

Georgia Geological Survey well no. 190

Montgomery County, Georgia

J. E. Weatherford Co., Lonnie Wilkes no. 1

TD3424

Geophysical datum: Top rotary table (1 foot above drilling floor?);
drilling floor 293 feet above sea level.

logged by George Meadows, Emory University, October 1976

227
293
10/10

0-10'-No sample.

10-20'-Leached, stained, pale red 10R6/2, earthy luster, well sorted, medium to fine grained, clayey sand. Sand-98% medium to fine grained, sub-rounded, anhedral quartz. Remainder of sample is clayey, feldspathic coating on quartz grains.

20-40'-Leached, stained, pale red 10R6/2, earthy luster, well sorted, medium to fine grained, clayey sand. Sand-98% medium to fine grained, clayey anhedral, sub-rounded quartz. Remainder of sample is feldspathic coating on quartz grains.

40-60'-Fresh, fairly clean, white N9, earthy luster, well sorted, medium to fine grained sand. Sand-98% medium to fine grained, sub-angular, anhedral quartz.

60-124'-No sample.

124-250'-Stained, medium light gray N6, dull luster, coarse grained fossiliferous, phosphatic, sandy, limestone. 55% fossiliferous, dolomitic limestone. 43% poorly sorted, coarse to fine grained, anhedral, sub-angular quartz. Limonite present in small amounts.

250-300'-No change. Microfossil.

300-350'-Medium light gray N6, dull luster, coarse grained, fossiliferous, phosphatic, sandy, limestone. 68% fossiliferous dolomitic limestone. 30% poorly sorted, coarse to fine grained, anhedral, sub-angular quartz. Limonite and rose quartz present in small amounts.

350-370'-No change.

370-400'-Medium light gray N6, dull luster, coarse grained, fossiliferous, phosphatic, sandy limestone. 70% fossiliferous dolomitic limestone. 28% poorly sorted, coarse to fine grained, anhedral, sub-angular quartz. Limonite and rose quartz present in very small amounts. Some aggregates of dirty, iron cemented quartz grains present. Microfossils-3.

400-430'-No change. Microfossil.

430-460'-No change.

460-490'-Medium light gray N6, dull luster, coarse grained, fossiliferous, phosphatic, oolitic, sandy limestone. 75% fossiliferous, dolomitic, oolitic limestone. 20% poorly sorted, fine to coarse grained, anhedral, sub-angular quartz. Limonite and rose quartz present in small amounts. Some aggregates of dirty, iron cemented quartz grains present. Microfossil.

490-500'-No change. Microfossil.

500-520'-Light gray N7, dull luster, coarse grained, fossiliferous, phosphatic, sandy limestone. 65% fossiliferous dolomitic sandy limestone. 33% poorly sorted, coarse to fine grained sub-rounded, anhedral quartz. Small amounts of rose quartz and chert present. Microfossil.

520-560'-No change. Microfossil.

560-590'-Very light gray N8, dull luster, medium grained, fossiliferous, medium grained, limestone. 12% poorly sorted, coarse to fine grained, sub-rounded anhedral quartz. 85% fossiliferous, medium grained, limestone. Microfossils-4.

590-620'-Very light gray N8, dull luster, medium to fine grained, fossiliferous, sandy limestone. 88% fossiliferous, medium to fine grained limestone. 10% poorly sorted, coarse to fine grained, sub-rounded, anhedral quartz.

620-660'-Light gray N7, dull luster, phosphatic, medium to fine grained, fossiliferous, sandy, limestone. 85% fine to medium grained, fossiliferous limestone. 12% poorly sorted, coarse to fine grained, sub-angular to sub-rounded anhedral quartz. Small amounts of limonite and rose quartz present. Microfossil.

660-700'-No sample.

700-730'-Light gray N7, dull luster, phosphatic, medium to fine grained, fossiliferous, sandy, limestone. 88% fine to medium grained, fossiliferous sandy, dolomitic limestone. 10% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. Small amounts of rose quartz and limonite present. Microfossil.

730-760'-No sample.

760-790'-Medium light gray N6, dull luster, phosphatic, medium to fine grained, fossiliferous, dolomitic, sandy limestone. 12% medium to fine grained, sub-angular to sub-rounded, poorly sorted, anhedral quartz. Small amounts of limonite and rose quartz present. 85% medium to fine grained, fossiliferous, dolomitic, sandy limestone.

790-805'-No change.

800-820'-No change. Microfossil.

820-835'-Light gray N7, dull luster, phosphatic, medium to fine grained, fossiliferous, dolomitic, sandy limestone. 88% medium to fine grained, fossiliferous, dolomitic limestone. 10% poorly sorted, coarse to fine grained, sub-rounded anhedral quartz. Most of the quartz is present as small grains in the sandy limestone.

835-850'-No change.

850-865'-No change.

865-880'-No change.

885-900'-Light gray N7, fine to medium grained, fossiliferous, dolomitic, phosphatic, sandy limestone. 72% medium to fine grained, dolomitic, fossiliferous limestone. 27% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. Some large aggregates of Fe cemented quartz grains present. Also small amounts of limonite, rose quartz, and pyrite present.

900-915'-No change. Microfossil.

915-930'-No change.

930-960'-No change.

930-945'-No change.

945-960'-No change.

960-975'-Medium light gray N6, medium to fine grained, fossiliferous, phosphatic, glauconitic, sandy limestone. 80% medium to fine grained, fossiliferous, dolomitic limestone. 15% poorly sorted, coarse to fine grained, sub-rounded, anhedral, quartz. Small amounts of rose quartz and limonite present.

975-990'-No change. Microfossil.

990-1005'-No change.

1005-1020'-No change.

1020-1035'-Medium light gray, N6, medium to fine grained, fossiliferous, phosphatic, glauconitic, dolomitic, sandy limestone. 89% medium to fine-grained, fossiliferous, dolomitic limestone. 9% poorly sorted, coarse to fine grained, sub-rounded, anhedral quartz.

1035-1050'-Light gray N7, medium to fine grained, fossiliferous, phosphatic, glauconitic, dolomitic, sandy limestone. 90% medium to fine grained, fossiliferous, dolomitic, limestone. 8% poorly sorted, coarse to fine grained, sub-rounded, anhedral quartz. Small amounts of limonite present. Microfossil.

1050-1065'-No change.

1065-1080'-No change.

1080-1095'-Light gray N7, medium to fine grained, fossiliferous, phosphatic, glauconitic, dolomitic, sandy limestone. 80% fossiliferous, dolomitic, limestone. 18% poorly sorted, coarse to fine grained, sub-rounded, anhedral quartz. Small amounts of limonite and rose quartz present.

1095-1110'-Light gray N7, medium to fine grained, fossiliferous, phosphatic, glauconitic, dolomitic, sandy limestone. 75% fossiliferous, dolomitic limestone. 23% poorly sorted, coarse to fine grained, sub-rounded, anhedral quartz. Small amounts of rose quartz and limonite present. Some large aggregates of Fe cemented quartz grains present.

1110-1125'-Medium light gray N6, medium to fine grained, fossiliferous, phosphatic, dolomitic, sandy limestone. 65% fossiliferous, dolomitic limestone. 33% poorly sorted, coarse to fine grained, sub-rounded, anhedral quartz. Small amounts of rose quartz and limonite present. Several large grains of dark gray silty shale present.

1125-1140'-Medium light gray N6, medium to fine grained, fossiliferous, phosphatic, dolomitic, sandy limestone. 70% fossiliferous, dolomitic limestone. 28% poorly sorted, coarse to fine grained, sub-rounded, anhedral quartz. Small amounts of limonite present. Microfossil.

1140-1155'-Medium light gray N6, medium to fine grained, fossiliferous, phosphatic, glauconitic, dolomitic, sandy limestone. 65% fossiliferous, dolomitic limestone. 30% poorly sorted, coarse to fine grained, sub-rounded, anhedral quartz. Small amounts of limonite, rose quartz, and dark gray, silty shale present.

1155-1170'-No change. Microfossil.

1170-1185'-Medium light gray, N6, medium to fine grained, fossiliferous, phosphatic, glauconitic, dolomitic, sandy limestone. 55% fine to coarse grained, poorly sorted, coarse to fine grained, sub-rounded, to sub-angular, anhedral quartz. 43% fine to coarse grained, dolomitic, fossiliferous limestone. Limonite, rose quartz, and pyrite present in small amounts. Microfossil.

1185-1210'-No change. Microfossil.

1210-1230'-Medium light gray N6, medium to fine grained, fossiliferous, phosphatic, glauconitic, dolomitic, sandy limestone. 65% fine to coarse grained, dolomitic, fossiliferous limestone. 34% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. Small amounts of limonite and rose quartz present. Microfossil.

- 1230-1250'-Medium light gray N6, fossiliferous, medium to fine grained, phosphatic, glauconitic, dolomitic, sandy limestone. 55% medium to fine grained, fossiliferous, dolomitic limestone. 43% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. Small amounts of limonite and mica present.
- 1250-1270'-Medium light gray N6, medium to fine grained, phosphatic, glauconitic, dolomitic, sandy limestone. 68% medium to fine grained, fossiliferous, dolomitic limestone. 30% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. Small amounts of limonite rose quartz, and dark gray, silty shale present.
- 1270-1300'-No change.
- 1300-1330'-Medium light gray N6, medium to fine grained, fossiliferous, phosphatic, glauconitic, dolomitic, sandy limestone. 60% medium to fine grained, fossiliferous, dolomitic, limestone. 38% poorly sorted, coarse to fine grained, sub-angular to sub-rounded anhedral quartz. Several large grains of dark gray silty shale present, also small amounts of limonite, rose quartz, and pyrite present. Microfossils-2.
- 1330-1360'-No change.
- 1360-1390'-Medium gray N5, coarse to fine grained, phosphatic, glauconitic, limy sand. 95% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 4% medium to fine grained limestone. Grains of limonite present in small amounts.
- 1390-1420'-Medium gray N5, coarse to fine grained, phosphatic, glauconitic, limey sand. 90% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 8% fine to medium grained, limestone. Some limonite and rose quartz present in small amounts.
- 1420-1450'-Medium gray N5, very coarse to fine grained, phosphatic, limey sand. 85% poorly sorted very coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 12% fine to medium grained limestone. Also small amounts of dark brown siltstone, limonite, and rose quartz present.
- 1450-1480'-Medium gray N5, very coarse to fine grained, phosphatic, limey, silty sand. 75% poorly sorted, coarse to fine grained, sub-rounded to subangular, anhedral quartz. Several large aggregates of hematite grains coated with a crystalline coating of gypsum, small amounts of limonite, rose quartz, and dark brown silty shale present.
- 1480-1510'-No change.
- 1510-1540'-No change.

- 1540-1570'-Medium light gray N6, coarse to fine grained, phosphatic, glauconitic, limey sand. 60% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 35% medium to fine grained, fossiliferous, dolomitic, Fe stained limestone. Aggregates of hematite grains with a crystalline gypsum coating present, also small amounts of limonite, rose quartz, and silty shale present.
- 1570-1600'-No change.
- 1600-1630'-No change.
- 1630-1670'-Medium to light gray N6, coarse to fine grained, phosphatic, dolomitic, sandy limestone. 60% medium to fine grained, dolomitic, sandy limestone. 38% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. Several large aggregates of crystalline gypsum coated, hematite grains, also small amounts of rose quartz, limonite, silty shale, and sulphur present.
- 1670-1700'-No change.
- 1700-1730'-No change. Very small sample.
- 1730-1770'-Medium light gray N6, fine to medium grained, highly phosphatic, sandy, glauconitic, fossiliferous, dolomitic, limestone. 55% fine to medium grained, fossiliferous, sandy limestone. 40% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. A few aggregates of hematite grains and one of Fe cemented quartz grains present, also small amounts of limonite and rose quartz present. Very small sample.
- 1770-1810'-No change. Small sample.
- 1810-1840'-Medium gray N5, fine to medium grained, phosphatic, mixture of sand and dark gray silty shale, with one large limestone fragment. Sample is approximately 50% sand and 50% shale, sand is fairly well sorted, fine grained, micaceous, and the shale is dark grayish-brown, with some limonite and rose quartz present. Sample is extremely small.
- 1840-1870'-Dark gray N3, sandy micaceous, silty shale. 65% dark gray, micaceous, silty shale. 33% fairly well sorted, fine grained, sub-angular to sub-rounded, anhedral quartz. Some limonite, rose quartz, and limestone chips present. Very small sample.
- 1870-1900'-Medium gray N5, coarse to fine grained, micaceous, shaly sand. 65% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 30% dark brown micaceous, silty shale. Some limonite, rose quartz, and limestone chips present. Very small sample.

1900-1940'-Medium light gray N6, medium to fine grained, phosphatic, glauconitic, sand and limestone. 55% poorly sorted, medium to fine grained, sub-angular to sub-rounded, anhedral quartz. 45% fine to medium grained, fossiliferous, sandy, limestone. Small amounts of rose quartz, limonite mica, and silty shale present, with one aggregate of hematite grains with a coating of crystalline gypsum, and one large, 10mm by 4mm, fragment of lignite.

1940-1980'-Medium gray N5, coarse to fine grained, phosphatic, shaly sand. 70% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. 15% dark gray silty shale, 15% medium to fine grained, fossiliferous sandy limestone. Present in small amounts, mica, rose quartz, limonite, and some aggregates of hematite grains with a coating of crystalline gypsum. Microfossil.

1980-2010'-No change. Samples of small, magnetic, metallic, spheres mounted on slides.

2010-2040'-Medium gray N5, coarse to fine grained, phosphatic, shaly, glauconitic sand. 70% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 25% medium to fine grained, fossiliferous, sandy limestone. Small amounts of silty shale, limonite, rose quartz, and a few aggregates of hematite grains with a coating of crystalline gypsum present.

2040-2070'-No change.

2070-2100'-No change.

2098'-Medium gray N5, coarse to fine grained, phosphatic, shaley sand. 70% fairly well sorted, medium grained, sub-rounded to sub-angular, anhedral quartz. 20% fine to medium grained, fossiliferous sandy limestone. Fairly large amounts of dark gray silty shale present. Small amounts of limonite, rose quartz and pyrite present. Microfossil. 20% sh

2100-2130'-Medium gray N5, phosphatic, coarse to fine grained, shaly sand. 65% fairly well sorted, medium grained, sub-angular to sub-rounded, anhedral quartz. 30% fine to medium grained, fossiliferous, sandy limestone. Fairly large amounts of dark gray silty shale present. Small amounts of limonite and rose quartz present. Microfossil. 20% sh

2130-2170'-Medium gray N5, coarse to fine grained, glauconitic, phosphatic, sand. 65% fairly well sorted, medium to coarse grained, sub-rounded to sub-angular, anhedral quartz. 32% fine to medium grained, fossiliferous, sandy limestone. Small amounts of limonite and rose quartz present, also several aggregates of hematite grains with a coating of crystalline gypsum.

10% shale

- 2170-2200'-Medium gray N5, coarse to fine grained, phosphatic, shaly sand. 70% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. 25% fine to medium grained, fossiliferous, sandy limestone. Several large grains of limonite present and small amounts of rose quartz and silty shale. Microfossil. 10% sil
- 2200-2230'-No change.
- 2230-2260'-Medium gray N5, coarse to fine grained, phosphatic, glauconitic sand. 65% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. 15% dark gray, micaceous, silty shale. 18% medium to fine grained, fossiliferous, sandy limestone. Small amounts of limonite and rose quartz present. Microfossil.
- 2260-2290'-Medium gray N5, coarse to fine grained, phosphatic, sand. 73% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. 25% medium to fine grained, fossiliferous, sandy limestone. Small amounts of rose quartz and limonite present, also some aggregates of hematite grains with a coating of crystalline gypsum.
- 2290-2320'-No change.
- 2320-2360'-No change.
- 2360-2400'-Medium light gray N6, coarse to fine grained, phosphatic, glauconitic, sand. 85% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. 13% fine to medium grained, fossiliferous, sandy limestone. Small amounts of rose quartz, limonite, and some aggregates of hematite grains with a crystalline gypsum coating present.
- 2400-2430'-No change.
- 2430-2470'-Medium gray N5, coarse to fine grained, phosphatic sand. 85% poorly sorted coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 14% fine grained, Fe stained limestone. Also present in small amounts, rose quartz, limonite, aggregates of hematite grains coated with crystalline gypsum, and lime cemented aggregates of quartz grains.
- 2470-2500'-Medium gray N5, coarse to fine grained, phosphatic, glauconitic sand. 75% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. 17% fine to medium grained, sandy, Fe stained limestone. Limonite, rose quartz, and silty shale present in small amounts. Also aggregates of hematite grains coated with crystalline gypsum.

- 2500-2530'-Medium gray N5, coarse to fine grained, phosphatic sand. 85% poorly sorted, very coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 5% lignite, associated with pyrite also present. Present in small amounts, sandy limestone, rose quartz, limonite, mica, silty shale, and aggregates of hematite grains with a coating of crystalline gypsum. Microfossil.
- 2530-2560'-Medium gray N5, very coarse to fine grained phosphatic sand. 90% poorly sorted, very coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. Small amounts of mica, silty shale, limonite, rose quartz, lignite, and aggregates of hematite grains coated with crystalline gypsum.
- 2560-2590'-No change.
- 2590-2620'-Medium light gray N6, coarse to fine grained, phosphatic, shaly sand. 85% poorly sorted, very coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 5% lignite, 7% fine to medium grained, fossiliferous limestone. Small amounts of dark gray silty shale, limonite and mica present.
- 2620-2650'-Medium light gray N6, coarse to fine grained, phosphatic, glauconitic, shaly sand. 75% poorly sorted, very coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 10% dark gray, silty shale, 10% fine to medium grained, fossiliferous limestone. Small amounts of lignite, limonite, rose quartz, mica, and aggregates of hematite grains with a coating of crystalline gypsum present.
- 2655-2670'-Medium light gray N6, coarse to fine grained, phosphatic, shaly, limey sand. 55% poorly sorted, coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 25% dark gray silty shale, 18% fine to medium grained, fossiliferous limestone. Also present in small amounts, mica, lignite, limonite, and rose quartz.
- 2650-2680'-Medium light gray N6, coarse to fine grained, phosphatic, shaly, limey sand. 85% poorly sorted, coarse to fine grained, sub-angular to sub-rounded, anhedral quartz. 5% medium to fine grained limestone, 5% micaceous, silty shale. Also, small amounts of mica, lignite, limonite, rose quartz, and some lime cemented aggregates of quartz grains.
- 2670-2685'-Medium light gray N6, coarse to fine grained, phosphatic, shaly, limey sand. 75% poorly sorted, very coarse to fine grained, sub-rounded to sub-angular, anhedral quartz. 10% dark gray, micaceous silty shale, 10% fine to medium grained limestone. Also small amounts of mica, limonite, rose quartz and aggregates of lime cemented quartz grains. Also some aggregates of hematite grains with a coating of crystalline gypsum.

- 2685'-2700'-Medium gray N5, phosphatic, sandy, limey, silty shale. 65% dark gray, micaceous silty shale. 20% poorly sorted, coarse to fine grained, sub-rounded, anhedral quartz. 12% fine to medium grained limestone. Also present, small amounts of limonite, rose quartz, and lignite. Much of sample is iron stained.
- 2700-2715'-No change.
- 2715-2730'-No change except for appearance of a large clump of a light dun clayey substance, that did not react with HCl.
- 2730-2745'-Medium gray N5, phosphatic, silty sand. 65% poorly sorted, very coarse to fine grained, sub-rounded, anhedral quartz. 30% dark gray to light gray, micaceous, silty shale. Also present, limonite, lignite, rose quartz, and limestone. Microfossil.
- 2740-2770'-Medium light gray N6, phosphatic, glauconitic, sand. 90% fairly well sorted, very coarse grained, sub-rounded to sub-angular, anhedral quartz. Also present, small amounts of limonite, silty shale, rose quartz, and some aggregates of hematite grains with a crystalline coating of gypsum.
- 2745-2760'-Medium gray N5, phosphatic, silty, micaceous sand. 70% fairly well sorted, coarse grained, sub-angular, anhedral quartz. 12% dark to light gray, micaceous, silty shale. 12% fine to medium grained, limestone. Also present in small amounts, limonite, rose quartz, lignite and large flakes of mica.
- 2760-2775'-Medium gray N5, phosphatic, silty sand. 70% fairly well sorted, coarse grained, sub-angular, anhedral quartz. 20% dark to light gray, micaceous, silty shale. 8% fine to medium grained, sandy limestone. Also present, mica, limonite, and rose quartz.
- 2772-2790'-Medium light gray N6, phosphatic, limonitic, shaly, silty sand. 70% poorly sorted, very coarse to fine grained, sub-angular, anhedral quartz. 18% dark to light gray, micaceous silty shale. 10% medium to fine grained limestone. Also present, large mica flakes, rose quartz, limonite, lignite and some aggregates of hematite grains.
- 2790-2800'-Medium light gray N6, phosphatic, shaly, glauconitic sand. 70% poorly sorted, very coarse to fine grained, sub-angular, anhedral quartz. 25% dark to light gray, micaceous shale. Also present, limonite, limestone, and mica, and some silica cemented aggregates of quartz.

- 2770-2800'-Light gray N7, phosphatic, glauconitic, sand. 90% poorly sorted, coarse to fine grained, sub-angular, anhedral quartz. 7% dark gray, micaceous shale. Also present, limonite, rose quartz, and some aggregates of hematite grains with a coating of crystalline gypsum.
- 2805-2820'-Medium gray N5, phosphatic, glauconitic, silty-shaly sand. 60% poorly sorted, coarse to fine grained, sub-angular anhedral quartz. 30% dark to light gray, micaceous, silty shale. Also present, small amounts of lignite, limestone, limonite, rose quartz and crystalline pyrite.
- 2800-2830'-Medium light gray N6, phosphatic, glauconitic, shaly sand. 82% poorly sorted, coarse to fine grained, sub-angular, anhedral quartz. 15% dark to light gray silty, micaceous shale. Also present, small amounts of rose quartz, limonite and mica.
- 2820-2835'-Medium light gray N6, phosphatic, glauconitic, shaly sand. 65% poorly sorted, very coarse to fine grained, sub-angular, anhedral quartz. 30% dark to light gray, silty, micaceous shale. Also present, limonite, limestone, rose quartz and mica.
- 2830-2860'-Light gray N7, phosphatic, glauconitic, sand. 92% poorly sorted, coarse to fine grained, sub-angular, anhedral quartz. Also present, silty shale, mica, limonite, and rose quartz.
- 2835-2850'-Medium light gray N6, phosphatic, shaly sand. 90% fairly well sorted, coarse grain sized, sub-rounded, anhedral quartz. 7% dark to light gray, micaceous, silty shale. Also present, lignite, rose quartz, limonite in small amounts.
- 2850-2865'-Light gray N7, phosphatic, glauconitic, shaly sand. 80% poorly sorted, very coarse to fine grained, sub-rounded, anhedral quartz. 15% dark to light gray, micaceous, silty shale. Also present, lignite, rose quartz, limestone, limonite, and hematite.
- 2865-2880'-Medium light gray N6, phosphatic, glauconitic, shaly sand. 70% poorly sorted, very coarse to fine grained, sub-rounded, anhedral quartz. 15% dark to light gray, micaceous, silty shale. 10% sandy limestone. Also present, rose quartz and limonite.
- 2860-2890'-Medium light gray N6, phosphatic, glauconitic sand. 90% poorly sorted, coarse to fine grained, sub-angular, anhedral quartz. Also present, lignite, limonite, rose quartz, silty shale, limestone, and aggregates of hematite grains with a coating of crystalline gypsum.
- 2880-2895'-Medium light gray N6, phosphatic, glauconitic sand. 80% poorly sorted, coarse to fine grained, anhedral quartz. 12% dark to light gray, micaceous silty shale. Also present, rose quartz, limestone, limonite, and aggregates of hematite grains with a coating of crystalline gypsum.

- 2890-2920'-Pinkish gray 5YR 8/1, phosphatic sand. 95% poorly sorted, rounded to sub-rounded, coarse to fine grained, anhedral quartz. Present in small amounts, limonite and silty shale. Several grains of rose quartz give the sample its pinkish cast.
- 2895-2910'-No change.
- 2920-2950'-No change.
- 2950-2980'-No change.
- 2980-3010'-No change.
- 3000-3015'-No change.
- 3030-3040'-No change.
- 3010-3050'-No change.
- 3040-3060'-Piece of core sample-Moderate reddish orange 10R 6/6, coarse to fine grained, friable, phosphatic, feldspathic sandstone. Cuttings show poor sorting with medium grain size predominant. 98% anhedral, sub-rounded quartz.
- 3050-3090'-Pinkish gray 5Yr 8/1, phosphatic sand. 95% poorly sorted, very coarse to fine grained, sub-rounded, anhedral quartz. Very small amounts of limonite and silty shale present. Several large grains of rose quartz give sample its pinkish cast. One small metallic, sphere mounted on a slide.
- 3060-3080'-Piece of core sample-Banded, moderate reddish brown, 10R 4/6 to grayish orange pink 10R 8/2, friable, coarse to medium grained, feldspathic, micaceous sandstone. Cuttings show fairly well sorted, medium grain sized, anhedral, phosphatic sand. Very small amounts of mica.
- 3060-3090'-Piece of core sample-Banded, pale red 5R 6/2, to very pale green, 10G 8/2, friable, coarse to medium grained, micaceous, feldspathic sandstone. Cuttings show fairly well sorted, medium size grains, phosphatic, anhedral quartz.
- 3090-3108'-1-Piece of core sample-Pale red 5R 6/2, friable, coarse to fine grained, micaceous, feldspathic sandstone. Cuttings show fairly well sorted, medium grain sized, sub-angular, anhedral quartz, with amounts of phosphate and mica.
- 3090-3108'-2-Piece of core sample-Mottled, pale red 5R 6/2 and very pale green 10G 8/2, friable, coarse to fine grained, micaceous, feldspathic sandstone. Cuttings show well sorted, medium grain sized, sub-angular anhedral, phosphatic sand. Large amounts of mica present.

3090-3108'-3-Piece of core sample-Yellowish gray 5Y 8/1 friable, coarse grained, micaceous, phosphatic sandstone. Cuttings show fairly well sorted, medium grain sized, sub-angular, anhedral quartz. Limonite, rose quartz, and dark mica present in very small amounts.

3090-3120'-Grayish orange pink 5YR 7/2, coarse to fine grained, phosphatic sand. 90% poorly sorted, very coarse to fine grained, sub-angular, anhedral quartz. Also present, some limestone(caving), silty shale, and large amounts of mica, rose quartz, and K-feldspar.

3120-3150'-No change.

3150-3180'-No change.

3180-3220'-No change.

3220-3260'-No change.

3260-3300'-No change.

3300-3330'-Grayish orange pink 5YR 7/2, phosphatic, glauconitic, micaceous sandstone. 95% well sorted, medium size grains, sub-angular, anhedral quartz. Large amounts of K-feldspar and rose quartz present.

3305-3325'-No change.

3325-3355'-No change.

3330-3360'-No change.

3335-3393'-No change.

3360-3390'-No change.

3390-3420'-Cuttings sample mounted on glass slide-large grains of igneous or metamorphic basement rock.

Remainder of samples to depth of 3426'-Grayish orange pink, 5YR 7/2, phosphatic, glauconitic, micaceous sandstone. 95% well sorted, coarse grained, sub-angular, anhedral quartz. All samples contain chips of igneous or metamorphic basement rock.