

The rocks to be encountered on and near this project are:

Morrill Limestone: Only one exposure of this limestone was found on this project 500' L of N.W. Cor. Sec. 11, T 8 S, R 9 E, and here it measured only 1.0'. The lower 0.4' is a buff, hard, fine-grained limestone and the upper 0.6' is white, medium-hard, with many solution holes.

Florena Limestone: This member is exposed at the same place that the Morrill is found and here it is a light gray, calcareous shale containing many brachiopods and some bryozoans. This shale as well as the overlying limestone is absent along the centerline. Thickness 6.7'.

Cottonwood Limestone: This limestone is the most prominent outcropping limestone on the project. It is a light gray to buff, massive to thin-bedded limestone. Some chert occurs in the top 1.5' and 2.6' from the base. The chert is nodular. Fusulinids are very abundant and some brachiopods are found. The total thickness of this member ranges between 6.5' and 7.3'.

Eskridge Shale: This formation is composed of red, green, and gray shales with two included limy hard parts. This shale is a light green color, the middle is an olive green and the bottom is red to gray. Thickness 28'.

Neva Limestone: The Neva is composed of limestone, shale and shaly limestone. The limestone is gray, fine-grained to crystalline, hard, unfossiliferous and has a thickness of 4.9'. Below this lime is a gray calcareous shale zone, 0.6' thick followed by a 7.5' zone of gray shaly limestone which becomes hard when exposed to weather. At the base is a 3.5' limestone buff and massive. Total thickness of this member 18.2'.

Salem Point Shale: Gray shale, hard and calcareous. The thickness of this member is 6.6'.

Burr Limestone: This member is composed of a limestone, shale and shaly limestone. The limestone at top is gray to buff, massive and unfossiliferous, the shale is black and the lower part of the burr is a blue-gray shaly limestone. Total thickness 7.5'.

Roca Shale: A gray, green, and black shale with two included limestones, one of which occurs 5.4' below the Burr and is gray to buff and 1' thick. The other limestone occurs 16.2' below the Burr and is buff, impure and 3.3' thick.

Directional Dip and Hydrology: The rocks on this project have a general westward dip; however, there are local variations from this and so in places they are nearly horizontal. Some of the limestones outcropping here are potential aquifers and those areas should be protected.

Recommended: That drains be installed at the following places: Sta. 565/00-567/50; Sta. 569/30-570/50; Sta. 573/50-575/00; Sta. 595/00-597/00; Sta. 619/00/ Sta. 674/70-676/00; Sta. 689/00-690/50.

Submitted by: W. E. Lumb

~~KMY~~ Willard O. Hilton  
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