

Zemel Road Landfill IW (W-16889)

SFWD Geob. # 015-01

W-16889

or

CH-313

Zemel Rd  
IW

July 95

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-16889  
TOTAL DEPTH: 2710 FT.  
244 SAMPLES FROM 0 TO 2710 FT.

COUNTY - CHRLT4  
LOCATION: T.42S R.23E S.25  
LAT = 26D 47M 35S  
LON = 82D 57M 40S

COMPLETION DATE: 09/10/92  
OTHER TYPES OF LOGS AVAILABLE - NONE

ELEVATION: 21 FT

OWNER/DRILLER: SOUTH FLORIDA WATER MANAGEMENT DISTRICT

WORKED BY: MARTIN BALINSKY (8/8/95)  
THIS IS THE CHARLOTTE COUNTY INJECTION WELL.  
OWNER: ZEMEL ROAD #1 IW. DRILLED BY YOUNGQUIST BROS.  
WELL IS LOCATED IN SEC 25, T42S, R23E.  
GILCHRIST 7.5' QUADRANGLE, CHARLOTTE COUNTY.

SFWMP Geophy ID# 015-00000  
Well name: CH 313  
Digitized logs!

Ron Reese

|       |   |       |         |                      |
|-------|---|-------|---------|----------------------|
| 0.    | - | 40.   | 121PCPC | PLIOCENE-PLEISTOCENE |
| 40.   | - | 800.  | 122HTRN | HAWTHORN GROUP       |
| 800.  | - | 1180. | 123SWNN | SUWANNEE LIMESTONE   |
| 1180. | - | 1600. | 124OCAL | OCALA GROUP          |
| 1600. | - | 2710. | 124AVPK | AVON PARK FM.        |
| 40.   | - | 50.   | 000NOSM | NO SAMPLES           |
| 90.   | - | 100.  | 000NOSM | NO SAMPLES           |
| 140.  | - | 150.  | 000NOSM | NO SAMPLES           |
| 160.  | - | 180.  | 000NOSM | NO SAMPLES           |
| 240.  | - | 310.  | 000NOSM | NO SAMPLES           |
| 320.  | - | 350.  | 000NOSM | NO SAMPLES           |
| 360.  | - | 370.  | 000NOSM | NO SAMPLES           |
| 1950. | - | 1980. | 000NOSM | NO SAMPLES           |
| 2040. | - | 2050. | 000NOSM | NO SAMPLES           |
| 2080. | - | 2090. | 000NOSM | NO SAMPLES           |
| 2230. | - | 2240. | 000NOSM | NO SAMPLES           |
| 2530. | - | 2550. | 000NOSM | NO SAMPLES           |

Hawthorn

720 -

Suwannee

Base Brackish water  
1560'

0 - 10 CALCILUTITE; VERY LIGHT GRAY TO GRAYISH ORANGE  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
05% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO MEDIUM  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-05%

10 - 20 SHELL BED; WHITE TO VERY LIGHT ORANGE  
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY  
UNCONSOLIDATED  
ACCESSORY MINERALS: PHOSPHATIC SAND-01%  
FOSSIL SHELL BED. GASTROPODS

- 20 - 30 CALCILUTITE; GRAYISH BROWN TO VERY LIGHT ORANGE  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS, SKELETAL, CALCILUTITE  
35% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO GRAVEL  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: QUARTZ SAND-10%, PHOSPHATIC SAND-05%  
FOSSILS: MOLLUSKS  
A LIMY MUD WITH SAND AND PHOSPHATE GRAINS. CONTAINS ABOUT  
30% MOLLUSC FRAGMENTS.
- 30 - 40 SHELL BED; LIGHT OLIVE GRAY  
20% POROSITY: INTERGRANULAR; POOR INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-03%  
SHELLS 10-40 FEET POSSIBLY INDICATIVE OF CALOOSAHATCHEE  
MARL.
- 40 - 50 NO SAMPLES.
- 50 - 60 CALCILUTITE; LIGHT OLIVE GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, SKELETAL, CRYSTALS  
40% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: QUARTZ SAND-10%, PHOSPHATIC SAND-04%  
CLAY-05%  
FOSSILS: MOLLUSKS  
END OF SHELL BEDS. POSSIBLE TOP OF MIOCENE HAWTHORN  
FORMATION.
- 60 - 70 NO SAMPLES.
- 70 - 80 CALCILUTITE; LIGHT OLIVE GRAY TO MODERATE OLIVE BROWN  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, SKELETAL, CRYSTALS  
30% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
POOR INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: QUARTZ SAND-10%, PHOSPHATIC SAND-03%  
CLAY-05%  
FOSSILS: MOLLUSKS

- 80 - 90 CALCILUTITE; LIGHT OLIVE BROWN TO GRAYISH ORANGE PINK  
25% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, SKELETAL, CRYSTALS  
20% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
UNCONSOLIDATED  
ACCESSORY MINERALS: QUARTZ SAND-05%, CLAY-30%  
PHOSPHATIC SAND-05%  
FOSSILS: MOLLUSKS
- 90 - 100 NO SAMPLES.
- 100 - 110 CALCILUTITE; LIGHT OLIVE BROWN TO VERY LIGHT ORANGE  
25% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, SKELETAL, CRYSTALS  
35% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
UNCONSOLIDATED  
ACCESSORY MINERALS: QUARTZ SAND-05%, CLAY-35%  
PHOSPHATIC SAND-05%  
FOSSILS: MOLLUSKS
- 110 - 140 CALCILUTITE; LIGHT OLIVE GRAY TO LIGHT GREENISH YELLOW  
25% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, SKELETAL  
40% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
UNCONSOLIDATED  
ACCESSORY MINERALS: QUARTZ SAND-25%, CLAY-10%  
PHOSPHATIC SAND-02%  
FOSSILS: MOLLUSKS
- 140 - 150 NO SAMPLES.
- 150 - 160 CALCILUTITE; LIGHT OLIVE GRAY TO VERY LIGHT GRAY  
10% POROSITY: INTERGRANULAR  
GRAIN TYPE: CRYSTALS, SKELETAL  
15% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
POOR INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: CLAY-10%, QUARTZ SAND-30%  
PHOSPHATIC SAND-05%  
FOSSILS: MOLLUSKS
- 160 - 180 NO SAMPLES.

- 180 - 190 SHELL BED; WHITE  
25% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY  
UNCONSOLIDATED  
ACCESSORY MINERALS: PHOSPHATIC SAND-05%, QUARTZ SAND-25%  
CLAY-05%  
FOSSILS: MOLLUSKS  
A SANDY SHELL BED.
- 190 - 200 CALCILUTITE; LIGHT GRAY TO WHITE  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, SKELETAL, CRYSTALS  
35% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO GRAVEL  
POOR INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-05%, QUARTZ SAND-20%  
CLAY-05%  
FOSSILS: MOLLUSKS
- 200 - 210 CALCILUTITE; LIGHT OLIVE GRAY TO WHITE  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, SKELETAL, CRYSTALS  
20% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO GRAVEL  
POOR INDURATION  
ACCESSORY MINERALS: PHOSPHATIC SAND-07%, QUARTZ SAND-25%  
CLAY-03%  
FOSSILS: MOLLUSKS
- 210 - 240 CALCILUTITE; YELLOWISH GRAY TO LIGHT OLIVE GRAY  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, SKELETAL, CRYSTALS  
45% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
POOR INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-08%, QUARTZ SAND-20%  
CLAY-05%  
FOSSILS: MOLLUSKS, CORAL
- 240 - 310 NO SAMPLES.
- 310 - 320 CALCILUTITE; YELLOWISH GRAY TO WHITE  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, SKELETAL  
20% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO GRAVEL  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-05%  
FOSSILS: MOLLUSKS, ECHINOID  
END OF DISTINCTIVE CLAY MATRIX.

- 320 - 350 NO SAMPLES.
- 350 - 360 CALCILUTITE; LIGHT OLIVE GRAY  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
20% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO MEDIUM  
POOR INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-12%, CLAY-05%  
FOSSILS: ECHINOID
- 360 - 370 NO SAMPLES.
- 370 - 380 CALCILUTITE; LIGHT OLIVE GRAY  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
25% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO MEDIUM  
POOR INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-10%, CLAY-05%
- 380 - 390 CALCILUTITE; LIGHT OLIVE GRAY TO WHITE  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, SKELETAL  
20% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO MEDIUM  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-06%, CLAY-10%  
FOSSILS: MOLLUSKS  
GASTROPODS
- 390 - 410 CALCILUTITE; LIGHT OLIVE GRAY TO WHITE  
25% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, SKELETAL  
30% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO MEDIUM  
UNCONSOLIDATED  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-10%, CLAY-15%  
FOSSILS: CRUSTACEA, MOLLUSKS
- 410 - 440 CALCILUTITE; LIGHT OLIVE GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE; 05% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO MEDIUM  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-05%  
GRAY COLORED CLAY PRESENT THE LAST 350 FEET.

- 440 - 460 LIMESTONE; LIGHT OLIVE GRAY TO WHITE  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
05% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
ACCESSORY MINERALS: PHOSPHATIC SAND-03%
- 460 - 470 LIMESTONE; VERY LIGHT GRAY TO MODERATE LIGHT GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS; 02% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
ACCESSORY MINERALS: PHOSPHATIC SAND-01%
- 470 - 490 CALCILUTITE; LIGHT OLIVE GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE; 05% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
ACCESSORY MINERALS: DOLOMITE-40%, PHOSPHATIC SAND-02%  
OTHER FEATURES: DOLOMITIC  
PAST TWENTY FEET FIRST MAJOR DOLOMITE FOUND.
- 490 - 500 LIMESTONE; YELLOWISH GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS; 01% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
ACCESSORY MINERALS: PHOSPHATIC SAND-01%, DOLOMITE-40%  
OTHER FEATURES: DOLOMITIC
- 500 - 520 CALCILUTITE; LIGHT OLIVE GRAY TO YELLOWISH GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE; 01% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: DOLOMITE-25%, PHOSPHATIC SAND-03%  
OTHER FEATURES: DOLOMITIC  
DROP IN DOLOMITE CONTENT OF ABOUT 15%.

- 520 - 530 CALCILUTITE; LIGHT OLIVE GRAY TO VERY LIGHT GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE; 01% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-01%, DOLOMITE-25%  
OTHER FEATURES: DOLOMITIC
- 530 - 540 CALCILUTITE; WHITE TO VERY LIGHT GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, SKELETAL  
25% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-01%, DOLOMITE-25%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS
- 540 - 560 LIMESTONE; DARK GRAYISH YELLOW  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS, CALCILUTITE, SKELETAL  
05% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
ACCESSORY MINERALS: PHOSPHATIC SAND-05%, DOLOMITE-25%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: BENTHIC FORAMINIFERA
- 560 - 590 CALCILUTITE; VERY LIGHT ORANGE TO GRAYISH BROWN  
10% POROSITY: LOW PERMEABILITY, MOLDIC  
GRAIN TYPE: CALCILUTITE, CRYSTALS, SKELETAL  
20% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-05%, DOLOMITE-15%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: BENTHIC FORAMINIFERA
- 590 - 600 NO SAMPLES.



- 600 - 610 CALCILUTITE; YELLOWISH GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
05% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: DOLOMITE-10%  
OTHER FEATURES: DOLOMITIC  
DOLOMITE CONTENT HAS GRADUALLY DROPPED OVER THE COURSE OF  
THE LAST FIFTY FEET.
- 610 - 620 CALCILUTITE; DARK GRAYISH YELLOW  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE; 03% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-03%, DOLOMITE-15%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: MOLLUSKS
- 620 - 630 CALCILUTITE; DARK GRAYISH YELLOW TO DARK YELLOWISH ORANGE  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE; 15% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-05%, DOLOMITE-05%  
QUARTZ SAND-10%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: MOLLUSKS
- 630 - 640 CALCILUTITE; GRAYISH ORANGE  
12% POROSITY: LOW PERMEABILITY, MOLDIC  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
15% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO GRAVEL  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-04%, DOLOMITE-15%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: MOLLUSKS, CORAL  
FOSSILIFEROUS LIMESTONES, BEARING MAINLY SCALLOPS AND  
CORALS.

- 640 - 650 CALCILUTITE; DARK YELLOWISH ORANGE TO LIGHT YELLOWISH ORANGE  
12% POROSITY: LOW PERMEABILITY, MOLDIC  
GRAIN TYPE: CALCILUTITE, CRYSTALS, SKELETAL  
20% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO GRAVEL  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: IRON STAIN-20%, DOLOMITE-05%  
PHOSPHATIC SAND-05%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: MOLLUSKS
- 650 - 670 CALCILUTITE; VERY LIGHT ORANGE  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
05% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-02%  
NO DOLOMITE PRESENT HERE.
- 670 - 680 CALCILUTITE; YELLOWISH GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
04% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: PHOSPHATIC SAND-01%, DOLOMITE-20%  
PHOSPHATIC SAND-02%  
OTHER FEATURES: DOLOMITIC
- 680 - 690 NO SAMPLES.
- 690 - 700 CALCILUTITE; MODERATE LIGHT GRAY TO YELLOWISH GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
15% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX  
ACCESSORY MINERALS: DOLOMITE-04%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: MOLLUSKS

- 700 - 710 CALCILUTITE; LIGHT OLIVE GRAY TO VERY LIGHT GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 05% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-10%  
 OTHER FEATURES: DOLOMITIC  
 CHANGE IN INDURATION.
- 710 - 720 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 15% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-05%  
 OTHER FEATURES: DOLOMITIC  
 FOSSILS: ECHINOID, MOLLUSKS, BENTHIC FORAMINIFERA
- 720 - 730 LIMESTONE; MODERATE LIGHT GRAY TO VERY LIGHT GRAY  
 12% POROSITY: LOW PERMEABILITY, MOLDIC  
 GRAIN TYPE: CRYSTALS; 06% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-05%  
 OTHER FEATURES: DOLOMITIC  
 FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA
- 730 - 740 LIMESTONE; GRAYISH BROWN TO VERY LIGHT ORANGE  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS; 01% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-05%  
 OTHER FEATURES: DOLOMITIC  
 SLIGHTLY DOLOMITIC CRYSTALLINE LIMESTONE.
- 740 - 790 LIMESTONE; VERY LIGHT ORANGE TO GRAYISH YELLOW  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-15%  
 OTHER FEATURES: DOLOMITIC  
 LESS PHOSPHATIC AND MORE DOLOMITIC THAN PREVIOUS STRATA.

- 790 - 800 LIMESTONE; VERY LIGHT ORANGE TO MODERATE LIGHT GRAY  
 15% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS, SKELETAL  
 02% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 MODERATE INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-07%  
 OTHER FEATURES: DOLOMITIC  
 FOSSILS: MOLLUSKS  
 CONTAINS SOME WELL CONSOLIDATED FRAGMENTS WHICH ARE ALMOST  
 PURE CALCITE, AND SOME DARKER, POORLY CONSOLIDATED LIMEY  
 PELOIDAL FRAGMENTS. ALSO, SOME GRAY COLORED DOLOMITIC  
 FRAGMENTS.
- 800 - 820 LIMESTONE; VERY LIGHT ORANGE  
 15% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 MODERATE INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX  
 NON-DOLOMITIC. CHANGE IN DOLOMITE CONTENT POSSIBLY  
 INDICATIVE OF TOP OF OLIGOCENE SUWANNEE LIMESTONE.
- 820 - 840 LIMESTONE; VERY LIGHT ORANGE TO VERY LIGHT GRAY  
 15% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 MODERATE INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT
- 840 - 850 LIMESTONE; VERY LIGHT ORANGE  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT
- 850 - 870 LIMESTONE; YELLOWISH GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 01% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT
- 870 - 900 LIMESTONE; GRAYISH YELLOW TO LIGHT OLIVE GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE, SKELETAL  
 10% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT

- 900 - 960 LIMESTONE; PINKISH GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS, CALCILUTITE  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
MODERATE INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT
- 960 - 970 LIMESTONE; WHITE  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
01% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX
- 970 - 1010 LIMESTONE; YELLOWISH GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: DOLOMITE-05%
- 1010 - 1020 CALCILUTITE; YELLOWISH GRAY  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
POOR INDURATION
- 1020 - 1050 CALCILUTITE; VERY LIGHT ORANGE  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
10% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
POOR INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX
- 1050 - 1060 CALCILUTITE; YELLOWISH GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX
- 1060 - 1070 LIMESTONE; PINKISH GRAY  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
01% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
FINELY CRYSTALLINE LIMESTONE.

- 1070 - 1080 Limestone; LIGHT GREENISH YELLOW  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
01% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX
- 1080 - 1110 Limestone; VERY LIGHT ORANGE  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
01% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX
- 1110 - 1120 Limestone; YELLOWISH GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX
- 1120 - 1170 Limestone; YELLOWISH GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX  
ACCESSORY MINERALS: QUARTZ SAND-02%  
MOSTLY SLIGHTLY TO MOSTLY OPAQUE CRYSTALLINE LIMESTONE  
WITH SOME MUDDY PARTICLES.
- 1170 - 1180 Limestone; YELLOWISH GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT
- 1180 - 1190 Limestone; YELLOWISH GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS; 15% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX  
ACCESSORY MINERALS: DOLOMITE-05%  
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID  
POSSIBLE TOP OF UPPER EOCENE Ocala GROUP.

- 1190 - 1230 LIMESTONE; YELLOWISH GRAY  
 15% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS; 08% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 MODERATE INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX  
 FOSSILS: ECHINOID
- 1230 - 1240 LIMESTONE; YELLOWISH GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX
- 1240 - 1250 NO SAMPLES.
- 1250 - 1260 CALCILUTITE; YELLOWISH GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE; 05% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT  
 FOSSILS: MOLLUSKS
- 1260 - 1300 CALCILUTITE; VERY LIGHT ORANGE  
 20% POROSITY: INTERGRANULAR  
 GRAIN TYPE: CALCILUTITE  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 POOR INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX
- 1300 - 1320 CALCILUTITE; VERY LIGHT ORANGE  
 20% POROSITY: INTERGRANULAR  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 06% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY COARSE  
 POOR INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX  
 FOSSILS: MOLLUSKS
- 1320 - 1330 CALCILUTITE; VERY LIGHT ORANGE  
 20% POROSITY: INTERGRANULAR  
 GRAIN TYPE: CALCILUTITE, CRYSTALS, SKELETAL  
 20% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
 POOR INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 FOSSILS: BENTHIC FORAMINIFERA  
 MARKED DECREASE IN INDURATION THE LAST SEVENTY FEET.  
 LEPIDOCYCLINA

- 1330 - 1350 CALCILUTITE; VERY LIGHT ORANGE  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
30% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
FOSSILS: BENTHIC FORAMINIFERA  
LEPIDOCYCLINA
- 1350 - 1380 LIMESTONE; YELLOWISH GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS, CALCILUTITE  
25% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
FOSSILS: BENTHIC FORAMINIFERA  
LEPIDOCYCLINA
- 1380 - 1410 LIMESTONE; YELLOWISH GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
30% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
FOSSILS: BENTHIC FORAMINIFERA  
LEPIDOCYCLINA
- 1410 - 1450 LIMESTONE; WHITE TO LIGHT OLIVE GRAY  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
45% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
ACCESSORY MINERALS: DOLOMITE-10%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: BENTHIC FORAMINIFERA, CORAL  
NUMMULITES, LEPIDOCYCLINA, AND CORALS SOME GRAY FRAGMENTS  
PRESENT, WHICH ARE PARTIALLY DOLOMITIC.



- 1450 - 1460 Limestone; yellowish gray  
10% porosity: low permeability  
grain type: calcilutite, crystals  
25% allochemical constituents  
grain size: very fine; range: very fine to coarse  
good induration  
cement type(s): sparry calcite cement  
accessory minerals: dolomite-10%  
other features: dolomitic  
fossils: benthic foraminifera, coral  
lepidocyclina
- 1460 - 1480 Limestone; yellowish gray  
10% porosity: low permeability  
grain type: calcilutite, crystals  
25% allochemical constituents  
grain size: very fine; range: very fine to coarse  
good induration  
cement type(s): sparry calcite cement  
fossils: benthic foraminifera, coral
- 1480 - 1490 Limestone; yellowish gray to moderate light gray  
10% porosity: low permeability  
grain type: calcilutite; 45% allochemical constituents  
grain size: very fine; range: very fine to coarse  
good induration  
cement type(s): sparry calcite cement  
accessory minerals: dolomite-05%  
other features: dolomitic  
fossils: benthic foraminifera  
lepidocyclina, nummulites sample mostly cream colored  
with a few gray fragments (dolomitic in character).
- 1490 - 1510 Calcilutite; very light orange  
15% porosity: low permeability  
grain type: calcilutite; 35% allochemical constituents  
grain size: very fine; range: very fine to coarse  
moderate induration  
cement type(s): calcilutite matrix  
accessory minerals: dolomite-05%  
other features: dolomitic  
fossils: benthic foraminifera  
lepidocyclina present, and dolomitic fragments as well  
mixed in among the dominant calcilutite fragments.

- 1510 - 1530 CALCILUTITE; YELLOWISH GRAY TO LIGHT OLIVE  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE; 15% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: DOLOMITE-05%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: BENTHIC FORAMINIFERA  
NUMMULITES AND LEPIDOCYCLINA
- 1530 - 1550 LIMESTONE; VERY LIGHT ORANGE TO GRAYISH BROWN  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS, CALCILUTITE  
10% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX  
ACCESSORY MINERALS: DOLOMITE-05%  
OTHER FEATURES: DOLOMITIC  
FOSSILS: BENTHIC FORAMINIFERA  
LEPIDOCYCLINA
- 1550 - 1560 LIMESTONE; VERY LIGHT ORANGE TO DARK YELLOWISH BROWN  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS, CALCILUTITE  
05% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
MODERATE INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT, CALCILUTITE MATRIX  
FOSSILS: BENTHIC FORAMINIFERA  
LEPIDOCYCLINA
- 1560 - 1570 LIMESTONE; VERY LIGHT ORANGE TO GRAYISH BROWN  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX
- 1570 - 1600 LIMESTONE; VERY LIGHT ORANGE  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
NO VISIBLE FOSSILS THE PAST FORTY FEET, AND NO DOLOMITE.

- 1600 - 1620 LIMESTONE; WHITE TO LIGHT GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-10%  
 CONTAINS GRAY FRAGMENTS WHICH ARE PARTIALLY DOLOMITIC  
 AMONG ALMOST PURE CALCITIC FRAGMENTS WHICH ARE WHITE IN  
 COLOR. POSSIBLE TOP OF MIDDLE EOCENE AVON PARK FORMATION.
- 1620 - 1640 LIMESTONE; GRAYISH ORANGE  
 15% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE  
 10% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO COARSE  
 MODERATE INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 FOSSILS: ECHINOID  
 DISTINCT CHANGE IN COLOR AND INDURATION.
- 1640 - 1650 DOLOSTONE; VERY LIGHT ORANGE TO GRAYISH BROWN  
 15% POROSITY: LOW PERMEABILITY  
 MODERATE INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-10%  
 SIMILAR AGAIN TO MATERIAL BETWEEN 1600 AND 1620 FEET.
- 1650 - 1670 LIMESTONE; VERY LIGHT ORANGE  
 15% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 01% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 MODERATE INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX, CALCILUTITE MATRIX
- 1670 - 1680 LIMESTONE; LIGHT GRAYISH GREEN TO VERY LIGHT ORANGE  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE  
 02% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX
- 1680 - 1700 CALCILUTITE; VERY LIGHT ORANGE  
 15% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 30% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 POOR INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 MOSTLY CALCILUTITE, BUT A FEW CRYSTALS ARE PRESENT. ABOUT  
 30% OF THE SAMPLE IS CONSISTS OF PELOIDS. NUMMULITES

- 1700 - 1750 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT ORANGE  
20% POROSITY: INTERGRANULAR  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
35% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
POOR INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: QUARTZ SAND-10%  
FOSSILS: ECHINOID  
ABOUT 25% PELOIDS. NUMMULITES
- 1750 - 1760 CALCILUTITE; VERY LIGHT ORANGE  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE; 01% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
DICTYOCONUS AMERICANUS
- 1760 - 1770 CALCILUTITE; GRAYISH BROWN TO VERY LIGHT ORANGE  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS, CALCILUTITE  
20% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
MODERATE INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
FOSSILS: BENTHIC FORAMINIFERA  
ABOUT 20% PELOIDS.
- 1770 - 1800 LIMESTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE  
15% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS, CALCILUTITE  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
MODERATE INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
DICTYOCONUS AMERICANUS
- 1800 - 1810 LIMESTONE; GRAYISH BROWN  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CRYSTALS, CALCILUTITE  
GOOD INDURATION  
CEMENT TYPE(S): SPARRY CALCITE CEMENT  
FOSSILS: ECHINOID

- 1810 - 1820 LIMESTONE; VERY LIGHT ORANGE TO GRAYISH BROWN  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-15%  
 OTHER FEATURES: DOLOMITIC  
 FOSSILS: MOLLUSKS  
 CONTAINS SEVERAL BROWN-COLORED DOLOMITIC FRAGMENTS.  
 GASTROPODS
- 1820 - 1830 DOLOSTONE; GRAYISH BROWN TO VERY LIGHT ORANGE  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-30%  
 OTHER FEATURES: CALCAREOUS  
 FOSSILS: ECHINOID  
 FIRST SAMPLE WITH DOLOMITE PREDOMINANT. GASTROPODS
- 1830 - 1840 DOLOSTONE; MODERATE LIGHT GRAY TO MODERATE DARK GRAY  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-30%  
 OTHER FEATURES: CALCAREOUS  
 LEPIDOCYCLINA
- 1840 - 1860 DOLOSTONE; MODERATE GRAY TO MODERATE DARK GRAY  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-40%  
 OTHER FEATURES: CALCAREOUS  
 NUMMULITES
- 1860 - 1870 DOLOSTONE; GRAYISH BROWN TO WHITE  
 15% POROSITY: LOW PERMEABILITY; 10-50% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-40%  
 OTHER FEATURES: CALCAREOUS  
 CONTAINS DOLOMITIC (BROWNISH-GRAY) AND CALCITIC (WHITE)  
 FRAGMENTS.

- 1870 - 1880 LIMESTONE; MODERATE BROWN TO MODERATE YELLOWISH BROWN  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-40%  
 OTHER FEATURES: DOLOMITIC  
 DOMINANTLY CRYSTALLINE, CONSISTING OF BOTH CALCITIC AND  
 DOLOMITIC FRAGMENTS.
- 1880 - 1900 LIMESTONE; LIGHT OLIVE GRAY TO YELLOWISH GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE  
 0% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-10%  
 OTHER FEATURES: DOLOMITIC
- 1900 - 1910 LIMESTONE; VERY LIGHT ORANGE TO LIGHT GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS; 0% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-05%  
 OTHER FEATURES: DOLOMITIC
- 1910 - 1920 NO SAMPLES
- 1920 - 1930 LIMESTONE; VERY LIGHT ORANGE TO GRAYISH BROWN  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE  
 0% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-10%  
 OTHER FEATURES: DOLOMITIC
- 1930 - 1940 DOLOSTONE; OLIVE GRAY  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; ANHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-10%  
 OTHER FEATURES: CALCAREOUS

1940 - 1950 DOLOSTONE; MODERATE GRAY TO WHITE  
 10% POROSITY: LOW PERMEABILITY  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-40%  
 MIXED WHITE (CALCITIC) AND GRAY (DOLOMITIC) FRAGMENTS.

1950 - 1980 NO SAMPLES.

1980 - 1990 LIMESTONE; LIGHT GRAY TO YELLOWISH GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-30%  
 OTHER FEATURES: DOLOMITIC

1990 - 2000 DOLOSTONE; DARK YELLOWISH BROWN  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-10%  
 OTHER FEATURES: CALCAREOUS

2000 - 2010 DOLOSTONE; LIGHT GRAYISH BROWN TO VERY LIGHT ORANGE  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-40%  
 OTHER FEATURES: CALCAREOUS

2010 - 2020 LIMESTONE; YELLOWISH GRAY TO LIGHT OLIVE GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-40%  
 OTHER FEATURES: DOLOMITIC

2020 - 2030 LIMESTONE; VERY LIGHT ORANGE TO MODERATE LIGHT GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): SPARRY CALCITE CEMENT  
 ACCESSORY MINERALS: DOLOMITE-30%  
 OTHER FEATURES: DOLOMITIC

- 2030 - 2040 DOLOSTONE; DARK YELLOWISH BROWN  
 10% POROSITY: LOW PERMEABILITY; 90-100% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-05%  
 OTHER FEATURES: CALCAREOUS
- 2040 - 2050 NO SAMPLES.
- 2050 - 2060 DOLOSTONE; OLIVE GRAY TO VERY LIGHT ORANGE  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
 ACCESSORY MINERALS: CALCITE-35%  
 OTHER FEATURES: CALCAREOUS
- 2060 - 2070 DOLOSTONE; GRAYISH OLIVE TO LIGHT OLIVE GRAY  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-20%  
 OTHER FEATURES: CALCAREOUS
- 2070 - 2080 DOLOSTONE; LIGHT OLIVE GRAY TO MODERATE LIGHT GRAY  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
 ACCESSORY MINERALS: CALCITE-30%  
 OTHER FEATURES: CALCAREOUS
- 2080 - 2090 NO SAMPLES.
- 2090 - 2100 CALCILUTITE; YELLOWISH GRAY TO LIGHT OLIVE GRAY  
 15% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 01% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 MODERATE INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-25%  
 OTHER FEATURES: DOLOMITIC
- 2100 - 2110 CALCILUTITE; YELLOWISH GRAY TO LIGHT GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 01% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-40%  
 OTHER FEATURES: DOLOMITIC



- 2110 - 2120 DOLOSTONE; DARK YELLOWISH BROWN TO VERY LIGHT ORANGE  
10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-35%  
OTHER FEATURES: CALCAREOUS
- 2120 - 2130 DOLOSTONE; VERY LIGHT ORANGE TO LIGHT GRAY  
10% POROSITY: LOW PERMEABILITY; 10-50% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-45%  
OTHER FEATURES: CALCAREOUS
- 2130 - 2150 DOLOSTONE; DARK YELLOWISH BROWN TO MODERATE BROWN  
10% POROSITY: LOW PERMEABILITY; 90-100% ALTERED; SUBHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-05%  
OTHER FEATURES: CALCAREOUS
- 2150 - 2160 DOLOSTONE; GRAYISH BROWN TO LIGHT GRAYISH BROWN  
10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-10%  
OTHER FEATURES: CALCAREOUS  
DARK DOLOMITE FRAGMENTS WITH SOME REMNANT CALCILUTITE.
- 2160 - 2180 DOLOSTONE; MODERATE BROWN TO GRAYISH BROWN  
10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; SUBHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-05%  
OTHER FEATURES: CALCAREOUS
- 2180 - 2230 DOLOSTONE; DARK YELLOWISH BROWN TO MODERATE BROWN  
10% POROSITY: LOW PERMEABILITY; 90-100% ALTERED; SUBHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT
- 2230 - 2240 NO SAMPLES.

- 2240 - 2250 DOLOSTONE; DARK YELLOWISH BROWN TO GRAYISH BROWN  
10% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
50-90% ALTERED; SUBHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-20%  
OTHER FEATURES: CALCAREOUS  
SOME VERY EUHEDRAL CRYSTALS ARE PRESENT, BUT THE  
PREDOMINANT CRYSTAL TYPE IS STILL SUBHEDRAL. PARTIAL  
DOLOMITIZATION IS PREVALENT IN MOST FRAGMENTS.
- 2250 - 2260 DOLOSTONE; LIGHT GRAYISH BROWN TO MODERATE BROWN  
15% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
50-90% ALTERED; EUHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-10%  
CONTAINS MOSTLY CRYSTALLINE DOLOMITE, BUT ALSO SEVERAL  
CALCITIC FRAGMENTS.
- 2260 - 2270 DOLOSTONE; MODERATE BROWN TO DARK YELLOWISH BROWN  
15% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
90-100% ALTERED; EUHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-05%  
OTHER FEATURES: CALCAREOUS
- 2270 - 2280 DOLOSTONE; MODERATE YELLOWISH BROWN TO DARK YELLOWISH BROWN  
15% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
90-100% ALTERED; EUHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-01%
- 2280 - 2290 DOLOSTONE; MODERATE YELLOWISH BROWN TO MODERATE DARK GRAY  
10% POROSITY: LOW PERMEABILITY; 90-100% ALTERED; EUHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-05%  
OTHER FEATURES: CALCAREOUS  
REMNANTS OF CALCILUTITE MUD REMAIN IN DOLOMITE MATRIX.
- 2290 - 2300 DOLOSTONE; MODERATE DARK GRAY TO DARK YELLOWISH BROWN  
10% POROSITY: LOW PERMEABILITY; 90-100% ALTERED; SUBHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT

- 2300 - 2320 DOLOSTONE; MODERATE YELLOWISH BROWN TO DARK YELLOWISH BROWN  
10% POROSITY; LOW PERMEABILITY; 90-100% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
SOME EUHEDRAL CRYSTALS, BUT THE MAJORITY IS ANHEDRAL.
- 2320 - 2330 NO SAMPLES.
- 2330 - 2340 DOLOSTONE; MODERATE YELLOWISH BROWN TO GRAYISH BROWN  
15% POROSITY; LOW PERMEABILITY, INTERCRYSTALLINE  
90-100% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
A SIGNIFICANT AMOUNT EUHEDRAL CRYSTALS, BUT 60-70% OF THE  
ROCK IS ANHEDRAL.
- 2340 - 2350 NO SAMPLES.
- 2350 - 2370 DOLOSTONE; MODERATE YELLOWISH BROWN TO GRAYISH BROWN  
15% POROSITY; LOW PERMEABILITY, INTERCRYSTALLINE  
90-100% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCILUTITE-05%  
OTHER FEATURES: CALCAREOUS  
AGAIN, MOSTLY ANHEDRAL, BUT 30-40% EUHEDRAL. SOME REMNANT  
CALCILUTITE IS PRESENT AS WHITE SPECKS WITHIN THE DARKER  
DOLOMITE.
- 2370 - 2380 THIS IS A COAL SEAM--CONSISTS OF 65-70% MEDIUM TO HIGH GRADE  
BLACK CARBON WITH A SLIGHTLY VITREOUS LUSTER. IT IS  
ISOLATED ALMOST EXCLUSIVELY TO THIS TEN FOOT INTERVAL. THE  
REMAINDER IS DOLOMITE WITH THE SAME CHARACTERISTICS AS  
DIRECTLY ABOVE.
- 2380 - 2400 DOLOSTONE; GRAYISH BROWN TO MODERATE GRAY  
10% POROSITY; LOW PERMEABILITY; 90-100% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCILUTITE-35%  
OTHER FEATURES: CALCAREOUS  
CONSISTS OF ABOUT 2% COAL.

- 2400 - 2410 DOLOSTONE; GRAYISH BROWN  
10% POROSITY: LOW PERMEABILITY; 90-100% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCILUTITE-15%  
OTHER FEATURES: CALCAREOUS
- 2410 - 2420 NO SAMPLES.
- 2420 - 2430 DOLOSTONE; GRAYISH BROWN TO MODERATE YELLOWISH BROWN  
10% POROSITY: LOW PERMEABILITY; 90-100% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCILUTITE-20%  
OTHER FEATURES: CALCAREOUS  
DOLOMITE IS CALCITIC.
- 2430 - 2440 CALCILUTITE; VERY LIGHT ORANGE TO DARK YELLOWISH BROWN  
10% POROSITY: LOW PERMEABILITY  
GRAIN TYPE: CALCILUTITE, CRYSTALS  
02% ALLOCHEMICAL CONSTITUENTS  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
GOOD INDURATION  
CEMENT TYPE(S): CALCILUTITE MATRIX  
ACCESSORY MINERALS: DOLOMITE-35%  
OTHER FEATURES: DOLOMITIC  
MOSTLY CALCILUTITE FRAGMENTS--SOME DOLOMITIC FRAGMENTS.
- 2440 - 2450 DOLOSTONE; DARK YELLOWISH BROWN TO MODERATE YELLOWISH BROWN  
15% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
50-90% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-20%  
OTHER FEATURES: CALCAREOUS  
CONSISTS OF THREE TYPES OF FRAGMENTS: ANHEDRAL DOLOMITE  
(ABOUT 60%), EUHEDRAL CRYSTALLINE DOLOMITE (ABOUT 20%), AND  
CALCILUTITE (ABOUT 20%)
- 2450 - 2460 DOLOSTONE; GRAYISH BROWN TO LIGHT GRAYISH BROWN  
12% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
50-90% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT  
ACCESSORY MINERALS: CALCITE-25%  
OTHER FEATURES: CALCAREOUS

- 2460 - 2470 LIMESTONE; MODERATE YELLOWISH BROWN TO VERY LIGHT ORANGE  
 15% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
 GRAIN TYPE: CALCILUTITE, CRYSTALS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 MODERATE INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-35%  
 OTHER FEATURES: DOLOMITIC  
 CONSISTS OF ABOUT 2% COAL (POSSIBLE CAVING).
- 2470 - 2480 DOLOSTONE; LIGHT GRAYISH BROWN TO VERY LIGHT ORANGE  
 10% POROSITY: LOW PERMEABILITY; 50-90% ALTERED; ANHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-40%  
 OTHER FEATURES: CALCAREOUS
- 2480 - 2490 DOLOSTONE; GRAYISH BROWN TO MODERATE YELLOWISH BROWN  
 12% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
 50-90% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-25%  
 OTHER FEATURES: CALCAREOUS
- 2490 - 2530 DOLOSTONE; GRAYISH BROWN TO GRAYISH BROWN  
 12% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
 90-100% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-10%  
 OTHER FEATURES: CALCAREOUS
- 2530 - 2550 NO SAMPLES
- 2550 - 2560 DOLOSTONE; MODERATE GRAY TO LIGHT OLIVE GRAY  
 12% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
 50-90% ALTERED; SUBHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-35%  
 OTHER FEATURES: CALCAREOUS

- 2560 - 2570 DOLOSTONE; GRAYISH BROWN TO GRAYISH BROWN  
 11% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
 50-90% ALTERED; ANHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-15%  
 OTHER FEATURES: CALCAREOUS
- 2570 - 2580 DOLOSTONE; GRAYISH BROWN  
 11% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
 50-90% ALTERED; ANHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-25%  
 OTHER FEATURES: CALCAREOUS  
 FOSSILS: BENTHIC FORAMINIFERA  
 SIGNIFICANT AMOUNTS OF REMNANT LIMESTONE WITH FORAMINIFERA.
- 2580 - 2590 CALCILUTITE; VERY LIGHT ORANGE  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE, SKELETAL  
 05% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-30%  
 OTHER FEATURES: DOLOMITIC  
 FOSSILS: BENTHIC FORAMINIFERA
- 2590 - 2600 CALCILUTITE; YELLOWISH GRAY TO MODERATE GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE, SKELETAL  
 01% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-35%  
 OTHER FEATURES: DOLOMITIC  
 FOSSILS: BENTHIC FORAMINIFERA
- 2600 - 2610 CALCILUTITE; YELLOWISH GRAY TO MODERATE DARK GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CALCILUTITE, CRYSTALS, SKELETAL  
 08% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO GRANULE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-40%  
 OTHER FEATURES: DOLOMITIC  
 FOSSILS: BENTHIC FORAMINIFERA

- 2610 - 2620 CALCILUTITE; YELLOWISH GRAY TO LIGHT OLIVE GRAY  
 15% POROSITY: LOW PERMEABILITY, INTERGRANULAR  
 GRAIN TYPE: CALCILUTITE, SKELETAL  
 30% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO GRAVEL  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-35%  
 OTHER FEATURES: DOLOMITIC  
 FOSSILS: ECHINOID, CORAL, MOLLUSKS, BENTHIC FORAMINIFERA
- 2620 - 2630 CALCILUTITE; VERY LIGHT ORANGE TO BROWNISH GRAY  
 10% POROSITY: LOW PERMEABILITY  
 GRAIN TYPE: CRYSTALS, CALCILUTITE, SKELETAL  
 05% ALLOCHEMICAL CONSTITUENTS  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): CALCILUTITE MATRIX  
 ACCESSORY MINERALS: DOLOMITE-45%  
 OTHER FEATURES: DOLOMITIC  
 FOSSILS: BENTHIC FORAMINIFERA
- 2630 - 2640 DOLOSTONE; MODERATE YELLOWISH BROWN TO GRAYISH BROWN  
 11% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
 90-100% ALTERED; ANHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-05%  
 OTHER FEATURES: CALCAREOUS
- 2640 - 2650 DOLOSTONE; DARK YELLOWISH BROWN TO MODERATE YELLOWISH BROWN  
 12% POROSITY: LOW PERMEABILITY, INTERCRYSTALLINE  
 90-100% ALTERED; ANHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 MOSTLY ANHEDRAL, ALTHOUGH A FEW EUHEDRAL CRYSTALS EXIST.
- 2650 - 2690 DOLOSTONE; DARK YELLOWISH BROWN TO DARK BROWN  
 10% POROSITY: LOW PERMEABILITY; 90-100% ALTERED; ANHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT
- 2690 - 2700 DOLOSTONE; GRAYISH BROWN TO VERY LIGHT ORANGE  
 10% POROSITY: LOW PERMEABILITY; 90-100% ALTERED; ANHEDRAL  
 GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
 GOOD INDURATION  
 CEMENT TYPE(S): DOLOMITE CEMENT  
 ACCESSORY MINERALS: CALCITE-05%  
 OTHER FEATURES: CALCAREOUS

2700 - 2710 DOLOSTONE; MODERATE BROWN TO DARK BROWN  
10% POROSITY; LOW PERMEABILITY; 90-100% ALTERED; ANHEDRAL  
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO VERY FINE  
GOOD INDURATION  
CEMENT TYPE(S): DOLOMITE CEMENT

2710 TOTAL DEPTH