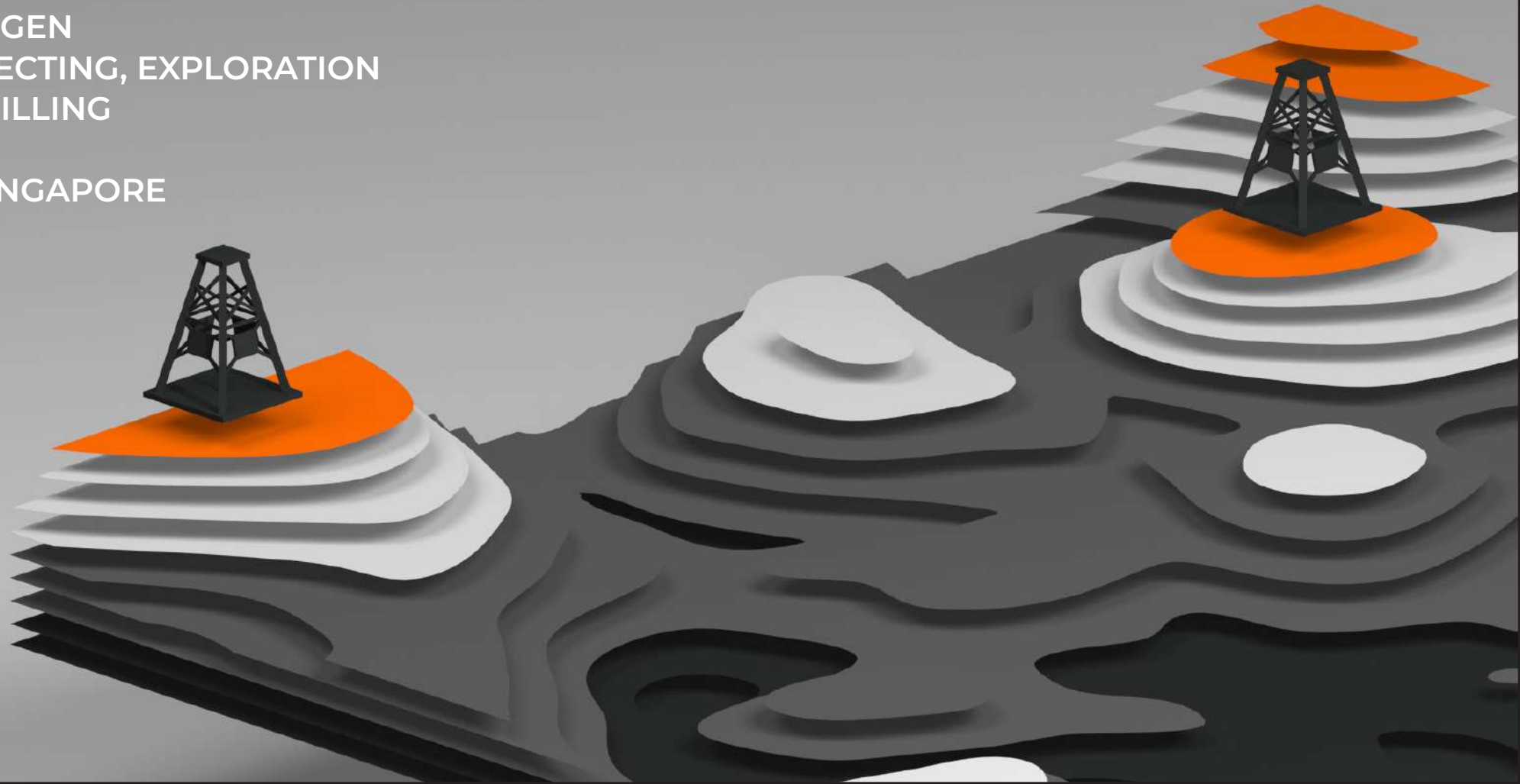


# TEASER PRESENTATION

HYDROGEN  
PROSPECTING, EXPLORATION  
AND DRILLING

2021, SINGAPORE



- Since 1992
- Founded in St. Petersburg (Russia) by professors from Russian State Institute of PetroGeology
- Headquartered in Singapore
- The only specialized Helium Technology developer and provider
- 20+ international project management staff
- 40+ international field operators
- Patents



# ACTIVITY MAP

HEOLOGIC

HEOLOGIC



**Actual Geology**  
A HEOLOGIC COMPANY

**sealium**  
A HEOLOGIC COMPANY



  
completed  
projects

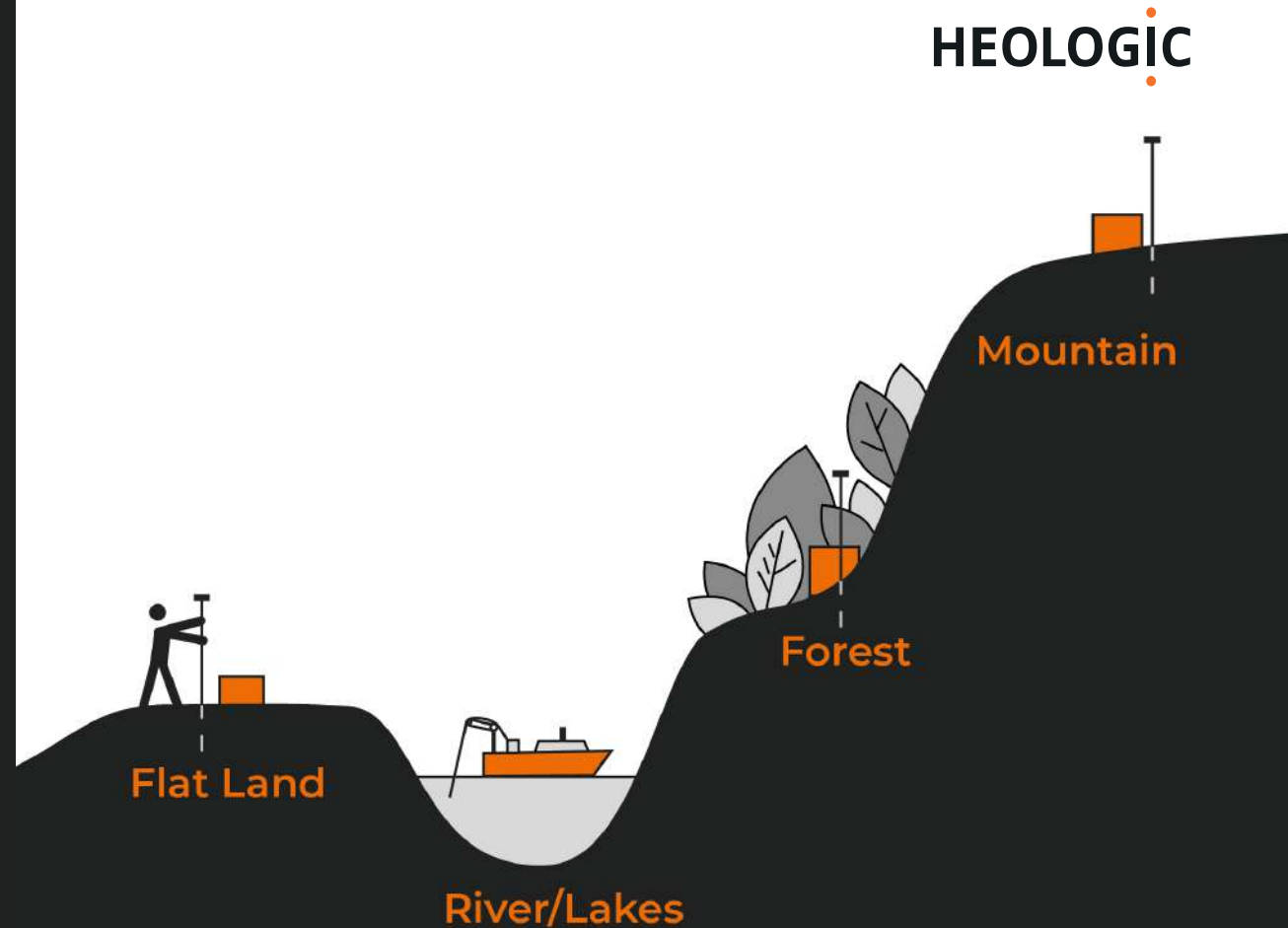
  
our  
companies



# OUR SERVICES

## ALLOCATION OF:

Hydrocarbons  
Hydrogen-enriched natural gases  
Helium-rich natural gases  
Deep Geothermal reservoirs/resources  
Uranium deposits



**HELIUM ZONAL ANOMALIES IDENTIFY LOCATION OF HYDROCARBON, HYDROGEN, HELIUM, GEOTHERMAL RESERVOIRS/RESOURCES AND URANIUM DEPOSITS WITH NO DEPTH LIMITATIONS**



# TRACK RECORD

HEOLOGIC

**200+** completed projects globally

**1M** onshore sample stations

**10K** waterbody sample stations

**50M** performed Helium measurements

**9M** acres (36 000 km<sup>2</sup>) surveyed

**3** field discoveries based only on He-Technology

**150** wells drilled within He Anomalies

**17 000** ft (5 200m) - deepest commercial well drilled based on He-Technology



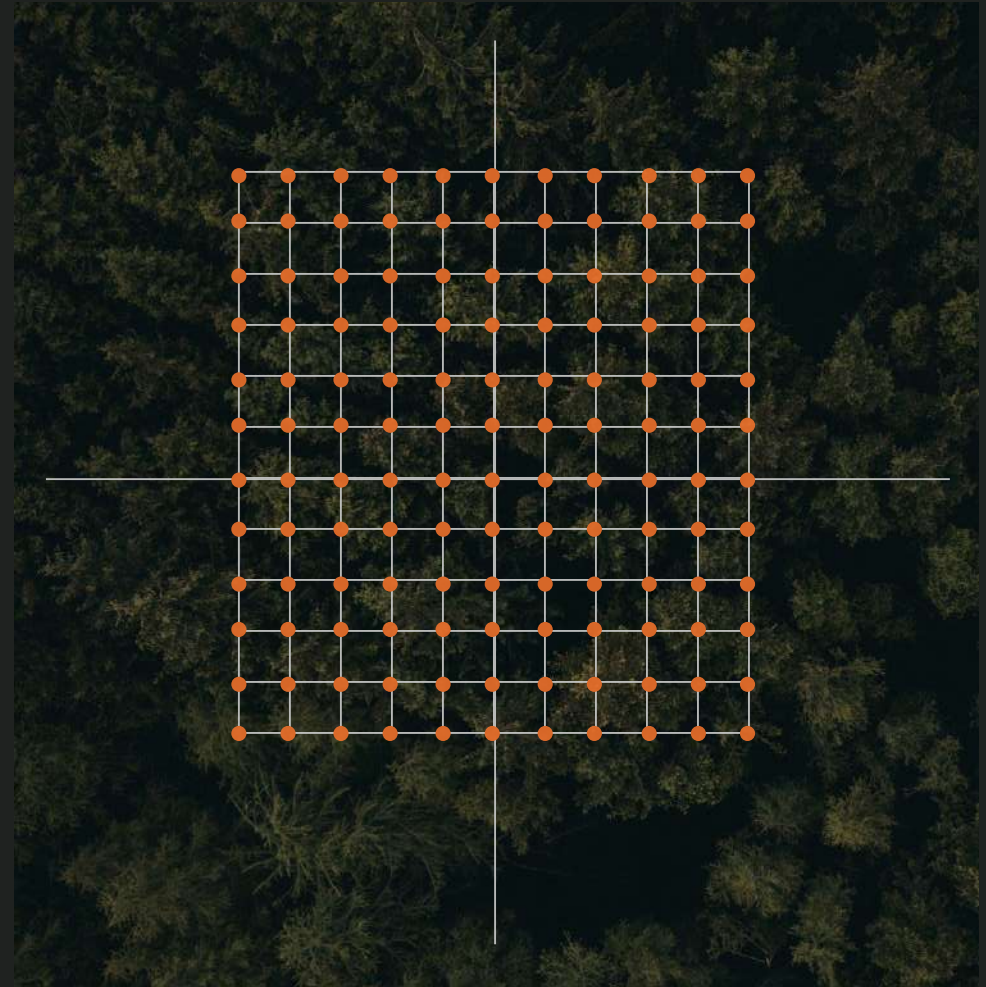
# H<sub>2</sub>+HE SURVEY FOR HYDROGEN EXPLORATION

- Helium spatial anomalies on the surface define hydrocarbons, hydrogen, helium, geothermal reservoirs/resources, uranium deposits, active faults and high permeability zones.
- Hydrogen has ability to accumulate in natural gas deposits together with other gases - hydrocarbons, nitrogen, carbon dioxide, helium.
- The high migration ability of both hydrogen and helium makes it even possible to migrate out of the reservoir through effective sealing and form a hydrogen and helium concentration field above the background value on the surface. Moreover, both gases migrate through zones of increased permeability (deep faults) from the depths of the earth to the surface (deep degassing).
- The zonal surveys of hydrogen concentrations carried out on the surface of the gas fields show that Helium anomalies are accompanied by an increase in hydrogen concentrations: the zone of increased hydrogen concentrations conforms to the zone of the helium field and in areas without helium anomalies, hydrogen concentrations have also not been established.
- This H<sub>2</sub>+He method will help quickly identify hydrogen + helium anomalies in-situ (on-site), build up correlation between hydrogen and helium anomalies, sort out hydrogen anomalies that can be associated with biogenic (organic) hydrogen and integrate processed data with available G&G data.
- As the result of work, priority wells for hydrogen drilling are recommended and zonal objects associated with geological structures (traps) with good reservoir properties and an effective seal will be preferable.



# H<sub>2</sub>+HE FIELD WORK

- Survey grid plan considering geological targets, **25M - 100M** step
- Continuous H+He flux measured **IN-SITU**
- Subsoil sample depth **1 M**
- Heologic™ Hydrogen/Helium gas sampling system produced **IN-HOUSE**
- Automatic Data Acquisition and Analysis with **NO HUMAN** interference on the spot
- Survey speed up to **4 KM2** per day per team, subject to step size, terrain, mean of transport and weather conditions



# EXPERIENCE: SURVEYS FOR HYDROCARBONS

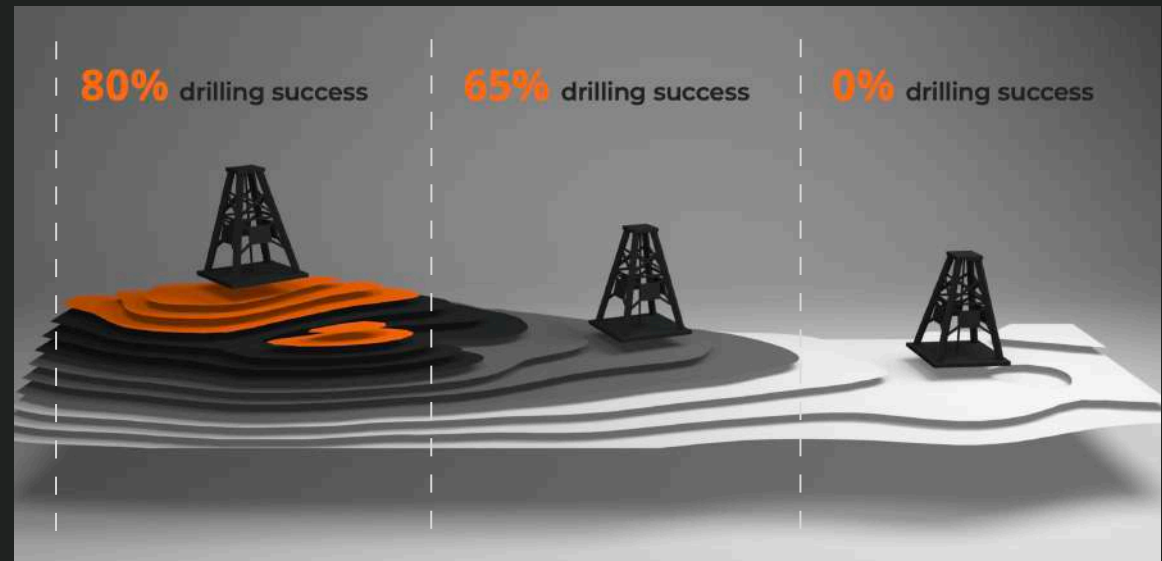
Helium Survey has helped many Oil & Gas E&P companies worldwide to significantly increase the efficiency of the investments in seismic and improve the drilling success rate.

Helium Survey has no impact on the ecosystem.

The proven results of Helium Technology confirm that this method can be used by itself or in conjunction with other known methods in order to:

- obtain new data on the geological model and potential of the block
- explore, prospect and develop the new oil and gas reservoirs and re-develop the existing ones
- identify the areas with active hydrocarbon reserves and improved fractured permeability
- predict saturation of the prospective section prior to drilling
- rank the exploration objects, cutting-off the non-perspective areas
- predict the reservoir distribution, delineate and precisely define hydrocarbon pool outlines
- set up the prospective drilling targets
- determine the residual reserves of the developed fields

## DRILLING WITHIN HIGH HELIUM ANOMALY EXCLUDES UNSUCCESSFUL RESULTS



## HELIUM TECHNOLOGY FORECAST ACCURACY CONFIRMED BY DRILLING - UP TO 90%





# HEOLOGIC

Heologic Group runs a game-changing business  
to deliver you superefficient, reliable, practically  
proven and sustainable technology.

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