This map summarizes the geology of the Jasper 7.5-minute quadrangle (fig. 1) in the Pitkin Limestone (Upper Mississippian, Chesterian) lamination. Basal sandstone locally contains casts of wood fragments, thin, as ledges in upper part of sequence. The Brentwood Limestone basal sandstone was a time-equivalent unit with the Woolsey Member of the Winslow Formation by Purdue and Miser (1916). This convention is used for both the top and bottom of the map in the synthesis of the Jasper 7.5-minute quadrangle. The major sandstone unit in the lower part of the map is the St. Joe Limestone Member, a thick, coarse-grained sandstone with bioclastic ooids and intraclasts. The Cane Hill Member is thinner and more thinly bedded than the St. Joe Limestone Member. The upper part of the Cane Hill Member is poorly exposed and composed of sandstone, siltstone, shale, and thin limestone that consists of Prairie Grove terraces. The Brentwood Limestone is composed of 5-10% quartzose sandstone with thin beds of limestone and shale. The structure contour map also illustrates the effects of several broad domes and synclines. The Sandstone is typically poorly cemented with sugary texture. The sandstone is light tan to white and variably cemented by dolomite or calcite that is light tan to white and variably cemented by dolomite or calcite. The sandstone is typically poorly cemented with sugary texture. The sandstone is light tan to white and variably cemented by dolomite or calcite. The sandstone is typically poorly cemented with sugary texture. The sandstone is light tan to white and variably cemented by dolomite or calcite.