Soil Gas Survey

Information sheet

Yorke Peninsula Soil Gas Survey to be undertaken by Gold Hydrogen and CSIRO

Gold Hydrogen Ltd (GHY) is an Australian company which is seeking to prove the existence of commercial quantities of natural hydrogen in its Petroleum Exploration Licence 687, covering portions of Yorke Peninsula and Kangaroo Island.

> Gold Hydrogen is hoping to prove natural hydrogen resources, first identified between 90 and 100 years ago, can be developed to provide clean, carbon-neutral energy.

GHY and the Commonwealth Scientific and Industrial Research Organisation (CSIRO), will be carrying out a non-invasive soil gas survey over the southern portion the Yorke Peninsula in South Australia within its granted licence area for approximately two weeks during mid-late April 2023.

Why is the survey important?

Soil gas surveys are a cost-effective and efficient on-ground technique used by geoscientists to sample for very small amounts of natural hydrogen.

The survey is designed to detect natural hydrogen generated from various geological processes that could be occurring in parts of the Earth's crust in the survey area. This information will assist GHY geoscientists in understanding where very small amounts (parts-per-million) of natural hydrogen could be leaking to the surface and its relationship to other subsurface geological observations. It will help us generate a broad picture of the presence of hydrogen in soil.

What you may see or hear

During survey activity you may see:

- A clearly marked light vehicle operated by GHY and CSIRO stopped along the road easement at pre-determined survey points.
- High-vis field technicians with handheld gas-soil survey equipment.

This is considered to be a non-invasive activity and noise levels on the ground will be minimal.

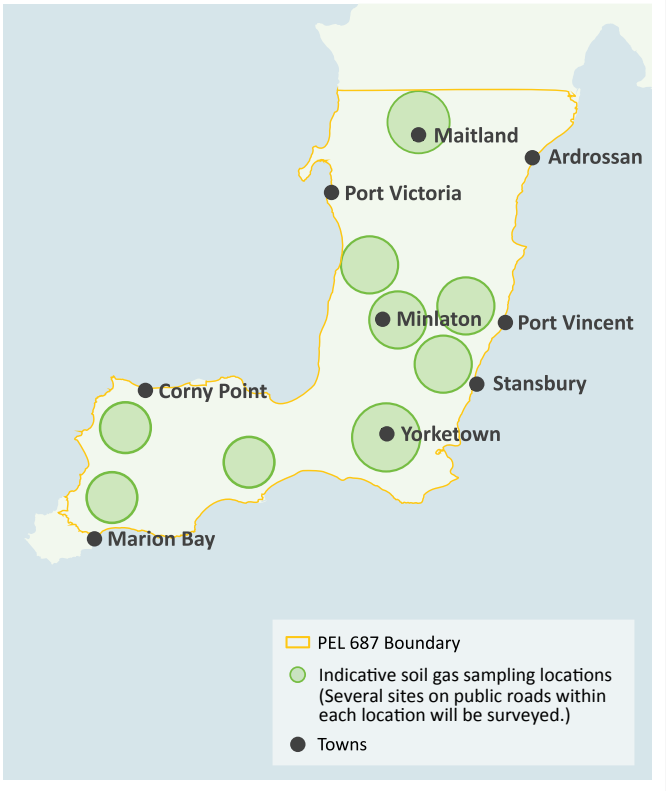
Timeframe and survey area

The soil gas survey (see map) is expected to be carried out over a two week period commencing mid-late April 2023 and and will be undertaken in accordance with an approval from the SA Department for Energy and Mining. The survey area is entirely located in Gold Hydrogen's petroleum exploration licence 687 of the Yorke Peninsula in South Australia, and will be undertaken on public road verges/easements.

Technicians will be in the field between 8am and 5pm, seven days per week over the survey period.

Approximately 80 survey points have been identified in a wide locality (see map below).

Indicative survey locations



Soil Gas Survey

Information sheet

Soil gas survey method

Technicians will locate a pre-determined site and assess the surrounds and choose a location to minimise disturbance to local vegetation.

A small handheld hammer drill, similar to the type of equipment you might use at home or on a farm, will drill a hole up to a metre in depth into the soil within the road easement.

The drill bit will then be retracted, and an 80cm stainless steel tube will be inserted into the hole and connected to a handheld multi-gas analyser device that is designed to vacuum any gases that may be present in the hole. Depending on the initial reading a second hole maybe be drilled in close proximity to the original hole.

If hydrogen is detected a tubular instrument approximately 80cm long and 6cm wide will be inserted into the hole and left in place for 24 hours. This instrument will provide Gold Hydrogen with readings of hydrogen seepage over that time.

After the soil-survey measurement is taken, the technicians will fill the holes and reinstate the area around each hole before safely relocating to the next pre-determined survey location.

> The survey technique used during the soil-gas survey does not have an impact on people or animals. The survey will not involve any significant disturbance to the ground (for comparison it will be like driving in a star dropper for a fence). CSIRO has also completed similar surveys in Western Australia.

More information about soil-gas surveys can be found at: https://research.csiro.au/hyresearch/native-hydrogen-gas-surface-seepage/

Health and Safety

GHY and CSIRO are committed to providing a safe, healthy working environment for all our stakeholders, our employees, subcontractors, and communities by having a robust Health Safety and Environmental Management System (HSEMS) that is supported by policies, procedures and standards that meet or exceed all legal requirements and industry best practices.

This activity has been planned with diligence and a risk management approach to ensure the health and safety of all persons involved and the environment we work in are protected during the survey.

A. Handheld drill B. Handheld multi-gas analyser device

C. Tubular instrument for gas measurement

For further information

Gold Hydrogen Limited:

goldhydrogen.com.au

info@goldhydrogen.com.au