

Table 3.--Section of unmetamorphosed Mescal limestone

Measured on west slope of Pendleton Mesa, 0.6 mile north of Horse Tank Creek, in NW 1/4 SW 1/4 sec. 11, T. 7 N., R. 14E. (unsurveyed).

	Thickness (feet)
Troy quartzite:	
Conglomerate overlain by pale red conglomeratic arkose - - - - -	20+
Unconformity.	
Mescal limestone:	
Upper member:	
13. Siliceous argillite, grayish orange-pink to moderate yellowish-brown; poorly exposed on gentle detritus-covered slope - - - - -	44
Basalt flow:	
12. Basalt, hematitic, part megascopically diabasic in texture, vesicular. Fossil basaltic soil 1-3 ft thick at top - - - - -	52
Unconformity.	
Middle (algal) member:	
11. Dolomite, pale red or yellowish-brown to medium light gray, finely crystalline, thin-bedded (1/2 to ft); stromatolite structures of unit 10 grade out in basal 10 ft of unit 11. Gray chert, in thin layers and lenses, increases in abundance upward; along bedding closely crowded hematite-flecked chert nodules locally occur in irregularly lenticular zones 2 to 4 ft thick. Several bedding partings marked by thin layers of grayish-orange argillite. Topmost bed very cherty, and contact with basalt slightly irregular - - -	28
10. Stromatolitic dolomite, pale red to grayish-red at base grading to medium light gray and yellowish-brown at top, finely crystalline, thin- to thick-bedded (1/2-6 ft, average 4 ft). Stromatolites of inverted cone forms mark basal 4 ft; form species <i>Collenia frequens</i> throughout rest of unit. Small (1/2-3 in. across) pinkish to medium gray chert masses, of very irregular outlines, sparse throughout, but most abundant toward top. Dolomite weathers brownish to yellowish-gray, with extremely rough, locally fluted surfaces; bottom 60 feet crops as cliff, remainder as ledges. Very light gray but grayish-orange weathering claystone, in lenticular layers 1 to 15 in. thick, caps beds at 4, 13, 50, 60, and 67 ft above base; layer at 60 ft locally includes coarse, well-rounded quartz grains - - - - -	77
Thickness of middle member (units 10-11) - - - - -	105
Lower member:	
9. Dolomite with sparse chert; dolomite pale yellowish-brown, weathers grayish-brown to rough, fluted surfaces on which silty laminae etch out. Chert light to medium gray, dense; weathers grayish-orange; occurs as thin layers and lenses (1/2-4 in. thick). Unit thin-bedded (8-24 in.) with slabby parting; crops as thin ledges on partly covered slope. Contrasts with lower units in containing little chert - - - - -	27
8. Dolomite interbedded sparsely with cherty dolomite; dolomite pale yellowish-brown, dense to finely crystalline, weathers pale yellowish-brown to brown with silty surface; chert mostly light gray, weathers yellowish to brownish gray with brownish-black oxide coating common but not prevalent on prominently etched out surfaces. Beds 1 to 5 ft thick, slabby to massive parting, crop as ledges on steep slope. Chert occurs in some beds as thin wavy parallel layers, but is mainly as secondary chert lenses that cap individual beds and project very irregularly 1 to 8 in. down into dolomite. Chert sparse in lower 34 ft, becomes abundant in upper part of unit. Conspicuous secondary chert zones in intervals 37 to 40, 47 1/2 to 50, and 57 to 60 ft above base of unit consist of crowded irregular nodules that include fragmented early formed chert; these zones crop prominently and vary in thickness and chert content laterally. In places 3-in. to 2-ft thick lenses of yellowish-gray to white quartzitic sandstone, comprised of well-rounded quartz grains of medium-sand to granule sizes, parallel the tops or bottoms of one or more of these chert zones or cut dike-like through chert zones and separating dolomite beds. A few beds in upper half of unit are capped by lenticular layers, paper-thin to 8 in. thick, of reddish-orange siliceous argillite - - - - -	68
7. Interbedded dolomite and cherty dolomite; dolomite grayish-orange, yellowish-brown and pale red-brown, dense to very finely crystalline, in beds 2 to 4 1/2 ft thick; includes clay and fine silt; weathers yellowish-orange to yellowish-gray and smooth. Chert mostly medium gray, in finely spongy to "vesicular" coalescing layers (commonly 1/2-in. to 1-in. thick) that etch out prominently, with black coatings, and comprise 10 to 80 percent of individual beds. Hopper-shaped molds after halite crystals, as much as 1 in. across, occur in chert layer 13 ft below top of unit; in lower cherts cubic molds are ill-formed. Unit crops as prominent dark-colored cliff - - - - -	47
6. Dolomite, grayish-red, dense, includes much clay and fine silt; weathers reddish to yellowish brown with smooth surface and inconspicuous splitting planes at 2- to 8-ft intervals; breaks conchoidally; bottom 6 ft forms ledge, top 13 ft smooth cliff with flat slope between. Top 6 in. includes small poorly rounded to angular, light gray chert pebbles; interval 4 to 5 1/2 ft above base includes granules and small pebbles of like chert and sparse coarse grains of vitreous quartz - - - - -	22
5. Dolomite, grayish-red, slightly silty; weathers to very rough surface mottled grayish	