Thermal springs in Bad Münster am Stein-Ebernburg

The Rheingrafenquelle and Huttenquelle (also known as Hugoquelle) in Bad Münster am Stein, located 6 km south of Bad Kreuznach in the Nahe valley, both show an elevated water temperature. Water of the Rheingrafenquelle has been classified as Heilwasser (SGS Institut Fresenius, 2014).

See also

Thermal water in Bad Kreuznach

Anomalies

A temperature of 15.4 °C has been observed for the Huttenquelle, while the Rheingrafenquelle water has a temperature of ~30 °C (Griesshaber et al., 1992; Käβ and Käβ, 2008; SGS Institut Fresenius, 2014). In both cases, the temperature is higher than the expected < 12 °C for spring water. Deep-seated fissures in the Kreuznacher porphyritic rhyolite body are postulated to give rise to these artesian thermal springs (Käβ and Käβ, 2008).

This file is part of the GeoConnect³d project that has received funding by the European Union's Horizon 2020 research and innovation programme under grant agreement n.731166.

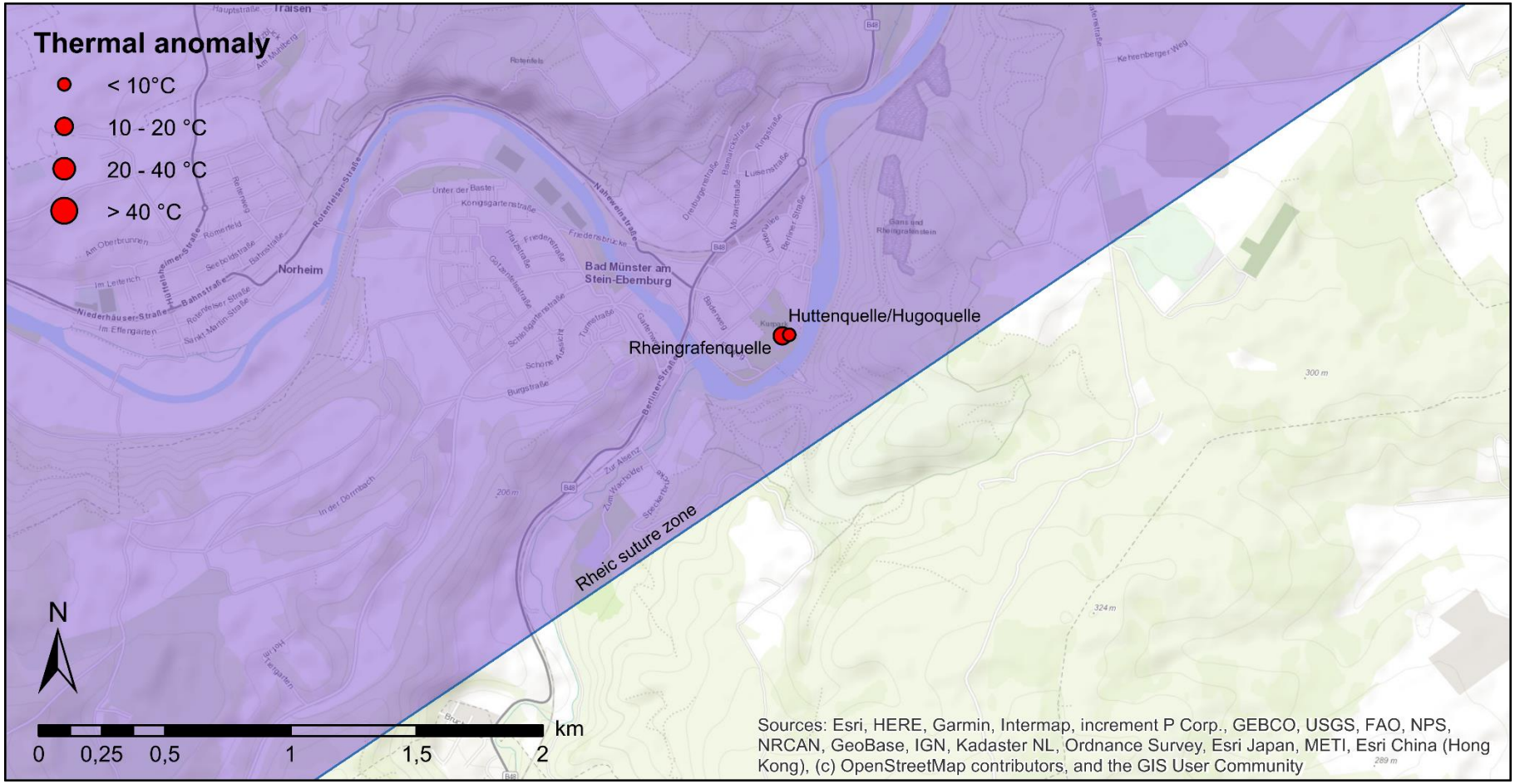

Figure 1: Thermal springs in Bad Münster am Stein-Ebernburg

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Data

ID	Coordinates	T	Depth	TDS°	Cl	Na	SO_4	Free CO_2	He	$^3He/^4He$	Analysis year	References
		°C	m	g/l	mg/l	mg/l	mg/l	mg/l	ppmv			
Rheingrafenquelle	49°48'31" North 07°50'51" East	30			4891	2655	6	66			<1992	Griesshaber et al. (1992)
										0.08	1992	
		29.6		8.6	4891	2655	0	66			1983	Käβ and Käβ (2008)
		30		8.1	4520	2620	<1	26			2014	SGS Institut Fresenius (2014)
Huttenquelle = Hugoquelle	49°48'31" North 07°50'53" East	15.4									<1975	Käβ and Käβ (2008)

° TDS = Total Dissolved Solids

References

Griesshaber, E., O'Nions, R.K., Oxburg, E.R., 1992. Helium and carbon isotope systematics in crustal fluids from the Eifel, the Rhine Graben and Black Forest, F.R.G. Chemical Geology 99, 213-235.

Käβ, W., Käβ, H., 2008. Deutsches Baderbuch, 2 ed. Vereinigung für Bäder- und Klimakunde e.V., Stuttgart.

SGS Institut Fresenius, 2014. "Rheingrafenquelle" in Bad Münster am Stein, p. 15.

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