

**Introduction of ROTAQUA Ltd.**

**And**

**AGILA Renewable Energy Service Ltd.**

**(Hungary)**

**Pál Csicsák**

Geologist

**ROTAQUA**



AGILA Renewable  
Energy Services Kft.

Wroclaw, 2022

# The structure of the presentation

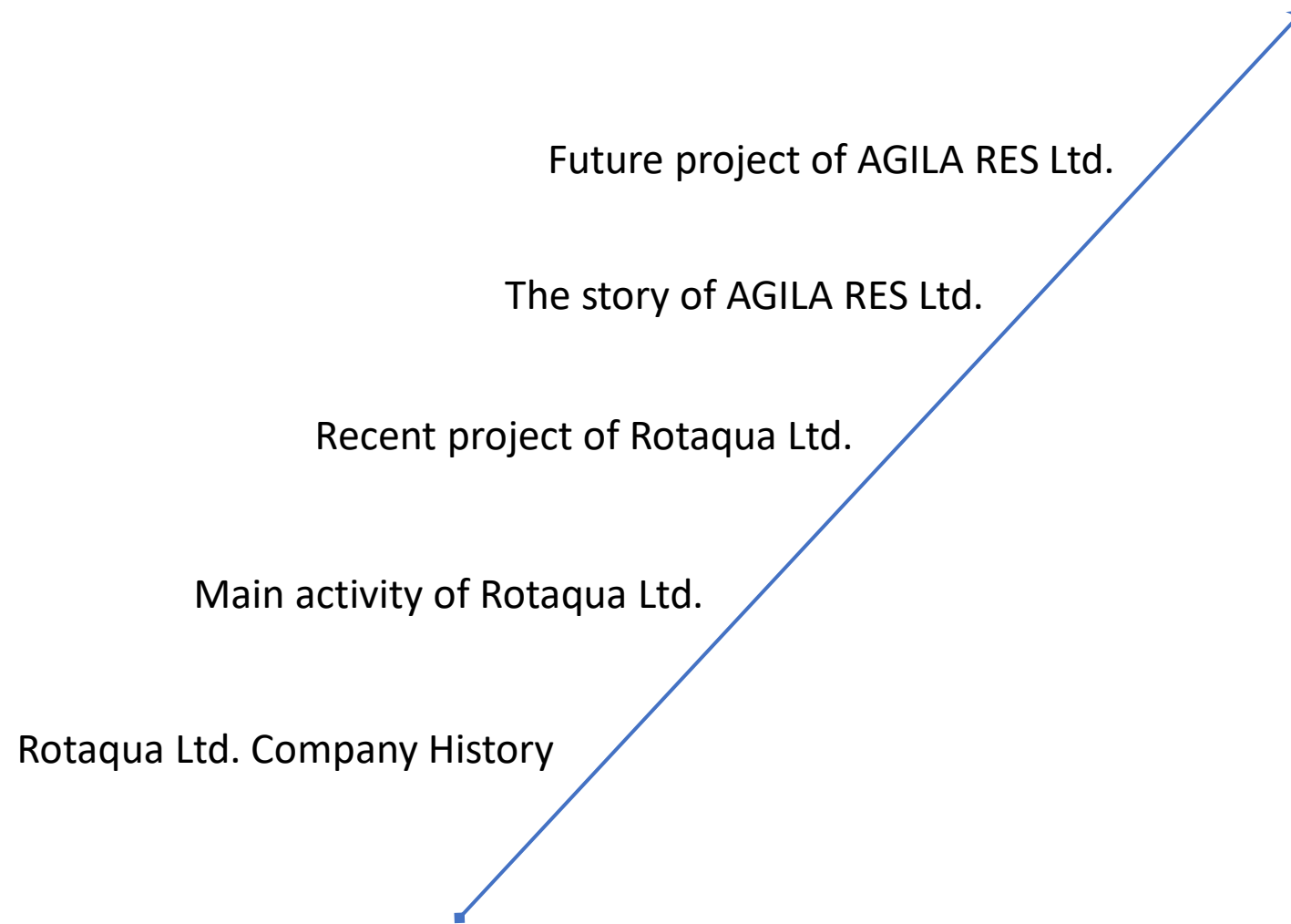
Rotaqua Company history

Main activity of Rotaqua Ltd.

Recent project of Rotaqua Ltd.

The story of AGILA RES Ltd.

Future project of AGILA RES Ltd.





## Rotaqua Ltd. Company History

Wroclaw, 2022



1955

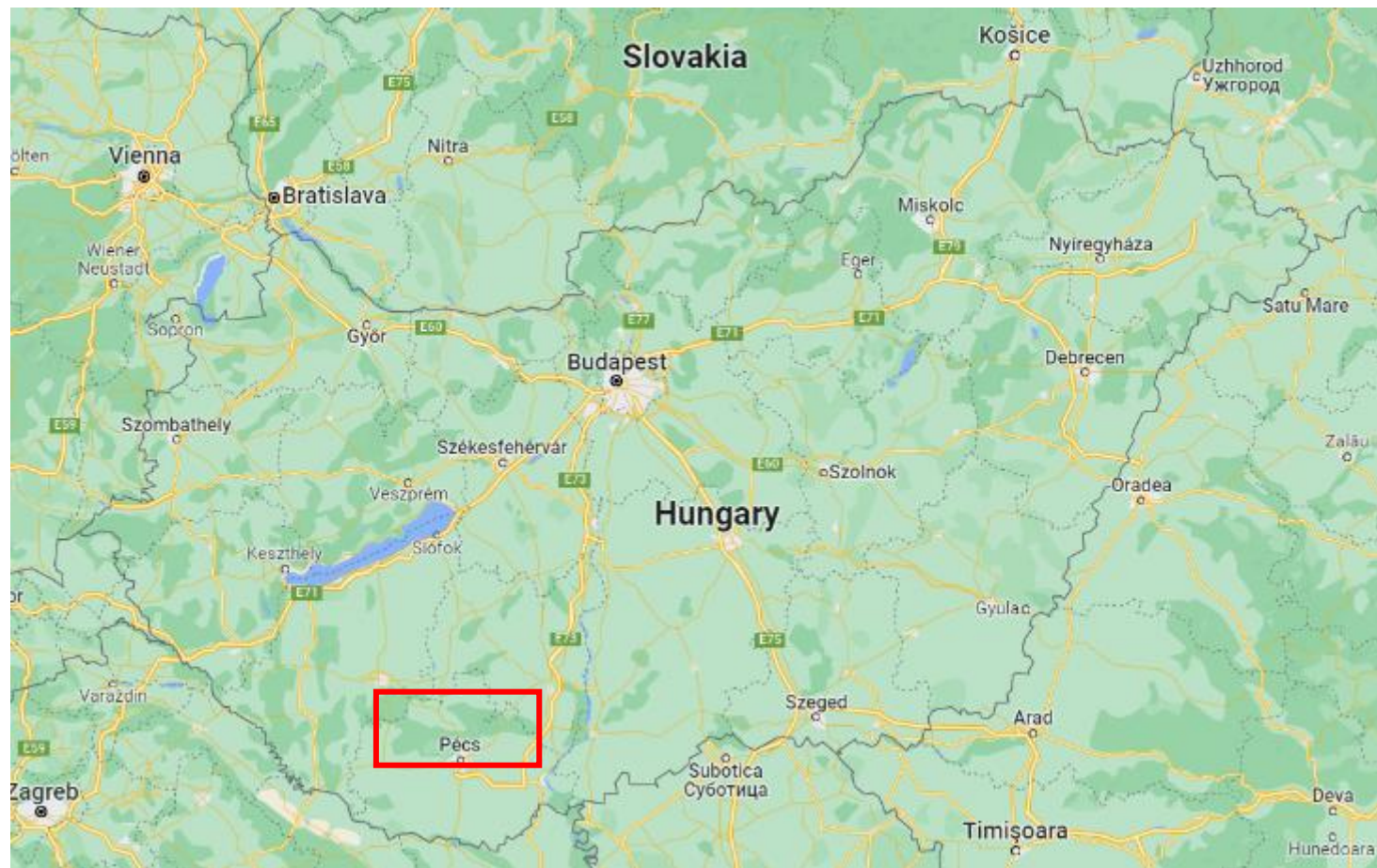
## The Past...

The work begins

The ancestral organization did the exploration and drilling works, related to uranium ore exploration in Hungary. The exploration activity was extensive for the entire territory of the country, except to the deep basins, covered with young sediments.



- Mecsek Mountains – SW-Hungary

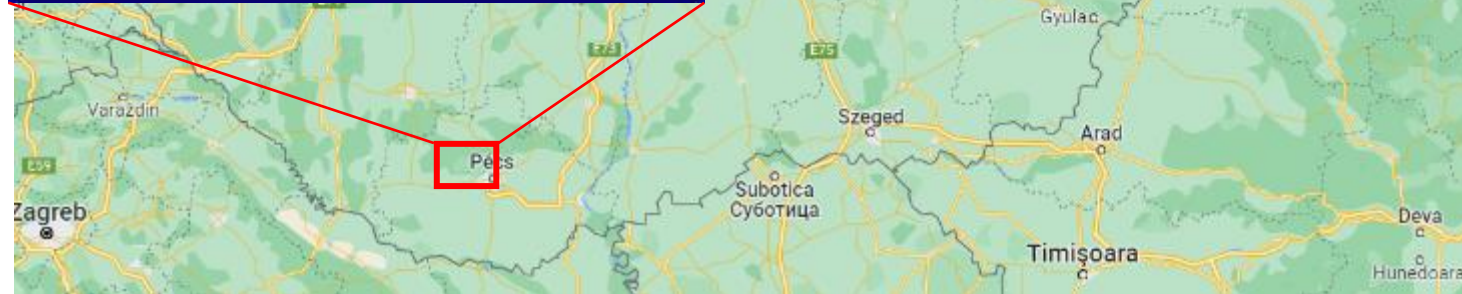
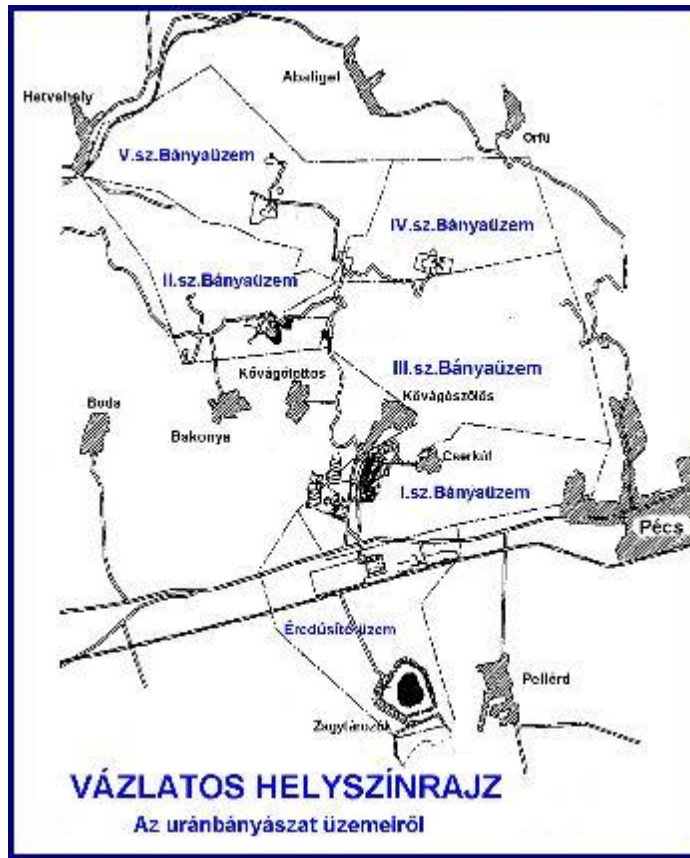


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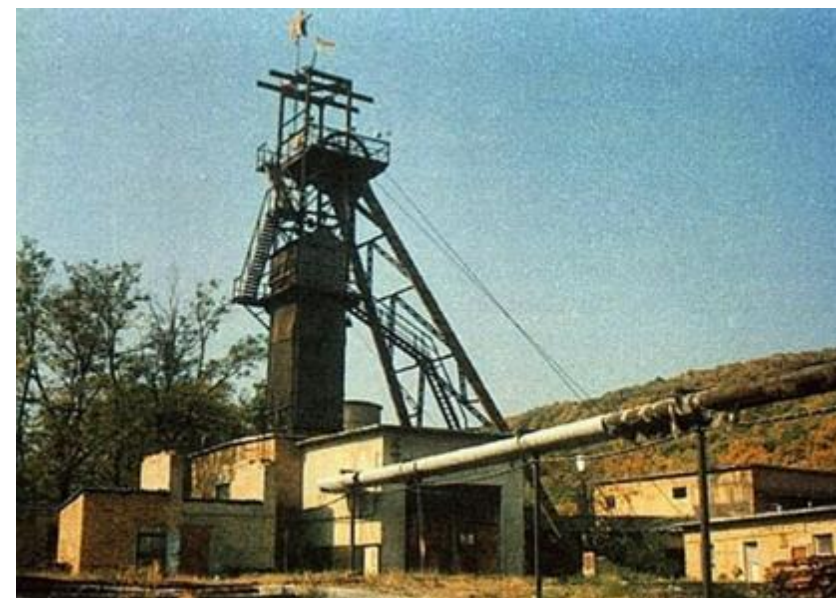


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1990

## Level Step...

ROTAQUA Ltd. is founded

The ROTAQUA Ltd. was founded by the Mecsek Ore Mining Company (MÉV) from its Exploration and Drilling Branch in spring of 1990. MÉV considered keeping at least a part of the strategic area, such as drilling equipment and experienced staff. Therefore the company and 20 of its former employees with a pecuniary contribution founded the ROTAQUA Ltd., in which MÉV became the majority shareholder.





1996

## Change of owner

The company get 100% owned

The owners decided to sell the company in 1996 which it was bought by today's 100 percent owner. Later, the company also applied for and fulfilled international orders, focusing on Central-Eastern Europe (such as the Czech Republic, Slovakia, Romania) in addition to Hungarian works.





In the present

## Nowdays

Years of development and stability

By improving the equipment (purchase of modern western manufactured drilling rigs instead of the inherited Russian-made ones) and focussing on the quality, the company achieved a market leading position (35% market share) in its main field of activity (geological exploration).

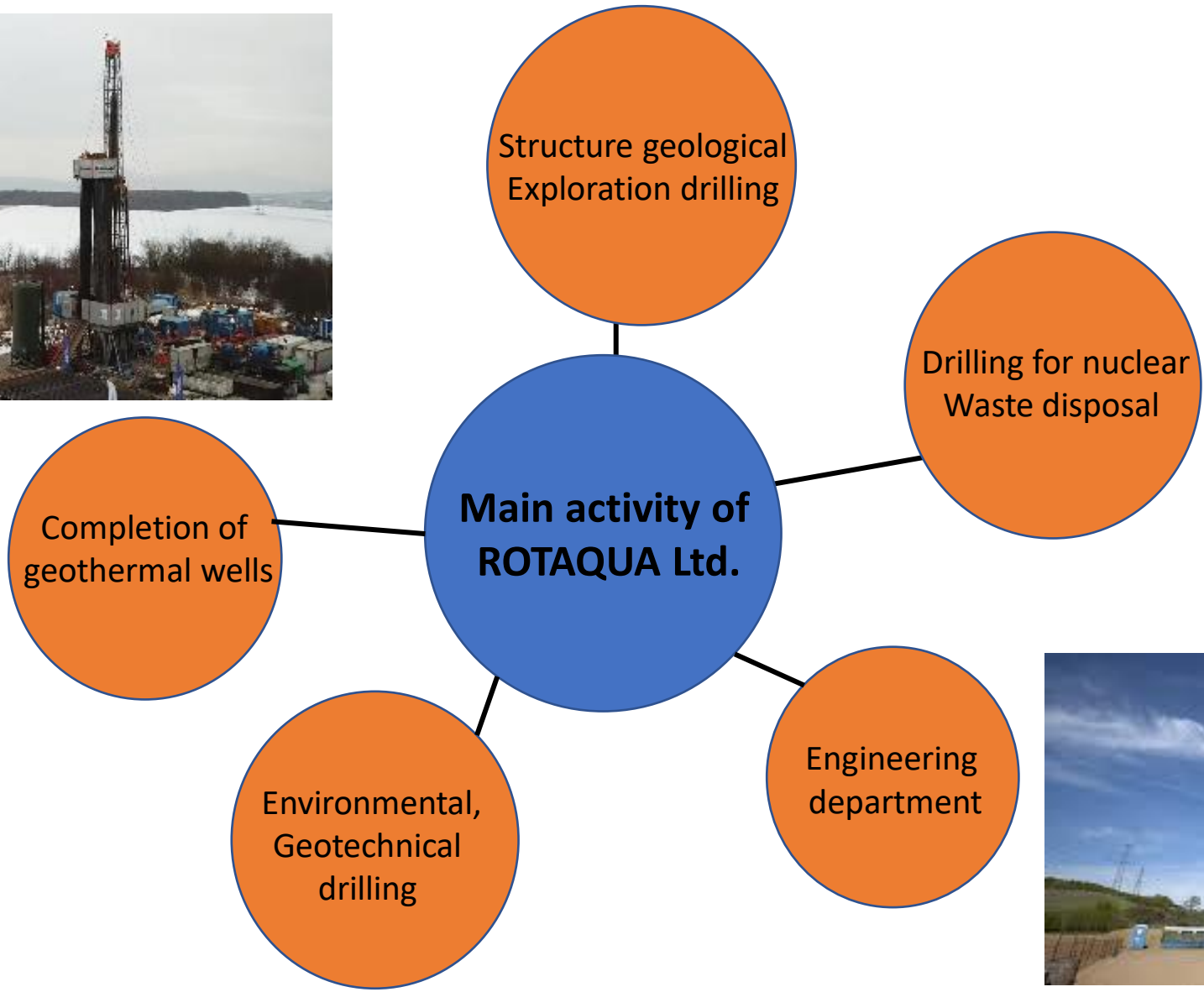




**Main activity of Rotaqua Ltd.**

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## **Recent projects of ROTAQUA Ltd.**

Wroclaw, 2022

## Research project of placement of high-radiation radioactive waste, in the Boda Claystone Formation, Mecsek mountains, SW Hungary

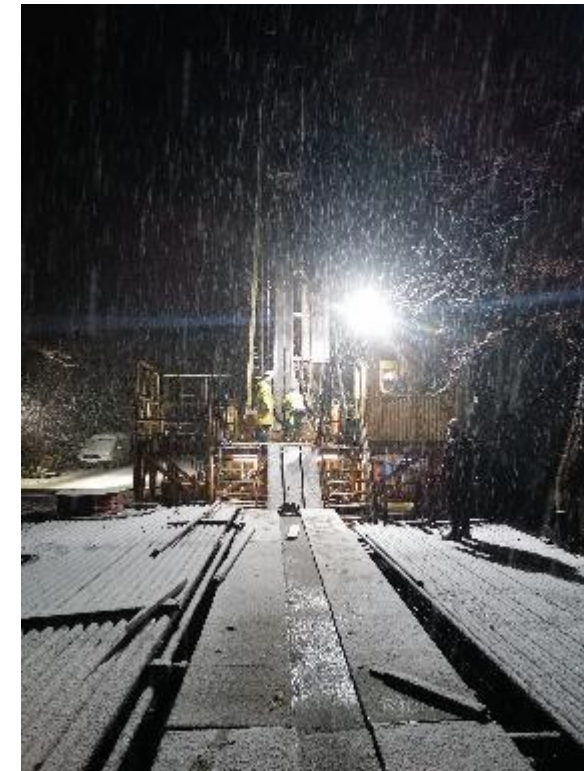
- 3 borehole drilled in a year
- 800 m full section drilling
- ~2270 m coredrilling
- Over 95% core recovery yield



Core samples from  
Boda Claystone Formation



Core Drill bit



Drilling rig, during core  
drilling

## Deep geothermal well completions on the Hungarian plane and Slovakia

- 3 borheole with 2500 m depth in Békéscsaba (SE-Hungary) related to heating of public institutions
- 1 well with 2200 m depth in Szentes (Hungary) related to heating of greenhouses
- 1 well next to Kosice (Slovakia) with 2700 m depth
- 1 well in Kezmarok (Slovakia) with 2500 m depth
- 1 well in Liptovsky Mikulas (Slovakia) with 2000 m depth



Drilling rig, during geothermal drilling





## The story of AGILA Renewable Energy Service Ltd.

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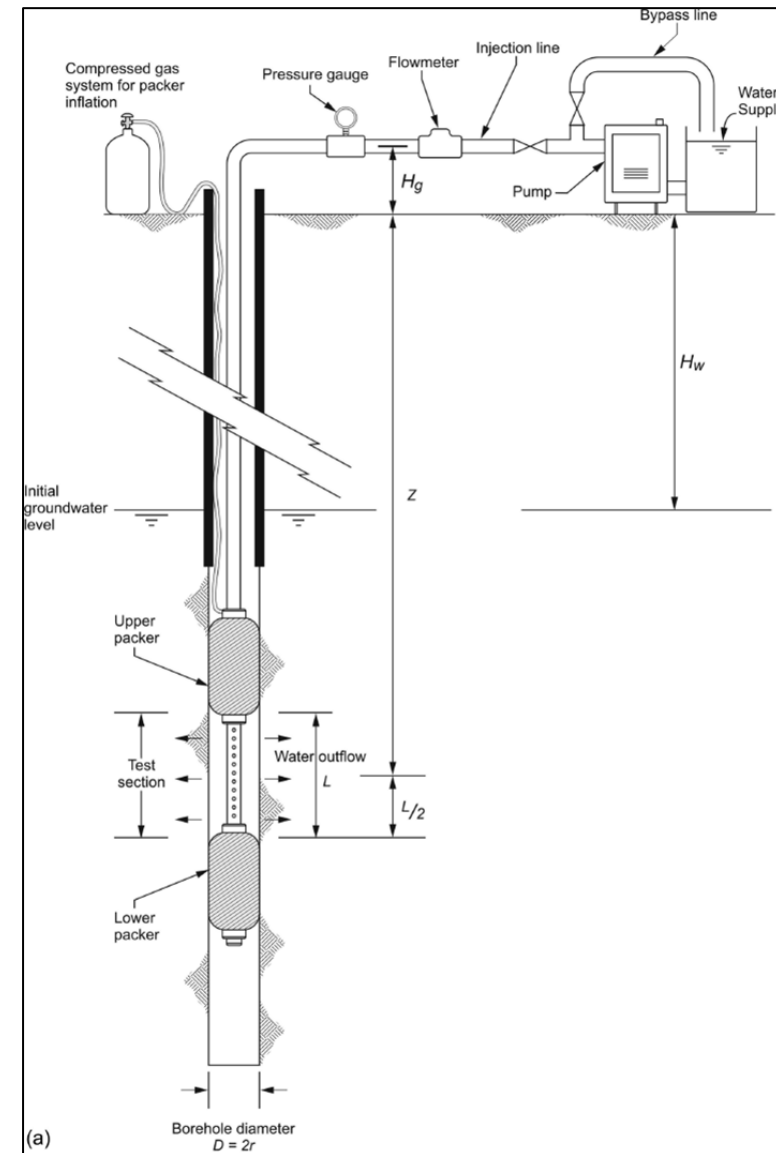
- The company was founded in 2019
- At the beginning the company's activities main focus was on the hydraulic well tests carried out with packer assemblies. These tests were measured in boreholes, that were drilled during research projects, related to the disposal of radioactive waste. Furthermore, the installation of multi-packer measurement systems into these boreholes.



Hydraulic packers

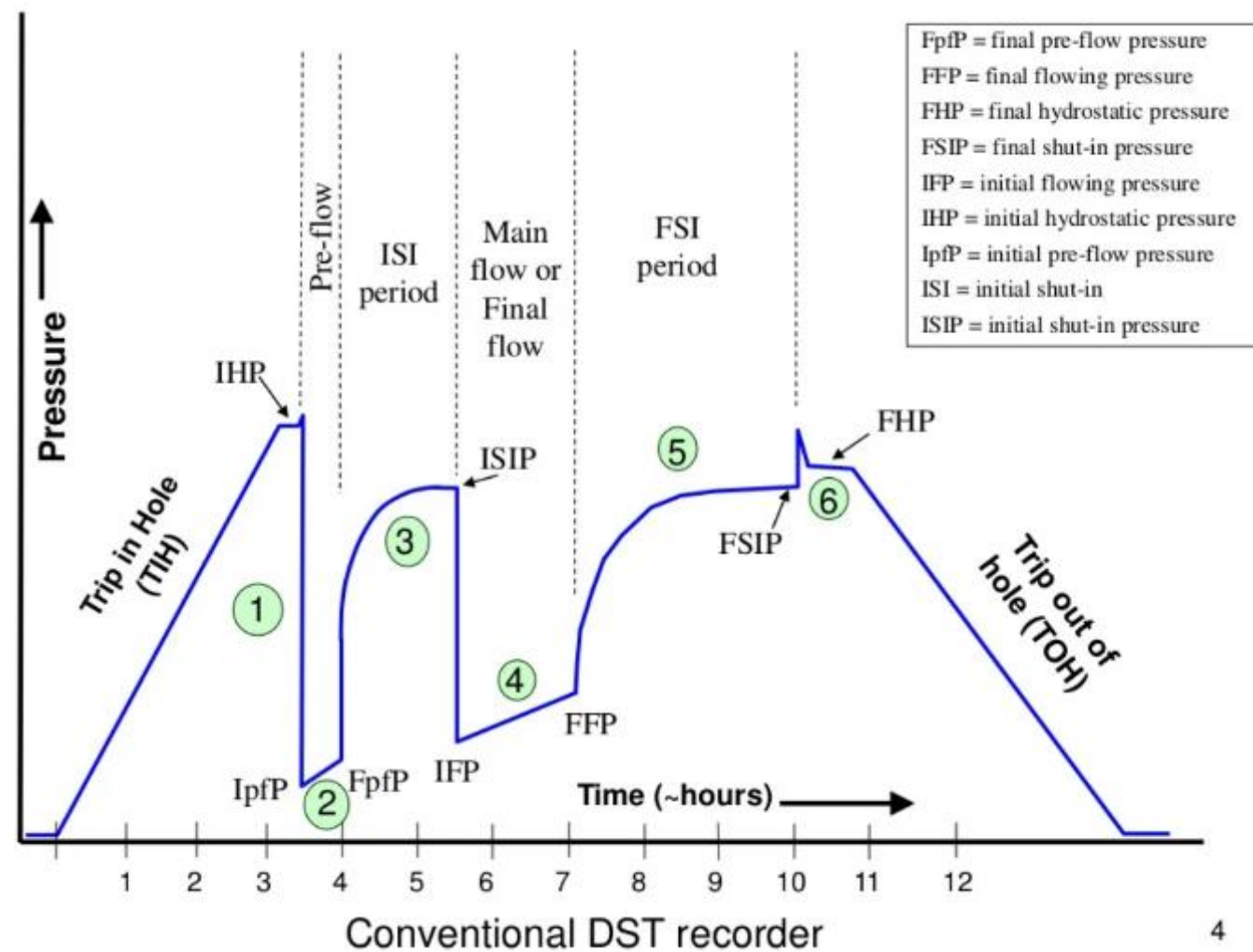
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Hydraulic packer test





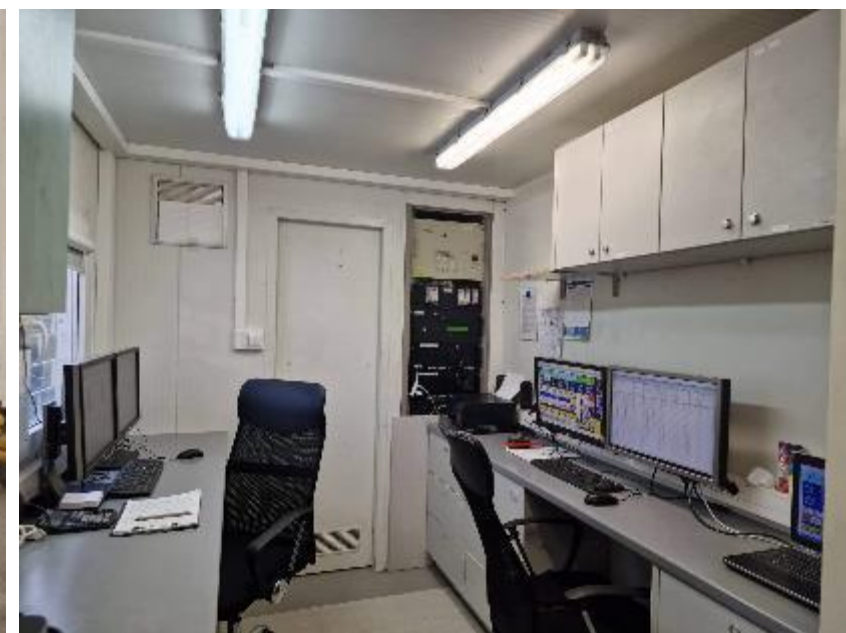
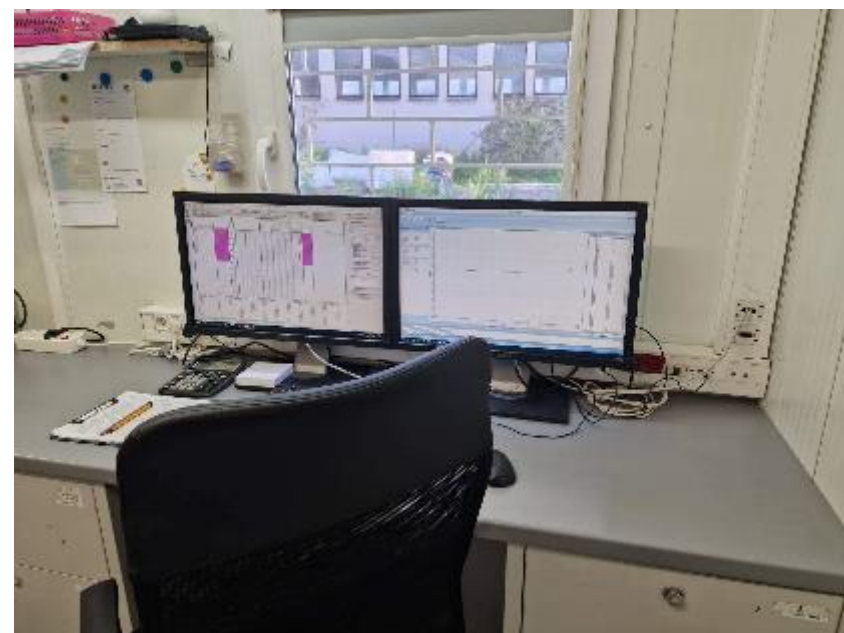
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Hydraulic packer test curve

Conventional DST recorder

- In 2021 the company was broadened with a new contingent, when a mud-log unit was bought. Since that the cabin is serving beside a ROTAQUA drilling rig, during geothermal well drillings.



- The third activity of the company is to execute measurements during geothermal well tests. With the use of high pressure/high temperature probe the team is able to collect huge amount of data - on surface and in downhole as well - which is essential for the determination of the wellbore production capacity. The company also has the knowledge and devices to evaluate the collected dataset.



Production test (SE-Hungary)



High p / High T probes on the wellhead



High pressure / High Temperature probes





**Future project of AGILA RES Ltd.**

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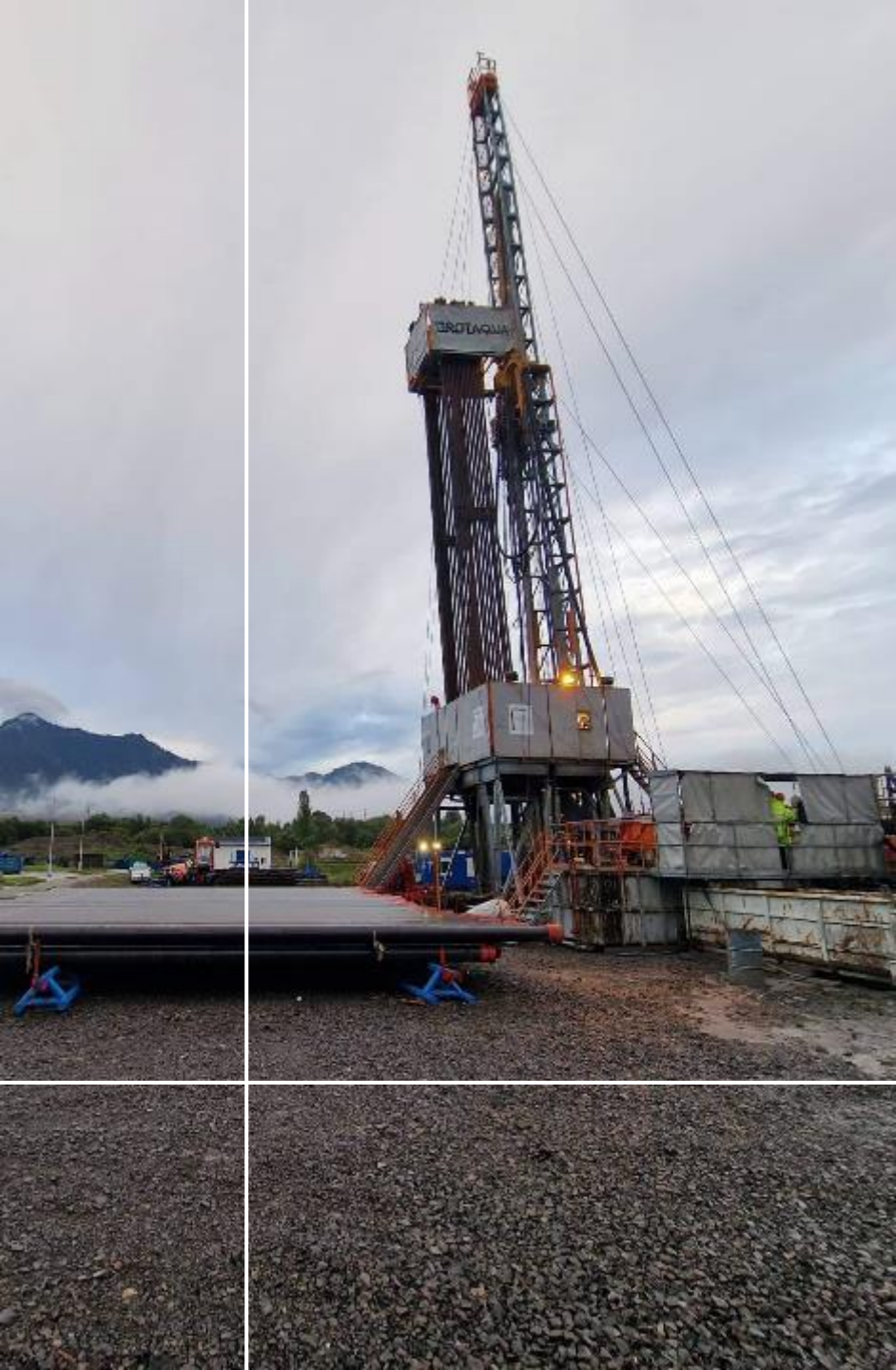
- Installation of multi-packer systems nearby a closed mine as a part of the water monitoring system in the Mátra mountain (North Hungary)
- Replacement of old multi-packer systems in a low- and mid-radiation radioactive waste deposit (Southwest Hungary)
- Data acquisition and measurements during geothermal well tests in Hungary and Slovakia
- And hopefully a successful BrineRIS project



Wellhead during welltest



During multipacker installation



**Thank you for your kind attention!**



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