

GGJ 3001

Lithologic Log

Georgia Geological Survey well no. 3001

Seminole County, Georgia

S. C. Dunlap Company, Saunders Co., Inc. no. 1

TD 7095

Geophysical datum: 110 feet above seal level (Kelly bushing)

logged by Charles Girardeau, Emory University, 1975-1976

* after the depth indicates a microfossil sample slide was made and is included in the sample envelope.

- 0-1085 no samples, December 1975
- 1085-1100* Limy sand, leached, hard, colorless and white and orange quartz; limestone, siltstone (caving?), fossiliferous (forams and bryozoans, shark tooth), glauconitic, well sorted, rounded, medium sands, color 10YR6/2. Limestone 40%, sand 60%
- 1100-1115 no change
- 1115-1130* Limy sand, leached, hard, colorless, white and orange quartz, limestone, sandy limestone (caving?), fossiliferous (forams, bryozoa, echinoid plate), glauconitic, slightly phosphatic, well sorted, rounded, medium grained sands, 10YR6/2. Limestone 30%, sand 70%
- 1130-1145 Limy sand, very similar to above except no phosphate and slightly less fossiliferous (forams and bryozoans)
- 1145-1160 Limy sand, leached, hard, colorless and orange quartz, limestone, siltstone, slightly fossiliferous, glauconitic, phosphatic, well sorted, coarse, sub rounded sands, 10YR6/2. Sand 70%, limestone 30%
- 1160-1175 Limy sand, leached, hard, colorless, white and orange quartz, limestone, slightly fossiliferous (forams), glauconitic, well sorted, coarse grained, subrounded sands, 10YR6/2. sand 75%, limestone 25%
- 1175-1190 Limy sand. Leached, hard, colorless, white and orange quartz; limestone, slightly fossiliferous (forams), glauconitic, well sorted, coarse grained, subrounded sands, 10YR6/2. Sand 65%, limestone 35%
- 1190-1205 Limy sand. Leached, hard, colorless, white and orange quartz; limestone, glauconitic, well sorted, medium grained, subrounded sands, 10YR6/2. Sand 45%, limestone 55%; actually sandy limestone
- 1205-1220 Limy sand, leached, hard, colorless quartz; limestone, glauconitic, slightly pyritic, well sorted, medium grained, subrounded sands, 10YR6/2. Sand 45%, limestone 55%
- 1220-1235 Limy sand, Leached, hard, colorless quartz; limestone, glauconitic, slightly phosphatic; well sorted, medium grained, subrounded sands, 10YR6/2. Sand 45%, limestone 55%

- 1235-1250 Limy sandstone, leached, hard, colorless quartz and lime cement; glauconitic, phosphatic, well sorted, rounded, medium sands, N7; limestone (caving). Sand 90% lime cement 10%
- 1250-1265 As above
- 1265-1280 Limy sand, leached, soft, colorless quartz with lime cement, slightly glauconitic, well sorted, medium grained rounded sand, N7; sand 90%; lime cement 10%
- 1280-1295 As above but with less glauconite
- 1295-1310 As above
- 1310-1325 As above
- 1325-1340 Clayey, limy sand. Colorless quartz, leached, soft, lime cement, clay, slightly glauconitic, slightly micaceous, well sorted, fine grained, rounded sand, N7; sand 85%, limy cement 10%; clay 5%
- 1340-1355 As above
- 1355-1370 Limy sand, leached, soft, colorless quartz with lime cement. Glauconitic, well sorted, medium grained, rounded quartz sand, 5Y6/1. Sand 60%, lime cement 40%
- 1370-1385 Limy sand, leached, soft, colorless quartz with limy cement; well sorted, medium grained, rounded sand, 5Y6/1; sand 65%, lime cement 35%
- 1385-1400 Limy, clayey sand. Leached, soft, colorless quartz with lime cement. Glauconitic, micaceous, well sorted, medium grained, rounded sands, 5Y6/1. Sand 65%, lime cement 35%
- 1400-1415 Limy sand, fresh, hard, colorless and orange quartz; limestone. Glauconitic, slightly fossiliferous (badly preserved forams). Poorly sorted, coarse to fine grained sand, subangular, 5Y6/1. Sand 60%, limestone 40%
- 1415-1430 As above except with the addition of pyrite. Sand 60%, limestone 40%
- 1430-1445 Limy sand. Leached, soft, colorless quartz, limy cement, glauconitic, phosphatic, slightly micaceous, slightly fossiliferous (forams), well sorted, medium grained, rounded sand, 5Y6/1, sand 85%, lime cement 15%

- 1445-1460 Limy sand, leached, soft, colorless quartz with limy cement. Glauconitic, slightly phosphatic, slightly micaceous limestone. Well sorted, medium grained, rounded sand, 5Y6/1. Sand 85%, lime cement 15%
- 1460-1475 Limestone, leached, hard, and limestone and sandy limestone, slightly glauconitic, white and colorless quartz sand, poorly sorted, all size grains, subrounded. 5Y7/2. Limestone 95%, sand 5%
- 1475-1490 Limy sand, leached, soft, colorless quartz and lime cement. Glauconitic, slightly micaceous, well sorted, fine grained, rounded sands, 5YR6/1. Sand 85%, lime cement 15%
- 1490-1505 Limy sand, leached, soft, colorless and orange quartz and lime cement; limestone; glauconitic, well sorted, fine grained, subrounded sands. 5Y6/1. Sand 80%, lime cement 20%
- 1505-1520 As above
- 1520-1535 Limy sand. Leached, soft, colorless quartz and lime cement, glauconitic, slightly micaceous, well sorted, fine grained, subrounded sand. 5YR6/1. Sand 60%, lime cement 40%
- 1535-1550 As above except no mica
- 1550-1565 As above, sand 70%, cement 30%
- 1565-1580 Limy sand. Leached, soft, colorless and orange quartz, limy cement, glauconitic, limestone (caving?), well sorted, medium grained, subrounded, 5YR6/1. Sand 70%, lime cement 30%
- 1580-1595 Lime sand. Leached, hard, colorless quartz with limy cement, glauconitic, slightly phosphatic, well sorted, medium grained, rounded sand, 5YR6/1. Sand 75%, lime cement 25%
- 1595-1610 Limy clayey sand. Leached, soft, colorless quartz, lime cement, clay, slightly micaceous, glauconitic, well sorted, fine grained, sub rounded sand, N7. Sand 75%, lime cement 15%, clay 10%
- 1610-1625 As above
- 1625-1640 As above
- 1640-1655 As above except sand 70%, cement 15%, clay 15%

- 1655-1670 As above, except sand 55%, cement 30%, clay 15%
- 1670-1685 Limy sand, leached, soft, colorless quartz, lime cement, some clay; glauconitic, well sorted, fine grained, rounded sand, N7. Sand 80%, cement 20%
- 1685-1700 Limy siltstone, leached, soft, limy cement, micaceous, well sorted, silt grains, 5YR6/1. Siltstone 100%
- 1700-1715 Sandy siltstone. Leached, soft, limy cement, micaceous, colorless quartz, glauconitic, slightly fossiliferous (crinoid stem?), well sorted, very fine grained sand, 5YR6/1. Silt stone 85%, sand 15%
- 1715-1730 Limy sand. Leached, soft, colorless quartz limy cement, slightly glauconitic, well sorted, fine grained, rounded sand, 5YR6/1. Sand 80%, lime 20%
- 1730-1745 Sandy, limy siltstone. Leached, hard, colorless quartz; siltstone, limy cement; micaceous, slightly glauconitic, well sorted, fine grained sand, 5YR6/1. Sand 20%, lime cement 20%, siltstone 60%
- 1745-1760 Limy silty sand. Leached, soft, colorless quartz, limy cement, and siltstone, slightly micaceous, slightly glauconitic, well sorted, fine grained, subrounded sand, 5YR6/1. Sand 50%, siltstone 30%, lime cement 20%
- 1760-1775 ^{silty} Limy sand. Leached, soft, colorless and orange quartz, lime cement, siltstone, slightly micaceous, glauconitic, well sorted, medium grained, subrounded sand, 5YR6/1. Sand 85%, siltstone 15%
- 1775-1790 Limy sand. Leached, soft, colorless and orange quartz, lime cement, claystone; micaceous, glauconitic, well sorted, medium grained, subrounded sand. Sand 85%, lime cement 15%, color 5YR6/1
- 1790-1805 Limy, clayey sand. Leached, soft, colorless and orange quartz, lime cement, claystone; micaceous, glauconitic, slightly phosphatic, well sorted, medium grained, subrounded sand, 5YR6/1. Sand 70%, lime cement 10%, claystone 20%
- 1805-1820* Limy clayey sand. Fresh, hard, colorless and orange quartz, claystone, and limy cement; glauconitic, slightly phosphatic, pyritic, fossiliferous (gastropod, crinoid stem, foram) well sorted, coarse grained subrounded sands, 5YR6/1. Sand 80%, claystone 10%, lime cement 10%

- 1820-1835 Shale and sand. Fresh, hard, colorless quartz; shale; glauconitic, pyritic, phosphatic, limy cement, well sorted, medium grained, rounded sand, N7. Sand 80%, shale 20%
- 1835-1850* Sand, fresh, hard, colorless quartz. Glauconitic, slightly phosphatic, slightly fossiliferous (forams), limy cement, well sorted, medium grained, rounded sand, N7. Sand 100%
- 1850-1865* Clayey sand, fresh, hard, colorless quartz; clay; glauconitic, phosphatic, pyritic, fossiliferous (forams, ostracodes, crinoids), well sorted, medium grained, rounded sand, N7. Sand 90%, clay 10%
- 1865-1880 Sand, hard, fresh, colorless quartz, limy cement, glauconitic, slightly phosphatic, well sorted, medium grained, rounded sand, N7. Sand 100%
- 1880-1895 Sand, fresh, hard, colorless quartz, limy cement; glauconitic, slightly phosphatic, well sorted, medium grained, subrounded sand, N7. Sand 100%
- 1895-1910 Sand, fresh, hard, colorless quartz, limy cement, glauconitic, pyritic, slightly fossiliferous (forams), well sorted, medium grained, rounded sand, N7. Sand 100%
- 1910-1925 Sand, much as above, except non fossiliferous
- 1925-1940 Sand, as above
- 1940-1955 Sand, as above
- 1955-1970 Sand, fresh, hard, colorless quartz, limy cement?, glauconitic, pyritic shale; Well sorted, medium grained, subrounded sand, N7. Sand 97%, shale 3%
- 1970-1985 * Limy sand, fresh, hard, colorless quartz, limy cement, glauconitic, slightly fossiliferous (forams), well sorted, medium grained, subround sand, N7. Sand 100%
- 1985-2000 Limy sand, fresh, hard, colorless quartz, limy cement, glauconitic, slightly pyritic, well sorted, medium grained, subrounded sand, N7. Sand 100%
- 2000-2015 Clayey limy sand. Leached, soft, colorless quartz, clay, limy cement, slightly glauconitic, well sorted, medium grained, subrounded sand, N6. Sand 55%, clay 25%, lime cement 20%

- 2015-2030* Limy sand, fresh, hard, colorless quartz and limy cement; glauconitic, slightly phosphatic, fossiliferous (forams), well sorted, fine grained, subrounded sand, N7. Sand 85%, lime cement 15%
- 2030-2045* Limy sand. Fresh, hard, colorless quartz and limy cement; glauconitic, slightly phosphatic, fossiliferous (forams), well sounded, fine grained, subrounded sand. Sand 90%, lime cement 10%
- 2045-2060* Sand as above, pyritic
- 2060-2075 Limy, clayey sand. Leached, soft, colorless quartz; clay; limy cement. Glauconitic, slightly fossiliferous, (forams and crinoids), slightly pyritic, well sorted, medium grained, subrounded sand, N6. Sand 80%, clay 10%, lime cement 10%
- 2075-2090 Limy clayey sand. Leached, soft, colorless quartz, clay; lime cement. Glauconitic, slightly phosphatic, well sorted, medium grained, subrounded sand, N6. Sand 80%, clay 10%, lime cement 10%
- 2090-2105* Limy clayey sand, as above except that this is fossiliferous (forams and ostracodes)
- 2105-2120 Limy, clayey sand. Leached, soft. Colorless quartz, clay, and limy cement. Glauconitic, slightly fossiliferous (forams), well sorted, medium grained, subrounded sand, N6. Sand 80%, clay 10%, lime cement 10%
- 2120-2135 Clayey limy sand, like above but sand 60%, clay 25%, lime cement 15%
- 2135-2150* Clayey limy sand. Leached, soft. Colorless quartz, clay, and lime cement. Glauconitic, slightly phosphatic, fossiliferous (forams, bryozoan and clam shell fragments). Well sorted, medium grained, subrounded sand, N6. Sand 55%, clay 30%, lime cement 15%
- 2150-2165* Limy sand, leached, soft, colorless quartz, limy cement. Glauconitic, slightly pyritic, slightly fossiliferous (forams). Well sorted, medium grained, subrounded sand, N7. Sand 85%, lime cement 15%
- 2165-2180* Limy sand. Leached, soft, colorless quartz and limy cement. Glauconitic, fossiliferous (forams and ostracods). Well sorted, medium grained, subrounded sand, 5YR6/1. Sand 80%, lime cement 20%

- 2180-2195* Limy sand. Leached, soft, colorless quartz and limy cement. Glauconitic, very fossiliferous (forams and ostracodes), well sorted, medium grained, subrounded sand, N5. Sand 80%, lime cement 20%
- 2195-2210 Limy sand, leached, soft, colorless quartz with limy cement. Glauconitic, slightly phosphatic, fossiliferous (forams). Well sorted, medium grained, subrounded sand, N5, Sand 80%, lime cement 20%
- 2210-2225 Limy sand. Leached, soft, colorless quartz and lime cement. Glauconitic, fossiliferous (forams). Well sorted, medium grained, subrounded sand, N5. Sand 75%, lime cement 25%
- 2225-2240 Limy sand, as above
- 2240-2255* Limy sand, as above, ostracodes
- 2255-2270 Limy sand, some clay, same as 2210-2225
- 2270-2285 Limy clayey sand. Leached, soft, colorless quartz, clay and limy cement. Glauconitic, slightly phosphatic, slightly fossiliferous (forams). Well sorted, medium grained, subrounded sand, 5YR6/1. Sand 60%, clay 15%, limy cement 25%
- 2285-2300 Limy clayey sand. Leached, soft, colorless quartz, clay, limy cement. Glauconitic, slightly pyritic, slightly fossiliferous (forams). Well sorted, fine grained, subrounded sand, 5YR6/1. Sand 55%, clay 25%, lime cement 20%
- 2300-2315 Limy clay. Leached, soft, colorless quartz, clay, and limy cement. Slightly glauconitic, slightly micaceous, N6. Clay 60%, lime cement 30%, sand, 10%
- 2315-2330 Limy clay. Leached, soft, clay, a few colorless quartz sand grains. Slightly fossiliferous (forams), slightly micaceous, slightly glauconitic, slightly phosphatic, N6. Clay 70%, lime cement 30%
- 2330-2345 Limy clay, much as above except there is an absence of phosphate and fossils. Clay 60%, lime cement 40%
- 2345-2360 Limy clay. Leached, soft, clay with limy cement. Slightly micaceous, slightly fossiliferous (forams), some colorless quartz sand. Clay 60%, lime cement 40%
- 2360-2375 Limy clay. Leached, soft, clay and limy cement. Slightly glauconitic, slightly phosphatic, more colorless quartz sand, N6. Clay 60%, lime cement 35%, sand 5%

- 2375-2390 Limy claystone. Leached, hard, clay with lime cement, some colorless quartz sand. Slightly glauconitic, slightly micaceous, N6. lime cement 40%, clay 60%
- 2390-2405 As above
- 2405-2420 Limy claystone. Leached, hard, clay with lime cement, a little colorless quartz. Slightly micaceous, slightly glauconitic, N6. Lime cement 40%, clay 60%
- 2420-2435 As above
- 2435-2450 As above
- 2450-2465 As above, but with pyrite
- 2465-2480 As above, no pyrite
- 2480-2495 Limy clay. Leached, soft, clay with lime cement and a little colorless quartz. Slightly micaceous and slightly glauconitic, N6. Clay 50%, lime cement 45%, sand 5%.
- 2495-2510 Limy clay as in 2480-2495 but more sand present: clay 50%, lime cement 40%, sand 10%
- 2510-2525* Limy clay. Leached, soft, clay with limy cement. Micaceous, pyritic, glauconitic, slightly fossiliferous (forams), 5YR6/1. Clay 55%, lime cement 45%
- 2525-2540* Limy clay. Leached, soft, clay with lime cement. Pyritic, slightly micaceous, slightly fossiliferous (forams and ostracodes), lignitic, 5YR6/1. Clay 60%, lime cement 40%
- 2540-2555* Sandy limy clay. Leached, soft, colorless quartz and clay with lime cement. Slightly pyritic, glauconitic, micaceous, fossiliferous (ostracodes, forams); a little shale, medium sand, subrounded, 5YR6/1. Sand 15%, clay 50%, lime cement 35%
- 2555-2570 Limy clay. Leached, soft, clay with lime cement. Glauconitic, pyritic, micaceous, slightly fossiliferous, some sand. Sample contains a lot of trash. 5Y6/1. Clay 70%, lime cement 30%.
- 2570-2585 Same as above
- 2585-2600 Limy clay. Leached, soft, clay with limy cement. Glauconite, pyrite, micaceous, slightly fossiliferous (forams), sample has a great deal of trash (hay and plastic, 5Y6/1. Clay 65%, lime cement 35%
- 2600-2615 Limy clay. Sample composed of 50% shredded plastic, leached, soft, clay with limy cement. Slightly glauconitic, slightly pyritic, 5Y6/1. Plastic 50%, clay 30%, lime cement 20%

- 2615-2630 As above
- 2630-2645 Limy clay, some extremely trashy (50% plastic). Leached, soft, clay with limy cement, micaceous, slightly pyritic, 5YR6/1. Plastic 50%, clay 30%, lime cement 20%
- 2645-2660 Limy clay. Leached, soft, clay with limy cement. Micaceous, slightly pyritic, slightly phosphatic, 5YR 6/1. Clay 60%, limy cement 40%
- 2660-2675 Limy clayey shale. Leached, hard shale and clay with limy cement, some sand. Slightly micaceous and phosphatic, lignite. 5YR6/1. Clay 20%, shale 60%, lime cement 20%
- 2675-2690 Limy clay. Leached, soft, clay with limy cement. Slightly micaceous and pyritic, lignitic, 5YR6/1. Clay 65%, limy cement 35%
- 2690-2705 Limy clay. Sample 65% plastic shreds. Leached, soft, clay with limy cement. Slightly micaceous, lignitic, pyritic, slightly fossiliferous (forams), 5YR6/1. Clay 65%, lime cement 35%
- 2705-2720* Limy sandy clay. Soft, leached, clay with limestone cement, sand. Pyritic, glauconitic, micaceous, fossiliferous (forams), well sorted, medium grained, sub-rounded sand, N5. Clay 50%, sand 20%, lime cement 30%
- 2720-2735 ^{Sandy} Limy clay. Leached, soft, clay with limy cement. Micaceous, pyritic, slightly fossiliferous (shell fragments), some sand. Clay 65%, lime cement 30%, sand 5%, N5
- 2735-2750* As above
- 2750-2765 Limy clay with shale. Leached, soft, clay with limy cement, shale. Micaceous, pyritic, slightly fossiliferous (shell fragments), N6. Clay 55%, lime cement 30%, shale 15%
- 2765-2780 Limy clay. Leached, soft, clay with lime cement; some shale and sand. Micaceous, pyritic, slightly fossiliferous (shell fragments), limestone also present, N6. Clay 60%, limy cement 35%, sand and shale 5%.
- 2780-2795 Limy clay. Leached, soft, clay with limy cement, some sand. Pyritic, phosphatic, micaceous, slightly fossiliferous (shell fragments); some white limestone also present, N6. Clay 65%, lime cement 35%

- 2795-2810 Clayey limestone. Leached, soft, limestone with clay, sandy. Micaceous, lignitic, slightly phosphatic, slightly fossiliferous (shell fragments), 5Y6/1. Limestone 70%, clay 30%
- 2810-2825 Clayey limestone. Leached, soft, limestone with clay. Micaceous, lignitic, phosphatic, a little sand, N6. Limestone 65%, clay 35% (sample has a lot of plastic)
- 2825-2840 Clayey limestone, as above, except more sand.
- 2840-2855 Limy sand. Leached, soft, colorless quartz sand with limy coated shale. Lignitic, glauconitic, slightly micaceous, some clay with limy cement (caving), phosphatic, slightly fossiliferous (shell fragments), 5YR6/1. Sand 70%, limy coating 35%, clay 5%
- 2855-2860 Core sample. Limy sandstone, Fresh, hard, colorless quartz with limy cement. Phosphatic, micaceous, glauconitic, lignitic; micaceous shale also present. Sand 55%, limy cement 35%, shale 10%
- 2860-2870 no sample
- 2870-2885 Limy sandstone interbedded with shale. Hrd, fresh, sand of colorless quartz with limy cement; shale; clay. Micaceous, glauconitic, lignitic, slightly phosphatic, slightly fossiliferous (shell fragments), 5YR6/1. Sand 50%, lime cement 30%, clay 15%, shale 5%
- 2885-2900 (Limy) shaly/ sandstone. Fresh, hard, colorless quartz, shale, clay coating. Micaceous, glauconitic, lignitic, fossiliferous (shell fragments), 5YR6/1. Sand 65%, shale 15%, limy cement 20%
- 2900-2915 Limy sandstone. Fresh, hard, colorless quartz with limy cement, some shale, glauconitic, micaceous, phosphatic, fossiliferous (shell fragments), well sorted, fine grained subrounded sands, 5YR6/1. Sand 75%, limy cement 20%, shale 5%
- 2915-2930 Limy sandstone as above
- 2930-2945 Limy clayey sandstone. Fresh, hard, sand of colorless quartz with limy cement; clay, some shale. Micaceous, phosphatic, lignitic, glauconitic, fossiliferous (shell fragments), well sorted, fine grained, subrounded sand, 5YR6/1. Sand 60%, lime cement 25%, clay 15%
- 2945-2960 Limy clayey sandstone as above except sand 50%, lime cement 25%, and clay 25%; no glauconite

- 2960-2975 Sandy shale. Leached soft shale with sand which has limy cement. Micaceous, phosphatic, colorless quartz, fossiliferous (shell fragments), lignitic, slightly pyritic, 5YR6/1. Some white dolomite. Shale 65%, sand 20%, limy cement 15%
- 2975-2990 Limy sandy shale. Leached, soft, with a great deal of sand, shale and colorless quartz; very fossiliferous (shell fragments), phosphatic; white limestone, slightly micaceous, slightly pyritic; well sorted, fine grained sand, subrounded, 5G6/1. Shale 40%, shell fragments 30%, sand 30%.
- 2990-3005 Very fossiliferous sand. Fresh, hard. Colorless quartz with a great deal of pelecypod shell fragments. Micaceous, phosphatic, pyritic; some shale; well sorted, sub rounded fine grained sand, 5G6/1. Shell fragments 60%, sand 40%
- 3005-3020 As above
- 3020-3035 Very fossiliferous sand. Fresh, hard. Colorless quartz with a great deal of pelecypod shell fragments. Phosphatic, pyritic, slightly micaceous, lignitic, some shale is also present. Sand grains are well sorted, fine grained, and sub rounded, 5G6/1. Sand 30%, shell fragments 60%, shale 10%
- 3035-3050 Fossiliferous sand, as above except shell fragments 60%, sand 25%, shale 15%
- 3050-3065 Fossiliferous sandy shale. Leached, hard. Shale with loose sand and a great deal of shell fragments. Phosphatic, slightly micaceous, slightly lignitic, pyritic, color 5G6/1. Shale 55%, shell fragments 30%, sand 15%
- 3065-3080 Fossiliferous sand. Leached, hard. Colorless quartz with a great deal of shell fragments and some shale. Phosphatic, pyritic, micaceous, 5G6/1. Sand 45%, shell fragments, 45%, shale 10%
- 3080-3095 Very fossiliferous sand. Fresh, hard. Colorless quartz with mostly pelecypod shell fragments. Phosphatic, pyritic, slightly micaceous; sand well sorted, subrounded, fine grained, 5G6/1. Sand 40%, shell fragments 60%
- 3095-3110 Limy shale. Leached, soft. Micaceous shale. Pyritic, phosphatic, very fossiliferous (shell fragments); some sand present; lignitic, 5Y 6/1. Shale 60%, lime cement 25%, shell fragments 15%

- 3110-3125 Limy shale. Leached, soft, micaceous shale with limy cement. Pyritic, phosphatic, fossiliferous (shell fragments) some sand present, 5Y6/l. Shale 65%, limy cement 25%, shell fragments 10%
- 3125-3140 Limy clay. Leached, soft. Clay with a very small amount of limy cement. Micaceous, some shell also present and some very fine grained sand, 5GY6/l. Clay 90%, sand 5%, lime cement 5%
- 3140-3155 Limy clayey sandstone. Leached, hard, sandstone with limy cement and clay, very micaceous. Well sorted, very fine grained, subrounded sand, 5GY6/l. Sand 75%, clay 15%, limy cement 10%
- 3155-3170 As above. Sand 60%, clay 30%, cement 10%
- 3170-3185 Limy clayey sand. Leached, soft. Sand with clay and limy cement. Phosphatic, micaceous, fossiliferous (shell fragments); sand well sorted, fine grained, sub rounded, 5YR6/l. Sand 50%, clay 35%, limy cement 15%
- 3185-3200 Limy clayey sand, As above. Sand 60%, limy cement 30%, clay 20%; also some shale present
- 3200-3215 Limy clayey sand. Leached, soft. Colorless quartz with clay and limy cement. Micaceous, phosphatic, fossiliferous (shell fragments); shale; well sorted, fine grained subrounded sand, 5Y6/l. Sand 60%, clay 20%, limy cement 20%
- 3215-3230 no sample.
- 3230-3245 Limy shaly sand. Leached, soft. Sand and shale, limy cement. Micaceous, fossiliferous (shell fragments), well sorted, fine grained subrounded quartz sand, 5GY6/l. Sand 60%, shale 15%, lime cement 25%
- 3245-3260 Limy clayey sand. Leached, soft. Sand with clay and lime cement. Micaceous, slightly fossiliferous (shell fragments); shale; sand grains well sorted, fine grained, subrounded, 5YR6/l. Sand 60%, clay 20%, lime cement 20%
- 3260-3275 Limy sandy clay. Soft, leached clay with limy matrix; sand; micaceous,; shale. Sand is well sorted, fine grained, subrounded, 5YR6/l. Clay 55%, sand 30%, limy cement 15%
- 3275-3290 Limy sandy caly. Soft, leached clay with limy matrix; sand, micaceous, slightly phosphatic; shale. Sand is well sorted, fine grained, subrounded 5GY 6/l. Clay 55%, sand 30%, limy cement 15%
- 3290-3305 Limy sandy clay as above.

- 3305-3320 Limy clay, leached, hard, clay, micaceous, limy matrix, slightly fossiliferous (shell fragments); a little sand, 5Y6/1. Clay 85%, limy cement 15%
- 3320-3335 Limy clay as above
- 3335-3350 Limy sandy clay. Soft, leached. Clay and sand with limy cement, micaceous. Sand is well sorted, fine grained, subrounded, 5Y6/1. Clay 55%, sand 25%, lime cement 20%
- 3350-3365 Limy sandy clay, leached, soft, clay, sand with limy cement, micaceous, slightly phosphatic. Sand well sorted, fine grained, subrounded, 5Y6/1. Clay 60%, sand 25%, limy cement 5%
- 3365-3380 Limy clayey sand. Leached soft. Sand with clay and limy cement, very micaceous, phosphatic; shale, slightly fossiliferous (shell fragments). Sand is well sorted, medium grained, subrounded, 5Y6/1. Sand 60%, clay 25%, limy cement 15%
- 3380-3395 Limy clayey sand as above
- 3395-3575 no samples.
- 3575-3590 Arkosic sand. Fresh, hard. Colorless and milky quartz, pyrite, slightly micaceous, phosphatic, feldspathic. Sand very poorly sorted, coarse to fine grained, subangular, 5Y8/1. Sand 100%
- 3590-3605 Arkosic sand. Fresh, hard. Colorless and milky quartz, feldspar, pyrite, mica; some shale. Sand very poorly sorted, very coarse to fine grained, subangular, 5Y8/1. Sand 99%, shale 1%
- 3605-3620 Arkosic sand. Fresh, hard. Colorless and milky quartz, feldspar; shale, pyritic, micaceous, slightly phosphatic (caving?). Poorly sorted, very coarse to fine grained, subangular, N7. Sand 95%, shale 5%
- 3620-3635 Arkosic sand. Fresh, hard. Colorless and milky quartz, feldspar, pyrite, phosphate; micaceous shale; poorly sorted, very coarse to fine grained, subangular sand, N7. Sand 95%, shale 5%
- 3635-3650 Shaly sand. Fresh, hard, colorless and milky quartz, feldspar, pyrite; micaceous shale; mica in sand, phosphatic, poorly sorted, very coarse to fine grained, subangular, N7. Sand 90%, shale 10%
- 3650-3665 Shaly sand as above

- 3665-3680 Arkosic sand, fresh, hard, colorless and milky and orange quartz, feldspar; some shale; pyritic, phosphatic, slightly glauconitic, slightly micaceous. Poorly sorted, very coarse to fine grained, subangular sand, N7. Sand 95%, shale 5%
- 3680-3695 Arkosic sand as above
- 3695-3710 Arkosic sand as above except no glauconite
- 3710-3725 Shaly arkosic sand. Fresh, hard. Colorless and milky quartz, feldspar; micaceous shale; mica, phosphatic, pyritic. Poorly sorted, coarse to fine grained, subangular sand, N7. Sand 87%, shale 13%
- 3725-3740 Arkosic sand. Fresh, hard. Colorless and milky quartz, feldspar. Micaceous shale, phosphatic, slightly fossiliferous (shell fragments). Better sorted, medium and fine grained, subrounded sand, N7. Sand 95%, shale 5%
- 3740-3755 Arkosic sand as above
- 3755-3770 Arkosic sand as above
- 3770-3785 Arkosic sand as above
- 3785-3800 Arkosic sand. Fresh, hard. Colorless and milky quartz, feldspar. Micaceous shale, pyritic, phosphatic, Well sorted, medium grained, subrounded sand, 5YR8/1. Sand 97%, shale 3%
- 3800-3815 Arkosic sand, fresh, hard. Colorless and milky quartz and feldspar. Micaceous shale, pyritic, phosphatic, micaceous. Well sorted, medium grained, subrounded sand, 5YR8/1. Sand 96%, shale 4%
- 3815-3830 Arkosic sand, as above
- 3830-3845 Arkosic sand. Fresh, hard, colorless and milky quartz, feldspar, micaceous, poorly sorted, coarse to fine grained, subrounded sand, 5YR8/1. Sand 100%
- 3845-3860 Arkosic sand as above, except pyritic
- 3860-3875 As above
- 3875-3890 As above
- 3890-3905 Arkosic sand, no change
- 3905-3920 As above
- 3920-3935 As above
- 3935-3950 As above

- 3950-3965 Arkosic sand. Fresh, hard colorless and white quartz, feldspar, micaceous, pyritic, poorly sorted, coarse to fine grained, subrounded, 5YR 8/1. Sand 100%
- 3965-3980 Arkosic sand as above except that some shale is present (caving maybe?)
- 3980-3995 Arkosic sand as 3950-3965
- 3995-4010 As above
- 4010-4025 As above
- 4025-4040 As above
- 4040-4055 As above
- 4055-4070 As above
- 4070-4085 no sample
- 4085-4100 As above
- 4100-4115 Arkosic sand. Fresh, hard, colorless and white quartz, feldspar, micaceous, slightly pyritic, poorly sorted, coarse to fine grained, subrounded, sand, 5YR8/1. Sand 100%
- 4115-4130 No change
- 4130-4145 As above
- 4145-4160 Arkosic sand, fresh, hard, colorless and white quartz, feldspar, micaceous, poorly sorted, coarse to fine grained, subrounded, 5YR 8/1. Sand 100%
- 4160-4175 Arkosic sand. Fresh, hard, colorless and white quartz, feldspar, micaceous, glauconitic (caving?), pyritic (caving?), a small amount of shale. Poorly sorted, coarse to fine grained, subangular sand, 5Y8/1. Sand 100%
- 4175-4190 As above
- 4190-4205 Arkosic sand. Fresh, hard, colorless and white quartz, feldspar, micaceous (biotite and muscovite); micaceous shale. Poorly sorted, coarse to medium grained, subangular sands, 5Y8/1. Sand 100%
- 4205-4220 As above
- 4220-4235 Arkosic sand as 4190-4205, but small amounts of pyrite, phosphate and glauconite.

- 4235-4250 As 4190-4205
- 4250-4265 As above
- 4265-4280 Arkosic sand. Fresh, hard, colorless and white quartz, feldspar. Micaceous, some micaceous shale, better sorted than previous samples, medium and fine grained, subrounded sand, 5Y8/1. Sand 100%
- 4280-4295 Sample missing
- 4295-4310 Arkosic sand as 4265-4280
- 4310-4325 Arkosic sand. Fresh, hard, colorless and white quartz, feldspar, micaceous, some micaceous shale. Poorly sorted, coarse to fine grained, subangular sand, 5YR 7/2. Sand 100%
- 4325-4340 Arkosic sand as above
- 4340-4355 As above
- 4355-4370 Arkosic sand. Fresh, hard, colorless and white quartz, less feldspar than in previous samples, slightly fossiliferous (shell fragments)(caving?), micaceous, some micaceous shale. Poorly sorted, coarse to fine grained, subrounded sand, 5YR8/1. Sand 100%
- 4370-4385 Arkosic sand. Fresh, hard, colorless and white quartz, feldspar. Micaceous, some micaceous shale. Poorly sorted, coarse to fine grained, subangular, 5YR8/1. Sand 100%
- 4385-4400 Arkosic sand, fresh, hard, colorless and white quartz, feldspar, limy shale, phosphate, pyrite, micaceous, shell fragments. Poorly sorted, coarse to fine grained, subrounded sand, 5YR 8/1. Sand 95%, shale 5%
- 4400-4415 Arkosic sand, fresh, hard, colorless and white quartz, feldspar, micaceous, phosphatic; shale; pyritic shell fragments. Poorly sorted, coarse to fine grained, subrounded, quartz grains, 5YR8/1. Sand 95%, shale 5%
- 4415-4430 Sand, fresh, hard, colorless and milky quartz, micaceous, glauconitic, pyritic, shell fragments, Very well sorted, fine grained, subrounded, N7. Sand 100%
- 4430-4445 Sand, fresh, hard, colorless and white quartz, micaceous, slightly pyritic, shell fragments. Shale. Poorly sorted, coarse to fine grained, subangular, N7. Sand 100%

- 4445-4460 Arkosic sand, fresh, hard, colorless and white quartz, feldspar, micaceous shale, limestone, shell fragments, micaceous, slightly pyritic and phosphatic. Poorly sorted, coarse to fine grained, subangular, 5Y7/2. Sand 100%
- 4460-4475 Sandy, limy clay. Leached, soft, clay, sand, micaceous, limy cement. Sands very poorly sorted, some small pieces of shale, 5YR5/2. Clay 55%, sand 45%
- 4475-4490 Limy clay with sand, leached, soft, clay with lime present, sand, micaceous, some rounded chunks of limestone, some shale, 5YR5/2. Limy clay 60%, sand 40%
- 4490-4505 Limy clayey sand. Leached, soft, sand with limy cement, clay, colorless and white quartz, micaceous, poorly sorted, subrounded, coarse to fine grained, 5YR5/2. Sand 65%, clay 35%
- 4505-4520 As above
- 4520-4535 Limy clayey sand. Leached, soft, colorless and white quartz, micaceous, clay. Poorly sorted, coarse to fine grained, subangular, 5YR6/2. Sand 85%, clay 15%
- 4535-4550 Limy clayey sand, leached, soft, colorless and white quartz, clay, micaceous, very poorly sorted, coarse to fine grains, subangular, 5YR6/2. Sand 70%, clay 30%
- 4550-4565 As above
- 4565-4580 Limy clayey sand, leached, soft, colorless or white quartz, clay, micaceous, very poorly sorted, coarse to fine grained, subangular, a few chunks of red clay, 5YR6/2. Sand 75%, clay 25%
- 4580-4595 Arkosic sand, fresh, hard, colorless white and orange quartz, feldspar, micaceous, a few shell fragments, some chunks of red clay. Very poorly sorted, very coarse to fine grained, subangular, 5Y8/1. Sand 100%
- 4595-4610 Arkosic sand as above
- 4610-4625 Arkosic sand as above
- 4625-4640 Clayey arkosic sand. Leached, hard, colorless, white and orange quartz, feldspar, clay, micaceous, some shale, red clay chunks. Poorly sorted, very coarse to very fine grained, subangular 10YR6/2. Sand 80%, clay 20%

- 4640-4655 Arkosic sand, fresh, hard, colorless white and orange quartz, feldspar, micaceous silt; very poorly sorted, coarse to fine grained, subangular, 5YR6/1. Sand 100%
- 4655-4670 As above
- 4670-4685 As above
- 4685-4700 Silty arkosic sand. Fresh, hard. Colorless white and orange quartz, feldspar; a little silt and shale, slightly micaceous. Very poorly sorted, very coarse to fine grained, subrounded, 10YR6/2. Sand 90%, silt 10%
- 4700-4715 As above
- 4715-4730 As above
- 4730-4745 Sample missing
- 4745-4760 Silty arkosic sand. Fresh, hard, colorless, white and orange quartz, less feldspar than in previous samples, slightly micaceous, some shale. Very poorly sorted, very coarse to very fine grained, subangular silt. 5YR6/1. Sand 60%, silt 40%
- 4760-4775 As above
- 4775-4790 Arkosic sand. Fresh, hard. Colorless, white and orange quartz, very little feldspar, smaller amount of silt, micaceous shale. Very poorly sorted, very coarse to very fine grained, angular to subangular, 5YR6/1. Sand 85%, silt 15%
- 4790-4805 Silty arkosic sand. Fresh, hard, colorless, white and orange quartz, some feldspar, slightly micaceous, silt, very poorly sorted, very coarse to very fine grains, subangular, 5YR6/1. Sand 60%, silt 40%
- 4805-4820 As above
- 4820-4835 Silty sand. Fresh, hard, colorless, white and orange quartz, very little feldspar, slightly micaceous, silt, shale, some chunks of red clay. Very poorly sorted, coarse to fine grained, subrounded, 10YR6/1. Sand 65%, silt 35%
- 4835-4850 Sand. Fresh, hard. Colorless white and orange quartz, a little feldspar, silt and shale, slightly micaceous, poorly sorted, coarse to fine grained, subangular, 5YR6/2. Sand 92%, silt 8%

- 4850-4865 As above
- 4865-4880 Sand. Fresh, hard. Colorless and white quartz, some feldspar, shale slightly micaceous. Poorly sorted, although better sorted than previous samples, coarse to fine grained, subrounded, N7. Sand 95%, shale 5%
- 4880-4895 As above
- 4895-4910 As above
- 4910-4925 Sand. Fresh, hard, colorless and white quartz, slightly micaceous; shale. Poorly sorted, medium and fine grained, subrounded, N7. Sand 100%
- 4925-4940 Sand. Fresh, hard, colorless and white quartz, slightly micaceous, some limestone, some chunks of red clay. Poorly sorted, medium to fine grained, subangular, N7. Sand 100%
- 4940-4955 As above
- 4955-4970 As above
- 4970-4985 As above
- 4985-5000 As above
- 5000-5015 Sand, fresh, hard, colorless and white quartz, slightly micaceous; shale; a small amount of feldspar, a little limestone. Poorly sorted, medium to very fine grained, subangular, N7. Sand 100%
- 5015-5030 As above
- 5030-5045 Sand, fresh, hard, colorless and white quartz, some shale, some feldspar, limestones. Poorly sorted, coarse to fine grained, subrounded, N7. Sand 100%
- 5045-5060 Sand as above except poorly sorted, coarse to fine grained which are subangular. Sand 100%
- 5060-5075 As above
- 5075-5090 no sample
- 5090-5105 Sand, fresh, hard, colorless and white quartz, some shale and limestone. Very poorly sorted, very coarse to very fine grained, subangular, N7. Sand 100%
- 5105-5120 Sand, fresh, hard, colorless and white quartz, some shale and limestone, slightly micaceous. Very poorly sorted, very coarse to fine grained, subangular, N7. Sand 100%

- 5120-5135 As above
- 5135-5150 Sand, fresh, hard, colorless and white and rose quartz, some limestone and shale, feldspar, micaceous, Very poorly sorted, very coarse to fine grained, subangular, N7. Sand 100%
- 5150-5165 As above
- 5165-5180 As above
- 5180-5195 Sand as in 5135-5150
- 5195-5210 Sand as above except for small amount of shell fragments
- 5210-5225 Sand, fresh, hard, colorless, white and rose quartz, some limestone, shale, and feldspar, slightly micaceous, very poorly sorted, very coarse to fine grains, subangular, N7, Sand 100%
- 5225-5240 As above
- 5240-5255 As above
- 5255-5270 Sand, fresh, hard, colorless and white quartz, feldspar, some shale and limestone. Poorly sorted, medium to fine grained, subrounded, N7. Sand 100%
- 5270-5285 Sand as above
- 5285-5300 Sand as above
- 5300-5315 Sand, fresh, hard, colorless and white quartz, feldspar, small amounts of limestone and shale, sorted, medium and fine grains, subrounded, N7. Sand 100%
- 5315-5330 Sand with shale. Fresh, hard. Colorless and white quartz, some feldspar; shale, limestone. Poorly sorted, coarse to fine grained, subangular, N7. Sand 100%
- 5330-5345 Sand, fresh hard, colorless and white quartz, feldspar, micaceous, shale, limestone. Very well sorted, fine grained, subrounded, N7. Sand 100%
- 5345-5360 Sand with shale. Fresh, hard. Colorless and white quartz, shale, limestone, micaceous. Poorly sorted, coarse to fine grains, subrounded, N7, Sand 93%, shale 7%
- 5360-5375 Shaly sand as above
- 5375-5390 As above
- 5390-5405 Shaly sand. Fresh, hard. Colorless and white quartz, shale, micaceous; limestone. Well sorted, fine grained, subrounded, N5. Sand 75%, shale 25%

- 5405-5420 Shaly sand, sand 60%, shale 40%
- 5420-5435 As above
- 5435-5450 Limy shale. Weathered, soft. Shale with limy cement; sand, micaceous; limestone, N4. Shale 95%, sand 5%
- 5450-5465 As above except for a few shell fragments
- 5465-5480 As 5435-5450
- 5480-5495 Limy shale. Weathered, soft. Shale with limy cement; sand, micaceous; limestone, N4. Shale 90%, sand 10%
- 5495-5510 As above
- 5510-5525 Shaly sand. Weathered, hard. Colorless and white quartz; shale; limestone, micaceous. Poorly sorted, coarse to fine grained, subrounded, N5. Sand 60%, shale 40%
- 5525-5540 Shaly sand as in 5510-5525-----note. added by HRC, this appears to be a conglomerate, with pebbles of some sort of hard stuff.
- 5540-5555 Limy shale. Weathered, soft. Shale; sand; limestone, micaceous, N4. Shale 90%, sand 10%
- 5555-5570 Limy shale and sand. Weathered, soft. Shale, colorless and white quartz, limestone, slightly micaceous. Well sorted, medium grained, subrounded, N5. Shale 55%, sand 45%
- 5570-5585 Limy shale as above
- 5585-5600 Shaly sand. Weathered, hard. Colorless and white quartz; shale; limestone; slightly micaceous. Well sorted, medium grained subrounded, 5YR6/1. Sand 85%, shale 15%
- 5600-5615 Limy sand. Fresh, hard, colorless and white quartz; limestone; shale. Slightly micaceous, glauconitic, feldspar, a few shell fragments. Well sorted, medium grained, subrounded, 5YR6/1. Sand 96%, shale 4%
- 5615-5630 Limy sand as above.
- 5630-5645 Limy sand. Fresh, hard. Colorless and white quartz; shale; limestone, micaceous, glauconite. Well sorted, medium grained, subrounded, 5YR6/1. Sand 93%, shale 7%
- 5645-5660 Sand as above