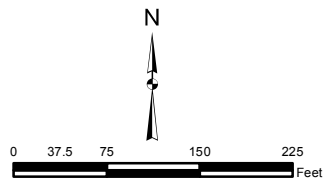




Legend

- ★ Proposed Well  Wellpad
 Moffat County Soils



Ellgen 11-10-1
19 May 2011

LAT: 40.497407°

LONG: -107.597273°

NW/NW SEC. 10 T6N R91W

MOFFAT COUNTY, COLORADO N.M.P.M.



Soils Map



Forelle Series

Map unit(s): 77, 78, 79, 80, 81, 82

Depth class: very deep

Drainage class: well drained

Slowest permeability: 0.6 to 2.0 in./hr. (moderate)

Landform: benches, hills, hillslopes

Position on landform: footslopes, toeslopes

Parent material: alluvium derived from shale and sandstone, loess, loess and in alluvium derived from shale and sandstone

Elevation: 6,200 to 7,200 feet (1,890 to 2,195 meters)

Slope: 1 to 25 percent

Climatic data:

Mean annual precipitation: 11 to 15 inches (279 to 381 millimeters)

Mean annual air temperature: 42 to 45 degrees F. (5.6 to 7.2 degrees C.)

Frost-free period: 75 to 95 days

Taxonomic class: Fine-loamy, mixed Borollic Haplargids

Typical Pedon

Map unit in which located: Forelle loam, 3 to 12 percent slopes

Location in the survey area: about 1,800 feet east and 1,800 feet north of the southwest corner of sec. 16, T. 4 N., R. 93 W.

A—0 to 5 inches; brown (7.5YR 5/4) loam, brown (10YR 4/2) moist; weak fine granular structure; soft, very friable, slightly sticky and slightly plastic; mildly alkaline; clear smooth boundary.

Bt1—5 to 11 inches; brown (7.5YR 5/2) clay loam, dark brown (7.5YR 4/2) moist; weak medium subangular blocky structure; slightly hard, firm, sticky and plastic; very few faint clay films on faces of peds; mildly alkaline; clear wavy boundary.

Bt2—11 to 23 inches; brown (7.5YR 5/3) clay loam, brown (7.5YR 5/2) moist; moderate coarse subangular blocky structure parting to moderate medium subangular blocky; hard, firm, sticky and plastic; common faint clay films on faces on peds; mildly alkaline; clear wavy boundary.

Bk1—23 to 34 inches; light brownish gray (10YR 6/2) loam, brown (10YR 5/3) moist; moderate medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; common fine concentrations of calcium carbonate; strongly

effervescent; moderately alkaline; gradual wavy boundary.

Bk2—34 to 42 inches; pale brown (10YR 6/3) loam, grayish brown (10YR 5/2) moist; weak coarse subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common fine concentrations of calcium carbonate; strongly effervescent; moderately alkaline; gradual wavy boundary.

Bk3—42 to 51 inches; pale brown (10YR 6/3) sandy clay loam, brown (10YR 5/3) moist; weak coarse subangular blocky structure; slightly hard, firm, slightly sticky and slightly plastic; common fine concentrations of calcium carbonate; strongly effervescent; moderately alkaline; abrupt wavy boundary.

Bk4—51 to 60 inches; pale brown (10YR 6/3) sandy loam, brown (10YR 5/3) moist; massive; slightly hard, very friable, slightly sticky and slightly plastic; few fine concentrations of calcium carbonate; slightly effervescent; moderately alkaline.

Range in Characteristics

Depth to argillic horizon: 18 to 25 inches

Depth to secondary calcium carbonate: 15 to 25 inches

Bt horizon:

Hue: 7.5YR or 10YR

Bk3 and Bk4 horizons:

Texture: loam, sandy loam, or sandy clay loam