ENGINE - ENhanced Geothermal Innovative Network for Europe
Workshop 2: Exploring high temperature reservoirs: new challenges for geothermal energy
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The deep reservoir of the Travale geothermal area: mineralogical, geochemical and resistivity data

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Explain the anomalies in resistivity values observed in the deep reservoir of the Travale area

- the lithology and the alteration affecting the reservoir rocks
- the physico-chemical characteristics of the fluids
- their distribution and evolution with time

Anomalous values can be related to

- the heterogeneities in the reservoir rocks
- the abundance and type of alteration minerals
- the presence of **brines**, whose interconnection would be sufficient to produce electrolytic conduction

Fluid	T (°C)	P (MPa)	
H_2O + NaCl (*)	300-350	3-7 25-40	(vaporstatic) (hydrostatic)
H_2O + NaCl (^)	350-500	40-100	(lithostatic)
H_2O + NaCl + CO_2 + CH_4 (°)	350-500	40-100	(lithostatic)

(*) 0-1 wt % NaCl eq.
(^) up to 50 wt % NaCl eq.
(°) up to 50 wt % NaCl eq., pure CO_2 or CO_2 + CH_4 mixture 50:50 (molar)

calibrate petrophysical experiments in order to reproduce the realistic physical condition of the deep reservoir