

Burgstaller Flaserkalke / Burgstall Flaser Limestones

BERNHARD HUBMANN

Validity: Invalid; first mentioned by DREGER (1905), a comprehensive description by SCHLAMBERGER (1987: p. 60; "Karbonatkomplex vom Grillkogel").

Type area: ÖK50-UTM, map sheet 4111 Leibnitz (ÖK50-BMN, map sheet 207 Arnfels).

Type section: No type section defined; SCHLAMBERGER (1987) presents a section of the quarry "Grillkogel" (458 m; N 46°44'52" / E 15°24'09").

Reference section(s): Further occurrences of limestones are recorded from the vicinity of the village Burgstall (N 46°44'40" / E 15°24'36") especially on the southern slope of the Grillkogel.

Derivation of name: After the village Burgstall.

Synonyms: Partly: Kalke des Burgstallkogels (DREGER, 1905; SCHIMUNEK, 1958; HERITSCH, 1943); Flaser- und Crinoidenkalke des Burgstallkogels (SCHÖNLAUB, 1979).

Lithology: Light grey dolostones, crinoidal limestones (sometimes intercalated with black marly slates), brownish flaser limestones with colored clay lenses ("colorful limestones") and lydites.

Fossils: Conodonts, badly preserved tentaculites.

Origin, facies: Pelagic environment.

Chronostratigraphic age: Pragian–Emsian (up to Givetian?) (BUGGISCH et al., 1975).

Biostratigraphy: -

Thickness: Strong variation in thickness; approx. 80 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Metabasaltic Complex.

Overlying unit(s): Greywackes.

Lateral unit(s): ?Greywackes.

Geographic distribution: Sausal region, ?Remschnigg; ÖK50-BMN, map sheets 190 Leibnitz, 207 Arnfels.

Remarks: DREGER (1905) described the finding of a *Favosites* (now lost!) within crinoidal limestones and assumed a Devonian age. Following the description of SCHLAMBERGER (1987) of the Grillkogel quarry dolostones are unconformably overlain by a sequence of crinoidal limestones, "colorful limestones" and flaser limestones. After a fault lydites unconformably terminate the section.

Complementary references: -

Grauacke / Greywackes

BERNHARD HUBMANN

Validity: Invalid; collective term for very bad exposed rocks above the Devonian calcareous sequence in the Sausal – Remschnigg area.

Type area: ÖK50-UTM, map sheet 4111 Leibnitz (ÖK50-BMN, map sheet 207 Arnfels).

Type section: No section cited in the literature.

Reference section(s): -

Derivation of name: After the predominant lithology of strata overlying the phyllitic successions and crinoidal limestones respectively.

Synonyms: Partly: Scholle von Heiligengeist (WINKLER-HERMADEN, 1933), Grauacke (SCHÖNLAUB, 1979).

Lithology: Various fine-grained siliciclastic rocks including dark colored mica-rich argillaceous slates and sandstones (see FLÜGEL & NEUBAUER, 1984).

Fossils: Unknown.

Origin, facies: ?

Chronostratigraphic age: Devonian (?Carboniferous).

Biostratigraphy: -

Thickness: Strong variation; presumably several tens of meters.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): ?Burgstall Flaser Limestones and rocks of the Metapsammitic Complex.

Overlying unit(s): -

Lateral unit(s): -

Geographic distribution: Remschnigg, ?Sausal region; ÖK50-BMN, map sheets 190 Leibnitz, 207 Arnfels.

Remarks: -

Complementary references: -

Lydite / Lydites

BERNHARD HUBMANN

Validity: Invalid; restricted to very small occurrences in the Remschnigg area only.

Type area: ÖK50-UTM, map sheet 4111 Leibnitz (ÖK50-BMN, map sheet 207 Arnfels).

Type section: HERITSCH (1933b) and WINKLER-HERMADEN (1933) reported isolated outcrops in the western part of the Altenbachgraben (N 46°40'18" / E 15°20'54").

Reference section(s): WINKLER-HERMADEN (1933) described an additional occurrence at Heiligengeistklamm – Jarzkogl (N 46°37'55" / E 15°28'09").

Remarks: Due to bad exposure the position of the lydites is not clear. HERITSCH (1933b) mentioned some possible connections with coral-bearing crinoidal limestones of the Remschnigg area.

Derivation of name: After the dominant lithology (lydite = Paleozoic chert) of the unit.

Synonyms: Kieselschiefer und Lydite (HERITSCH, 1933b); partly: Scholle von Altenbach (WINKLER-HERMADEN, 1933).

Lithology: Siliceous cherts (lydites).

Fossils: Unknown.

Origin, facies: ?

Chronostratigraphic age: (?)Upper Devonian.

Biostratigraphy: -

Thickness: Unknown.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Unknown; crinoidal limestones? (= ?Burgstall Flaser Limestones).

Overlying unit(s): Greywackes (?).

Lateral unit(s): -

Geographic distribution: Remschnigg, ?Sausal region, ÖK50-BMN, map sheets 190 Leibnitz, 207 Arnfels.

Remarks: -

Complementary references: SCHÖNLAUB (1979).

Sandsteine / Sandstones

HANS P. SCHÖNLAUB

Validity: Invalid.

Type area: See remarks.

Type section: -

Reference section(s): -

Derivation of name: After the dominant lithology.

Synonyms: -

Lithology: Red quartz-sandstones and dark-grey silty shales.

Fossils: -

Origin, facies: Molasse-type sedimentation.

Chronostratigraphic age: -

Biostratigraphy: -

Thickness: Unknown.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): See remarks.

Overlying unit(s): -

Lateral unit(s): -

Geographic distribution: ÖK50-UTM, sheet 4110 Eibiswald, upper part of Lieschen creek (eastern margin of ÖK50-BMN, map sheet 206 Eibiswald; red sandstones also on ÖK50-BMN, map sheet 207 Arnfels) south of Leutschach.

Remarks: A sequence of red sandstones has been found in the Remschnigg area of southern Styria overlying the fossiliferous Silurian to Devonian sequence attributed by EBNER (1987) to the Murau and Stolzalpen Nappes of the Gurktal Thrust Sheet. The true relationship between the basement and the cover is unclear due to tectonic overprints. The clastic sequence starts with dark-grey silty shales and red quartz-sandstones which are correlated with the Werchzirm Formation of middle Carinthia.

Complementary references: -

Südburgenland / Southern Burgenland

The Paleozoic of southern Burgenland is represented by two units which are outcropping at the Hohensteinmaißberg (south of Kirchnfidisch), near Sulz, in the Punitz woods and at the Königsberg near Hannersdorf. Additionally, the sequence is documented by drill cores taken in the 1970s (EBNER, 1978b, 1988). Based on these cores "subsurface units" in Styria, which were correlated with the sections at Sulz and Hannersdorf by EBNER (1988: Fig. 4), were named "Blumauer Phyllit-Karbonat-Formation" and "Arnwiesener Gruppe" by FLÜGEL (1988).

In general, the unit is represented by small tectonic windows which were called "Schieferinseln" (HOFFMANN, 1877) within a tectonically displaced nappe almost completely covered by Neogene sediments. A total thickness is estimated with approx. 500 m (mainly phyllitic shale, limestone and dolomite). According to strong faulting, repetition of the sequence within the relatively thick shale intervals cannot be excluded. The composite section ranges from Silurian to Lower/Middle Devonian. Until now, Pridoli to Emsian is proven by microfossils (SCHÖNLAUB, 1994; SUTTNER, 2009a). Due to facies and fossil content, shallow marine, neritic conditions dominate the depositional environment.

Although the relationship and original distance of the Paleozoic deposits of southern Burgenland to that of adjacent nappes remain unclear, lithostratigraphic equivalents are suggested with neritic units of the Graz Paleozoic (FLÜGEL, 1988) and outcrops in Hungary (compare SCHÖNLAUB, 2000a: p. 35).

Dolomite und Schiefer des Hochsteinmaißberg und von Sulz / Dolomites and shales from the Hochsteinmaißberg and from Sulz

THOMAS J. SUTTNER

Validity: Informal unit; first observed by HOFFMANN (1877); detailed description is provided by POLLAK (1962) and SCHÖNLAUB (1984a, 1994).

Type area: ÖK50-UTM, map sheets 5220 Rechnitz, 5225 Fürstenfeld, 5226 Kohfidisch (ÖK50-BMN, map sheets 166 Fürstenfeld, 167 Güssing, 168 Eberau).

Type section: -

Reference section(s): Hohensteinmaißberg near Kirchnfidisch (Baron von Kottwitz quarry, N 47°09'01" / E 16°21'10"), Sulz (abandoned quarry, N 47°04'43" / E 16°15'57"), Punitz Woods (abandoned quarry, N 47°08'07" / E 16°21'32") compare SCHÖNLAUB (1984a, 1994); Waltersdorf 1 (drill core), Blumau 1 and 1a (drill cores), Fürstenfeld TH 1 (drill core), Litzelsdorf (drill core) compare EBNER (1988).

Derivation of name: After lithologic units outcropping at the Hohensteinmaißberg and near Sulz.

Synonyms: Phyllit-Kalkschiefer und Dolomit-Kalkkomplex (POLLAK, 1962); Hannersdorfer Komplex (SCHMIDT, 1983); Blumauer Phyllit-Karbonat-Formation (FLÜGEL, 1988) [this formation name was suggested by FLÜGEL (1988) based on drill cores Blumau 1 and 1a (EBNER, 1988)]; Blumau-Formation (SCHÖNLAUB, 1994 sensu FLÜGEL, 1988).

Lithology: Phyllitic shale, calcareous marl, laminated limestone, dolomitic limestone and dolostone, bedded limestone with thin interbeds of brownish silt.

Fossils: Brachiopods, conodonts, corals (rugose and tabulate), echinoderms, gastropods, ostracods, serpulids, sponge spicules.

Origin, facies: Marine, neritic unit.

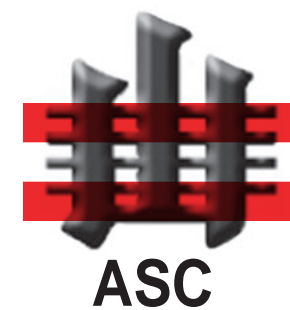
Chronostratigraphic age: Hence the age of the dolomites from Sulz is documented by conodonts ranging from middle Silurian to Lower Devonian, a Sheinwoodian–Lochkovian age is suggested for this unit (SCHÖNLAUB, 1984a: p. 504).

Biostratigraphy: Additionally to the conodont assemblage from Sulz (SCHÖNLAUB, 1984a), the *eosteinhornensis*? and *woschmidti* conodont zones are documented from a short

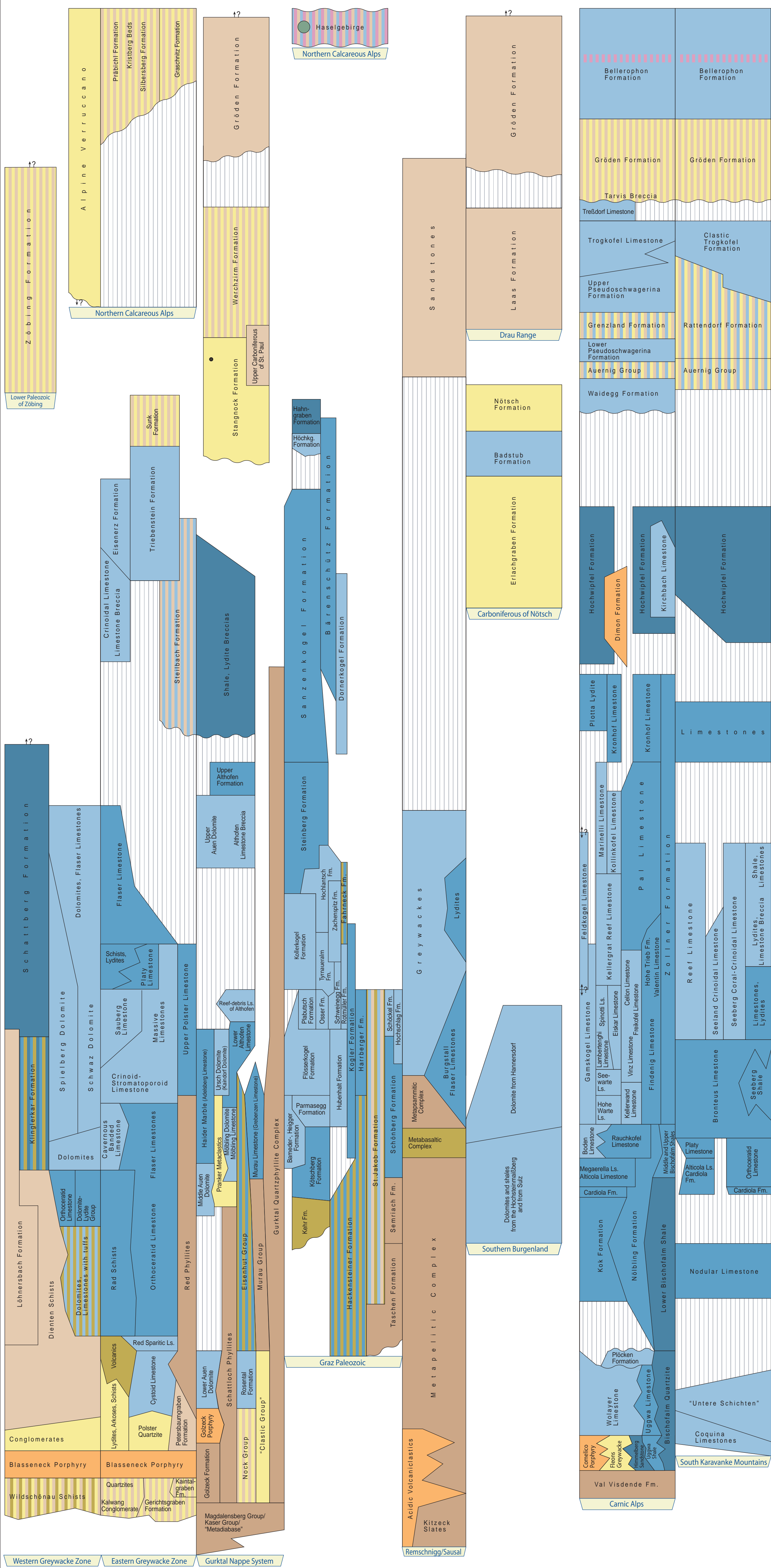
Austrian Stratigraphic Chart 2004 - Paleozoic

(sedimentary successions)

Austrian Stratigraphic Commission



ERA	SYSTEM / PERIOD / SERIES / EPOCH	STAGE / AGE	DURATION Ma	Global Classification					
				ERATHM / ERA	SYSTEM / PERIOD / SERIES / EPOCH				
PALEOZOIC	PERMIAN	CHANGHSINGIAN / Dorashanian	251	PERMIAN	MID PERMIAN / GUADALUPIAN / LOPINGIAN				
		WUCHIAPINGIAN / Dzhulfian	255						
		CAPITANIAN	260						
		WORDIAN	265						
		ROADIAN	270						
		PERMIAN	LOWER PERMIAN / CISURALIAN			KUNGURIAN	275		
						ARTINSKIAN	280		
						SAKMARIAN	285		
						ASSELIAN	290		
		PERMIAN	UPPER PERMIAN / CARBONIFEROUS / PENNSYLVANIAN			GZHELIAN	295	PERMIAN	LOWER PERMIAN / CISURALIAN
KASIMOVIAN	300								
MOSKOVIAN	305								
BASHKIRIAN	310								
PERMIAN	UPPER PERMIAN / CARBONIFEROUS / PENNSYLVANIAN			SERPUKHOVIAN	315				
				VISEAN	320				
					325				
PERMIAN	LOWER PERMIAN / MISSISSIPPIAN			TOURNAISIAN	330	PERMIAN	LOWER PERMIAN / MISSISSIPPIAN		
				335					
				340					
		345							
		350							
		355							
		359.2							
		365							
		370							
		375							
PERMIAN	UPPER DEVONIAN	FAMENNIAN	380	PERMIAN	UPPER DEVONIAN				
		FRASNIAN	385						
		GIVETIAN	390						
		EIFELIAN	395						
		DEVONIAN	LOWER DEVONIAN			EMSIAN	400		
						405			
		PRAGIAN	410						
		LOCHKOVIAN	415						
		PERMIAN	LOWER DEVONIAN			LUDFORDIAN / GORSTIAN	420	PERMIAN	LOWER DEVONIAN
						HOMERIAN / SHEINWOOD	425		
TELYCHIAN	430								
AERONIAN	435								
RHUDDANIAN	440								
HIRNANTIAN	443.7								
445									
450									
455									
460									
PERMIAN	UPPER ORDOVICIAN	DARRIWILIAN	465	PERMIAN	UPPER ORDOVICIAN				
		470							
		475							
		480							
		485							
		488.3							
		490							
		495							
		500							
		505							
PERMIAN	MIDDLE CAMBRIAN	PAIBIAN	510	PERMIAN	MIDDLE CAMBRIAN				
		515							
		520							
		525							
		530							
		535							
		540							
		542							
		CAMBRIAN	LOWER CAMBRIAN			545	CAMBRIAN	LOWER CAMBRIAN	
						550			
555									
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585									
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- Legend**
- pelagic, offshore, siliciclastic
 - pelagic, nearshore, calcareous
 - shallow marin, neritic
 - terrestrial-continental, coarse clastic
 - terrestrial-continental, fine clastic
 - evaporite (chloride, sulphate)
 - rhyolite, dacite
 - (basaltic) andesite, trachyandesite
 - basalt
 - phyllite
 - mixed-facies (in corresponding colors)
 - coal (may include several seams)
 - ? position/age doubtful/controversial
 - | equal units
 - \ older unit left \ younger unit right
 - hiatus
 - unconformity
 - GSSP
 - Fm. Formation
 - Ls. Limestone

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Cutout and English adaptation of the "Die Stratigraphische Tabelle von Österreich 2004": Geological Survey of Austria

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