



Thermal springs in Bad Bertrich

The town of Bad Bertrich, located in western Germany, is known for its bathing houses since Roman times (Hänel, 2020). Multiple springs are present, of which the Bergquelle and Gartenquelle are best documented.

Anomalies

The Bergquelle, also known as the Glaubersalz-Quelle, is the warmest spring in the West-Eifel (Meyer, 1994). A temperature of up to 32.9 °C has been measured in the Na-HCO₃-SO₄-thermal water of the Bergquelle in Bad Bertrich (Käβ and Käβ, 2008; Meyer, 1994). Assuming a normal temperature for shallow groundwater (<500 m) of maximum 12 °C, this indicates a temperature anomaly of almost 21 °C. Temperature data of the Gartenquelle were not found.

The thermal springs in Bad Bertrich are associated to a disrupted zone through which upward migration of deep (> 2300 m) groundwater as well as magma was enhanced. The springs are located where the vergence of fold axes shifts and the bedding crosses this perpendicular NE-SW discontinuity (Käβ and Käβ, 2008).

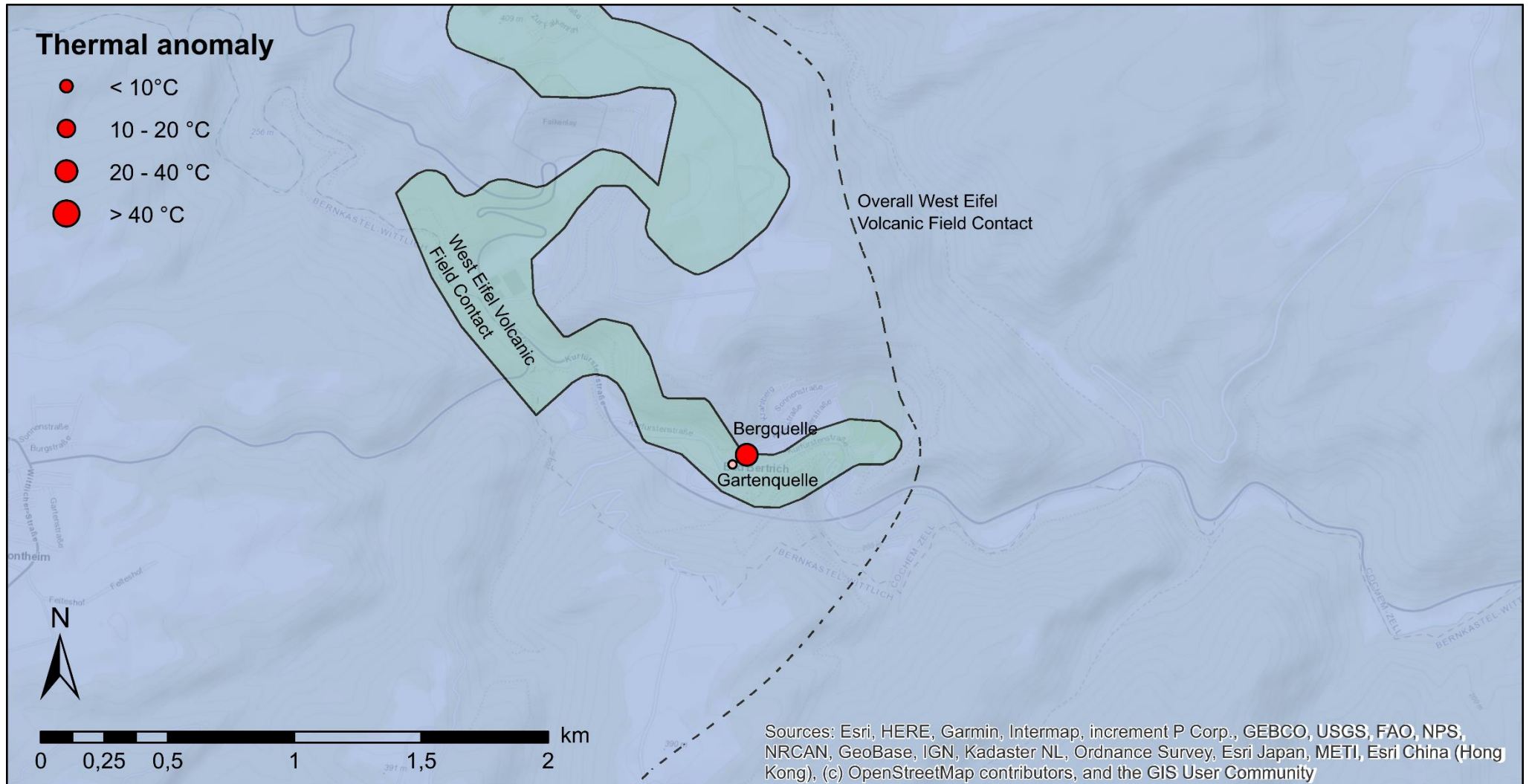


Figure 1: Thermal springs in Bad Bertrich



Data

ID	Coordinates	T	Depth	TDS°	Cl	Na	SO ₄	Free CO ₂	He	³ He/ ⁴ He	Analysis year	References
		°C	m	g/l	mg/l	mg/l	mg/l	mg/l	ppmv			
Bergquelle	50°04'13" North 07°02'00" East	32.9									1972	Dillmann and Krauter (1972)
		31.5		2.474	140	616	659	140			1991	Käβ and Käβ (2008)
Gartenquelle	50°04'12" North 07°01'57" East											May (2002)

° TDS = Total Dissolved Solids

References

Dillmann, W., Krauter, E., 1972. Beziehungen zwischen Tektonik, Vulkanismus und den warmen Quellen von Bad Bertrich (Eifel, Rheinisches Schiefergebirge). Mainzer geowissenschaften Mitteilungen 1, 48-58.

Hänel, M., 2020. Wasserquellen-Atlas. <http://www.quellenatlas.eu/39994.html>

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

May, F., 2002. Säuerlinge der Vulkaneifel und der Südeifel, pp. 7-58.

Meyer, W., 1994. Geologie der Eifel, Third ed. E. Schweizerbart'sche Verlagsbuchhandlung, Stuttgart.

Cite this source

Van Daele, J. & Ferket, H., 2021. Thermal springs in Bad Bertrich [Fact sheet]. Flemish Planning Bureau for the Environment and Spatial Development (VPO).