

Table 1.—Generalized correlation chart of selected geologic and aquifer units for Montana

Eratem	System	Series	Northwestern Montana Plains		North-central Montana Plains		Eastern Montana and western North Dakota		Southwestern Montana Plains		Southeastern Montana Plains			
Cenozoic	Quaternary	Holocene	Alluvium and colluvium		Alluvium and colluvium		Alluvium and colluvium		Alluvium and colluvium		Alluvium and colluvium			
		Pleistocene	Terrace deposits		Terrace deposits		Terrace deposits		Terrace deposits		Terrace deposits			
			Glacial deposits		Glacial deposits		Glacial deposits		Glacial deposits		Glacial deposits			
	Tertiary	Pliocene	Willow Creek Formation		Flaxville Formation		Flaxville Formation							
		Miocene			igneous rocks									
									Wasatch Formation		Absaroka volcanics			
		Oligocene									Arikaree Formation			
		Eocene									White River Formation or Group		Wasatch Formation	
													Tongue River Member ¹	
		Paleocene							Fort Union Formation		Fort Union Formation		Fort Union Formation	
							Sentinel Butte Member Tongue River Member Lebo Shale Member Tulloch Member				Lebo Shale Member Tulloch Member			
Mesozoic	Upper Cretaceous	Upper Cretaceous	St. Mary River Formation		Hell Creek Formation		Hell Creek Formation		Hoppers Formation		Hell Creek Formation			
					Fox Hills Sandstone		Fox Hills Sandstone		Billman Creek Formation		Fox Hills - lower Hell Creek aquifer			
			Horsethief Sandstone		Bearpaw Shale		Bearpaw Shale		Miner Creek Formation		Bearpaw Shale			
			Two Medicine Formation		Judith River Formation		Pierre Shale		Cokdale Formation		Judith River Formation			
					Claggett Shale				Livingston Group		Parkman Sandstone			
					Eagle Sandstone				Sedan		Claggett Shale			
					Virgelle Sandstone Member		Eagle Sandstone		Volcanic rocks, equivalent to Livingston Group		Eagle Sandstone			
					Telegraph Creek Formation		Telegraph Creek Formation				Telegraph Creek Formation			
											Shannon Sandstone Member ²			
											Eggen shale ²			
	Cretaceous	Cretaceous	Cretaceous	Niobrara Formation		Niobrara Formation		Niobrara Formation		Niobrara Formation		Niobrara Formation		
				Marion River Shale		Bowdoin ss. ² Carille Shale		Carille Shale		Cody Shale		Carille Shale		
						Greenhorn Formation		Greenhorn Formation		Frontier Formation		Greenhorn Formation		
						Mosby Sandstone Member		Belle Fourche Shale		Boulder River Sandstone Member		Belle Fourche Shale		
						Belle Fourche Shale		Mowry Shale		Mowry Shale		Belle Fourche Shale		
						Muddy Sandstone		Newcastle or Muddy Sandstone		Muddy Sandstone		Newcastle or Muddy Sandstone		
						Skull Creek Shale		Skull Creek Shale		Thermopolis Shale equivalent (Skull Creek Shale)		Skull Creek Shale		
						Basal silt ²		Basal silt ²				Basal silt ²		
						First Cat Creek sandstone ²		Fall River Sandstone		First Cat Creek sandstone ²		"Dakota" - Fall River Sandstone		
						Second Cat Creek sandstone ²		Fuson Shale		Kootenai Formation		Fuson Shale Member		
Lower Cretaceous	Lower Cretaceous	Lower Cretaceous	Blackleaf Formation		Blackleaf Formation		Blackleaf Formation		Blackleaf Formation		Blackleaf Formation			
			Vaughn Member		Muddy Sandstone		Newcastle or Muddy Sandstone		Muddy Sandstone		Newcastle or Muddy Sandstone			
			Taff Hill Member		Skull Creek Shale		Skull Creek Shale		Thermopolis Shale equivalent (Skull Creek Shale)		Skull Creek Shale			
			Flood Member		Basal silt ²		Basal silt ²				Basal silt ²			
					First Cat Creek sandstone ²		Fall River Sandstone		First Cat Creek sandstone ²		"Dakota" - Fall River Sandstone			
					Second Cat Creek sandstone ²		Fuson Shale		Kootenai Formation		Fuson Shale Member			
					Third Cat Creek sandstone ²		Lakota Sandstone		Third Cat Creek sandstone ²		Lakota Sandstone			
Jurassic	Upper Jurassic	Upper Jurassic	Morrison Formation		Morrison Formation		Morrison Formation		Morrison Formation		Morrison Formation			
			Swift Formation		Swift Formation		Swift Formation		Swift Formation		Sundance Formation (upper part)			
			Rierdon Formation		Rierdon Formation		Rierdon Formation		Rierdon Formation		Sundance Formation (lower part)			
			Sawtooth Formation		Piper Formation		Piper Formation		Piper Formation		Gypsum Spring Formation			
	Middle Jurassic	Middle Jurassic	Middle Jurassic	Nesson Formation		Nesson Formation		Nesson Formation		Nesson Formation		Nesson Formation		
Triassic	Triassic	Triassic	Nesson Formation		Nesson Formation		Nesson Formation		Nesson Formation		Nesson Formation			
Permian	Permian	Permian	Nesson Formation		Nesson Formation		Nesson Formation		Nesson Formation		Nesson Formation			
Pennsylvanian	Pennsylvanian	Pennsylvanian	Quadrant Formation		Quadrant Formation		Quadrant Formation		Quadrant Formation		Quadrant Formation			
			Devils Pocket Formation		Devils Pocket Formation		Devils Pocket Formation		Devils Pocket Formation		Devils Pocket Formation			
			Aloaka Bench Limestone		Aloaka Bench Limestone		Aloaka Bench Limestone		Aloaka Bench Limestone		Aloaka Bench Limestone			
			Tyler Formation		Tyler Formation		Tyler Formation		Tyler Formation		Tyler Formation			
Mississippian	Mississippian	Mississippian	Sun River Member		Charles Formation		Charles Formation		Charles Formation		Charles Formation			
			Castle Reef Dolomite		Mission Canyon Limestone		Mission Canyon Limestone		Mission Canyon Limestone		Mission Canyon Limestone			
			Mission Canyon Limestone		Mission Canyon Limestone		Mission Canyon Limestone		Mission Canyon Limestone		Mission Canyon Limestone			
			Lodgepole Limestone		Lodgepole Limestone		Lodgepole Limestone		Lodgepole Limestone		Lodgepole Limestone			
Devonian to Precambrian, undifferentiated	Devonian to Precambrian, undifferentiated	Devonian to Precambrian, undifferentiated												

1. Contains Harmon lignite bed of Leonard and Smith (1909)

2. Of subsurface usage

From Davis and Rogers (1984), who modified from Balster (1980), Rice (1978 a,b), and Rice and others (1982)