September 10, 1984 J. L. Decker

Executive Summary
ROMP#15 "Long Island Marsh"
Deep Monitor

I. General Description

The ROMP #15 well site is located approximately 13 miles east of U. S. 17 (Arcadia) and adjacent to S.R. 70. The site is located on the northeast corner of the DeSoto County Corrections Institution property. ROMP #15 lies in the NW 1/4 of the NW 1/4 of the NW 1/4 of Section 6, Township 38 South, Range 27 East at latitude 27°12'32" and longitude 81°39'22".

II. Site Easement

The easement for ROMP #15 was granted by DeSoto County Corrections Institution, State of Florida in February, 1979. A perpetual permanent easement of 20' X 20' is contained within a temporary construction easement of 40' X 100'. The temporary easement includes a 10' wide access to the site from S.R. 70.

III. Reasons for the Monitor

ROMP #15 was constructed for the purpose of collecting the following hydrogeologic data: potentiometric surface levels, water quality, specific capacity and pump test information, formation boundary identification, location of the upper and lower units of the Floridan Aquifer and its confining beds. ROMP #15 will also monitor long-term pumping effects from local orange grove and cattle ranch operations.

IV. Geology

The ROMP #15 well site is located on the Wicomico Terrace, a former marine shoreline, formed by the invasion of the sea during the Pleistocene Epoch. The site lies on the DeSoto Plain physiographic land feature which is also within the Peace River drainage basin.

The stratigraphic units include: Surficial Sand and Clay Deposits, Hawthorn and Tampa Formations (Hawthorn Group), Suwannee Limestone Formation, Ocala Group and the Avon Park Formation.

The following data summarizes the formation lithologic descriptions and their boundary contact depths.

Lithology (ft. below LSD)	Name of Rock Unit
LSD - 20'	Surficial Sand Deposits = quartz sand, light-dark yellowish brown, yellowish gray, olive gray, frosted, fine to very fine grained, minor organic and phosphatic material, unconsolidated, slightly fossiliferous near the base; moderate to high porosity.
20' - 328'	Hawthorn Formation = quartz and phosphatic sand and gravel - light grayish brown - dark grayish brown, some shell and bone fragments; clay - grayish green to dark grayish green, very fine - medium grained, poorly to moderately consolidated, low to moderate porosity, low permeability (20' - 40'), limestone - very light orange, yellowish gray, moderate -

II A

good consolidation; shell and echinoid fragments, low - moderate porosity and permeability; dolomite - greenish gray, yellowish gray - white, good consolidation, (interbedded with limestone near the bottom of the formation), low-moderate porosity. *(Hawthorn Group - Peace River Formation (20' - 155'), Arcadia Formation - Tampa Member (230' - 347').

328' - 544' — Tampa Formation = dolomite (top of formation) - white, yellowish gray, good consolidation, low-moderate porosity; limestone - yellowish gray, light greenish yellow, very light orange, white; moderate - good porosity; clay - very light green, light grayish green, moderate - dark grayish green, moderate consolidation, organic clay seams, fossil fragments (echinoids mollusks), silty and sandy in part; low permeability. *Nocatee member of Arcadia Formation (347' - 544').

544' - 680' — Suwannee Formation = limestone - very light orange, yellowish gray, chalky, granular, moderate-good consolidation, shell fragments - echinoids and echinoid spines, fossil molds, foraminifera?; usually moderate-high permeability.

680' - 940' — Ocala Group = limestone - very light orange, light greenish yellow, chalky; fossiliferous - foraminifera (Lepidocylina, Nummulites, Operculinoides), echinoids (Periarchus lyelli); poor to moderate consolidation; porosity (pin point vugs) - moderate to high; good permeability in part.

940' - 1,360' TD — Avon Park Formation = limestone - light brown, yellowish gray, light alive gray; dolomite - dark yellowish brown, light brown, light grayish brown, sucrosic, fractured, pen point vugs, calcite crystals - top of formation; moderately consolidated, fossiliferous - foraminifera (Coskinolina floridana, Dictyoconus cookei), echinoids (Peronella dalli), bryozoan; organic clay seams; moderate porosity, fairly permeable.

The fractured, vuggy, transmissive dolomite was encountered at a depth of approximately 1,344' below LSD.

Formation picks from area wells and ROMP #15 indicated that some changes in the depths for the formation contacts for the Tampa, Suwannee and Ocala Group formations.

V. Hydrogeology

The non-artesian zone at ROMP #15 lies between LSD and approximately 20'. The composition of the surficial deposits in this zone is mainly sand. The upper confining beds of clay and intermittent limestone appear to extend to 260' (Upper Hawthorn Formation). The upper unit of the Floridan Aquifer appears to extend from 260' (Lower Hawthorn Formation) to approximately 360' (Upper Tampa Formation). The beds of dolomite along the formation contact of the Hawthorn - Tampa Formation have pin points, but may not be interconnected to the extent that it is very permeable. If this is the case, then the Hawthorn and Tampa Formation are fairly well separated hydraulically.

SAS 0-20'
IAS 20'-490' J.C. 4/98
UFA 490'→

The upper unit of the Floridan Aquifer is separated from the lower unit by sand, clay and limestone beds within the Tampa Formation.

The lower unit of the Floridan Aquifer consists mainly of limestone, occasional clay seams and dolomite. The formations in the lower unit of the Florida aquifer include: the Suwannee Formation, the Ocala Group and the Avon Park Formation. Because of the greater thickness of the lower unit of the Floridan Aquifer, it is more productive then the upper unit. The confining beds near the bottom of the surficial aquifer, the upper and lower confining beds of the Floridan Aquifer have a low hydraulic conductivity and thus retard inter-aquifer flow.

The dolomite unit located within the Avon Park Formation was encountered at 1,344'. Drilling continued to a depth of 1,360' below LSD. Drill cutting descriptions indicate that the dolomite is either fractured or consists of dolomite with pen point vugs.

The contact between the Tampa and Suwannee Formations was verified by the marked decrease in gamma radiation as indicated on the gamma log. The dolomite and clay seams near the Hawthorn - Tampa contact was correlated with the electric and gamma logs.

VI. Hydrology

Water quality, water level measurement, specific capacity, and pump test data was recorded during drilling operations. Standard complete analyses were completed on water samples at the following depths: 1,000', 1,100', 1,200', 1,220', 1,300' and 1,360'. For other depths between 680' and 1,360', only specific conductivity, chlorides and sulfates were recorded on water samples. Specific conductivity ranged from 1,050 Unhos at 680' to 820 Umhos at 1,360'. Due to high PH values, specific conductivity values at 860', 960', 1,220', 1,240' were 1,400, 1,300, 1,940, 1,200 Umhos respectively. There appeared to be little change in the chlorides and sulfates at these respective depths. Chlorides were fairly consistent, ranging usually from 28 mg/l to 33 mg/l. One sample at 1,180' indicated 54 mg/l for a chloride value. Sulfates also remained fairly consistent, ranging usually from 322 mg/l to 401 mg/l. One sample collected at 1,180' yielded a value of 441 mg/l for sulfates.

Due to effects from mud cake on the borehole's wall (before the pump test), water level measurements are likely to be invalid between 380' and 880' below LSD. Water level measurements recorded between 880' and 1,360' below LSD ranged from 28.30' to 29.85' below LSD or from approximately 46.70' to 45.15' above MSL. The values correspond to published potentiometric surface values of 45' - 46' above MSL in the vicinity of ROMP #15. Local pumpage from nearby orange groves and gravitational effects, changes in hydraulic head due to penetration of the formations and semiconfiners encountered may be reasons for potentiometric surface level variations during drilling.

Water level in the surficial table monitor was measured at 8.4' below LSD.

Specific capacity tests were conducted at 920', 960', 1,000', 1,060', 1,100' and 1,160' below LSD. The well was pumped at an average of 50 gal./min. Static water levels varied between 29.1' and 30.8' below LSD during the above specific capacity tests. Gravitational effects, local orange grove pumpage, hydraulic head changes while drilling would contribute to the changes in water levels

measurements. Specific capacity ranged from 5.62 gpm/ft to 7.04 gpm/ft until a depth of 1,160' below LSD. At 1,280' and 1,360' below LSD, specific capacity was 9.3 gpm/ft and 15.58 gpm/ft respectively. Recovery time generally took from 3-7 minutes from the time pumping ceased to a return to approximate static conditions. (See specific capacity data in the file.)

A pump test was conducted on the deep monitor well after drilling was completed to a depth of 880' below LSD. The open hole interval (575' - 880' below LSD) was pumped at a discharge rate of 201 gpm. Discharge and drawdown were measured for a period of 5 hours. Recovery measurements were recorded for a period of 2 hours and 40 minutes. Static water level before the start of the pump test was 32.20' below LSD. Water level recovered to 32.25' below LSD following the pump test. Drawdown ranged from 27.20' below LSD after one (1) minute to 34.35' below LSD after 300 minutes. The discharge pipe was 4" in diameter while the orifice was 3" in diameter. A well belonging to Golden Groves was used for observation purposes to detect fluctuations of the potentiometric surface level near ROMP #15. Changes did occur within the Golden Groves property due to the pumping of their wells, but its effects on the pump test were probably minimal due to the distance factor. Water quality degradation and gravitational effects did not appear to affect the drawdown curve to any degree. Residual drawdown ranged from 4.90' after one (1) minute following pump shutdown to .05' after 160 minutes following shutdown.

Transmissity, permeability, and specific capacity calculations are shown below:

Q - Discharge = 201gpm
Units conversion factor = 264
's - Change in residual drawdown per log cycle = 1.99 ft.
s' = Residual Drawdown which is the distance the water level has to rise (recover) to reach the initial static water level.
T - Transmissivity = gpd/ft. ft^2/d.
k - Permeability = gpd/ft.^{2} or ft^2/d.
d - distance = open hole interval = 304 ft.
dd - drawdown = ft.

$$T = \frac{264\ Q}{s'},\quad T = \frac{264\ (201\ gpm)}{1.99\ ft.} = 26{,}665\ gpd/ft.$$

$$T = 3564.36\ ft^2/ft$$

$$k = \frac{T}{d},\quad k = \frac{26{,}665\ gpd/ft.}{304'},\quad k = 87.7\ gpd/ft^2$$

$$\text{Specific Capacity} = \frac{Q}{dd} = \frac{201\ gpm}{34.35'} = 5.85\ gpm/ft.$$

The interval pumped (575' - 880' below LSD) lies in the Suwannee Formation and the Ocala Group.

VII. Well Construction

The ROMP #15 deep monitor was completed as a single zoned monitor. The well monitors the Suwannee Formation, Ocala Group, and Avon Park Formation. A water table monitor was drilled to a depth of 55' below LSD to monitor the unconfined surficial aquifer.

A. The deep monitor well was constructed in the following manner: a 22" norminal borehole was drilled to a depth of 80' below LSD, using a 22" bit and conventional mud rotary drilling techniques. A 16" steel surface casing was seated and cement grouted to the surface. A 14 5/8" bit was used in drilling a 15" nominal borehole to a depth of 580' below LSD. At a 575' depth, 10" PVC casing was seated and pressure grouted to the surface. Reverse air drilling techniques were used to drill a 10" nominal borehole to a depth of 1,360'.

B. The water table monitor well was drilled to a depth of 55' below LSD. A 12" nominal borehole was drilled to 55' below LSD, using a 12 1/4" drill bit. A 6" diameter PVC screened interval (45' - 55' below LSD) was coupled to 48' of 6" diameter PVC casing (+3' to 45' below LSD). Silica sand, type 6-20, was poured into the well's annulus from 55' to 3' below LSD. Cement grout filled well's annulus from -3' to LSD. The water table monitor was then developed so that valid water level measurements could be accomplished.

VIII. Geophysical Logs

Geophysical logs were used for correlation purposes with drill cuttings collected at 5 intervals.

USGS Notification

The USGS will be notifed when ROMP #15 is ready for monitoring.

*Definition of Formation Boundaries

The specific definition of formations penetrated at ROMP #15 was done partially on the basis of biostratigraphic and lithologic evidence. The formational boundaries are tentative at best, and according to standard stratigraphic methods. The simplified lithology for ROMP #15 is listed below along with Tom Scott's (Florida Bureau of Geology) system for describing the Hawthorn Group.

Simplified Lithology
ROMP #15

Borehole Depth (Ft. Below LSD)	Name of Rock Unit
LSD - 20'	Surficial Sand clay and Shell Deposits
20' - 328'	Hawthorn Formation
328' - 544'	Tampa Formation
544' - 680'	Suwannee Formation
680' - 940'	Ocala Group
940 - 1,360' TD	Avon Park Formation

Simplified Lithology
(Hawthorn Group)

Borehole Depth (Ft. below LSD)	Name of Rock Unit
LSD - 20'	Surficial Sand Deposits
20' - 544'	Hawthorn Group
(20' - 155')	Peace River Formation
(155' - 544')	Arcadia Formation
(230' - 347')	Tampa Member
(347' - 544')	Nocatee Member

ROMP SITE # 15 (LONG ISLAND MARSH) DESOTO COUNTY

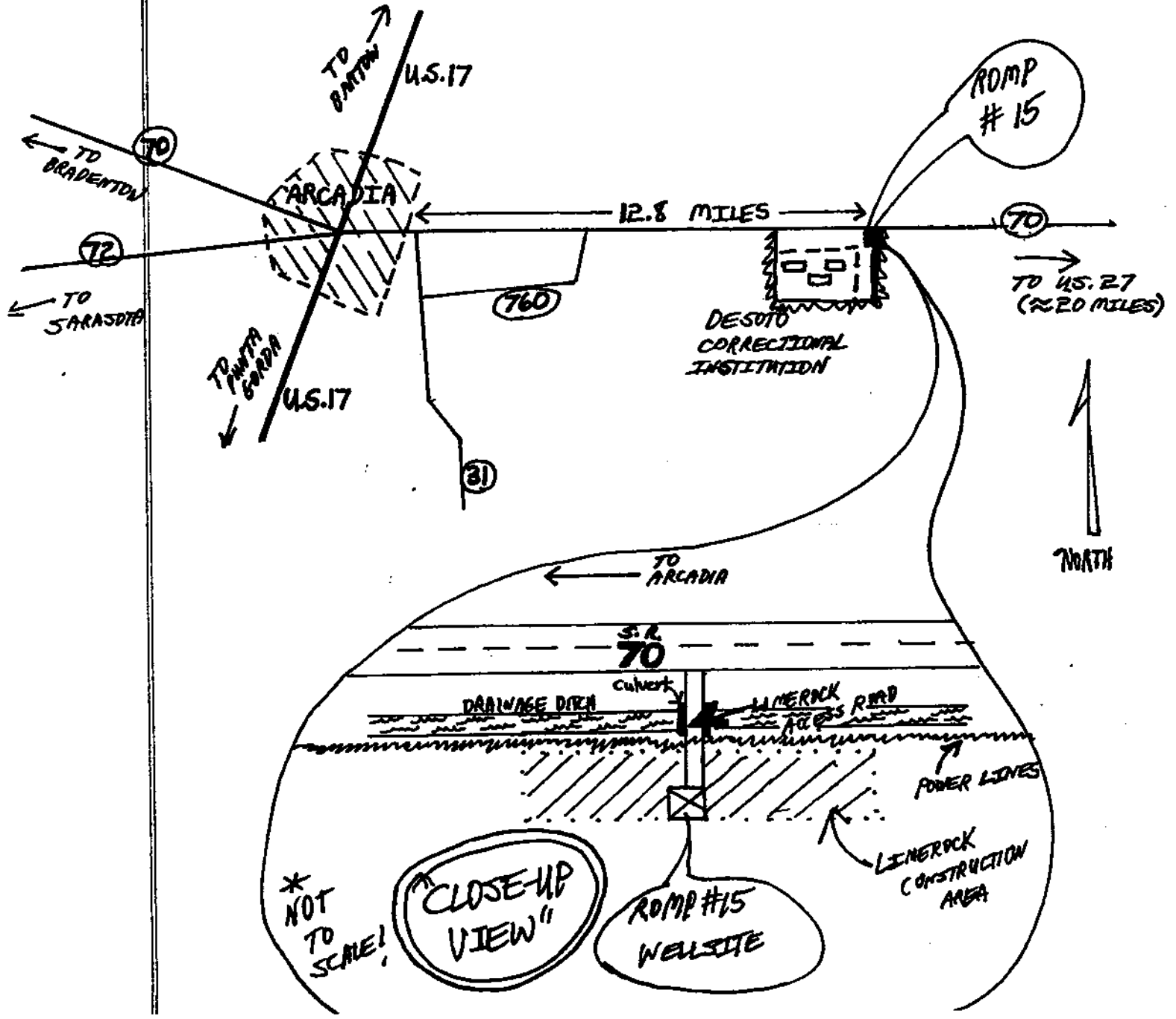
NW 1/4 of NW 1/4 of NW 1/4 of Section 6, Township 38S, Range 27E.

Lat: 27°12'32" / Long: 81°39'22"

Lithology

LSD-20'	UNDIFF.
20'-328'	HAWTHORN
328'-544'	TAMPA
544'-680'	SUWANNEE
680'-940'	OCALA GRP.
940'-1360' T.D.	AVON PARK

*NOTE = MUST UTILIZE CENTRALIZER WHEN LOGGING THIS WELL (1360' Total Depth)



ROMP #15 "LONG ISLAND MARSH" S16 T38S R27E JL DECKER

7-6-84

WELL DESIGN AS BUILT - DEEP MONITOR

LSD LITHOLOGY

22" NOMINAL BOREHOLE (LSD-80')

16" STEEL CASING (+1 TO 77')

15" NOMINAL BOREHOLE (LSD-538')

10" PVC CASING (+3' TO 538')

CASING SEPARATION (538' - 546')

10" PVC CASING (546' - 586')

10" NOMINAL BOREHOLE (538'-1360')

TD 1360'

1360' TD

WATER TABLE MONITOR AS BUILT

CEMENT GROUT (LSD-3')

12" NOMINAL BOREHOLE (LSD-68')

6" PVC CASING (+3 TO 45')

6-20 SILICA SAND (2'-60')

6" PVC SCREENED INTERVAL (45-55')

TD 55'

ROMP SITE # 15 (LONG ISLAND MARSH) DESOTO COUNTY

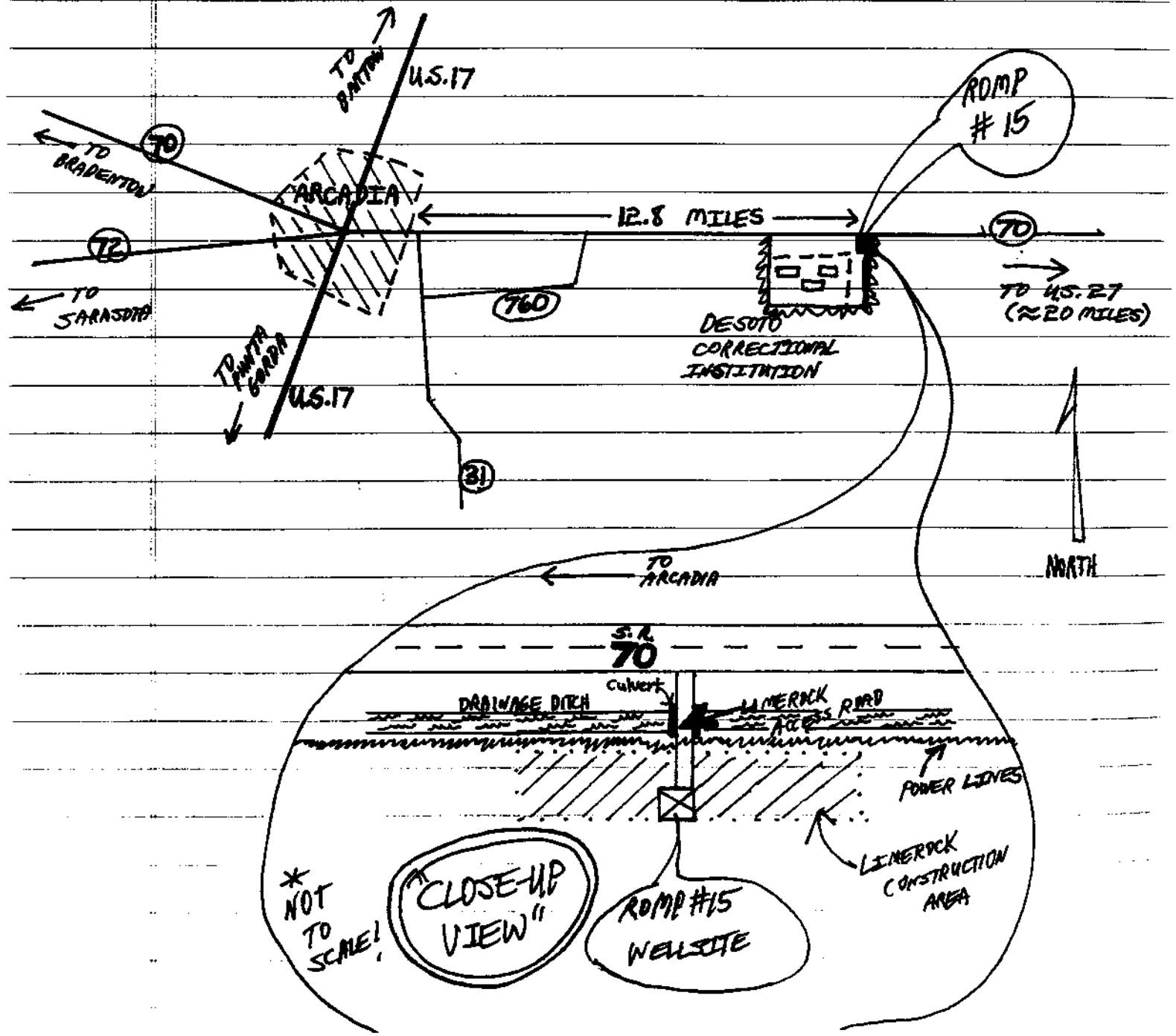
NW 1/4 of NW 1/4 of NW 1/4 of Section 6, Township 38S, Range 27E.

Lat: 27°12'32" // Long: 81°39'22"

Lithology

LSD - 20'	UNDIFF.
20' - 328'	HAWTHORN
328' - 544'	TAMPA
544' - 680'	SUWANNEE
680' - 940'	OCALA GRP.
940' - 1360' T.D.	AVON PARK

*NOTE = MUST UTILIZE CENTRALIZER WHEN LOGGING THIS WELL (1360' Total Depth)



LITHOLOGIC WELL LOG PRINTOUT SOURCE - FGS

WELL NUMBER: W-15801 COUNTY - DESOTO
TOTAL DEPTH: 01360 FT. LOCATION: T.38S R.27E S.06 AA
272 SAMPLES FROM 0 TO 1360 FT. LAT = 27D 12M 32S
LON = 81D 39M 22S
COMPLETION DATE: 07/06/84 ELEVATION: 77 FT
OTHER TYPES OF LOGS AVAILABLE - CALIPER, ELECTRIC, GAMMA, GEOLOGIST

OWNER/DRILLER:OWNER - SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
ROMP #15 "LONG ISLAND MARSH", JOHN HOLLAND - DRILLER

WORKED BY:DESCRIBED BY JOHN DECKER 4-4-84 TO 6-7-84; GOOD TO AVERAGE SAMPLE QUALITY, ENTERED BY T.L.SEAL 2-28-91 (FGS)

0.	-	20.	090UDSC	UNDIFFERENTIATED SAND AND CLAY
20.	-	62.	090UDSS	UNDIFFERENTIATED SAND, CLAY, AND SHELLS
62.	-	328.	122HTRN	HAWTHORN GROUP
328.	-	530.	122TAMP	TAMPA MEMBER OF ARCADIA FM.
530.	-	680.	123SWNN	SUWANNEE LIMESTONE
680.	-	750.	124OCALU	OCALA LIMESTONE UPPER MEMBER
750.	-	940.	124OCALL	OCALA LIMESTONE LOWER MEMBER
940.	-	.	124AVPK	AVON PARK FM.

0 - 5 SAND; LIGHT GRAYISH BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
ROUNDNESS: ROUNDED TO SUB-ANGULAR; MEDIUM SPHERICITY
UNCONSOLIDATED
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY-05%
OTHER FEATURES: FROSTED, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, ORGANICS

5 - 10 AS ABOVE
SAME AS ABOVE BUT <1% CLAY AND 1% PHOSPHATIC SAND

10 - 15 SAND; LIGHT OLIVE TO LIGHT BROWN
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE
ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
UNCONSOLIDATED
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY-01%, PHOSPHATIC SAND-01%, SILT- %
OTHER FEATURES: FROSTED, CALCAREOUS

15 - 20 SAND; LIGHT GREENISH YELLOW TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE
ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
UNCONSOLIDATED
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY-05%, PHOSPHATIC GRAVEL-01%

PHOSPHATIC SAND-01%, SILT- %
OTHER FEATURES: FROSTED, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, ORGANICS, MOLLUSKS

20 - 25 SAND; LIGHT GRAYISH BROWN TO DARK YELLOWISH BROWN
POROSITY: LOW PERMEABILITY, INTERGRANULAR
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
UNCONSOLIDATED
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-30%, PHOSPHATIC GRAVEL-15%
SILT- %, PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS, FROSTED
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, ORGANICS

25 - 30 AS ABOVE
PHOSPHATE GRAVEL 10%

30 - 35 AS ABOVE
PHOSPHATE GRAVEL 15%

35 - 40 SAND; GRAYISH BROWN TO GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
UNCONSOLIDATED
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-25%, PHOSPHATIC GRAVEL-05%
SILT- %
OTHER FEATURES: CALCAREOUS, FROSTED
FOSSILS: FOSSIL FRAGMENTS, ORGANICS

40 - 45 AS ABOVE

45 - 50 SAND; GRAYISH GREEN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE
ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
UNCONSOLIDATED
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BANDED
ACCESSORY MINERALS: CLAY-15%, PHOSPHATIC GRAVEL-03%
OTHER FEATURES: CALCAREOUS, FROSTED
FOSSILS: ORGANICS, FOSSIL FRAGMENTS

50 - 55 AS ABOVE
SAME AS ABOVE BUT LESS CLAY AND PHOSPHATIC GRAVEL

55 - 62 SAND; GRAYISH GREEN TO LIGHT GRAYISH BROWN
POROSITY: INTERGRANULAR
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE
ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
UNCONSOLIDATED
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED

ACCESSORY MINERALS: CLAY-15%, PHOSPHATIC GRAVEL-01%
OTHER FEATURES: CALCAREOUS, GRANULAR, FROSTED

62 - 70 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BANDED
ACCESSORY MINERALS: QUARTZ SAND-01%, PHOSPHATIC GRAVEL-01%
SILT- %
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS
MORE QUARTZ SAND IN UPPER PART OF SECTION

70 - 80 AS ABOVE

80 - 85 CLAY; GRAYISH BLUE GREEN TO DARK GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BANDED
ACCESSORY MINERALS: QUARTZ SAND-02%, PHOSPHATIC GRAVEL-01%
SILT-10%, LIMESTONE- %
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

85 - 95 AS ABOVE

95 - 100 CLAY; LIGHT GRAYISH GREEN TO DARK GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BANDED
ACCESSORY MINERALS: SILT-10%, PHOSPHATIC GRAVEL-01%
QUARTZ SAND-02%, LIMESTONE- %
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

100 - 110 CLAY; LIGHT GRAYISH GREEN TO GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BANDED
ACCESSORY MINERALS: SILT-10%, QUARTZ SAND-02%
PHOSPHATIC GRAVEL-05%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

110 - 120 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BANDED
ACCESSORY MINERALS: QUARTZ SAND-10%, SILT-15%
PHOSPHATIC GRAVEL-02%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS
NO COLOR REPORTED FOR CLAY FROM 110-180 INTERVAL

120 - 130 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX

SEDIMENTARY STRUCTURES: BANDED
ACCESSORY MINERALS: QUARTZ SAND-05%, SILT-10%
PHOSPHATIC GRAVEL-02%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

130 - 140 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: BANDED
ACCESSORY MINERALS: QUARTZ SAND-05%, SILT-10%
PHOSPHATIC GRAVEL-02%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

140 - 150 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-10%, SILT-15%
PHOSPHATIC GRAVEL-01%, LIMESTONE-03%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

150 - 160 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-10%, SILT-15%
PHOSPHATIC GRAVEL-02%, LIMESTONE-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS
MOLLUSKS FIRST IDENTIFIED AT 155

160 - 165 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-10%, SILT-15%
PHOSPHATIC GRAVEL-03%, LIMESTONE-15%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS

165 - 170 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-15%, SILT-20%
PHOSPHATIC GRAVEL-10%, LIMESTONE-05%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS

170 - 180 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-15%, PHOSPHATIC GRAVEL-15%
SILT-15%, QUARTZ SAND-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS

180 - 185 LIMESTONE; LIGHT GREEN TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-40%, PHOSPHATIC GRAVEL-07%
SILT-10%, QUARTZ SAND-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: ORGANICS, MOLLUSKS

185 - 190 LIMESTONE; GRAYISH GREEN TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-40%, PHOSPHATIC GRAVEL-05%
SILT-10%, QUARTZ SAND-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS

190 - 195 CLAY; GRAYISH GREEN TO LIGHT ORANGE
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-40%, PHOSPHATIC GRAVEL-15%
SILT-10%, QUARTZ SAND-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS

195 - 205 CLAY; GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-15%, PHOSPHATIC GRAVEL-20%
SILT-10%, QUARTZ SAND-05%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS

205 - 210 CLAY; LIGHT GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX

SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-10%, PHOSPHATIC GRAVEL-20%
SILT-10%, QUARTZ SAND-05%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

210 - 220 CLAY; LIGHT GREEN TO GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-05%, QUARTZ SAND-05%
PHOSPHATIC GRAVEL-20%, SILT-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

220 - 225 CLAY;
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-25%, PHOSPHATIC GRAVEL-15%
SILT-15%, QUARTZ SAND-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, ORGANICS

225 - 230 LIMESTONE; MODERATE YELLOWISH GREEN TO LIGHT ORANGE
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-30%, QUARTZ SAND-05%
PHOSPHATIC GRAVEL-10%, SILT-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, ORGANICS
LIMESTONE INTERBEDDED WITH YELLOW-GREEN CALCAREOUS CLAY

230 - 235 AS ABOVE
CLAY CONTENT HIGHER IN THIS INTERVAL

235 - 245 CLAY; GRAYISH GREEN TO YELLOWISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-10%, PHOSPHATIC GRAVEL-04%
SILT-10%, QUARTZ SAND-07%
OTHER FEATURES: CALCAREOUS, SPECKLED
FOSSILS: FOSSIL FRAGMENTS

245 - 250 CLAY; LIGHT YELLOWISH GREEN TO GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED

ACCESSORY MINERALS: LIMESTONE-05%, PHOSPHATIC GRAVEL-05%
PHOSPHATIC SAND-05%, SILT-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, ORGANICS

250 - 260 CLAY; LIGHT GRAYISH GREEN TO MODERATE YELLOWISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-15%, PHOSPHATIC GRAVEL-05%
PHOSPHATIC SAND-03%, IRON STAIN- %
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

260 - 265 AS ABOVE
SAME AS ABOVE, BUT MORE LIMESTONE IN INTERBEDDED SEQUENCE

265 - 270 LIMESTONE; LIGHT GREENISH YELLOW TO YELLOWISH GRAY
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-30%, PHOSPHATIC GRAVEL-05%
DOLOMITE-05%, SILT-05%
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
LIMESTONE INTERBEDDED WITH LIGHT GREEN CALCAREOUS CLAY

270 - 280 CLAY; LIGHT YELLOWISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-30%, PHOSPHATIC GRAVEL-05%
PHOSPHATIC SAND-03%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS
INTERBEDDED CLAYS AND LIMESTONE

280 - 285 LIMESTONE; LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-35%, PHOSPHATIC GRAVEL-05%
PHOSPHATIC SAND-03%, IRON STAIN- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS

285 - 290 LIMESTONE; LIGHT GRAYISH RED TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE

GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: DOLOMITE-10%, PHOSPHATIC GRAVEL-03%
CLAY-10%, SILT-15%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
GREEN-GRAY DOLOMITE INTERBEDDED WITH LIMESTONE

290 - 295 LIMESTONE; LIGHT GRAYISH RED TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: DOLOMITE-15%, PHOSPHATIC SAND-03%
SILT- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
SAME DOLOMITE PRESENT WITH 2% PHOSPHATE GRAVEL

295 - 305 LIMESTONE; WHITE TO GRAYISH ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED
ACCESSORY MINERALS: DOLOMITE-10%, PHOSPHATIC GRAVEL-01%
QUARTZ SAND-01%, PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS

305 - 310 LIMESTONE; LIGHT GRAYISH GREEN TO LIGHT GRAYISH RED
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED
ACCESSORY MINERALS: DOLOMITE-10%, PHOSPHATIC GRAVEL-01%
SILT-05%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS

310 - 320 LIMESTONE; GRAYISH GREEN
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX

SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-01%, DOLOMITE-20%
PHOSPHATIC GRAVEL-01%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
LESS DOLOMITE IN UPPER HALF OF INTERVAL

320 - 330 DOLOSTONE; YELLOWISH GRAY TO WHITE
POROSITY: INTERGRANULAR, PIN POINT VUGS; 10-50% ALTERED
SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-28%, SILT- %
PHOSPHATIC GRAVEL-01%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
DOLOMITE INTERLAYERED WITH LIMESTONE

330 - 335 AS ABOVE

335 - 340 LIMESTONE; YELLOWISH GRAY TO WHITE
POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, BIOGENIC
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: DOLOMITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS

340 - 345 AS ABOVE

345 - 350 LIMESTONE; YELLOWISH GRAY TO WHITE
POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-20%, DOLOMITE-40%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
YELLOW-GREEN SILTY CLAY INTERBEDDED WITH LIMESTONE

350 - 355 AS ABOVE

355 - 360 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED

ACCESSORY MINERALS: CLAY-01%, DOLOMITE-10%
PHOSPHATIC GRAVEL-03%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS

360 - 365 AS ABOVE

365 - 370 LIMESTONE; YELLOWISH GRAY TO LIGHT OLIVE
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-01%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
GRAY-GREEN CLAY INTERBEDDED WITH LIMESTONE

370 - 375 LIMESTONE; YELLOWISH GRAY TO LIGHT OLIVE
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: SILT-10%, PHOSPHATIC GRAVEL-01%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
CLAY INTERBEDS STILL PRESENT

375 - 385 LIMESTONE; LIGHT GREENISH YELLOW TO YELLOWISH GRAY
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: SILT-10%, PHOSPHATIC GRAVEL-01%
PHOSPHATIC SAND-02%, IRON STAIN- %
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS

385 - 390 LIMESTONE; YELLOWISH GRAY TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-03%, SILT-05%
PHOSPHATIC GRAVEL-01%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION

390 - 395 LIMESTONE; YELLOWISH GRAY TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION

SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-40%
OTHER FEATURES: CALCAREOUS, WEATHERED
FOSSILS: FOSSIL FRAGMENTS
OLIVE-GRAY TO BLACK SILTY LIMEY ORGANIC-BEARING CLAY

395 - 400 AS ABOVE

400 - 405 LIMESTONE; YELLOWISH GRAY TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-20%, SILT- %, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, WEATHERED
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
INTRACLASTS PRESENT

405 - 410 LIMESTONE; LIGHT ORANGE TO MODERATE YELLOWISH BROWN
POROSITY: FRACTURE, INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: CLAY-10%, SILT- %
PHOSPHATIC GRAVEL- %, PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS, WEATHERED
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS

410 - 415 AS ABOVE

415 - 420 LIMESTONE; GRAYISH BROWN TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-40%, SILT- %, PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS, WEATHERED
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
INTRACLASTS ALSO PRESENT

420 - 430 CLAY; GRAYISH GREEN
POROSITY: LOW PERMEABILITY, INTERGRANULAR
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-45%, SILT- %
PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, WEATHERED

FOSSILS: FOSSIL FRAGMENTS

430 - 435 LIMESTONE; GRAYISH BROWN TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE, INTRACLASTS
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: CLAY-40%, DOLOMITE- %
PHOSPHATIC SAND- %, PHOSPHATIC GRAVEL- %
OTHER FEATURES: CALCAREOUS, WEATHERED
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
DARK GRAYISH GREEN CLAY INTERBEDDED WITH LIMESTONE

435 - 440 CLAY; GRAYISH GREEN TO LIGHT GREEN
POROSITY: LOW PERMEABILITY, INTERGRANULAR
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-40%, PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %
OTHER FEATURES: CALCAREOUS, WEATHERED
SANDY DOLOMITIC LIMESTONE INTERBEDDED WITH CLAY

440 - 445 CLAY; MODERATE GREEN
POROSITY: LOW PERMEABILITY, INTERGRANULAR
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-10%, PHOSPHATIC SAND-10%
QUARTZ SAND-15%
OTHER FEATURES: CALCAREOUS
FOSSILS: ORGANICS

445 - 450 CLAY; MODERATE GREEN
POROSITY: LOW PERMEABILITY, INTERGRANULAR
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-10%, PHOSPHATIC SAND-07%
QUARTZ SAND-15%
OTHER FEATURES: CALCAREOUS

450 - 460 CLAY; MODERATE GREEN TO GRAYISH GREEN
POROSITY: LOW PERMEABILITY, INTERGRANULAR
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-15%, DOLOMITE-05%
OTHER FEATURES: CALCAREOUS
FOSSILS: ORGANICS
PHOSPHATIC GRAVEL AT 455-460 INTERVAL

460 - 465 CLAY; GRAYISH GREEN
POROSITY: LOW PERMEABILITY, INTERGRANULAR

MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-30%, QUARTZ SAND-10%
SILT- %, DOLOMITE- %
OTHER FEATURES: CALCAREOUS
FOSSILS: ORGANICS

465 - 475 CLAY; GRAYISH GREEN TO MODERATE GREEN
POROSITY: LOW PERMEABILITY, INTERGRANULAR
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-05%, QUARTZ SAND-10%
SILT- %, PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS
FOSSILS: ORGANICS

475 - 485 CLAY; GRAYISH GREEN TO LIGHT YELLOWISH GREEN
POROSITY: LOW PERMEABILITY, INTERGRANULAR
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-10%, QUARTZ SAND-10%
SILT- %, PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, ORGANICS

485 - 490 CLAY; GRAYISH GREEN
POROSITY: LOW PERMEABILITY, INTERGRANULAR
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-20%, QUARTZ SAND- %
SILT- %, DOLOMITE- %
OTHER FEATURES: CALCAREOUS
FOSSILS: ORGANICS

490 - 495 LIMESTONE; LIGHT GRAYISH GREEN
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, INTRACLASTS
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-30%, QUARTZ SAND- %, SILT- %
PHOSPHATIC SAND- %
OTHER FEATURES: CHALKY, CALCAREOUS
MEDIUM RECRYSTALLIZATION
FOSSILS: ORGANICS, FOSSIL FRAGMENTS
SANDY OLIVE-GRAY CLAY INTERBEDDED WITH LIMESTONE

495 - 500 AS ABOVE

500 - 505 LIMESTONE; GRAYISH GREEN
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE, BIOGENIC

GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-05%, QUARTZ SAND- %
PHOSPHATIC SAND- %, SILT-20%
OTHER FEATURES: CALCAREOUS, CHALKY, SPECKLED
FOSSILS: ORGANICS, FOSSIL FRAGMENTS

505 - 510 LIMESTONE; LIGHT GRAYISH RED
POROSITY: INTERGRANULAR, FRACTURE
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-05%, QUARTZ SAND- %
PHOSPHATIC SAND- %, SILT-20%
OTHER FEATURES: CALCAREOUS, CHALKY, SPECKLED
FOSSILS: ORGANICS, FOSSIL FRAGMENTS

510 - 515 AS ABOVE

515 - 520 LIMESTONE; YELLOWISH GRAY TO LIGHT GRAYISH GREEN
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-05%, CALCILUTITE- %, SILT- %
PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS, SPECKLED, CHALKY
FOSSILS: ORGANICS, FOSSIL FRAGMENTS

520 - 530 LIMESTONE; LIGHT ORANGE TO GRAYISH ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-10%, CALCILUTITE- %, SILT-03%
OTHER FEATURES: CALCAREOUS, CHALKY, LOW RECRYSTALLIZATION
GRANULAR
FOSSILS: ORGANICS, FOSSIL FRAGMENTS, MOLLUSKS

530 - 540 AS ABOVE

540 - 545 LIMESTONE; LIGHT ORANGE TO GRAYISH ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX

SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-10%, CALCILUTITE- %, SILT-03%
OTHER FEATURES: CALCAREOUS, CHALKY, LOW RECRYSTALLIZATION GRANULAR
FOSSILS: ORGANICS, FOSSIL FRAGMENTS, MOLLUSKS

545 - 550 AS ABOVE

550 - 555 LIMESTONE; LIGHT ORANGE TO GRAYISH ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-05%, CALCILUTITE-02%, SILT-02%
OTHER FEATURES: CALCAREOUS, CHALKY, LOW RECRYSTALLIZATION GRANULAR
FOSSILS: ORGANICS, FOSSIL FRAGMENTS, MOLLUSKS

555 - 560 AS ABOVE
IN THE INTERVAL 525-560 THERE ARE MANY LENSES OF GREENISH BLACK ORGANIC CLAY

560 - 565 LIMESTONE; LIGHT ORANGE TO GRAYISH ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-05%, CALCILUTITE- %, SILT-01%
OTHER FEATURES: CALCAREOUS, CHALKY, LOW RECRYSTALLIZATION GRANULAR
FOSSILS: ORGANICS, FOSSIL FRAGMENTS, MOLLUSKS

565 - 570 LIMESTONE; GRAYISH ORANGE TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-05%, CALCILUTITE- %, SILT-01%
OTHER FEATURES: CALCAREOUS, CHALKY, LOW RECRYSTALLIZATION GRANULAR
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, ORGANICS

570 - 575 LIMESTONE; GRAYISH ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: CALCILUTITE- %, CLAY-01%
QUARTZ SAND- %

OTHER FEATURES: CALCAREOUS, CHALKY, LOW RECRYSTALLIZATION
GRANULAR
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, FOSSIL MOLDS
CRUSTACEA

575 - 580 AS ABOVE

580 - 585 LIMESTONE; LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-01%
PHOSPHATIC SAND-02%, QUARTZ SAND-01%, CLAY-20%
OTHER FEATURES: CALCAREOUS, CHALKY, GRANULAR, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
GRAYISH GREEN SILTY LIMEY CLAY

585 - 590 LIMESTONE; LIGHT ORANGE TO LIGHT YELLOWISH GREEN
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE, INTRACLASTS
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-03%, SILT- %
OTHER FEATURES: CALCAREOUS, GRANULAR, CHALKY
LOW RECRYSTALLIZATION, WEATHERED
FOSSILS: FOSSIL FRAGMENTS, ORGANICS

590 - 600 LIMESTONE; LIGHT ORANGE
POROSITY: PIN POINT VUGS, POSSIBLY HIGH PERMEABILITY
INTERGRANULAR
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-05%, SILT- %
OTHER FEATURES: CALCAREOUS, GRANULAR, CHALKY
LOW RECRYSTALLIZATION, WEATHERED
FOSSILS: ORGANICS

600 - 605 AS ABOVE

605 - 610 LIMESTONE; LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-02%, PHOSPHATIC SAND-01%
OTHER FEATURES: CALCAREOUS, GRANULAR, CHALKY

LOW RECRYSTALLIZATION, WEATHERED
FOSSILS: FOSSIL FRAGMENTS

610 - 615 LIMESTONE; LIGHT ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-02%
OTHER FEATURES: CALCAREOUS, GRANULAR, CHALKY
LOW RECRYSTALLIZATION, WEATHERED
FOSSILS: FOSSIL FRAGMENTS

615 - 620 AS ABOVE

620 - 625 LIMESTONE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-01%, SILT- %
OTHER FEATURES: CALCAREOUS, GRANULAR, CHALKY
LOW RECRYSTALLIZATION, WEATHERED
FOSSILS: FOSSIL FRAGMENTS

625 - 630 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-03%, SILT- %
OTHER FEATURES: CALCAREOUS, GRANULAR, LOW RECRYSTALLIZATION
CHALKY, WEATHERED
FOSSILS: FOSSIL FRAGMENTS

630 - 635 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-03%, SILT- %
OTHER FEATURES: CALCAREOUS, GRANULAR, CHALKY
LOW RECRYSTALLIZATION, WEATHERED
FOSSILS: FOSSIL FRAGMENTS

635 - 645 LIMESTONE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC

GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: SILT- %
OTHER FEATURES: CALCAREOUS, GRANULAR, CHALKY
LOW RECRYSTALLIZATION, WEATHERED
FOSSILS: FOSSIL FRAGMENTS

645 - 650 AS ABOVE

650 - 655 AS ABOVE

655 - 660 LIMESTONE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
OTHER FEATURES: CALCAREOUS, GRANULAR, CHALKY
LOW RECRYSTALLIZATION, WEATHERED
FOSSILS: FOSSIL FRAGMENTS

660 - 665 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: SILT- %, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, CHALKY, LOW RECRYSTALLIZATION
WEATHERED
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

665 - 670 LIMESTONE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: SILT- %, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, GRANULAR, CHALKY
LOW RECRYSTALLIZATION, WEATHERED
FOSSILS: FOSSIL FRAGMENTS

670 - 675 AS ABOVE

675 - 680 LIMESTONE; YELLOWISH GRAY TO GREENISH YELLOW
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION

CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
WEATHERED
FOSSILS: FOSSIL FRAGMENTS

680 - 685 LIMESTONE; MODERATE GREENISH YELLOW TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: SILT- %
OTHER FEATURES: CALCAREOUS, CHALKY, LOW RECRYSTALLIZATION
WEATHERED, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ECHINOID
POSSIBLE LEPIDOCYCLINA(?)

685 - 695 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, CHALKY, LOW RECRYSTALLIZATION
WEATHERED
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

695 - 700 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION, CHALKY
WEATHERED
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
LEPIDOCYCLINA, NUMMULITES, OPERCULINOIDES(?)

700 - 710 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
WEATHERED, CHALKY
FOSSILS: BENTHIC FORAMINIFERA, SPICULES
WILLISTON FORMATION AT THIS INTERVAL

710 - 720 AS ABOVE

720 - 725 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED, CHALKY
LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
LEPIDOCYCLINA IDENTIFIED

725 - 735 AS ABOVE

735 - 740 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY-01%
OTHER FEATURES: CALCAREOUS, WEATHERED, CHALKY
LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
LEPIDOCYCLINA, NUMMULITES

740 - 745 AS ABOVE
LEPIDOCYCLINA (SOME DARK
GREEN-GRAY),NUMMULITES,OPERCULINOIDES

745 - 750 LIMESTONE; LIGHT ORANGE TO DARK GREENISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
GREEN-GRAY FORAMS AND LIMESTONE (TRACE PHOSPHATE)

750 - 755 AS ABOVE
OPERCULINOIDES, LEPIDOCYCLINA (SOME PHOSPHATIC)

755 - 760 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED, CHALKY
LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS, SPICULES
BRYOZOA, ECHINOID

OPERCULINOIDES, LEPIDOCYCLINA, NUMMULITES, PERIARCHUS LYELLI

760 - 770 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED, CHALKY
LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS

770 - 775 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED, CHALKY
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, SPICULES
MINOR CLAY PRESENT, PHOSPHATIZED FORAMS (CAVINGS?)

775 - 780 AS ABOVE

780 - 785 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED, CHALKY
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
OPERCULINOIDES, LEPIDOCYCLINA, NUMMULITES

785 - 790 AS ABOVE

790 - 795 LIMESTONE; LIGHT ORANGE TO LIGHT OLIVE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %, DOLOMITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED, CHALKY
LOW RECRYSTALLIZATION, COQUINA
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
FORAMS: LEPIDOCYCLINA, NUMMULITES (CAVINGS?)

795 - 800 LIMESTONE; LIGHT ORANGE TO LIGHT OLIVE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED, CHALKY
MEDIUM RECRYSTALLIZATION, COQUINA
FOSSILS: FOSSIL FRAGMENTS, SPICULES

800 - 805 AS ABOVE

805 - 810 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, SPICULES
ZOPERCULINOIDES, LEPIDOCYCLINA, NUMMULITES

810 - 815 AS ABOVE

815 - 820 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, CORAL
ECHINOID
OPERCULINOIDES AND NUMMULITES

820 - 830 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
OPERCULINOIDES AND NUMMULITES PRESENT

830 - 835 AS ABOVE

835 - 840 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, BRYOZOA
NUMEROUS OPERCULINOIDES AND NUMMULITES PRESENT

840 - 845 AS ABOVE

845 - 850 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

850 - 855 LIMESTONE; LIGHT GREENISH YELLOW TO LIGHT OLIVE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION, COQUINA
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
FORMATION CHANGE, LIGHT BROWN DOLOMITIC LIMESTONE
OPERCULINOIDES IDENTIFIED

855 - 860 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, COQUINA
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ECHINOID
NUMEROUS OPERCULINOIDES AND NUMMULITES PRESENT

860 - 865 LIMESTONE; LIGHT GREENISH YELLOW TO LIGHT OLIVE

POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, COQUINA
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
NUMEROUS OPERCULINOIDES AND NUMMULITES PRESENT, SOME
LEPIDOCYCLINA PRESENT

865 - 870 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, COQUINA
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

870 - 875 AS ABOVE
NUMEROUS NUMMULITES

875 - 880 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
NUMEROUS NUMMULITES, SOME PHOSPHATIC FORAMS

880 - 885 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: COARSE; RANGE: MEDIUM TO VERY COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
NUMMULITES = 90%, OPERCULINOIDES AND LEPIDOCYCLINA

885 - 890 AS ABOVE
CLAY LENSE AT 888

890 - 895 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: COARSE; RANGE: MEDIUM TO VERY COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

895 - 900 AS ABOVE

900 - 905 LIMESTONE; LIGHT GREENISH YELLOW TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

905 - 910 LIMESTONE; LIGHT ORANGE TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: COARSE; RANGE: MEDIUM TO VERY COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

910 - 915 LIMESTONE; LIGHT GREENISH YELLOW TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
INTRAGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: COARSE; RANGE: MEDIUM TO VERY COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

915 - 920 AS ABOVE

NUMEROUS NUMMULITES (905-920 INTERVAL), OPERCULINOIDES AND LEPIDOCYCLINA

920 - 925 ; GRAYISH RED TO GRAYISH YELLOW
POROSITY: INTERGRANULAR; GOOD INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
FORMATION CHANGE OCCURING IN THIS INTERVAL

925 - 930 LIMESTONE; YELLOWISH GRAY TO MODERATE YELLOWISH BROWN
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA
NUMMULITES AND LEPIDOCYCLINA

930 - 935 LIMESTONE; LIGHT BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CALCITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL MOLDS, FOSSIL FRAGMENTS
BENTHIC FORAMINIFERA, ECHINOID
PERIARCHUS LYELLI? OR PERONELLA DALLI, FRIABLE LIMESTONE

935 - 940 LIMESTONE; YELLOWISH GRAY TO LIGHT OLIVE
POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %, CALCITE- %, SPAR- %
OTHER FEATURES: CALCAREOUS, WEATHERED
MEDIUM RECRYSTALLIZATION
FOSSILS: ECHINOID, FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
CLAY SEAM AT 939, PERONELLA DALLI?

940 - 941 CLAY; MODERATE GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED

941 - 945 LIMESTONE; LIGHT BROWN TO LIGHT ORANGE
POROSITY: PIN POINT VUGS, POSSIBLY HIGH PERMEABILITY
INTERGRANULAR

GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %, CALCITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ECHINOID
BRYOZOA, SPICULES

945 - 950 AS ABOVE

950 - 955 LIMESTONE; LIGHT BROWN TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, ECHINOID, BENTHIC FORAMINIFERA
PERONELLA DALLI?, NUMMULITES

955 - 960 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, ECHINOID, BENTHIC FORAMINIFERA
PERONELLA DALLI, COSKOLINA FLORIDANA

960 - 965 AS ABOVE
COSKOLINA FLORIDANA AND LEPIDOCYCLINA IDENTIFIED

965 - 970 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCITE-02%
OTHER FEATURES: CALCAREOUS, WEATHERED
FOSSILS: ECHINOID, BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
BRYOZOA
GREEN CLAY SEAM AT 967, COSKOLINA FLORIDANA AND NUMMILITES

970 - 980 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY

PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCITE-03%, CALCILUTITE- %
OTHER FEATURES: CALCAREOUS
FOSSILS: ECHINOID, BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
MOLLUSKS
COSKINOLINA FLORIDANA

980 - 990 LIMESTONE; YELLOWISH GRAY TO GRAYISH OLIVE GREEN
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR, SPECKLED
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, FOSSIL FRAGMENTS
ORGANICS
DICTYOCONUS COOKEI, COSKINOLINA FLORIDANA, FRIABLE
LIMESTONE

990 - 995 AS ABOVE

995 - 1000 LIMESTONE; YELLOWISH GRAY TO LIGHT OLIVE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, BIOTURBATED
ACCESSORY MINERALS: CALCITE-03%, CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR, SPECKLED
MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS, ORGANICS
LEPIDOCYCLINA, NUMMULITES, COSKINOLINA FLORIDANA, FRIABLE

1000 - 1005 LIMESTONE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %, CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA
LEPIDOCYCLINA, FRIABLE

1005 - 1010 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE

GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS

1010 - 1015 AS ABOVE

1015 - 1025 LIMESTONE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %, CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA

1025 - 1035 LIMESTONE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: VERY FINE TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %, CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS, ECHINOID
MOLLUSKS

1035 - 1045 LIMESTONE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, ECHINOID
NUMMULITES AND COSKINOLINA FLORIDANA, FRIABLE LIMESTONE

1045 - 1050 LIMESTONE; MODERATE GREENISH YELLOW TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED

LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS

1050 - 1055 LIMESTONE; MODERATE GREENISH YELLOW TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
COSKINOLINA FLORIDANA IDENTIFIED

1055 - 1065 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ECHINOID SPICULES
NUMMULITES COMMON IN 1063-1065 INTERVAL; COSKINOLINA FLORIDANA AND STEINKERN IDENTIFIED

1065 - 1075 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
DICTYOCONUS COOKEI AND COSKINOLINA FLORIDANA, FRIABLE LIMESTONE

1075 - 1080 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION

FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ECHINOID
COSKINOLINA FLORIDANA, PERONELLA DALLI

1080 - 1082 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ECHINOID

1082 - 1085 CLAY;
FOSSILS: BENTHIC FORAMINIFERA

1085 - 1095 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
SOME INTERBEDDED CLAY AND GRAY LIMESTONE LAYERS

1095 - 1100 AS ABOVE

1100 - 1105 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: DOLOMITE-25%, CLAY-20%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
BROWN SUCROSIC DOLOMITE AT 1104, CLAY LENSE ALSO PRESENT

1105 - 1115 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED
ACCESSORY MINERALS: CLAY- %, CALCITE- %, DOLOMITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION

FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ORGANICS
GRAY CLAY LENSE, DICTYOCONUS COOKEI, SUCROSIC DOLOMITE

1115 - 1125 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED
ACCESSORY MINERALS: CLAY- %, DOLOMITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ORGANICS
COSKINOLINA FLORIDANA

1125 - 1135 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BANDED, INTERBEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ORGANICS

1135 - 1140 AS ABOVE
MINOR INTERBEDDED GRAY LIMESTONE AND CLAY, NUMMULITES

1140 - 1145 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BANDED, INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ORGANICS

1145 - 1150 AS ABOVE

1150 - 1155 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
SEDIMENTARY STRUCTURES: BANDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
SOME GRAY LIMESTONE

1155 - 1160 AS ABOVE

1160 - 1165 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
SOME DRY GRAY CLAY AND SPARSE GRAY LIMESTONE

1165 - 1170 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: BRYOZOA, FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
COSKINOLINA FLORIDANA

1170 - 1175 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-35%
OTHER FEATURES: CALCAREOUS, WEATHERED
FOSSILS: BRYOZOA, BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
35% OF INTERVAL IS LIGHT YELLOW GREEN CALCAREOUS CLAY

1175 - 1180 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-15%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

1180 - 1185 AS ABOVE
FORAM IDENTIFIED (POSSIBLE CAVINGS?)

1185 - 1195 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE

POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-10%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
POSSIBLE FORAM (CAVINGS?)

1195 - 1205 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: DOLOMITE-35%, CLAY-05%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
GRAY ORANGE DOLOMITE ALSO PRESENT IN THIS INTERVAL, HARD DOLOMITE LAYER AT 1200, SOME GRAY LIMESTONE ALSO

1205 - 1210 LIMESTONE; DARK YELLOWISH BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, FRACTURE
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-10%, CALCITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ECHINOID SPICULES
COSKINOLINA FLORIDANA IDENTIFIED

1210 - 1220 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-15%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
COSKINOLINA FLORIDANA AND DICTYOCONUS COOKEI

1220 - 1225 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE

MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-10%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
SAME FORAMS AS ABOVE, SOME DARKER GRAY LIMESTONE
NUMMULITES

1225 - 1230 LIMESTONE; GRAYISH BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, BANDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

1230 - 1235 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
COSKINOLINA FLORIDANA IDENTIFIED

1235 - 1240 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ORGANICS

1240 - 1245 CLAY; GRAYISH GREEN
POROSITY: INTERGRANULAR; MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-50%
OTHER FEATURES: CALCAREOUS
CLAY INTERBEDDED WITH YELLOW GRAY LIMESTONE

1245 - 1250 AS ABOVE

1250 - 1255 LIMESTONE; YELLOWISH GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED
ACCESSORY MINERALS: CLAY-30%, DOLOMITE-01%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, ECHINOID, ORGANICS, BRYOZOA
SOME DRY GRAY CLAY AND SILICIFIED DOLOMITE

1255 - 1260 LIMESTONE; GRAYISH BROWN TO LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, ORGANIC MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED, BRECCIATED
MOTTLED
ACCESSORY MINERALS: CLAY- %, DOLOMITE-01%
OTHER FEATURES: CALCAREOUS, COQUINA, LOW RECRYSTALLIZATION
MEDIUM RECRYSTALLIZATION
FOSSILS: ORGANICS, BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
DARK BROWN ORGANIC LAYER AT 1255-1256

1260 - 1265 LIMESTONE; DARK GRAY TO LIGHT ORANGE
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED, MOTTLED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS

1265 - 1275 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS, SPICULES
ORGANICS

1275 - 1280 AS ABOVE
SOME DARK GRAY LIMESTONE

1280 - 1285 LIMESTONE; DARK YELLOWISH BROWN TO LIGHT ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS

GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, BANDED
ACCESSORY MINERALS: ANHYDRITE-0W%
OTHER FEATURES: LOW RECRYSTALLIZATION
MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, ORGANICS

1285 - 1290 LIMESTONE; GRAYISH GREEN TO DARK YELLOWISH BROWN
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: VERY FINE; RANGE: FINE TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, BANDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, ORGANICS
DRY GRAY GREEN CLAYEY LIMESTONE WITH DARK BROWN ORGANICS
ALSO PRESENT, HIGHLY FRIABLE IN PART

1290 - 1295 LIMESTONE; LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE; POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS

1295 - 1300 LIMESTONE; LIGHT ORANGE TO DARK YELLOWISH BROWN
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE; POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: ANHYDRITE- %, CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ECHINOID

1300 - 1305 LIMESTONE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE; POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
DICTYOCONUS CONUS AND LAGENA IDENTIFIED

1305 - 1315 LIMESTONE; YELLOWISH GRAY TO LIGHT BROWN

POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA

1315 - 1320 AS ABOVE
LARGE DICTYOCONUS COOKEI AND NUMMULITES IDENTIFIED

1320 - 1325 LIMESTONE; MODERATE YELLOWISH GREEN TO LIGHT ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: FINE; MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION

1325 - 1330 DOLOSTONE; DARK YELLOWISH BROWN TO MODERATE BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO GRANULE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED, BANDED
OTHER FEATURES: DOLOMITIC, SUCROSIC
MEDIUM RECRYSTALLIZATION, HIGH RECRYSTALLIZATION

1330 - 1331 AS ABOVE
DARK BROWN SUCROSIC SILICIFIED DOLOMITE

1331 - 1336 LIMESTONE; YELLOWISH GRAY TO LIGHT BROWN
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GRAIN SIZE: FINE; MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: DOLOMITE- %
OTHER FEATURES: CALCAREOUS, WEATHERED
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL FRAGMENTS
DICTYOCONUS COOKEI AND COSKINOLINA FLORIDANA

1336 - 1340 LIMESTONE; LIGHT OLIVE GRAY TO LIGHT BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: FINE; MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: DOLOMITE-10%
OTHER FEATURES: CALCAREOUS, WEATHERED
LOW RECRYSTALLIZATION, HIGH RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA

1340 - 1345 DOLOSTONE; YELLOWISH GRAY TO LIGHT BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO GRANULE

MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, BEDDED
OTHER FEATURES: DOLOMITIC, SUCROSIC
MEDIUM RECRYSTALLIZATION, HIGH RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA

1345 - 1350 DOLOSTONE; LIGHT BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO GRANULE
CEMENT TYPE(S): DOLOMITE CEMENT, SILICIC CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC, SUCROSIC
MEDIUM RECRYSTALLIZATION, HIGH RECRYSTALLIZATION
BROWN FRACTURED SUCROSIC DOLOMITE, QUARTZ CRYSTALS IDENTIFIED

1350 - 1355 DOLOSTONE; LIGHT BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO GRANULE
CEMENT TYPE(S): DOLOMITE CEMENT, SILICIC CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC, SUCROSIC
MEDIUM RECRYSTALLIZATION, HIGH RECRYSTALLIZATION

1355 - 1360 DOLOSTONE; DARK YELLOWISH BROWN TO LIGHT BROWNISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO GRANULE
CEMENT TYPE(S): SILICIC CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC, SUCROSIC
MEDIUM RECRYSTALLIZATION, HIGH RECRYSTALLIZATION
HARD BROWN FRACTURED SUCROSIC DOLOMITE

1360 TOTAL DEPTH