

Lateral unit(s): Kitzbühel area: Dolomites, Limestones with tuffs; W Zell am See: lower parts of the Löhnersbach Formation.

Geographic distribution: W-GWZ; Tyrol, Kitzbüheler Alpen; Salzburg, Dientener Berge.

Remarks: -

Complementary references: BAUER et al. (1969), EBNER et al. (1989), SCHÖNLAUB & HEINISCH (1993).

Klinglerkar-Formation / Klinglerkar Formation

FRITZ EBNER

Validity: Valid; formal description by HEINISCH et al. (1987). Note: spelling of the first description is Klingler Kar-Formation.

Type area: Glemmtal Unit of the Kitzbüheler Alpen W Zell am See (ÖK50-UTM, map sheet 3220 Mittersill; ÖK50-BMN, map sheet 123 Zell am See).

Type section: No type section is explicitly indicated, but HEINISCH et al. (1987: Fig. 2) refer to seven detailed sections mapped at the scale of 1:5,000 (HEINISCH et al., 1987) in the Klinglerkar (NE Klinglertörl, 2,059 m, N 47°19'45" / E 12°37'17"; ÖK50-UTM, map sheet 3220 Mittersill; ÖK50-BMN, map sheet 123 Zell am See). The sections 1–6 are situated along a stripe of 800 m and have a lateral distance of 100–200 m to each other. The seventh section is more distantly situated. The sections exhibit strong lateral lithological differentiations which can be correlated by marker horizons (metapillow lavas, lydite) and conodont biostratigraphy. The formation is subdivided into three subunits (members) assigned by HEINISCH et al. (1987) as “Lower, Middle and Upper Klingler-Kar-Formation” (in the following: “lower member”, “middle member”, “upper member”).

Reference section(s): -

Derivation of name: After the Klinglerkar in the Kitzbüheler Alpen W of Zell am See (ÖK50-UTM, map sheet 3220 Mittersill; ÖK50-BMN, map sheet 123 Zell am See).

Synonyms: Partim Wildschönauer Schichten in the older literature (e.g., MOSTLER, 1968).

Lithology: Limestones, lydites, black schists with sulphide mineralization, green and violet tuffitic schists, pyroclastic breccias and basaltic pillow lavas.

Fossils: Conodonts; nautiloids, radiolarians (“lower” and “middle member”).

Origin, facies: Deep basinal swell deposits outside the influence of siliciclastic turbiditic sedimentation with condensed cephalopod limestones, lydites and black schists (“lower member”) and fine input of clayey materials (“middle member”). The carbonate pelagic deep swell is covered by submarine basaltic flows and pyroclastics (“upper member”; HEINISCH et al., 1987).

Chronostratigraphic age: Uppermost Silurian (Pridoli)–Lower Devonian (Zlichovian regional stage = lower Emsian; HEINISCH et al., 1987). “Lower member”: uppermost Silurian (Pridoli); “middle member”: Lower Devonian (Lochkovian–lower Pragian); base of “upper member” within the lower Emsian.

Biostratigraphy: “Lower member”: *eosteinhornensis* Zone; “middle member”: conodont fauna with fragments of the *Icriodus woschmidti* – *postwoschmidti* – *Icriodus* sp. A

SCHÖNLAUB 1985 – *I. steinachensis* group. Base of the “upper member”: *Polygnatus gronbergi* – *Polygnatus serotinus* zones (HEINISCH et al., 1987).

Thickness: Up to 80 m (a: 10 to 13 m; b: 6 to 16 m; c: 5 to 35 m; HEINISCH et al., 1987).

Lithostratigraphically higher rank unit: Wildschönau Group (sensu SCHÖNLAUB & HEINISCH, 1993).

Lithostratigraphic subdivision: According to HEINISCH et al. (1987) three members can be distinguished: a) The “lower member” is characterized by limestone – lydite alternations, lydite and black schists with sulphide mineralization. The lydite is associated and interfingered with metamarl. b) The “middle member” exhibits rhythmic alternations of thin bedded calcareous marble and platy shale respectively metamarls. c) The “upper member” consists of epiclastic green and violet tuffitic and sometimes banded schists which are intercalated by white marble layers. They are followed by pyroclastic breccias and basaltic pillow lavas which interfinger laterally with metatuffite. All lithologies are of low metamorphic grade (CAI 5 to 8).

Underlying unit(s): Löhnersbach Formation.

Overlying unit(s): Schattberg Formation and parts of the Metabasite Group (HEINISCH et al., 1995) (not indicated in the ASC 2004).

Lateral unit(s): ?Upper Silurian–Lower Devonian siliciclastics of the “Wildschönau Group” (Löhnersbach Formation) and in uppermost parts Metabasite Group (SCHLAEGEL-BLAUT, 1990; HEINISCH et al., 1995, 2003).

Geographic distribution: W-GWZ; Tyrol, Salzburg, Kitzbüheler Alpen.

Remarks: This lithostratigraphic unit was proposed as a formation because MOSTLER’s (1968) subdivision in Lower and Upper Wildschönau Schists is not applicable for the siliciclastic domains W of Zell am See (HEINISCH et al., 1987).

Complementary references: HEINISCH (1986, 1988), EBNER et al. (1989), SCHÖNLAUB & HEINISCH (1993).

Metabasit-Gruppe / Metabasite Group

FRITZ EBNER

Validity: Invalid; informal working term (HEINISCH et al., 1995, 2003).

Type area: Glemmtal Unit of the Kitzbüheler Alpen W Zell am See (ÖK50-UTM, map sheet 3214 Kitzbühel; ÖK50-BMN, map sheet 122 Kitzbühel; ÖK50-UTM, map sheet 3220 Mittersill, ÖK50-BMN, map sheet 123 Zell am See).

Type section: No type section was explicitly nominated.

Reference section(s): -

Derivation of name: According to the geochemistry of the metavolcanics.

Synonyms: Partim “Diabase”, “intrusive” Diabase (SCHÖNLAUB, 1979, 1980a), partim Basalt Sill Komplex von Maishofen (SCHLAEGEL-BLAUT, 1990).

Lithology: a) highly vesicular pillow and massive basalts, gabbroic sills, pyroclastics, tuffites. b) pillow and sheet-flows basalts, many gabbroic and some dioritic sills, thin shale intercalations (SCHLAEGEL-BLAUT, 1990; LOESCHKE & HEINISCH, 1993).

Fossils: -

Origin, facies: a) transitional and alkali oceanic island type intraplate basalts formed in a shallow marine environment (< 500 m below sea level). b) tholeiitic basalts extruded > 500 m below the sea level. The interpretation of the environment fits best with extensional processes in oceanic domains (marginal basin, oceanic plateau, sill-sediment complex connected with a continental rift zone; SCHLAEGEL-BLAUT, 1990; LOESCHKE & HEINISCH, 1993).

Chronostratigraphic age: a) Devonian (upper Emsian); for b) a younger age, possibly continuing until ?lower Carboniferous is assumed (HEINISCH, 1988; LOESCHKE & HEINISCH, 1993).

Biostratigraphy: -

Thickness: a) some hundreds of m (basalts 350 m, pyroclastics 400 m in maximum); b) 400 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Kinglerkar Formation, Löhnersbach Formation (HEINISCH et al., 1995, 2003; SCHLAEGEL-BLAUT, 1990; LOESCHKE & HEINISCH, 1993).

Overlying unit(s): Schattberg Formation.

Lateral unit(s): In deeper parts Kinglerkar Formation; Schattberg Formation (LOESCHKE & HEINISCH, 1993).

Geographic distribution: W-GWZ; Salzburg, Kitzbüheler Alpen.

Remarks: Firstly the basic metavolcanics were regarded as Ordovician ocean floor basalts within the "Lower Wildschönau Schists" below the Blasseneck Porphyry (COLINS et al., 1980; MOSTLER, 1984).

Complementary references: SCHÖNLAUB (1980a), SCHÖNLAUB & HEINISCH (1993), EBNER et al. (2008).

Schattberg-Formation / Schattberg Formation

FRITZ EBNER

Validity: Valid; formalized by HEINISCH et al. (1987).

Type area: Glemmtal Unit of the Kitzbüheler Alpen W Zell am See (ÖK50-UTM, map sheet 3220 Mittersill, ÖK50-BMN, map sheet 123 Zell am See).

Type section: No type section was explicitly nominated. The formation was described due to the situation in the Schattberg area (Mittlerer Schattberg: N 47°21'47" / E 12°37'38"; ÖK50-UTM, map sheet 3220 Mittersill, ÖK50-BMN, map sheet 123 Zell am See).

Reference section(s): -

Derivation of name: After Schattberg in the Kitzbüheler Alpen (ÖK50-UTM, map sheet 3220 Mittersill, ÖK50-BMN, map sheet 123 Zell am See).

Synonyms: Partim Wildschönauer Schichten in older literature (e.g., MOSTLER, 1968).

Lithology: Alternation of argillaceous schists, metasilstones and metasandstones. At one locality a layer of a metabreccia (with components up to 80 cm) occurs above the top of the Kinglerkar Formation (HEINISCH et al., 1987).

Fossils: -

Origin, facies: Basinal siliciclastic proximal turbidite facies in which the coarse grained intercalations are channel deposits of submarine fans (HEINISCH et al., 1988).

Chronostratigraphic age: Middle Devonian–?lower Carboniferous (HEINISCH et al., 1987; SCHÖNLAUB & HEINISCH, 1993).

Biostratigraphy: -

Thickness: > 450 m.

Lithostratigraphically higher rank unit: Wildschönau Group (sensu SCHÖNLAUB & HEINISCH, 1993).

Lithostratigraphic subdivision: -

Underlying unit(s): Metabasite Group (HEINISCH et al., 1995, 2003; SCHLAEGEL-BLAUT, 1990).

Overlying unit(s): -

Lateral unit(s): In deeper parts Metabasite Group (LOESCHKE & HEINISCH, 1993).

Geographic distribution: W-GWZ; Salzburg, Kitzbüheler Alpen.

Remarks: -

Complementary references: SCHÖNLAUB (1979, 1980a), HEINISCH (1986, 1988), EBNER et al. (1989, 2008).

Carbonate facies (partim Wildseeloder unit in the Kitzbüheler Alpen)

Blasseneck Porphyroid / Blasseneck Porphyry (description see E-GWZ)

Konglomerate / Conglomerates

FRITZ EBNER

Validity: Invalid; not formalized informal working term.

Type area: ÖK50-UTM, map sheet 3214 Kitzbühel (ÖK50-BMN, map sheet 122 Kitzbühel).

Type section: Not yet indicated; best outcrops in the section of the Klausenbachgraben W of Kitzbühel (ÖK50-UTM, map sheet 3214 Kitzbühel; ÖK50-BMN, map sheet 122 Kitzbühel).

Reference section(s): -

Derivation of name: After the predominant lithology.

Synonyms: "Geröllführende Quarzporphyrtuff- und Grauwackenschiefer" (OHNESORGE, 1919).

Lithology: Schists with pebbles of porphyroid, feldspar- and quartzsandstones, lydites and basic volcanics. The sequence starts with fining upwards conglomerates which continue to a fine sandy horizon followed again by conglomerates. The "porphyroidic" matrix of deeper parts of the sequence changes to a clayey-sandy one in the upper parts. In the same direction the number of porphyroid pebbles decreases (MOSTLER, 1968).

Fossils: -

Origin, facies: Transgression conglomerate.

Chronostratigraphic age: Lowermost Silurian.

Biostratigraphy: -

Thickness: Up to 80 m.

Lithostratigraphically higher rank unit: -

Lithostratigraphic subdivision: -

Underlying unit(s): Blasseneck Porphyry. A correlation with the lower Silurian global transgression suggests a strati-

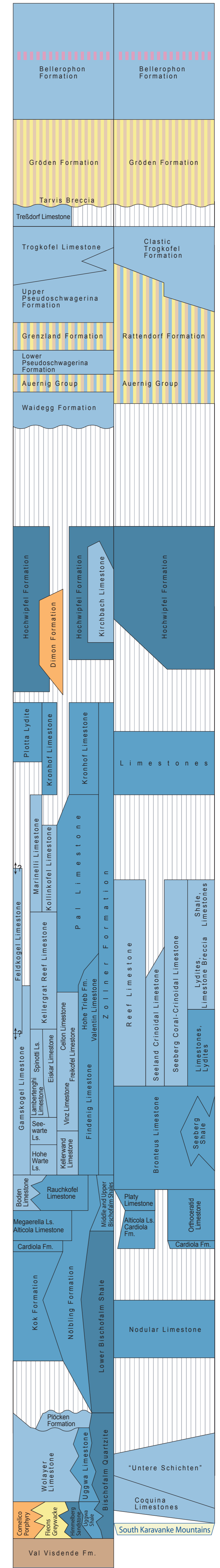
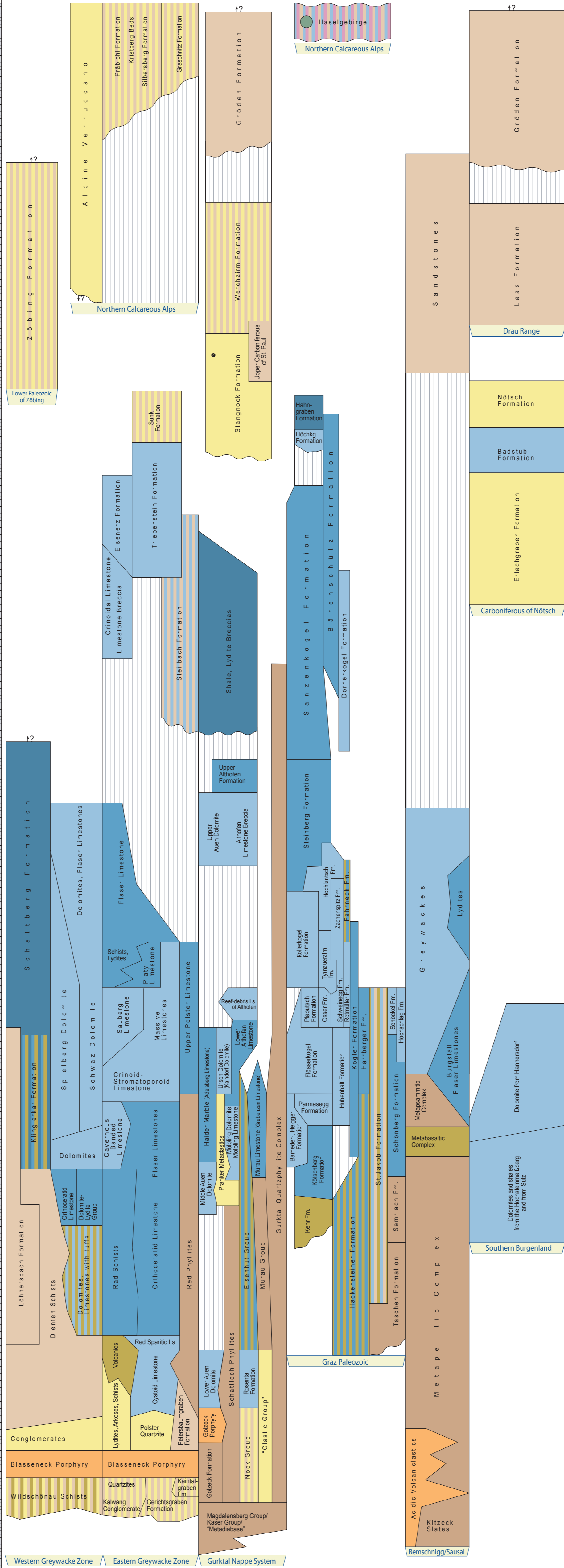
Austrian Stratigraphic Chart 2004 - Paleozoic

(sedimentary successions)

Austrian Stratigraphic Commission



ERA	SYSTEM / PERIOD / SERIES / EPOCH	STAGE / AGE	DURATION Ma	Global Classification					
				ERA	PERIOD				
PALEOZOIC	PERMIAN	CHANGHSINGIAN	251	PERMIAN	MID PERMIAN				
		WUCHIAPINGIAN	255						
		CAPITANIAN	260						
		WORDIAN	265						
		ROADIAN	270						
		PERMIAN	LOWER PERMIAN			KUNGURIAN	275		
						ARTINSKIAN	280		
						SAKMARIAN	285		
						ASSELIAN	295		
		PERMIAN	UPPER PERMIAN			GZHELIAN	299	PERMIAN	UPPER PERMIAN
KASIMOVIAN	305								
MOSKOVIAN	310								
BASHKIRIAN	315								
PERMIAN	LOWER PERMIAN			SERPUKHOVIAN	320				
				VISEAN	325				
					335				
PERMIAN	LOWER PERMIAN			TOURNAISIAN	350	PERMIAN	LOWER PERMIAN		
				355					
				359.2					
		365							
		FAMENNIAN	370						
		PERMIAN	UPPER DEVONIAN	FRASNIAN	375				
				380					
		PERMIAN	MIDDLE DEVONIAN	GIVETIAN	385			PERMIAN	MIDDLE DEVONIAN
				EIFELIAN	390				
				395					
400									
405									
410									
416									
PERMIAN	LOWER DEVONIAN			LOCHKOVIAN	420				
				425					
PERMIAN	LOWER DEVONIAN			LUDFORDIAN	430	PERMIAN	LOWER DEVONIAN		
		GORSTIAN	435						
		HOMERIAN	440						
		SHEINWOOD	443.7						
		TELYCHIAN	445						
		AERONIAN	450						
		RHUDDANIAN	455						
		HIRNANTIAN	460						
		PERMIAN	UPPER ORDOVICIAN	465	PERMIAN			UPPER ORDOVICIAN	
				470					
475									
480									
485									
488.3									
PERMIAN	LOWER ORDOVICIAN			TREMA-DOCIAN		490			
				495					
PERMIAN	UPPER CAMBRIAN			PAIBIAN		500	PERMIAN		UPPER CAMBRIAN
				505					
		510							
		515							
		520							
		525							
		530							
		535							
		540							
		542							



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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