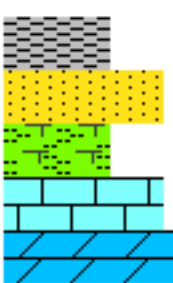


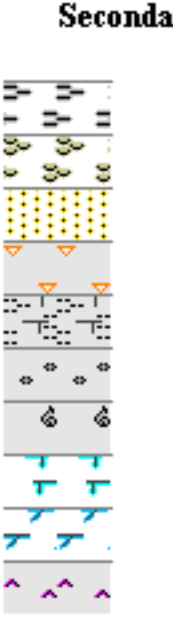
Munzer 1 (15-197-00065) T: 13S R: 9E S: 13

Latitude: 38.923 Longitude: -96.3708 Elevation (GL): 1287.0 Depth: 3207.0

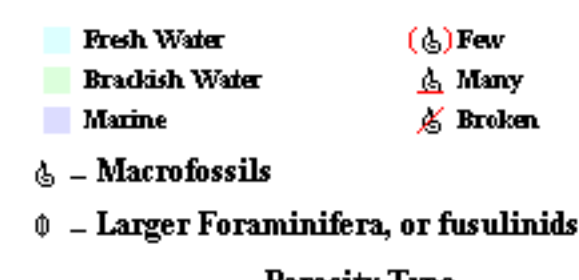
Depth	Stratigraphic Units						Rock Color	Lithology Rock Column	Grainsize	Fossils	Porosity Type	Remarks
	Members	Formations	Subgroup	Stage	System	Era						
220												220 250 dominantly gray slightly anhydritic sh streaks buff fine xln fossiliferous LST 250 275 buff-brown fine xln highly fossiliferous broken 1st anhydritic 4 sh 275 307 greenish gray sh
320												307 340 gray-buff fine xln fusulinid shaly 1st & limy sh 340 350 gray sh 350 385 gray sh limy & highly fossiliferous in part 385 395 gray sh 395 400 gray sh limy & highly
420												417 460 gray sh sandy in part 460 487 gray-brown slightly sandy sh. 487 520 red-brown sandy sh
520												520 525 cream fine xln 1st 550 560 gray fine grain. 560 605 gray micaceous sh streak sand
620												605 613 cream fine xln sandy 613 650 gray sandy sh 650 685 gray-buff fine xln 1st shaly in part 685 702 gray-buff fine xln soft 1st 702 710 gray sandy sh 710 727 gray-cream-buff fine xln fossiliferous 1st. 727 740 gray slightly sandy sh 740 760 gray sh gray-buff fine xln fossiliferous 1st 760 780 gray slightly sandy sh 780 785 gray sh gray-buff fine
720												840 893 gray-brown micaceous slightly gritty shale 893 915 gray-brown fine granular fossiliferous slightly sandy 1st 915 943 gray sandy micaceous sh
820												980 1005 gray-brown very sandy sh 1005 1043 gray-light brown dense to fine xln fossiliferous slightly dolomitic 1st 1062 1103 gray fine grain sub-vitreous micaceous porous (good porosity) sst shaly in part 1103 1123 gray-buff dense to fine xln fossiliferous 1st 1123 1127 dark gray sh 1162 1167 gray sh 1200 1213 gray-brown sandy sh 1213 1218 gray-brown dense to
920												1235 1253 gray-buff dense fine to medium xln 1st 1253 Heebner Shale 1265 1270 gray sandy sh 1285 1295 gray fine grain sub 1295 1305 gray fine grain sub 1305 1320 gray fine grain sub vitreous micaceous sst 1320 1325 gray fine grain sub 1335 1355 gray fine grain sub vitreous micaceous sst 1365 1390 gray fine grain sub vitreous micaceous sst 1390 1402 gray fine grain sub 1402 1407 gray-tan-brown dense
1020												1450 1465 gray-brown sand 1465 1502 dominantly gray sh 1502 1507 gray-buff dense to 1520 1532 cream-gray dense to 1532 1535 gray sh 1550 1555 gray sh 1568 1580 gray sh 1580 1590 cream-gray dense to 1590 1635 red 4 gray sh
1120												1635 Kansas City 1647 1653 gray 4 cream-buff 1667 1670 gray sh 1683 1693 gray sh 1700 1705 gray sh 1745 1747 gray sh 1728 1732 gray sh 1752 1760 dark gray sh 1760 1773 gray-buff fine xln 1773 1783 gray-buff dense to 1783 1785 dark gray to black 1795 1803 dark gray to black 1810 1812 dark gray to black 1825 1830 black sh 1835 1845 dark gray sh 1845 1854 cream-tan dense to 1854 Base KC 1864 1880 red 4 gray sh 1880 1893 gray fine grain sub 1893 1927 gray sandy micaceous sh 1927 1950 dark gray sh 1950 1958 cream-gray-tan dense 1958 1968 gray sandy sh 1968 1972 cream-gray-tan dense 1978 1982 cream-gray-tan dense
1220												2010 2018 dark gray sh 2018 2022 cream-gray-tan dense 2040 2055 gray-light brown dense to fine granular 2055 2063 black sh 2063 2077 gray sandy sh 2077 2085 gray fine granular 2085 Cherokee 2095 2115 gray-dark gray sh 2115 2123 gray fine grain 2123 2135 gray dandy sh 2135 2153 dark gray sh 2153 2158 gray fine grain 2165 2170 gray sh 2190 2200 gray sh 2200 2227 black sh 2227 2273 gray fine grain micaceous slightly calcareous slightly shaly sst 2273 2295 dark gray sh 2295 2300 gray sh 2300 2305 gray-tan dense to 2323 2323 cream-gray dense 2323 2335 dark gray sh 2335 2341 gray fine grain 2347 2350 cream fine xln 1st 2368 2373 buff-brown fine xln 2385 2390 black sh 2405 2420 black sh 2420 2435 gray sh 2435 2450 gray sandy sh 2450 Burgess Shale 2465 2474 gray-white fine 2474 Mississippian 2485 2505 gray-buff sucrose to fine xln porous (good porosity) 2505 2525 gray-brown sucrose slightly porous (fair porosity) 2525 2548 cream-gray-buff sucrose to fine xln porous (good porosity) cherty dolomite 2548 2562 cream medium xln 2565 2568 cream-gray-buff 2562 2580 cream-gray-buff 2580 2610 cream-buff sucrose dolo with abundant white gray opaque to sub-opaque chert 2610 2645 gray-cream-buff sucrose to fine granular cherty dolo. 2645 2675 cream-gray fine to coarse xln slightly cherty fossiliferous 1st 2675 2685 cream fine to medium 2685 2735 gray-buff-brown fine to coarse xln slightly dolomitic 1st 2735 2743 gray-brown fine to 2750 Kinderhookian 2785 2927 greenish gray 4 grayish green sh
1320												2927 Hunton 2955 2970 gray-cream medium to coarse xln porous (good porosity) 2970 Silurian 2985 3035 white-gray-cream medium to coarse xln vuggy porosity dolomite coarse dolo rhombs in part 3035 3065 gray-buff-cream medium to coarse xln dolo slightly vuggy porosity to fossil cast porosity 3065 3083 gray-buff medium xln cherty dolo scattered vuggy 3083 3125 cream-gray-buff medium to coarse xln dolo vuggy porosity in part 3125 3137 gray fine to medium 3137 Maquoketa 3145 3165 pale green speckled slightly cherty dolomitic marl 3165 3218 pale green dolomitic sh streaks gray
1420												3218 Viola Limestone 3237 3257 gray-buff-brown medium to coarse xln cherty 3257 3288 gray-brown limy dolomite 4 dolomitic 1st 3288 3298 buff-brown medium to 3298 Simpson 3347 3327 gray fine to medium 3327 3330 green sh 3362 3366 buff fine to medium 3393 3406 green sandy sh 3406 3440 gray-cream-buff medium to coarse xln cherty
1520												
1620												
1720												
1820												
1920												
2020												
2120												
2220												
2320												
2420												
2520												
2620												
2720												
2820												
2920												
3020												
3120												
3220												
3320												
3420												



Shale
Sand, Sandstone
Marly, marl
Limestone
Dolomite



Shaly, shale
Micaceous
Sandy, sand
Cherty, chert
Marly, marl
oolitic
fossiliferous
Calcareous
Dolomitic
Anhydritic, anhydrite



Fresh Water
Brackish Water
Marine
Few
Many
Broken
Macrofossils
Larger Foraminifera, or fusulinids



Interskeletal
Intercrystalline
Vuggy
Oolitic