

COLUMNAR-SECTION SHEET

SECTION OF SEDIMENTARY STRATA AT KEGAN BUTTE, 6 MILES NORTHWEST OF NEIHART.  
SCALE: 1000 FEET=1 INCH.

PERIOD	FORMATION NAME	SYMBOL	COLUMNAR SECTION	THICKNESS IN FEET	CHARACTER OF ROCKS
CAMBRIAN	( <i>Gallatin limestone</i> ), Barker formation, ( <i>Flathead quartzite</i> )	Cb		500	Thin-bedded limestones. Dark green micaceous shale with lime- stone nodules. Sandstone, quartzite. UNCONFORMITY
ARCHEAN	Gneiss and schist.	Agn			Gneiss and mica-schist of various tex- ture and color.

GENERALIZED SECTION OF SEDIMENTARY STRATA OF LITTLE BELT RANGE EAST OF NEIHART.  
SCALE: 1000 FEET=1 INCH.

PERIOD	FORMATION NAME	SYMBOL	COLUMNAR SECTION	THICKNESS IN FEET	CHARACTER OF ROCKS
CRETACEOUS	( <i>Colorado formation</i> ), Yellowstone formation, ( <i>Dakota formation</i> )	Ky		350±	Shales with interbedded sandstones. Sandstone.
CRETACEOUS	Cascade formation.	Kcd		600	Yellow and gray sandstone with inter- bedded red, purple, and gray shale.
JURASSIC	Ellis formation.	Je		90-130	Arenaceous limestone and shale. Alternating beds of limestone and sand- stone. Green shale and interbedded limestones.
CARBONIFEROUS	Quadrant formation.	Cq		1400	Limestone with sandstone beds. Green shale with interbedded limestones that are often oolitic.
CARBONIFEROUS	Madison limestone.	Cm		1025	Red clay, with yellow lumps. Massive bedded white limestone.
DEVONIAN	Monarch formation.	Dm		165	Thin bedded dark gray limestone.
CAMBRIAN	( <i>Gallatin limestone</i> ), Barker formation.	Cb		1300	Chocolate brown granular limestone. Massive and thin bedded limestones. Dark green and purple micaceous shale carrying interbedded limestone and limestone conglomerate.
CAMBRIAN	( <i>Flathead quartzite</i> ), ( <i>Spokane shale</i> )			(210)	Pink quartzite and sandstone. Red shale.
CAMBRIAN	( <i>Gregson shales</i> )			(650)	Lustrous gray sericite shale and slate.
ALGONKIAN	( <i>Newland limestone</i> )			(600)	Dense, dark colored, bluish gray im- pure limestone with interbedded slate.
ALGONKIAN	Belt formation.	Ab		3800	Slate and compact, indurated, dark gray shale.
ALGONKIAN	( <i>Chamberlain shale</i> )			(2080)	
ALGONKIAN	Neihart quartzite, (at the Belt formation)	An		700	Massive bedded quartzite. UNCONFORMITY
ARCHEAN	Gneiss and schist.	Agn			Banded gneiss and mica-schist, with in- trusive porphyries, diorite, and syen- ite.

GENERALIZED SECTION OF SEDIMENTARY STRATA OF CASTLE MOUNTAIN AND VICINITY.  
SCALE: 1000 FEET=1 INCH.

PERIOD	FORMATION NAME	SYMBOL	COLUMNAR SECTION	THICKNESS IN FEET	CHARACTER OF ROCKS
NEOGENE	Alluvium.	Pal		0-50+	Sand, gravel, and clay in stream bottoms.
NEOGENE	Glacial drift.	Fgd		0-100+	Sand and boulders, occurring locally.
NEOGENE	Smith River lake beds.	Ns		0-800	Clay, sand, and conglomerate with tuff beds. Contain vertebrate remains.
CRETACEOUS	Livingston formation.	lv		3900	Dark brown tuffaceous sandstone, in places conglomeratic, and shale with beds of limestone. Local intercala- tions of breccias and agglomerates representing volcanic eruptions.
CRETACEOUS	Laramie formation.	Kl		900- 1050	Light gray or yellow sandstone with shale beds in the upper portion and containing workable seams of coal. Carries plant remains and brackish- water shells.
CRETACEOUS	( <i>Montana formation</i> )				Lead-gray arenaceous shale, with thin beds of sandstone. Contains marine fossils.
CRETACEOUS	Yellowstone formation.	Ky		2800- 3500	Calcareous shale with limestone concen- trations and interbedded sandstones. Contains marine fossils.
JURASSIC	( <i>Dakota formation</i> )				Black bituminous shale. Quartzite, with sandy shale below passing into conglomerate at the base. Fresh- water fossils in limestone near the top.
JURASSIC	Ellis formation.	Je		90-130	Limestone, conglomeratic at base.
JURASSIC	Quadrant formation.	Cq		330-400	Green shale with interbedded limestone.
CARBONIFEROUS	Madison limestone.	Cm		1300	Massive bedded white limestone.
CARBONIFEROUS	Monarch formation.	Dm		195	Thin bedded dark gray limestone.
CAMBRIAN	( <i>Gallatin limestone</i> )				Brown and black saccharoidal limestone.
CAMBRIAN	Barker formation.	Cb		2200	Massive and thin bedded limestones.
CAMBRIAN	( <i>Flathead quartzite</i> )				Green, gray, and purple micaceous shale with interbedded limestone and lime- stone conglomerate.
CAMBRIAN	( <i>Spokane shale</i> )				Pink quartzite and sandstone. UNCONFORMITY Red shale.
CAMBRIAN	( <i>Gregson shale</i> )				Gray sericite slate and shale.
ALGONKIAN	Belt formation.	Ab		2300+	Impure limestone.
ALGONKIAN	( <i>Newland limestone</i> )				

GENERALIZED SECTION OF SEDIMENTARY STRATA OF THE CRAZY MOUNTAINS.  
SCALE: 1000 FEET=1 INCH.

PERIOD	FORMATION NAME	SYMBOL	COLUMNAR SECTION	THICKNESS IN FEET	CHARACTER OF ROCKS
Eocene or Neogene?	Port Union beds. (Included with the Living- ston formation in map- ping.)			4700	Light gray or yellow friable sandstone, thickly bedded and bedded, in- terbedded with gray silty shale hold- ing intercalations of hard lamellar sandstone and lenses of blue limestone which weather in concentric forms. Plant remains and fresh-water shells occur in the latter.
CRETACEOUS?	Livingston formation.	lv		7000	Thin bedded tuffaceous shale, sandy in the lower portion.  Thin beds of limestone in tuffaceous shale.  Tuffaceous shale and clay with occa- sional fine-grained sandstone lenses.
CRETACEOUS	Laramie formation.	Kl		1000	Coarse tuffaceous sandstone with some shale beds.  Local intercalations of breccias agglom- erates, and tuff beds, representing volcanic eruptions.  Dark brown or green sandstone con- taining plant remains with local beds of conglomerate.
CRETACEOUS					UNCONFORMITY  Light gray or yellow sandstone with shale beds and workable seams of coal. Carries plant remains and brackish-water shells.

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