

**Einstein  
Telescope**

**Bjorn Vink  
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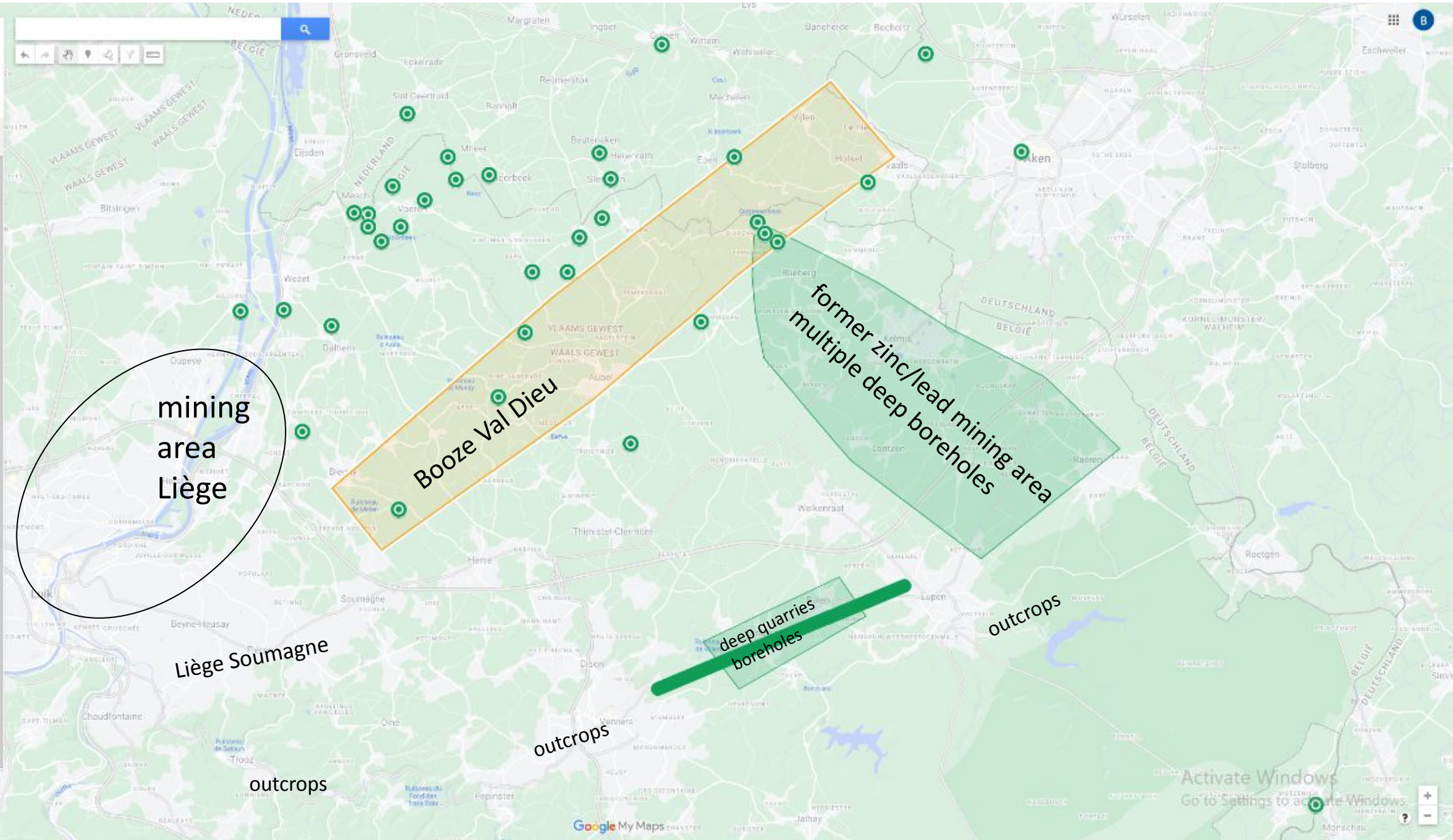
# Completed, Ongoing & Upcoming Geo-studies EMR

- what has been done
- ongoing surveys nov 2023 E-test briefly (ULiège, Uni Bonn)
- upcoming borehole campaign and logging



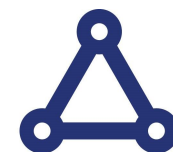
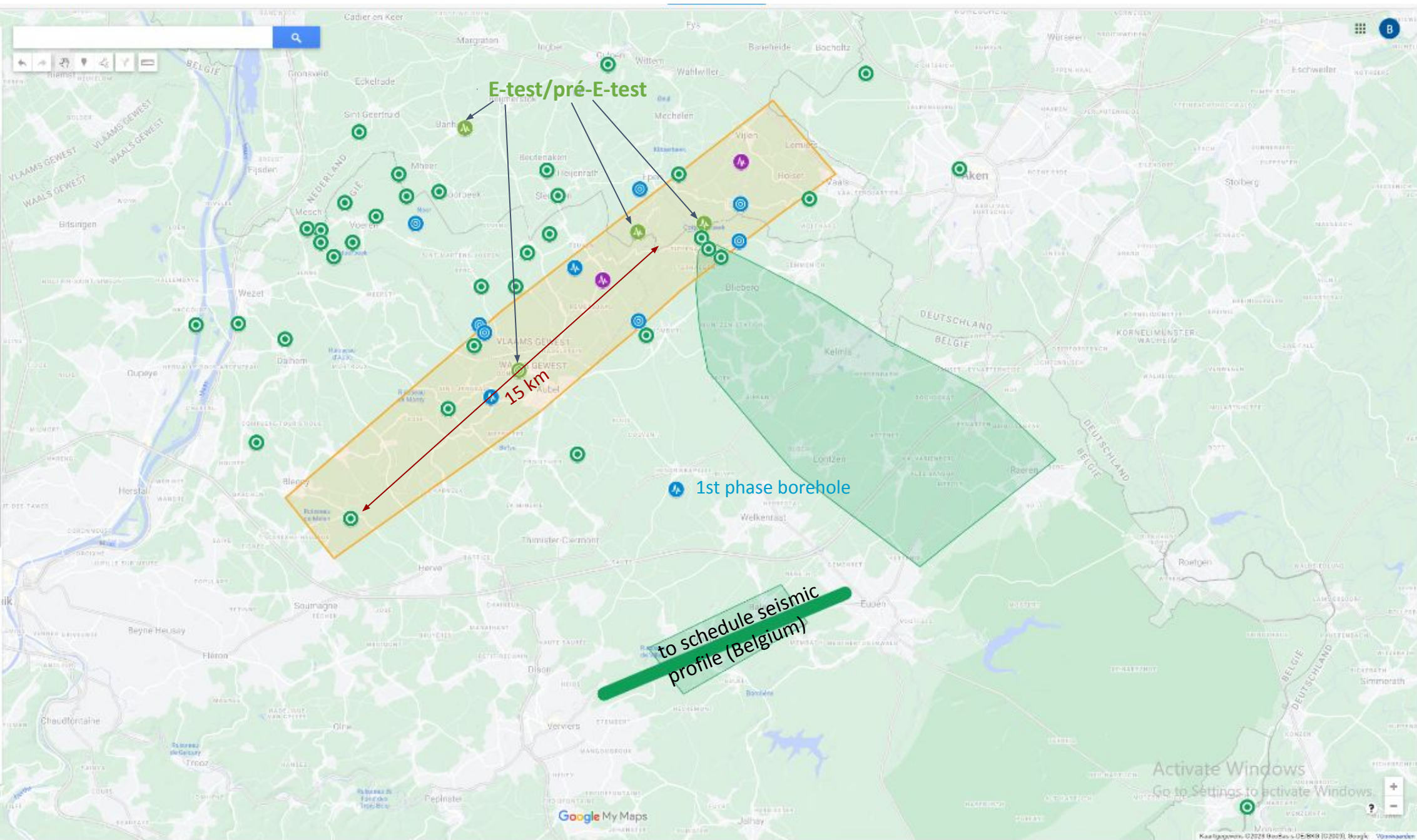
"Core Store Aubel"

# What has been done far past boreholes, for mining et cetera





# Planned boreholes first phase





# 2024-2025 list upcoming surveys

- 2 phases of 10 cored drillings, total ~6000 m length
- 5 to add deep seismometers [noise at ET-level], total = 8 \*
- 15 deep piézometers [hydraulic head at ET-level], total ~20.
- Core storage at Aubel (*core workshops*)
- Geophysical surveys (deep ERT, active & passive seismic)
- Microgravitation study area
- Geohydrological testing (borehole & monitoring wells)
- In borehole testing
- lab testing geomechanical properties
- Seismic noise studies, railways, windmills, ET-cetera \*



# Drilling

- core drilling also sampling for overburden for lab testing ;
- standard core sampling SQ:  $\Phi = 146/102\text{mm}$  PQ:  $\Phi = 95/122,6 \text{ mm}$  ;
- in situ testing and borehole surveys feasible

## Holes finalized as deep seismic noise monitoring station

- reaming in case needed
- will be dry cemented boreholes
- include glass fibre / DAS system depending evaluation Cottessen borehole

Other boreholes deep piezometer, level filter below 150m depending findings drilling.





Thanx 4 your attention

Any Questions?

