

## HY-Range Project (RSEL 802) Delivers Impressive Maiden Natural Hydrogen and Helium Prospective Resource

Thor Energy plc ("Thor" or "the Company") (AIM, ASX: THR, OTCQB: THORF) is pleased to announce an independent assessment of prospective resources for naturally occurring hydrogen and helium for the HY-Range project on RSEL 802 licence in South Australia.

- Prospective resource results vastly exceed Company expectations
- Prime position in Australia's natural hydrogen/helium hotspot - HY-Range includes a regionally scarce fully granted license within South Australia's hydrogen and helium fairway.
- Management to accelerate the exploration programme following these results to unlock HY-Range's full potential
- Thor Energy effective 80.2% net interest in RSEL 802 through previously announced Go Exploration transaction.

### Highlights:

Unrisked Recoverable Prospective Resources on RSEL 802						
	Hydrogen (Bcf)			Helium (Bcf)		
	1U	2U	3U	1U	2U	3U
RSEL 802 (net)	275	1,050	3,511	25	115	427
Thor (net)	221	842	2,816	20	90	343

- The estimated quantities of hydrogen and helium that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both a 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 hydrogen and helium.
- The prospective resources are based on the entrapment model for natural hydrogen and helium in the free gas phase.
- The assessment was undertaken by RISC Advisory Pty Ltd.

### Andrew Hume, Managing Director of Thor Energy, said

*"We are excited by the hugely significant prospective resource estimates for natural hydrogen and helium at our HY-Range Project within RSEL 802. This assessment, conducted by RISC Advisory, highlights the potential of this licence, which is underpinned by compelling geological factors and historical hydrogen and helium occurrences in the region. While these are unrisked estimates, and further work is required to confirm commercial viability, this marks a substantial milestone for Thor Energy. We believe this reinforces our strategic focus on natural hydrogen and helium exploration and positions us strongly for future growth in this emerging sector. We look forward to advancing our exploration efforts and unlocking the full potential of RSEL 802."*

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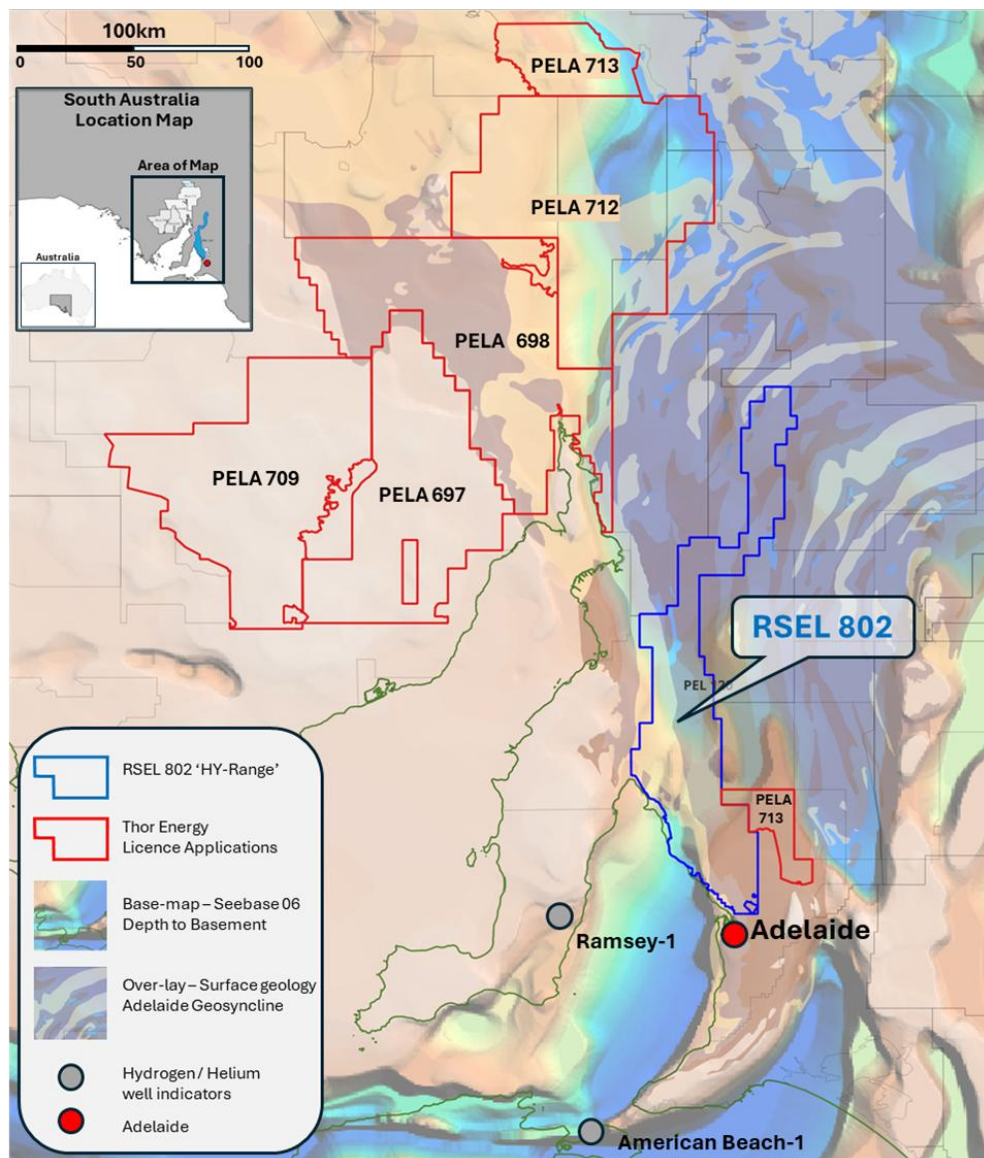
AIM & ASX Listings  
Shares: THR

OTCQB Listing  
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**Further Information on RSEL 802:**

The HY-Range Project licence RSEL 802 is situated within the Neoproterozoic Adelaide Geosyncline in South Australia, is an exploration licence covering 6,336 square kilometres and is wholly owned by Go Exploration Pty Ltd, of which Thor Energy Plc recently acquired an 80.2% interest.

The geological setting of RSEL 802 is considered favourable for the exploration of naturally occurring hydrogen and helium. The Adelaide Geosyncline is a Neoproterozoic age failed rift system, in a similar geologic setting to other hydrogen and helium systems being targeted by industry across the globe. RSEL 802 is interpreted to be centrally placed within the geosyncline to receive potential charge of hydrogen and helium sources. This prospectivity is supported by historical reports of gaseous hydrogen occurrences in South Australia, notably at the Ramsay Oil Bore-1 on the Yorke Peninsula and the American Beach Oil-1 on Kangaroo Island. Numerous leads have been identified across RSEL 802 including large anticlinal folds mapped in the northern portion of the licence and significant structures delineated from gravity and magnetics in the southern portion.



**Figure 1:** RSEL 802 licence and Thor Energy PLC’s licence application (PELA) location map, overlain on opensource SEEBASE 06 depth to basement, and Adelaide Geosyncline surface geology maps. Large basement structures and prospectivity dominate the south of RSEL 802 with geological affinity and proximity to American Beach-1 and Ramsay-1 wells with significant hydrogen and helium well results. Adelaide Geosyncline fold-thrust belt prospectivity dominate northern RSEL 802.

Significant subsurface uncertainty is inherent in any hydrogen or helium exploration play. Consequently, further exploration, appraisal, and evaluation are necessary to confirm the presence and potential recoverability of hydrogen and helium volumes within RSEL 802.

The resources assessment is set out below in **Table 1** and the matters required to be disclosed in accordance with Chapter 5 of the ASX Listing Rules are set out in Schedule 1.

**Table 1:** Unrisked Recoverable Prospective Resources Net to Thor at RSEL 802

Unrisked Recoverable Prospective Resources on RSEL 802						
	Hydrogen			Helium		
	1U	2U	3U	1U	2U	3U
RSEL 802 (gross)	281	1,071	3,583	25	115	436
<i>less royalty</i>	6	21	72	1	2	9
Go Exploration (net)	275	1,050	3,511	25	113	427
<i>less minority interests</i>	55	208	695	5	22	85
<b>Thor (net) (Bcf)</b>	<b>221</b>	<b>842</b>	<b>2,816</b>	<b>20</b>	<b>90</b>	<b>343</b>
<b>Thor (net) (t)</b>	<b>512,820</b>	<b>1,954,557</b>	<b>6,538,916</b>			

Notes to the table:

1. The estimated quantities of hydrogen and helium that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both a 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 hydrogen and helium.
2. These estimates are reported as of March 29 2025.
3. The natural hydrogen and helium resource estimates have been derived in accordance with the principles of the Petroleum Resources Management System (PRMS). The PRMS specifically applies to petroleum. However, the Oil and Gas Reserves Committee of the Society of Petroleum Engineers (SPE) advised in August 2022 that although the gaseous extraction of natural hydrogen and helium is outside of the scope of the PRMS, the principles can be applied given the similarities in exploration, evaluation and exploitation.
4. The resource estimates are presented on a net entitlements basis and represent Thor's net economic interest in the prospective recoverable hydrogen and helium volumes after deductions for a 2% royalty and minority shareholders interests in Go Exploration Pty Ltd .
5. The prospective resources have been evaluated using probabilistic methods and are presented on an unrisksed basis.
6. Totals are calculated using arithmetic summation.
7. Hydrogen mass conversion is 2,321.98 tonnes per billion standard cubic feet (t/Bscf).
8. The estimates are for naturally occurring gaseous hydrogen and helium gas only. Adjustments for petroleum gases and inert gases have been made. No adjustment has been made to the estimates to account for fuel and flare.

The Board of Thor Energy Plc has approved this announcement and authorised its release.

For further information on the Company, please visit the [website](#) or please contact the following:

**Thor Energy PLC**

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**About Thor Energy Plc**

The Company is focused on uranium, energy metals and recently hydrogen and helium that are crucial in the shift to a clean energy economy.

For further information on Thor Energy and to see an overview of its projects, please visit the Company's website at <https://thorenergyplc.com/>.

**Competent Person Statement**

The information in this report that relates to exploration results and exploration targets is based on information compiled by Andrew Hume, who holds a BSc in Geology (Hons). Mr Hume is an employee of Thor Energy PLC. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' and is a qualified person under AIM Rules. Andrew Hume consents to the inclusion in the report of the matters based on his formation in the form and context in which it appears.

### Schedule 1

Rule Number	Title	Comments
5.25.1	Date of Estimates	March 29 2025
5.25.2	Classification of Petroleum Resources	The natural hydrogen and helium resource estimates have been derived in accordance with the principles of the PRMS. The PRMS specifically applies to petroleum. However, the OGRC advised in August 2022 that although the gaseous extraction of natural hydrogen and helium is outside of the scope of the PRMS, the principles can be applied given the similarities in exploration, evaluation and exploitation.
5.25.3	Disclosure of Total Petroleum Initially-in-Place	Not applicable as total petroleum initially-in-place and other regulated categories are not stated.
5.25.4	Disclosure of Discovered Petroleum-Initially-In-Place	Not applicable as discovered petroleum initially-in-place not stated.
5.25.5(a)	Reporting Based on Economic Interest	<p>Go Exploration Pty Ltd is the sole licensee of RSEL 802. Thor owns 80.2% of Go Exploration Pty Ltd (see Thor ASX announcements of 30 October 2024 and 17 February 2025).</p> <p>The resource estimates are presented on a net entitlements basis and represent Thor's net economic interest in the prospective recoverable hydrogen and helium volumes after deductions for the minority interest in Go Exploration and the royalty described below.</p>
5.25.5(b)	Reporting Net of Royalties	<p>The prospective resources are reported net of a 2% royalty payable to Tri-Star Royalty Company Pty Ltd.</p> <p>The resource estimates are presented on a net entitlements basis and represent Thor's net economic interest in the prospective recoverable hydrogen and helium volumes after deductions for the royalty and minority interest in Go Exploration described above.</p>
5.25.5(c)	Not Reported in Relation to Pure Service Contracts	Not applicable
5.25.6	Method of Estimation	Probabilistic
5.25.7	Units of Measurement	Reported in appropriate units, otherwise not applicable. Hydrogen volumes are presented in both billion cubic feet (Bcf) and metric tonnes (t). Helium volumes are presented in Bcf.
5.28.1	Categorization of Prospective Resources	See resource table in announcement.
5.28.2	Cautionary Statement	The estimated quantities of hydrogen and helium that may potentially be recovered by the application of a future development project(s) relate to undiscovered accumulations. These estimates have both a 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 hydrogen and helium.
5.28.3	Prohibition of Mean Estimate	Mean estimate not stated
5.28.4	Aggregation Methods	Arithmetic
5.28.5	Aggregation Beyond Project Level	Estimates are aggregated by category. 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.
5.35.1	Permits and licenses	South Australian Regulated Substance Exploration Licence 802 (RSEL 802)
5.35.2	Basis for Estimates	See notes to resource table in the body of the announcement. Significant subsurface uncertainty is inherent in any hydrogen or helium exploration play. Consequently, further exploration, appraisal, and evaluation are necessary to confirm the presence and potential recoverability of hydrogen and helium volumes within RSEL 802.
5.35.3	Chance of Discovery and Development	<p>The geological chance of success (GCoS or Pg) for both natural hydrogen and helium is estimated to be between 6% and 9% which is consistent with a moderate value for risk in basins at this current level of subsurface understanding. Our planned 2025/26 exploration program, featuring geochemical, optional geophysical, and drilling operations, is strategically designed to enhance GCoS through the acquisition of critical new subsurface data.</p> <p>The chance of development (Pd) for natural hydrogen, once discovered, is considered high particularly due to RSEL 802's proximity to the city of Adelaide for industrial and domestic use, gas pipelines and electricity transmission lines which cross the licence, and numerous mining, steel and industrial sites across South Australia.</p> <p>The chance of development (Pd) for helium, once discovered, is also considered to be high due to growing Australian market demand, current lack of production in Australia, and relative global production scarcity.</p>
5.35.4	Risked Estimates	The prospective resources are unrisked. Risked estimates are not reported.
5.41	Estimates Prepared by Qualified Evaluator	See LR 5.42 disclosure below.
5.42	Disclosure of Qualified Evaluator	This announcement is based on and fairly represents information and supporting documentation prepared by or under the supervision of Adam Craig. He is a qualified petroleum reserves and resources evaluator employed by RISC Advisory Pty Ltd. He is a member of PESA, a certified petroleum geologist of the AAPG and a Fellow of the Geological Society. He is not an employee of Go Exploration Pty Ltd, Thor Energy Plc or any of its subsidiaries. This announcement is issued with his prior written consent as to its form and content in accordance with the requirements of ASX Listing Rule 5.42.

## Resource summary



RISC probabilistic prospective resources assessment for RSEL 802 leads. The resources are estimated on the basis of the entrapment model and that hydrogen occurs in a free gas phase.

	GIIP (Bcf)			Unrisked									Risked									POS
				Hydrogen Resources (Bcf)			Hydrogen Resources (t)			Helium Resources (Bcf)			Hydrogen Resources (Bcf)			Hydrogen Resources (t)			Helium Resources (Bcf)			
	P90	P50	P10	P90	P50	P10	P90	P50	P10	P90	P50	P10	P90	P50	P10	P90	P50	P10	P90	P50	P10	
Lead A	23	109	387	10	50	185	24,149	116,563	429,567	0.9	5.4	22.5	0.62	3.01	11.10	1,448.92	6,993.81	25,773.99	0.05	0.32	1.35	6%
Lead B	21	101	358	10	47	172	22,059	107,972	399,381	0.9	4.9	20.8	0.57	2.79	10.32	1,323.53	6,478.33	23,962.85	0.05	0.29	1.25	6%
Lead C	40	191	675	18	88	324	42,028	203,406	752,322	1.7	9.3	39.2	1.09	5.26	19.44	2,521.67	12,204.33	45,139.32	0.10	0.56	2.35	6%
Lead D	18	87	309	8	40	148	19,203	93,111	343,653	0.8	4.3	18.0	0.50	2.41	8.88	1,152.17	5,586.69	20,619.19	0.05	0.26	1.08	6%
Lead E	23	112	395	11	51	189	24,613	119,118	438,854	1.0	5.5	23.0	0.64	3.08	11.34	1,476.78	7,147.06	26,331.27	0.06	0.33	1.38	6%
Lead F	31	105	319	14	49	157	32,043	113,545	364,551	1.2	5.2	18.9	1.19	4.22	13.56	2,768.54	9,810.28	31,497.21	0.11	0.45	1.63	9%
Lead G	188	642	1,946	85	298	956	196,904	691,950	2,219,814	7.6	32.0	117.0	7.33	25.75	82.60	17,012.51	59,784.52	191,791.95	0.66	2.76	10.11	9%
Lead H	186	634	1,924	84	295	945	194,814	684,985	2,194,272	7.5	31.6	115.0	7.25	25.49	81.65	16,831.95	59,182.66	189,585.14	0.65	2.73	9.94	9%
Lead I	14.1	67.5	238.0	6.4	31.0	114.0	14,860.7	71,981.4	264,705.9	0.6	3.3	13.8	0.4	1.9	6.8	891.6	4,318.9	15,882.4	0.0	0.2	0.8	6%
Lead J	77.3	264.0	800.0	34.9	122.0	393.0	81,037.2	283,281.7	912,538.7	3.1	13.1	48.0	3.0	10.5	34.0	7,001.6	24,475.5	78,843.3	0.3	1.1	4.1	9%
<b>Arithmetic sum</b>	<b>621.3</b>	<b>2,312.9</b>	<b>7,351.0</b>	<b>280.7</b>	<b>1,070.6</b>	<b>3,583.0</b>	<b>651,710.5</b>	<b>2,485,913.3</b>	<b>8,319,659.4</b>	<b>25.3</b>	<b>114.6</b>	<b>436.2</b>	<b>22.6</b>	<b>84.4</b>	<b>279.7</b>	<b>52,429.3</b>	<b>195,982.1</b>	<b>649,426.6</b>	<b>2.0</b>	<b>9.0</b>	<b>34.1</b>	

Note: Hydrogen mass conversion is 2,321.98 t/Bscf.