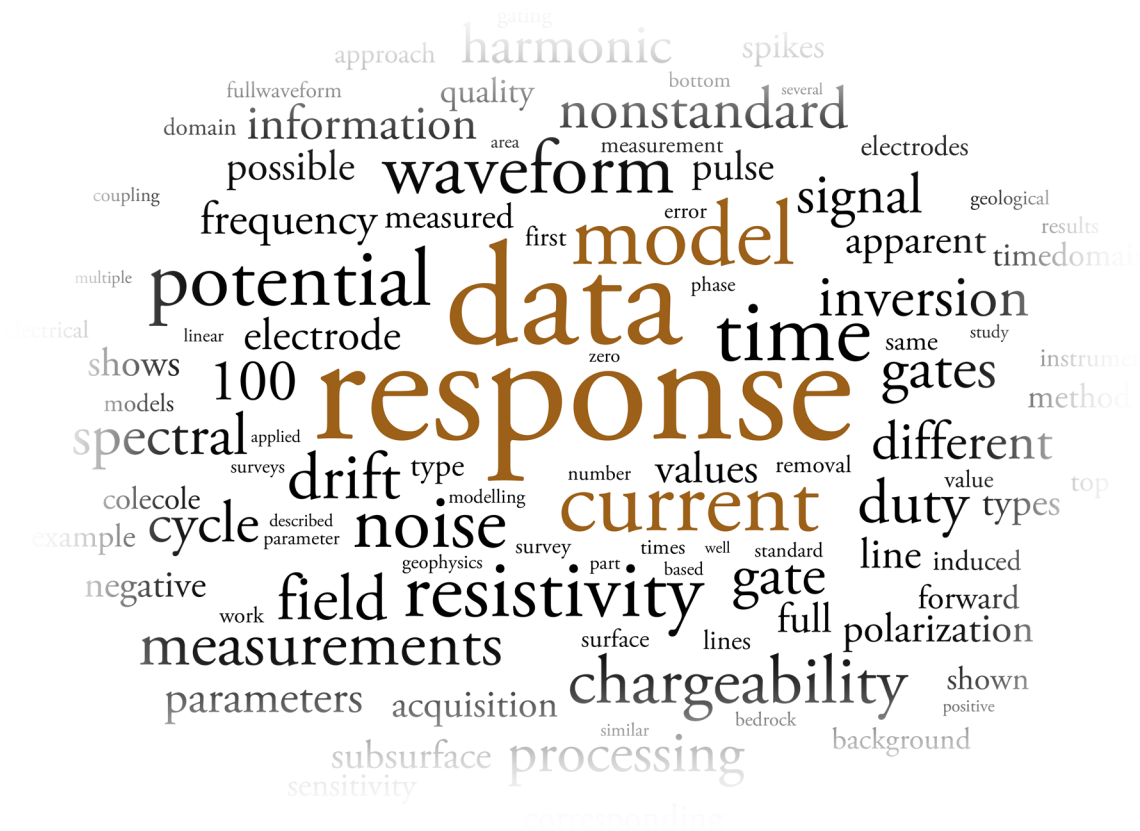


Advances in time-domain induced polarisation

Data acquisition, processing and modelling




A project summary compiled by Per-Ivar Olsson

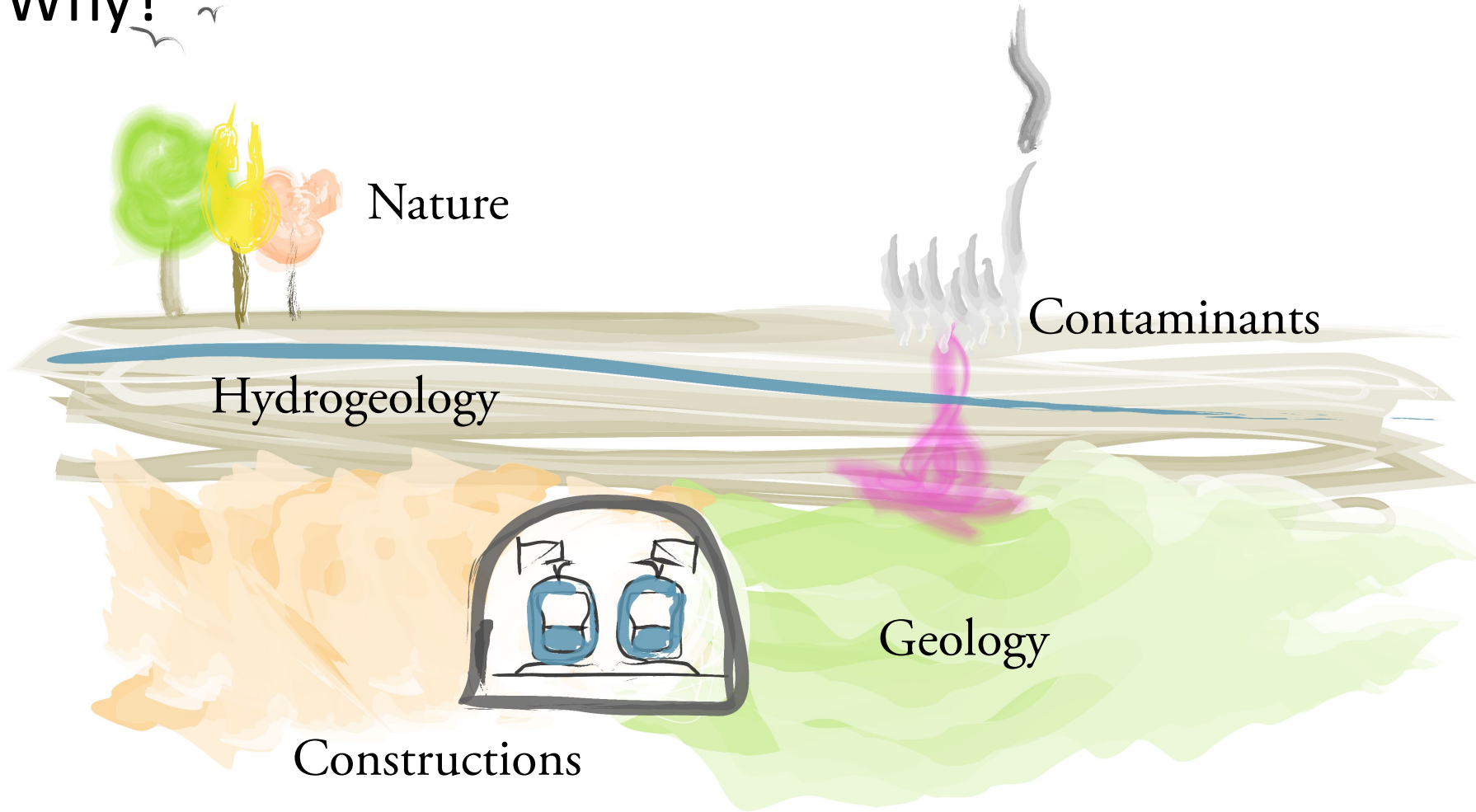


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Why? 

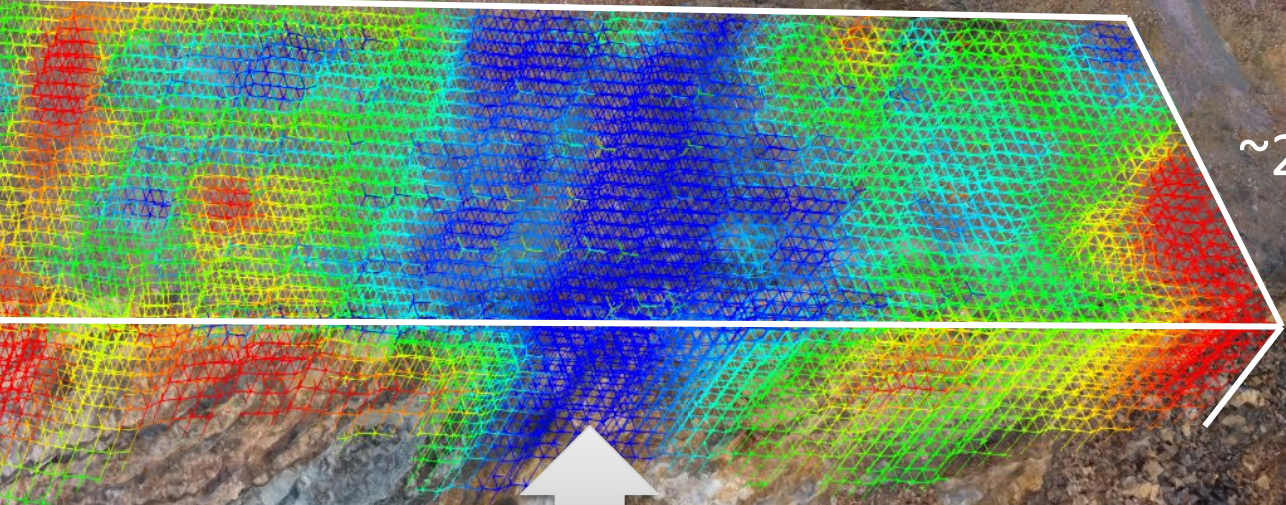


Resistivity (ohm-m)



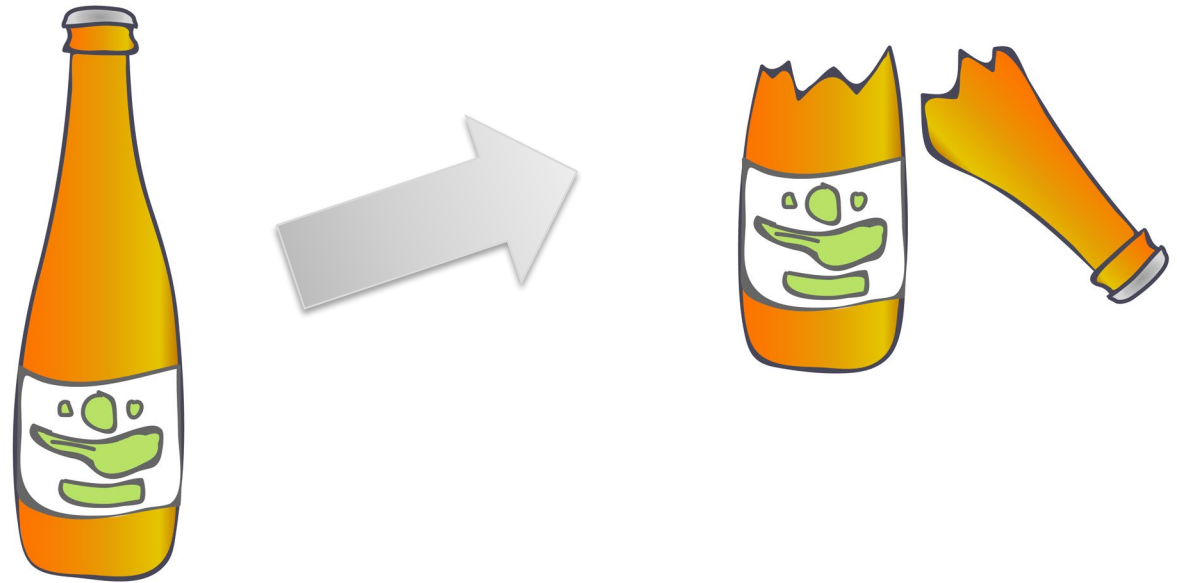
~60m

~20m



Vertical fault,
poor rock quality

Why?



Bottlenecks limit adoption of the resistivity and induced polarisation method:

- Acquisition time
- Data quality and reliability
- Demanding post-processing

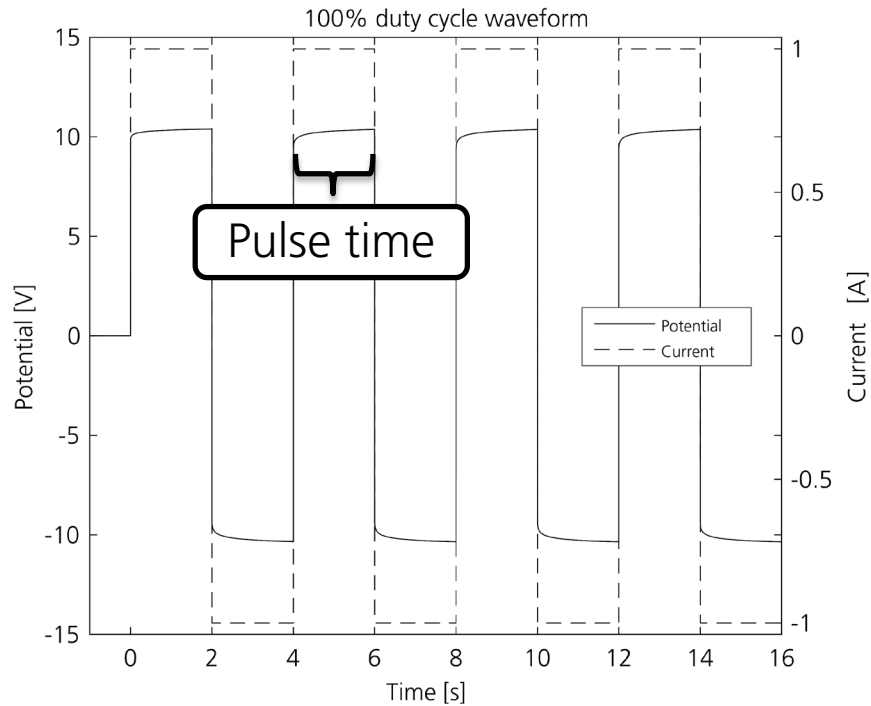
Data quality, reliability and understanding



$$u_{measured} = u_{response} + u_{drift} + u_{harmonic\ noise} + u_{spikes} + u_{other}$$

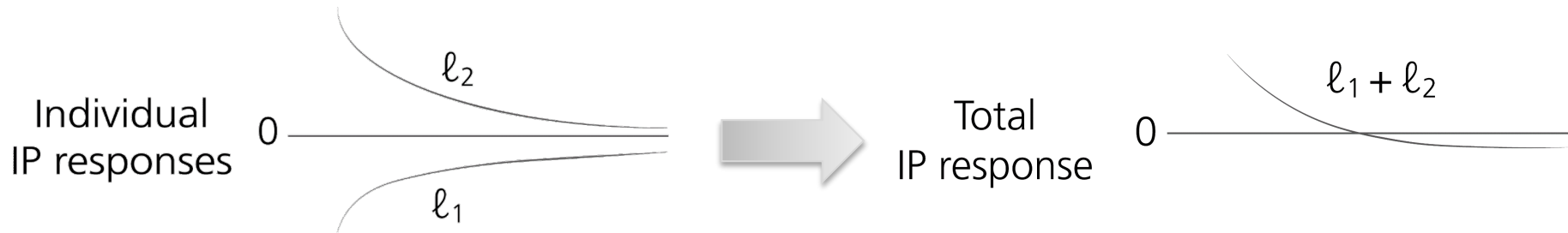
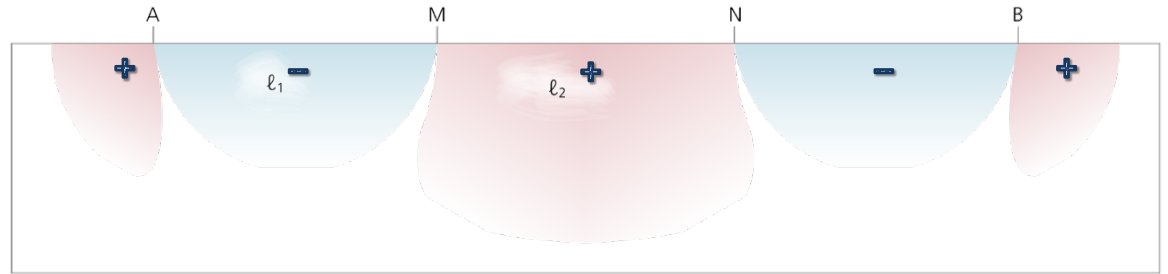
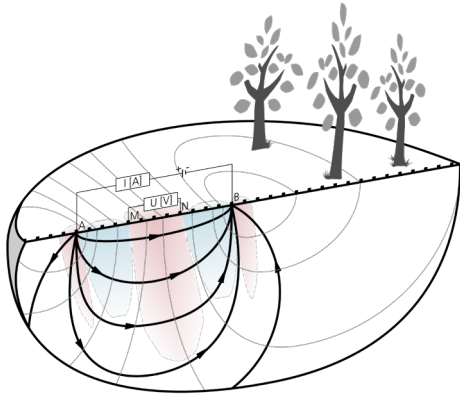
Improved processing of full waveform data.

Acquisition time



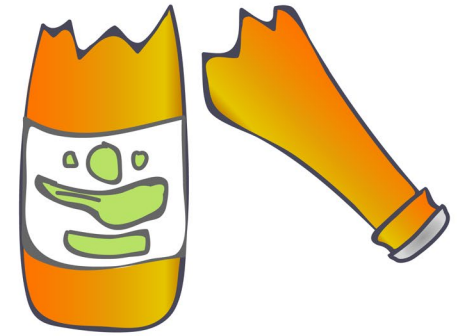
- Get resistivity and induced polarization information at the same time
- Theoretical 50% reduction in acquisition time

Post-processing



Improved basic understanding of possible IP responses.

Conclusions



Reduced DCIP bottlenecks:

- Increased data quality and spectral range
- Reduced field acquisition time by up to 50%
- Improved understanding for easier post-processing

Increased adoption of the DCIP method

