

Mapping local groundwater flow systems in the regolith of Dodowa, Ghana

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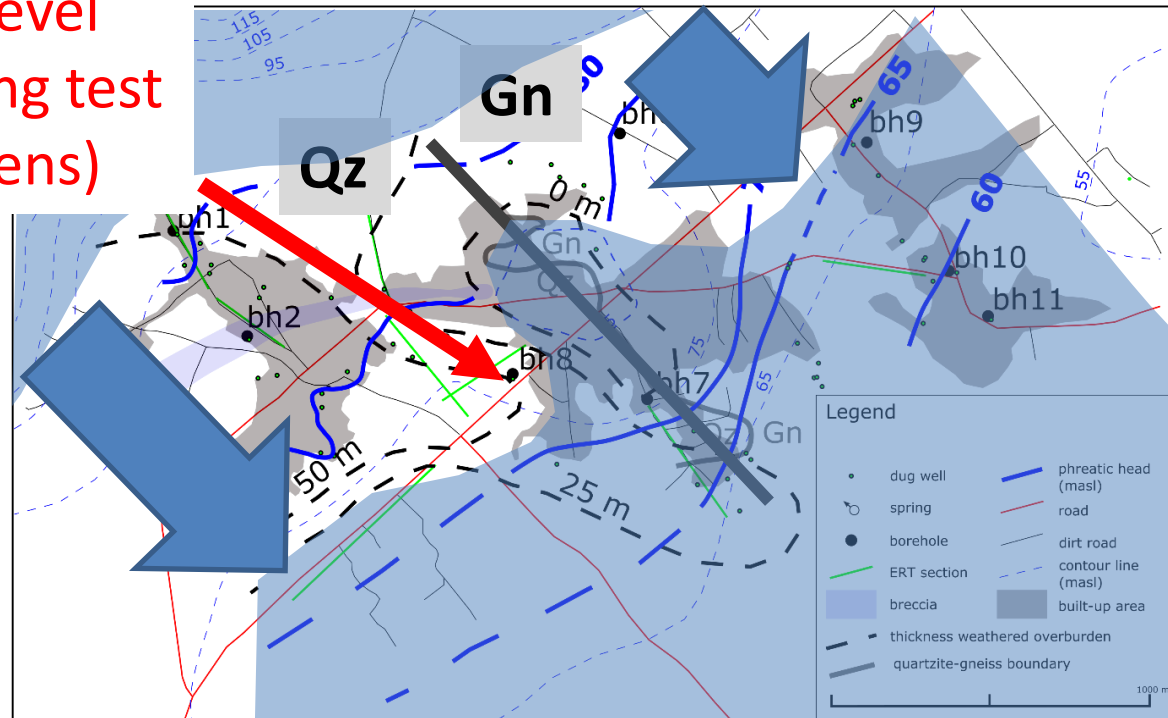
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Objective: carry out a groundwater flow systems analysis (GFSA) in order to prepare a groundwater management plan

Methods: ERT, drilling, multi-level pumping tests, hydrochemistry

Multi-level pumping test (4 screens)



Results

Qz:

Matrix flow (?)

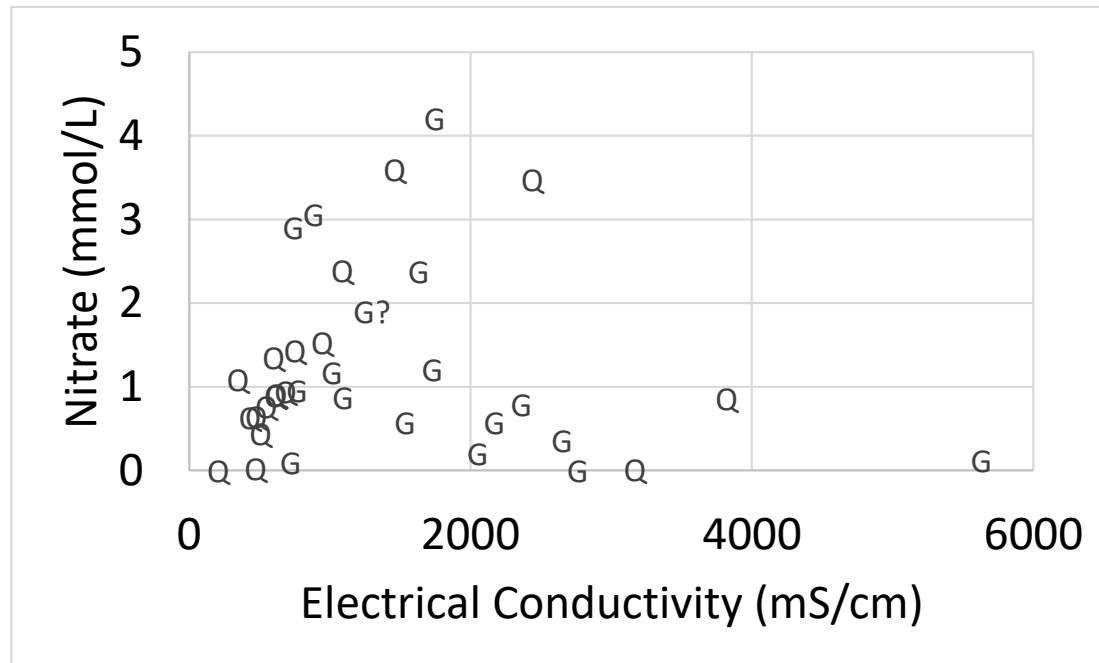
$T = 1-3 \text{ m}^2/\text{d}$

$C = 1\text{E}6-1\text{E}7 \text{ days}$

Gn:

Fissure flow

$T \sim 0.1-1 \text{ m}^2/\text{d}$



Conclusions

- Transmissivities are low. Intensive use for self-supply.
- High nitrate concentrations due to waste water infiltration combined with nitrification in the apparently aerobic weathered zone.
- Due to limited aquifer extent groundwater system development is local.
- Groundwater management strategies likely have to be aimed at non-potable self supply.