

**Atchison County, KS**

**Pleasant Grove Cemetery**

39.478585 -95.386568 342 m amsl

February 19-22, 2013

Kansas One-Call clearance

Rig: KGS Rotosonic  
Drill crew: J. Anderson, J. Elder

Objective: (1) Depth of buried valley; (2) Character of Pleistocene fill (glacial lacustrine and till)

Total Hole Depth 44.9 m

Collected in 1-m long transparent plastic liners

Drill Log

Field Determinations

Depth (m)	Material
0-2.1	surface soil (Mollisol) and loess mantle
2.1-5.8	medium gray lacustrine clay (Nortonville clay)
5.8-6.9	dark gray to black lacustrine clay (Nortonville clay)
6.9-10.3	Upper till-clay unit
10.3-11.7	Upper till-sandy clay unit
11.7-15.3	Upper till-silty clay unit
15.3-27.4	Lower till-gravelly silt unit
27.4-31.8	Lower till-clay unit
31.8-39.2	Lower till-sandy clay unit
39.2-41.7	Lower till-silty clay unit (gleyed)
41.7-43.2	oxidized sand and gravel (alluvial)
43.9-44.5	gleyed medium sand (alluvial)
44.5-44.9	limestone, thinly bedded



**Pleasant Grove Cemetery (Google Earth)**



**J. Anderson (KGS driller) and Rotosonic drill**

Scheduled laboratory analyses

- Particle size distribution-laser diffraction and sonic sieving
- Rock magnetics-magnetic susceptibility and frequency dependence of susceptibility, ARM, IRM
- Mineralogy-XRD
- Geochemistry-XRF
- Color-Munsell and CIE L\*a\*b