

## Outstanding Geochemical Results Demonstrate Prolific Hydrogen and Helium systems at HY-Range Project in South Australia

Thor Energy plc ("Thor") (AIM, ASX: THR, OTCQB: THORF) is pleased to announce positive results of its recent soil geochemistry study at its HY-Range project (RSEL 802) in South Australia.

### Highlights:

- Positive results with significantly elevated hydrogen and helium
- Several natural hydrogen values more than 1,000ppm, with highest reading of 3,000ppm (approximately 6,000 times background values)
- Helium detected up to 27ppm (greater than five times background values)
- Four high-grade focus areas identified for future exploration focus
- This significantly advances prospect definition, ranking and site selection for exploration drilling

### Andrew Hume, Managing Director of Thor Energy, commented:

*"The results from our geochemical survey at HY-Range (RSEL 802) are very promising and effectively derisk the presence of active and potentially prolific natural hydrogen and helium systems in our licence. This is a major achievement and establishes the HY-Range project as a highly prospective licence for natural hydrogen and helium exploration. The data is also proving critical to high-grade the acreage and to define the highest potential areas for natural hydrogen and helium. These findings allow us to focus our resources effectively as we undertake necessary work to define and high-grade drilling targets for exploration drilling. This is a very exciting development for Thor Energy and our promising natural hydrogen and helium project."*


### Geochemical Survey Yields Highly Encouraging Results

Thor Energy recently acquired soil geochemical gas sampling (also known as Soil Air, Soil gas analysis, or Soil vapor testing) across its HY-Range (RSEL 802) natural hydrogen and helium exploration licence in South Australia (**Figure 1**). Analysis of the data has been performed and has yielded very positive results, with a high percentage of elevated hydrogen values in numerous areas of the licence, locally exceeding 1,000ppm in several locations, and up to 3,000ppm at one sample point (compared to typical background atmospheric values of 0.5ppm). Locally elevated helium readings were also recorded up to 27ppm (compared to typical background atmospheric values of 5ppm). Whilst soil gas sampling can be inherently prone to anthropogenic hydrogen contamination and sample bias, the distribution of the values strongly correlates with mapped geological features and supports the natural origin of these highly elevated readings. Helium is not prone to similar potential contamination risk, and as such, collectively, and when taken in the context of regional geological and industry activity (**Figure 2a**), these results provide striking evidence to prove the presence of both strong natural hydrogen and helium generation and migration within RSEL 802.

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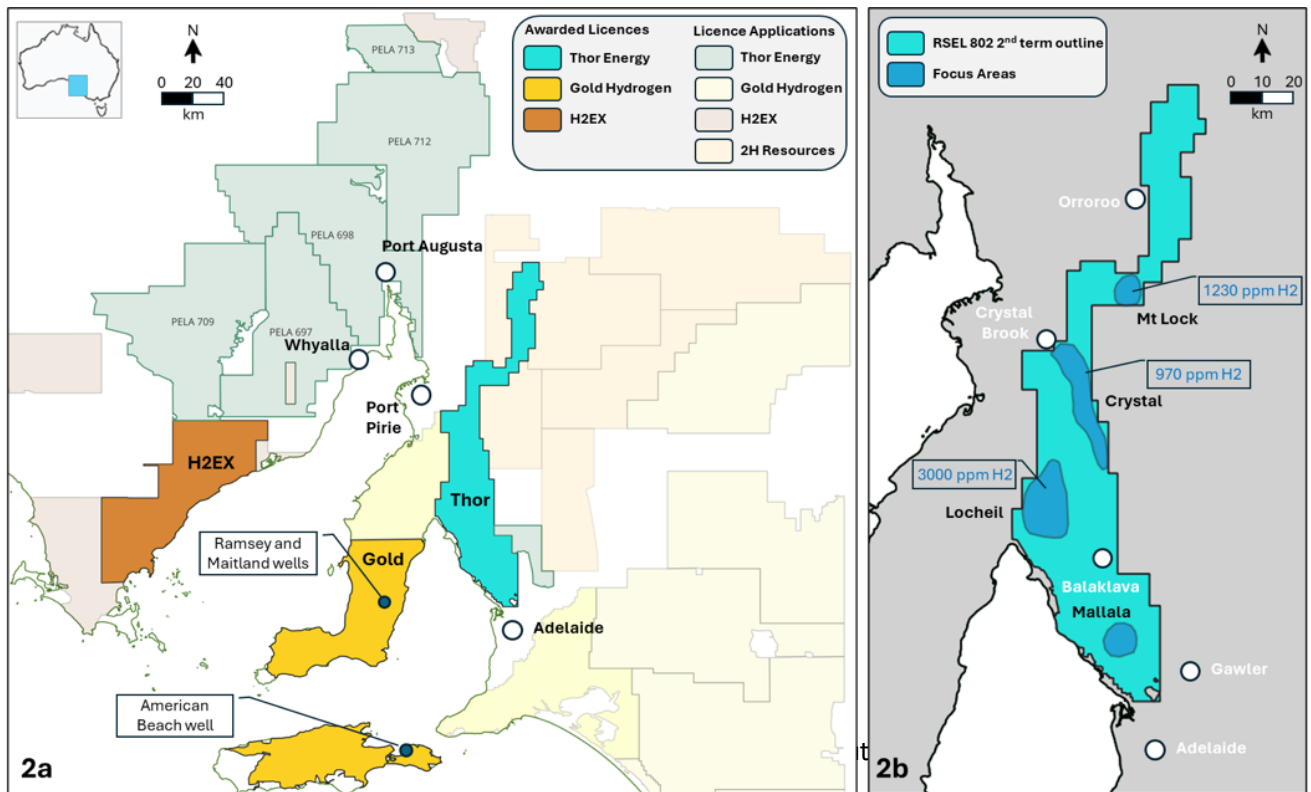
The data has allowed the high grading of areas of significant interest within the licence. Four principal focus areas have been high graded (**Figure 2b**), these being:

- **Mallala area**, located approximately 40 km north of central Adelaide
- **Locheil area**, located in vicinity of the township of Locheil
- **Crystal area**, an elongate area extending south southeasterly from the township of Crystal Brook
- **Mt Lock area**, an area 10 km northwest of the township of Jamestown



**Figure 1:** Field operations in the southern flinders area, collecting soil air geochemical analysis at Project HY-Range, May 2025.

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**Figure 2a** illustrates the location of HY-Range (RSEL 802) in the context of nearby Petroleum Exploration Licences (PELs) and licence applications (PELA's), as well as nearby down-hole hydrogen/helium occurrences. **Figure 2b** illustrates the four priority focus areas (Blue polygons) in the context of RSEL 802 licence (2<sup>nd</sup> term outline- black polygon).

This data has significantly added to the understanding of hydrogen and helium generation and migration systems within these areas. Future work will be focused on and around these four areas, resulting in further prospect definition, ranking and ultimately drilling of the most prospective and highest value wells within these focus areas. Near-term work will consist of ground-truthing these soil air geochemical results by acquiring increased sample density geochemistry and by incorporating techniques to take samples at deeper depths and/or longer durations, to better understand hydrogen and helium systems and help signpost prospectivity.

#### Managing Director Promotion to Chief Executive Officer

Thor Energy Plc also announces that Thor Managing Director Andrew Hume, who joined Thor Energy in February 2025, will assume the role of Chief Executive Officer ("CEO") and Managing Director ("MD") with immediate effect. Since joining, Mr Hume has overseen the successful conclusion of the acquisition of Go Exploration, conducted critical fieldwork, relinquished low-priority mineral exploration acreage, and secured three new co-located gas storage licenses, adjacent to RSEL802, which offer a novel potential advantage for hydrogen exploration and commercialisation in South Australia. Mr Hume's remuneration remains unchanged.

In line with the plan, Alastair Clayton will resume the role of Non-Executive Director Chairman.

#### Andrew Hume, incoming CEO of Thor Energy, commented:

"Alastair and I discussed a succession plan some time ago whereby the Company would have one Executive Director, as is appropriate for the present size of the Company. With much of the corporate restructuring now complete and our HY-Range Project plans now accelerating, Alastair informed me that he wished to resume his previous role as Non-Executive Chairman and that the Board had requested that I take the role of CEO and MD, to which I gladly accepted."

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

**Thor Energy PLC**

Andrew Hume, Managing Director  
Alastair Clayton, Non-Executive Chairman  
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**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.

**About Thor Energy Plc**

The Company is focused on Hydrogen and Helium exploration which are crucial in the shift to a clean energy economy, with a portfolio that also includes uranium, and other energy metals.

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

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## Appendix 1: Table of results

The following table provides raw sample values taken from soil air geochemical analysis in RSEL 802. It should be noted that the technique of soil gas analysis for hydrogen has inherent risk associated with anthropogenic contamination, during the sampling process. Future follow-up work will aim to ground-truth this data as well as to increase spatial density in key focus areas.

Location	X	Y	H2 (ppm)	He (ppm)
T1-1	138.416	-34.5961	425	<10
T1-2	138.4438	-34.5856	<10	<10
T1-3	138.4743	-34.5845	90	<10
T1-4 0.8m	138.5266	-34.6027	850	<10
T2-4 1.3m	138.5266	-34.6027	55	11
T1-5	138.5564	-34.6025	350	<10
T1-6	138.5886	-34.6017	<10	<10
T1-7	138.6295	-34.6004	<10	<10
T2-1	138.2593	-34.3121	<10	<10
T2-2	138.2987	-34.3119	<10	<10
T2-4	138.3733	-34.3119	<10	<10
T2-5	138.4043	-34.3106	<10	<10
T2-6	138.4404	-34.3107	<10	<10
T2-7	138.4682	-34.3106	<10	<10
T2-8	138.5097	-34.3108	<10	<10
T2-9	138.5695	-34.3068	<10	<10
T2-10	138.5851	-34.3021	<10	<10
T3-1	138.1739	-34.1693	40	<10
T3-3	138.2697	-34.1609	65	<10
T3-4	138.3086	-34.1603	75	<10
T3-5	138.3397	-34.1558	<10	<10
T3-6	138.3906	-34.1483	35	<10
T3-7	138.4541	-34.1293	<10	<10
T3-8	138.4977	-34.0953	<10	<10
T4-1	138.1281	-33.929	<10	11
T4-2	138.1505	-33.9273	1,000	<10
T4-2A	138.144	-33.9244	3,000	<10
T4-2B	138.1521	-33.9191	360	<10
T4-2C	138.1401	-33.9267	<10	<10
T4-3	138.1589	-33.9482	<10	<10
T4-4	138.1704	-33.932	550	<10
T4-5	138.1718	-33.9328	40	<10
T4-6	138.1907	-33.9246	<10	27
T4-7	138.2229	-33.9137	43	<10
T4-8	138.2178	-33.931	1800	<10
T4-8A	138.2178	-33.931	760	<10
T4-8B	138.2178	-33.931	730	<10
T4-8C	138.2178	-33.931	500	<10
T4-8D	138.2178	-33.931	41	<10
T4-8E	138.2158	-33.9295	440	11
T4-9	138.2308	-33.9383	72	<10
T4-10	138.2524	-33.9398	<10	<10
T4-11	138.2663	-33.9407	<10	<10
T4-12	138.2806	-33.9374	<10	<10
T4-13	138.3318	-33.9461	72	<10
T4-14	138.4029	-33.9593	<10	<10
T4-15	138.4714	-33.9769	<10	<10
T5-1	138.4646	-33.8137	<10	<10
T5-2	138.4377	-33.8184	575	<10
T5-3	138.4146	-33.8223	90	<10
T5-4	138.3889	-33.824	<10	<10

Location	X	Y	H2 (ppm)	He (ppm)
T5-5	138.2733	-33.7549	41	<10
T5-6	138.2713	-33.7112	<10	<10
T5-7	138.268	-33.6586	<10	<10
T5-8	138.2471	-33.6582	20	<10
T5-9	138.2662	-33.6391	<10	<10
T5-10	138.3144	-33.639	<10	<10
T5-11	138.3557	-33.6391	615	<10
T5-12	138.4091	-33.6345	170	<10
T6-1	138.3812	-33.4583	540	<10
T6-2	138.322	-33.4442	210	<10
T6-3	138.2718	-33.445	10	<10
T6-4	138.2301	-33.4453	40	<10
T6-5	138.2556	-33.3765	970	<10
T6-6	138.2577	-33.3751	110	<10
T6-7	138.3206	-33.3288	11	<10
T6-8	138.3461	-33.3366	40	<10
T6-9	138.3983	-33.3416	20	<10
T7-1	138.3017	-33.1024	600	<10
T7-2	138.3318	-33.0935	60	<10
T7-3	138.3287	-33.1393	65	<10
T7-4	138.3573	-33.1394	77	<10
T7-5	138.3939	-33.1331	<10	<10
T7-6	138.4134	-33.1355	22	<10
T7-7	138.45	-33.1389	75	<10
T7-8	138.5005	-33.1456	50	<10
T7-9	138.5318	-33.152	1,230	<10
T7-10	138.5523	-33.1492	150	<10
T7-11	138.5949	-33.1427	<10	<10
T8-1	138.6366	-32.867	320	<10
T8-2	138.6717	-32.8417	<10	<10
T8-3	138.688	-32.8297	<10	<10
T8-4	138.727	-32.8223	<10	<10
T8-5	138.7828	-32.8275	<10	<10
T8-6	138.6247	-32.9793	40	<10
T8-7	138.6638	-32.9817	2,270	<10
T8-8	138.707	-32.9833	<10	<10
T8-9	138.7401	-32.9713	<10	<10
T9-1	138.6298	-32.6888	<10	<10
T9-2	138.67	-32.7055	<10	<10
T9-2A	138.6804	-32.7055	<10	<10
T9-3	138.7164	-32.7055	64	<10
T9-4	138.7522	-32.7054	<10	<10
T9-5	138.6279	-32.5343	710	<10
T9-6	138.6521	-32.5088	<10	<10
T9-7	138.6558	-32.4929	38	<10
T9-10	138.6938	-32.4768	<10	<10
T9-11	138.743	-32.4769	70	<10
T9-11A	138.7444	-32.4768	<10	<10
T9-12	138.8064	-32.4747	40	<10
T912-A	138.8096	-32.4752	<10	<10

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