Hydrogen). Refer: <https://www.spe.org/en/industry/reserves/non-hydrocarbons/>
3. Per ASX LRs 5.28.4&5 estimates are unrisks and aggregated arithmetically by category, hence caution that the aggregate low estimate may be a very conservative estimate and the aggregate high estimate may be a very optimistic estimate due to the portfolio effects of arithmetic summation.

4. Probabilistic methods are used to prepare the estimates. The distribution of the estimates is the "full distribution" and has not been truncated by application of the MEPS (minimum economic pool size) concept.
5. The Reference Point is at the wellhead/edge of lease (i.e. wellhead facilities) so the estimates have no deduction for flare, vent or fuel consumed in operations.
6. Pg (Chance of geologic Discovery), Pd (Chance of Development) and Pc (Chance of Commerciality = Pg x Pd) are calculated as a weight average of the P50's of the Helium Bcf (Billion Cubic Feet) of the prospect formations.
7. Pg incorporates Play Risk and Prospect Risk.
8. Pd incorporates an assessment across all SPE-PRMS Commerciality Criteria (i.e. not just economics).
9. Information in the table and throughout the Report is rounded. Some totals in the tables may not add due to rounding.
10. There is no change to information or additional information, since the effective date of 21 February 2024, that Gold Hydrogen and TRA are aware of that would materially change the estimates in this reserves statement.

**QPRRE Statement**

The Prospective Resource Statement in this announcement is based on, and fairly represents, information and supporting documentation prepared by independent consultants "Teof Rodrigues & Associates" (Mr Teof Rodrigues, Mr Paul Strong and Mr Greg Horton) and Mr Billy Hadi Subrata, Chief Technical Officer for Gold Hydrogen, with an effective date of 21 February 2024.

The Prospective Resource Statement has been included in this announcement:

- (1) under the approval of Mr Billy Hadi Subrata, Chief Technical Officer for Gold Hydrogen, who is a Qualified Petroleum Reserves and Resources Evaluator; and
- (2) with the prior written consent of Mr Billy Hadi Subrata and "Teof Rodrigues & Associates" (Mr Teof Rodrigues, Mr Paul Strong and Mr Greg Horton) as to the form and context in which the Helium prospective resource statement and supporting information are presented.

The employment and professional organisation membership details of Mr Billy Hadi Subrata, Mr Teof Rodrigues, Mr Paul Strong and Mr Greg Horton are as follows:

<b>Name</b>	<b>Employer</b>	<b>Professional organisation</b>
Billy Hadi Subrata	Gold Hydrogen	SPE
Teof Rodrigues	Teof Rodrigues & Associates	SPE, PESA
Paul Strong	Teof Rodrigues & Associates	GSL, AAPG, PESA
Greg Horton	Teof Rodrigues & Associates	SPE

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**Table 3 – Sample Analysis Table – Ramsay 1 Well – Stage 2 (Originally Published 17 October 2024)**

<b>Name:</b>	<b>Ramsay 1</b>
<b>Location (UTM zone 53 GDA2020)</b>	
<b>X</b>	748,208.07
<b>Y</b>	6149545.7
<b>Permit</b>	PEL687
<b>Entity holders</b>	Gold Hydrogen 100%
<b>Zones tested</b>	Zone 2 and 3
<b>Resources</b>	Helium
<b>Formation</b>	Kulpara Dolomite
<b>Gross thickness and net pay thickness</b>	180m Gross
<b>Geological rock type</b>	Dolomite
<b>Depth of the zones tested</b>	900 mMD
<b>Type of test</b>	Commingled pressure test
<b>Phase recovered</b>	Gas/Water
<b>Corrected H<sub>2</sub> and He concentration in gas recovered from downhole sample</b>	36.9% He
<b>Flow rates, choke size, volumes recovered</b>	1 Mscf/day gas constraint by pump capacity and flow intermittently with water; choke size 20/64 inch; volumes recovered 0.55 Mscf
<b>Fracture stimulation</b>	None
<b>Material non hydrocarbons</b>	Nitrogen, Hydrogen

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**Table 4A: Summary of Helium-4 (<sup>4</sup>He) and Helium-3 (<sup>3</sup>He) Results (Oxford University) in Ramsay 2  
 (Originally Published 30 October 2024)**

<b>Name:</b>	<b>Ramsay 2</b>					
<b>Location</b>	<b>UTM zone 53 GDA2020</b>					
<b>X</b>	747,707.85					
<b>Y</b>	6149385.46					
<b>Permit</b>	PEL687					
<b>Entity holders</b>	Gold Hydrogen 100%					
<b>Zones tested</b>	Zone 1_sample 11	Zone 2-3_sample 19	Zone 4_sample 32	Zone 5_sample 46	Zone 6_sample 62	Zone 7_sample 79
<b>Resources</b>	Hydrogen-Helium	Helium	Hydrogen	Hydrogen	Hydrogen	Hydrogen
<b>Formation</b>	Basement	Kulpara Fm	Kulpara Fm	Parara Limestone	Parara Limestone	Parara Limestone
<b>Gross thickness and net pay thickness</b>	>200m Gross	180m Gross	155m Gross	406m Gross	406m Gross	406m Gross
<b>Geological rock type</b>	Basement	Dolomite	Limestone	Limestone	Limestone	Limestone
<b>Depth of the zones tested</b>	1002 mMD	712mMD	530 mMD	384 mMD	343 mMD	289 mMD
<b>Type of test</b>	Noble gas abundance and isotopic quantification					
<b>Phase recovered</b>	Gas	Gas	Gas	Gas	Gas	Gas
<b>[<sup>4</sup>He], ccSTP/ccSTP</b>	1.44E-07	6.52E-04	4.21E-08	5.54E-07	3.05E-08	1.59E-07
<b><sup>3</sup>He/<sup>4</sup>He</b>	3.23E-07	9.26E-09	1.72E-06	6.84E-08	1.55E-06	7.57E-07
<b>R/Ra</b>	0.23	0.0066	1.2306	0.0489	1.11	0.5408
<b><sup>3</sup>He ppt</b>	0.05	6.04	0.07	0.04	0.05	0.12
<b>Flow rates, choke size, volumes recovered</b>	<b>TBA</b>					
<b>Fracture stimulation</b>	Yes	None	Yes	None	None	Yes
<b>Material non-hydrocarbons</b>	N <sub>2</sub> , H <sub>2</sub> , He, CO <sub>2</sub>	N <sub>2</sub> , H <sub>2</sub> , He, CO <sub>2</sub>	N <sub>2</sub> , H <sub>2</sub> , He, CO <sub>2</sub>	N <sub>2</sub> , H <sub>2</sub> , He, CO <sub>2</sub>	N <sub>2</sub> , H <sub>2</sub> , CO, CO <sub>2</sub>	N <sub>2</sub> , H <sub>2</sub> , He, CO <sub>2</sub>

**Table 4B: Summary Table of Helium-4 (<sup>4</sup>He) and Helium-3 (<sup>3</sup>He) results (Oxford University) in Ramsay 1 (Originally Published 30 October 2024)**

<b>Name:</b>	<b>Ramsay 1</b>		
<b>Location</b>	<b>UTM zone 53 GDA2020</b>		
<b>X</b>	748,208.07		
<b>Y</b>	6149545.7		
<b>Permit</b>	PEL687		
<b>Entity holders</b>	Gold Hydrogen 100%		
<b>Zones tested</b>	Zone 1_sample 8	Zone 2-3_sample 109451	Zone 2-3_sample 109477
<b>Resources</b>	Hydrogen-Helium	Helium	Helium
<b>Formation</b>	Basement	Kulpara Fm	Kulpara Fm
<b>Gross thickness and net pay thickness</b>	>200m Gross	180m Gross	180m Gross
<b>Geological rock type</b>	Basement	Dolomite	Dolomite
<b>Depth of the zones tested</b>	970 mMD	900 mMD	900 mMD
<b>Type of test</b>	Noble gas abundance and isotopic quantification		
<b>Phase recovered</b>	Gas	Gas	Gas
<b>[<sup>4</sup>He], ccSTP/ccSTP</b>	3.42E-04	5.34E-02	9.59E-02
<b><sup>3</sup>He/<sup>4</sup>He</b>	9.65E-09	9.31E-09	9.39E-09
<b>R/Ra</b>	0.0069	0.0067	0.0067
<b><sup>3</sup>He ppt</b>	3.30	497.39	900.51
<b>Flow rates, choke size, volumes recovered</b>	<b>TBA</b>		
<b>Fracture stimulation</b>	None	None	None
<b>Material non-hydrocarbons</b>	N <sub>2</sub> , H <sub>2</sub> , He, CO <sub>2</sub>	N <sub>2</sub> , H <sub>2</sub> , He, CO <sub>2</sub>	N <sub>2</sub> , H <sub>2</sub> , He, CO <sub>2</sub>

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**Table 5 – Listing Rule 5.30 Information (Preliminary) (Originally Published 2 December 2025)**

<b>Name:</b>	<b>Ramsay 3</b>
<b>Location (UTM zone 53 GDA2020)</b>	
<b>X</b>	749096 mE
<b>Y</b>	6151186 mN
<b>Permit</b>	<b>PEL 687</b>
<b>Entity holders(s)</b>	<b>Gold Hydrogen 100%</b>
<b>Resources</b>	<b>Hydrogen, Helium</b>
<b>Formation</b>	<b>Parara, Kulpara, Winulta and Hiltaba basement</b>
<b>Gross thickness and net pay thickness</b>	85m gross
<b>Geological rock type</b>	<b>Limestones, Dolomites, Dolomitic Sandstones and fractured Granites</b>
<b>Depth of the zones tested</b>	<b>148-870m</b>
<b>Type of test and duration</b>	<b>Calibrated mud gas log data and Isotubes</b>
<b>Phase recovered</b>	<b>Gas</b>
<b>Other types of recovery</b>	<b>N/A</b>
<b>Flow rates, choke size, volumes recovered</b>	<b>N/A</b>
<b>Fracture stimulation</b>	<b>N/A</b>
<b>Material non hydrocarbons</b>	<b>Hydrogen, Helium, Nitrogen, CO2</b>

*Insufficient information is presently available to determine net pay thickness.*