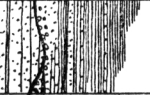
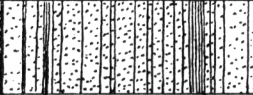
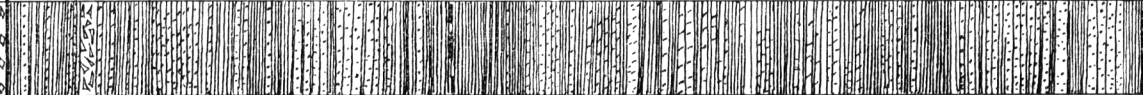
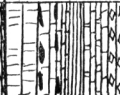
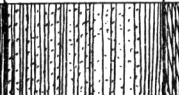
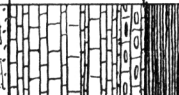
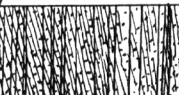


GENERALIZED STRATIGRAPHIC COLUMN.

SYSTEM	FORMATION.	SECTION	CHARACTER OF THE FORMATION.	THICKNESS IN FEET.				
COMANCHEAN.	Trinity		Loosely consolidated yellow sands and red clays at the base of which are boulder beds (A); and near the bottom fossiliferous lentils of limestone (B) and ferruginous resistant sandstone (C).	400±				
PENNSYLVANIAN.	JACKSON.		A Heavy bedded, massive to fine grained gray sandstones, with dark shales at wide intervals. Fossil plants, seeds, and stipes occur at several horizons in the basal portion (A); also in the higher beds.	1500± (650 in complete section)				
			F					
(?) PENNSYLVANIAN.	Stamley.		This bedded ripple marked fine grained dark colored, hard sandstones, and blue clay shales and slates irregularly interbedded in one vast series. A bed of buff 100 feet thick occurs near the bottom (A), a layer of cone-in-cone concretions appears in the middle (B), and a formation of black cherts 25 feet thick in the upper middle portion (C). A zone of <i>Diboloides nitida</i> Phillips occurs at the very bottom (D). A marine fauna consisting of <i>Cystodictya</i> sp., <i>Rhynchonella</i> sp., <i>Fenestella</i> sp., <i>Petalodus</i> sp., <i>Chonetes</i> sp. and crinoidal columns was found in the middle (E) and plants in several horizons notably at the top (F)	6000±				
			D	Heavy bedded white novaculite forming the lower 1/3 of the formation, thin bedded black novaculite and interbedded black slates and shales forming the middle portion and a nodulose (Manganese carbonate) bearing white novaculite 25-100 feet thick forming the top. A thin 4" bed of agglomerate occurs locally to the east of the top of the basal division (A) and lenses or pockets of psilomelane and other manganese minerals occur in two definite horizons in the basal division (B). In S. W. 1/4 Sec. 29, T. 5S., R. 22E. ashy tufts occur.	250'-540'			
			C	Red and green metamorphosed shale and slate with carbonated pyroclastic material near the top.	70'-100±			
			B	Thin bedded fine grained, greenish gray, hard sandstones and interbedded shaly sandstones and dark shales weathering red. Thin veins of smoky quartz are common. Worm trails occur abundantly at (A) and sparingly elsewhere.	800'			
			A	Coal black, graphitic, soft slate and shale carrying an abundance of undeterminable graptolites.	100±			
			DEVONIAN.	ARKANSAS NOVAULITE.			250'-540'	
			SILURIAN.	Blaylock.		A Thin bedded fine grained, greenish gray, hard sandstones and interbedded shaly sandstones and dark shales weathering red. Thin veins of smoky quartz are common. Worm trails occur abundantly at (A) and sparingly elsewhere.	800'	
						B	Coal black, graphitic, soft slate and shale carrying an abundance of undeterminable graptolites.	100±
							Hard, black chert, in beds 4" to 2" in thickness, interbedded with which are some coal black shales and a number of heavy ledges of black, cherty, fossiliferous limestone.	500±
			ORDOVIGIAN	Wornble equivalent.		A Schistose, micaceous, fine grained sandstones and grits, green in color when fresh, weathering red, interbedded with which are a few shales. Massive spongy, brown sandstones appear at the top.	1000±	
B	Dark, smoky gray quartzite cut by penetration veins of smoky quartz.	0-15'						
C	Dark colored, carbonaceous, hard clay shales and slates penetrated by a few veins of kaolinite and quartz.	1000±						
CAMBRIAN (?)	Crystal Mtn.		Uniform, medium grained, massive, gray sandstone, portions of which are veritable quartzites, other parts are partly replaced by an abundant carbonate, these upon weathering become porous and ferruginous. A 14' basal conglomerate occurs to westward of the base of the formation carrying boulders of chert and limestone up to 8" in diameter. Numerous large and small quartz-orthoclase pegmatites occur throughout.	500±				
			Collier	Graphitic, untabular shales carrying boulder beds in the upper part and capped by 30 feet of thin bedded replacement limestones. Large quartz-orthoclase pegmatites occur.	200±			