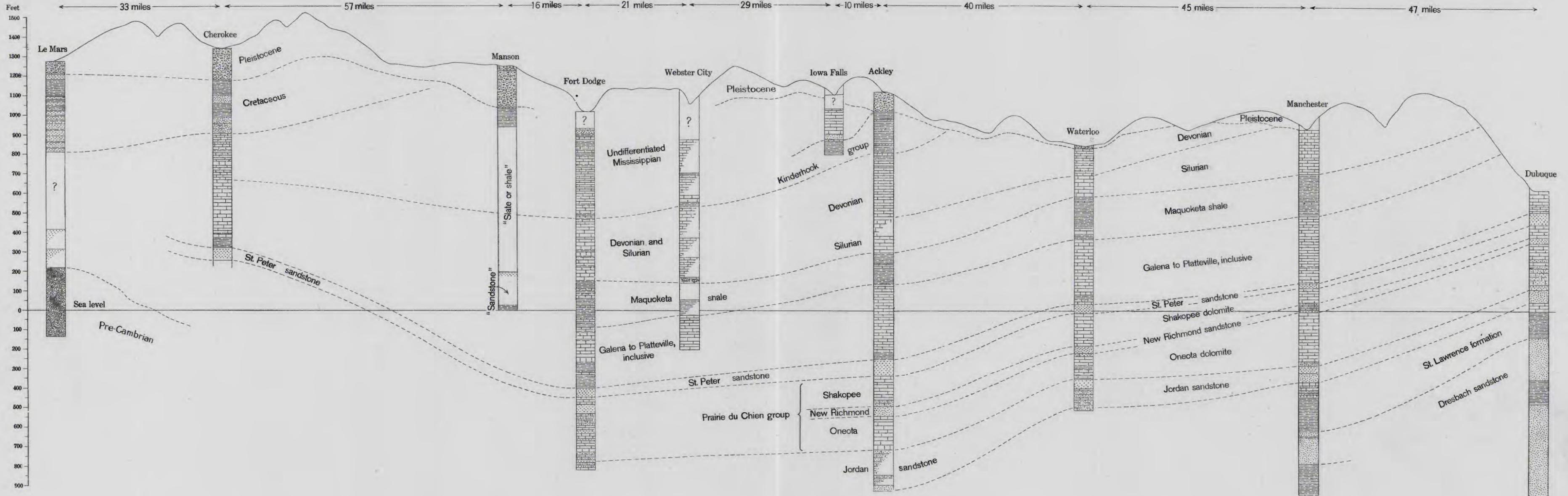


ERA	SYSTEM	SERIES	GROUP	FORMATION	COLUMNAR SECTION	CHARACTER OF STRATA
Cenozoic	Quaternary with patches of Tertiary at base	Pleistocene		Wisconsin drift		Stony clay, kame, and outwash gravels
				Loess, soil bed, etc. (Peorian interglacial stage)		Soil bed, loess, etc.
				Iowan drift		Stony clay
				Soil, etc. (Sangamon interglacial stage)		Soil and vegetal accumulations
				Illinoian drift		Stony clay
				Buchanan gravel; soil, etc. (Yarmouth interglacial stage)		Soil, gravel, sand, and vegetal accumulations
				Kansan drift		Stony clay and outwash gravels
Mesozoic	Cretaceous	Upper Cretaceous	Colorado		Gravel and sand, soil, peat, and forest beds	
			Dakota sandstone		Stony clay	
Paleozoic	Carboniferous	Permian (?)			In places stiff, plastic, and impervious clays of Tertiary age are present at the base of the Quaternary	
					Shales, limestones, chalk	
		Pennsylvanian	Missouri			Sandstones, friable
						Red shales and sandstones
						Gypsum
		Mississippian	Osage ^a			Shales, limestones, some sandstones, and coal
						Shales, some sandstones and limestones, and coal
		Devonian	Upper Devonian			Limestones, sandstones, shales
						Limestones, cherts, geodiferous shales
						Shales, magnesian and oolitic limestones, and sandstones
		Silurian				Shales and limestone
						Limestones
		Ordovician	Prairie du Chien			Limestones and some shales
						Dolomites and limestones, gypsum and anhydrite marls, sandstones
						Dolomites
Shales with some limestones						
Dolomites and limestones						
Green shale						
Limestones and shales						
Sandstone, white rounded grains						
Cambrian				Dolomite, often arenaceous		
				Sandstone		
				Dolomite		
				Sandstone		
Algonkian (?)	Huronian			Sandstones, marls, shales		
				Sandstone		
Proterozoic	Archean			Red sandstones		
				Quartzite		
				Gneiss and schist		

^a As used in this report includes at top the lower part of the Warsaw limestone

^b Includes upper part of Warsaw limestone

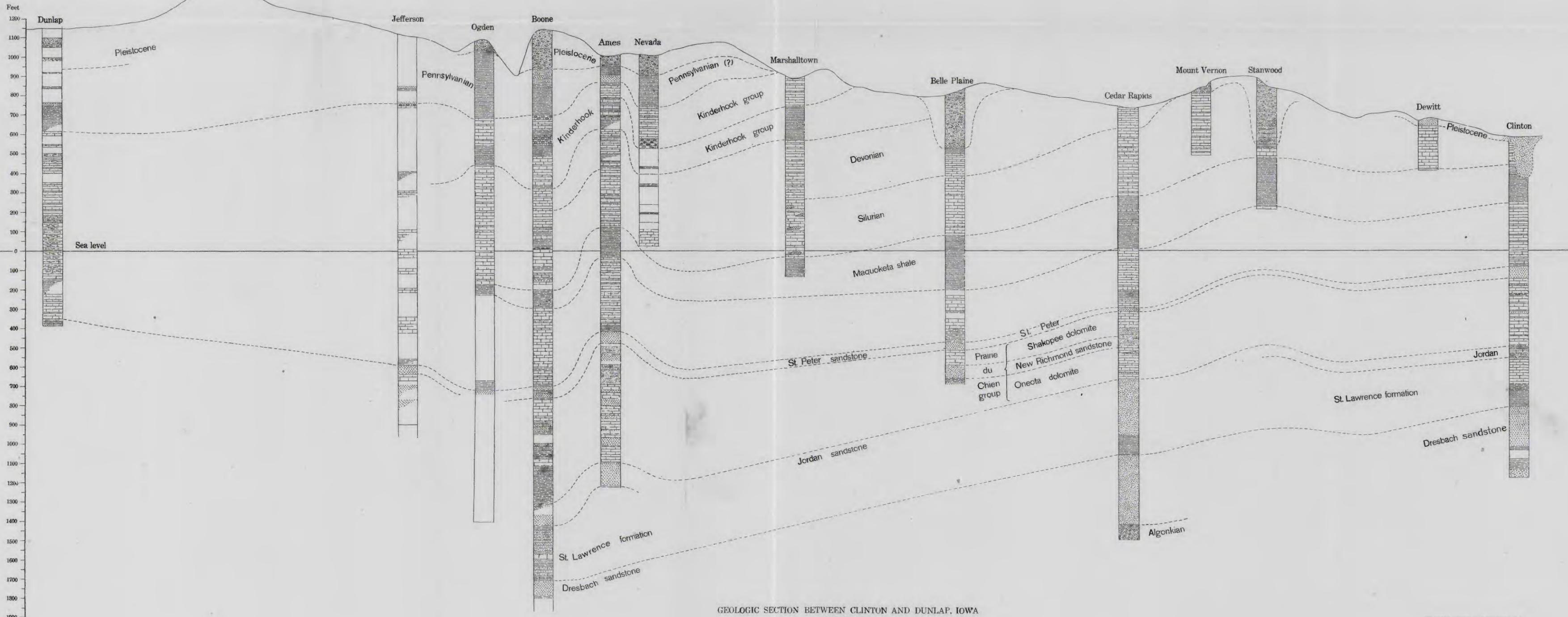
GENERAL COLUMNAR SECTION.



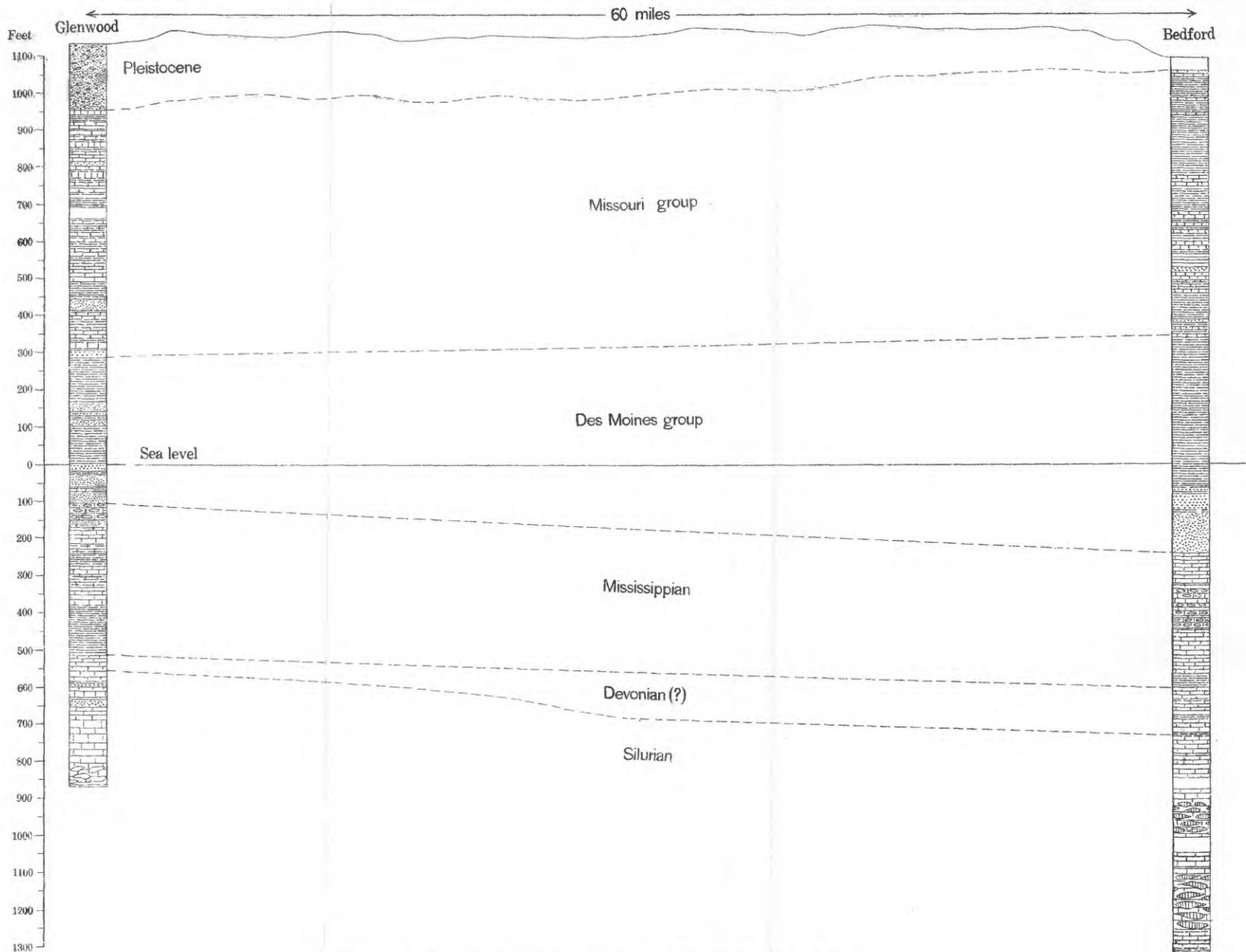
GEOLOGIC SECTION BETWEEN DUBUQUE AND LE MARS, IOWA

By W. H. Norton

73 miles 16 miles 12 miles 14 miles 8 miles 30 miles 32 miles 35 miles 15 miles miles 33 miles 19 miles



GEOLOGIC SECTION BETWEEN CLINTON AND DUNLAP, IOWA
By W. H. Norton



GEOLOGIC SECTION BETWEEN BEDFORD AND GLENWOOD, IOWA
By W. H. Norton

