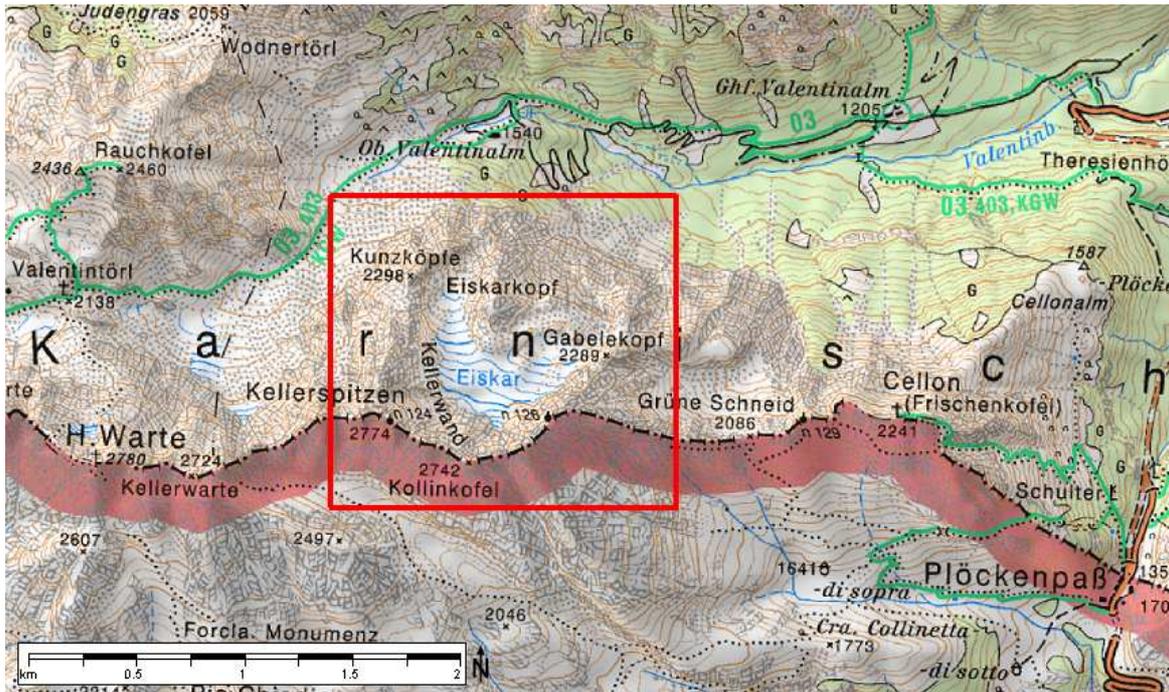


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## ***Geotope 54: Kellerwand – The Ultimate Cliff***



Red square: location of the geotope; green tracks: hiking trails; ©BEV: Federal Office for Calibration and Measurement.

### Access:

A private road branches off from the Plöckenpass road to Untere Valentinalm near the cemetery of World War I. The Alm serves as parking and lodging. Along the trail to Lake Wolayer the impressive cliff extends over more than 10 kilometers from east to west.

## Description of the Geotope



Aerial photo of Kellerwand Cliff with the Eiskar glacier, mountains Hohe Warte, Rauchkofel (green slope) and Valentintörl.

The impressive more than 1500 m high limestone cliff is unforgettable not only for mountain climbers but for every visitor. Geologists admire the conformable succession of different fossiliferous limestone types which start at the base with coarsely bedded dark limestones followed by thinly bedded platy ones. They are succeeded by yellowish and more massive rocks interbedded by greyish thicker beds.



View from Valentintörl to the Kellerwand cliff with the flexure mentioned in the text.

Million years back every layer represented the bottom of an ancient sea which covered the huge “open” area between the African Plate on the southern part of the globe and Baltica near or north of the equator (“Rheic Ocean”).

Sedimentation started during the Ordovician Period 480 to 460 million years ago and continued during the Silurian into the Devonian, i.e., 360 million years ago. During the latter period almost 1000 m of

sediments were deposited in this area. At the same time, the sedimentary basin drifted from cool climates in the Ordovician to the tropical belt in the Devonian.

The remarkable flexure seen in the middle part of the Kellerwand between Upper Valentinalm and Valentintörl is the result of tectonic movements which affected the whole area during the Variscan and also the Alpine orogenies. Originally, both blocks on either side of the flexure were much farther apart and not in such a close neighbourhood as today. Moreover, the sediments on the bottom of the sea were deposited horizontally. During the Variscan Orogeny due to lateral compressions they were inclined, folded and faulted. At the end, nappes formed by continuous thrusting. Whether or not all these deformations occurred during one orogeny or was the result of multiple tectonic events is difficult to assess. However, an Alpine contribution to the genesis of these mountains must be considered quite certainly.