

# Natural Hydrogen: A New Frontier for Energy Geoscience

4-5<sup>th</sup> July 2023

The Geological Society (Burlington House, Piccadilly, London) & Virtual via Zoom

## Provisional Programme

Day One	
08.30	Registration
08.50	Welcome
	<b>Session One: Natural Hydrogen Exploration Plays</b>
09.00	<b>KEYNOTE: Actively exploring the midcontinent rift natural hydrogen play in the central mid west, USA</b> Avon McIntyre, <i>HyTerra Ltd</i>
09.30	<b>The Natural Hydrogen System – how success can be achieved through the system and play approach</b> Owain Jackson, <i>H2Au Ltd</i>
09.55	<b>Natural Hydrogen Exploration Workflows: Insights from South Australia</b> Grant McMurtrie, <i>2H Resources Pty Ltd</i>
10.20	<b>Natural hydrogen in the Pyrenees and implications for exploration</b> Chris Atkinson, <i>Helios Aragon</i>
10.45	<b>BREAK</b>
11.10	<b>Why aren't there more native hydrogen accumulations?</b> Thomas Becker, <i>Astris Advisors</i>
11.35	<b>Defining an Architecture for Subsurface Hydrogen Play Concepts</b> Owen Sutcliffe, <i>Halliburton</i>
11.55	<b>DISCUSSION – What are the key geoscience knowledge gaps for Hydrogen Exploration?</b>
12.15	<b>LUNCH</b>
	<b>Session Two: The Hydrogen System – Generation, Migration &amp; Hosting</b>
13.15	<b>KEYNOTE: Trapping processes of natural hydrogen in subsurface: The case of the emblematic H2 field of Bourakebougou (Mali)</b> Omar Maiga, <i>IFPEN</i>
13.45	<b>Computation of vertical fluid mobility: Implications for hydrogen exploration and CO2 storage</b> Bhavik Lodhia, <i>UNSW</i>
14.10	<b>Numerical Modelling of Hydrogen Migration and Trapping in Geological Settings: Comparisons between Natural Hydrogen and Petroleum Systems</b> Javier Garcia-Pintado, <i>MARUM - University of Bremen</i>

14.35	<b>Heterogeneity of serpentinization through a km-size upper mantle body: The Turon de Técoùère case (Pyrenees, France)</b> Loiseau Keanu, <i>LFCR</i>
15.00	<b>BREAK</b>
15.20	<b>KEYNOTE: How to quantify the initial and remaining potential of a H2 source rock?</b> Isabelle Moretti, <i>UPPA</i>
15.50	<b>A model of dynamic gas accumulation of hydrogen, helium, nitrogen and methane</b> Marie-Christine Cacas-Stentz, <i>IFPEN</i>
16.15	<b>Possible generation mechanisms for an organic hydrogen system</b> John Hansen, <i>Independent</i>
16.40	<b>DISCUSSION – Comparisons between the Hydrogen System and the Petroleum System</b>
17.00	<b>End of day one</b>
17.00 – 18.00	<b>Drinks Reception</b>

<b>Day Two</b>	
08.30	<b>Registration</b>
08.50	<b>Welcome</b>
	<b>Session Three: Global Occurrences &amp; Habitats of Natural Hydrogen</b>
09.00	<b>KEYNOTE: Exploring Natural H2 in the Balkans</b> Benoit Hautville, <i>45-8 Energy</i>
09.30	<b>Natural Hydrogen Exploration in South Australia</b> Elinor Alexander, <i>South Australia Department for Energy &amp; Mining</i>
09.55	<b>Natural hydrogen and helium occurrences of the Eastern Trans-Australian Corridor (Darling-Curnamonda-Delamerian) in New South Wales, Australia</b> Emma Black, <i>Geoscience Australia</i>
10.20	<b>Anatomy of a Natural Hydrogen Seep: An Example from the Yilgarn Craton in Western Australia</b> Krista Davies, <i>Edith Cowen University</i>
10.45	<b>BREAK</b>
11.05	<b>KEYNOTE: Identification of Hydrogen-Rich Zones as a First Step in Natural Hydrogen Exploration in China</b> Xueying Yin, <i>Beijing Santai-Tongdi Exploration Technologies Co. Ltd</i>
11.35	<b>Surface Circular Depressions: how are they formed? A Western Australian Example</b> Leo Aimar, <i>CSIRO Energy</i>
11.55	<b>DISCUSSION – Trap vs flux – how are surface expressions important for discovering commercial hydrogen?</b>
12.15	<b>LUNCH</b>
	<b>Session Four: Natural Hydrogen Workflows, Techniques &amp; Datasets</b>

13.15	<b>KEYNOTE: Natural hydrogen resource potential of the conterminous US</b> Geoffrey Ellis, <i>USGS</i>
13.45	<b>Natural hydrogen – Estimating the resource, a case study from South Australia</b> Adam Craig, <i>RISC Advisory</i>
14.10	<b>NATURAL HYDROGEN. Estimating the Resource: Flux vs. Accumulation, Tools for Evaluation and Analysis. Proposed Drilling Techniques Development</b> Vitaly Vidavsky, <i>Curtin University</i>
14.35	<b>A Mineral Systems Approach to Targeting Natural Hydrogen Deposits</b> Howard Golden, <i>GETECH</i>
15.00	<b>BREAK</b>
15.25	<b>Early Exploration Services to aid in predicting the presence of Native Hydrogen at scale</b> Ranald Kelly, <i>CGG</i>
15.50	<b>A Statistical Approach as a tool for Native H2 Exploration: A Case Study in the Western Pyrenean Foothills (SW France)</b> Nicolas Lefeuvre, <i>CVA</i>
16.15	<b>Assessing hydrogen migration and accumulation potential: characterisation of the Adelaide Geosyncline basement structures and their mineral fills</b> Zak Milner, <i>Durham University</i>
16.40	<b>Advanced Gas Mudlogging in Natural Hydrogen Settings</b> Caroline Magnier, <i>Exlog</i>
17.05	Conference Wrap Up
17.30	End of Conference

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