

EXECUTIVE SUMMARY
ROMP TR 3 - 1 "PT. LONESOME"
"INDEPENDENCE VILLAGE"
S 4 T 41S R 21E

March 9, 1984

J. L. Decker

I. GENERAL DESCRIPTION

The TR 3-1 monitor wellsite is located approximately 2/3 mile north of the intersection of SR 771 and SR 776 in Charlotte County. The drill site can be found in the Gardens of the Gulf Cove Subdivision between Bennett Drive and the west side of SR 771. The three monitor wells lie in the NW 1/4 of the NE 1/4 of the NW 1/4 of Section 4, Township 41 South, Range 21 East at latitude 26° 56' 38" and longitude 82° 13' 07".

II. SITE EASEMENT

TR 3-1 includes both a perpetual and a temporary construction easement for the purpose of drilling, maintaining a monitor well for testing purposes. The easement was granted by Gardens of Gulf Cove Property Owners' Association, Inc., Miami, Florida. The perpetual easement is 20' x 20' and is contained within a temporary construction easement of 100' x 100'.

III. REASONS FOR THE MONITOR

The three TR 3-1 wells were drilled to identify and monitor the four artesian zones and their confiners in the El Jobean - Charlotte Beach area. Other reasons for constructing the monitor wells include: water quality, potentiometric surface level data acquisition, describing lithology and identifying geologic formation boundaries.

IV. GEOLOGY

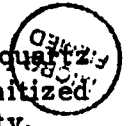
The TR 3-1 site lies within the Terraced Coastal Lowlands, a subdivision of the Gulf Coastal Lowlands. The site is located on the Pamlico Terrace at an elevation of 7.77' above MSL. The geologic units penetrated while drilling at this site include the following formations: Undifferentiable Sands, Caloosahatchee Marl of the Ft. Thompson Group, Tamiami, Hawthorn and Suwannee Formations.

An exploratory corehole was drilled at this site to a total depth of 603.5'. Drill cuttings were collected from a depth of 570' to 650' below LSD while drilling the deep monitor well. The geologic formations encountered ranged in age from Recent to Oligocene. The following summarizes the data collected at the TR 3 - 1 wellsite:

LSD-8.0' Undifferentiable Sands—off-white, gray, tan, light brown-brown, fine-medium grained quartz sands; pelecypod shell fragments; moderate-high porosity.

8.0'-22.0' Caloosahatchee Marl—tan-yellowish brown, heavily stained quartz sand; light bluish gray-dark gray sticky clay; tan, slightly dolomitized limestone, some phosphorite and shell fragments; low-moderate porosity.

DO NOT REMOVE ANY DATA FROM THIS "ROMP" FILE



22.0'-97.2' Tamiami Formation—Limestone-off-white, gray, tan-light brown, low-moderate porosity; dolostone-tannish, greenish, light-dark gray; siltstone, greenish gray; clay, cream, light gray, light-dark green; phosphatic throughout the formation; moldic, in part, coralline infilling at the top of the formation; some lenses of light-dark chert, low-moderate porosity (partly moldic).

97.2'-418.4' Hawthorn Formation—Limestone-cream-off-white, light gray, light tan, often a moldic biomicrite; fossiliferous—Turritella, Chione, Pectin; dolostone-tan to tannish gray, light-dark gray, friable in part, fossiliferous-fossil molds and casts; partly recrystallized siltstone-off-white to light tannish gray, soft, limey and moldic; clay-off-white, light-dark gray; phosphatic and fossiliferous (molds and casts throughout the formation); chert seam (238'-238.5'); low-high porosity.

418.4'-598.5' Tampa Formation—Siltstone, buff-light tan, light-dark, gray, soft but dense; limestone-off-white to light gray, biomicrite; clay-light-dark gray, soft, marly; fossiliferous-molds and casts—(Chione, Chlamys), phosphatic, friable in part; low-high porosity.

598.5'-650*TD Suwannee Formation—Limestone-tan to creamy white; chalky and sandy in part; generally fossiliferous—echinoids, foraminifera (Dictyconus Coskinolina, Rotalia mexicana); moderate to high porosity.

V. HYDROGEOLOGY

The first unconfined non-artesian zone is located between LSD and 20'. The elevation at the site is approximately 7.77' above MSL. The water level measured in the water table monitor following drilling operations was 10' below LSD. The water table is unconfined in the upper terrace deposits (Pamlico) and confined below by a light bluish gray-dark gray low porosity clay which comprises the lower section of the Caloosahatchee Marl Formation. The four separate and distinct artesian zones below the non-artesian aquifer consist of confining beds which appear to be leaky. The confining layers are primarily clayey limestone with some dense, well-compacted limestone, dolostone, and interbedded with clay. A first minor artesian zone (approximately 55'-79' below LSD), consisting of limestone, dolostone, siltstone, is found within the Tamiami Formation. The artesian zone is confined above by clay, limestone and dolostone of low porosity and below by clay, siltstone and mudstone (79'-97' below LSD). Water level was measured at 2.67' below LSD. A change in water level from 10' to 2.67' below LSD indicates that the first artesian zone is under hydrostatic head pressure.

A second artesian zone extends from approximately 141' to 172' below LSD. The interval consists mainly of siltstone and dolostone. Water level in the artesian zone was measured at 7.41' above LSD. The water level increased by 10 feet between these first two artesian zones in the Tamiami Formation and the upper Hawthorn Formation.

In the lower Hawthorn and upper Tampa Formation there appears to be a third intermittent artesian zone. The third artesian zone is found in an interval beginning at 249' to 265' below LSD. Porosity is high to very high in this interval. The water level was measured at 22.67' above LSD. The confining beds between 172' and 249' below LSD are interbedded siltstone, dolostone, clay, mudstone, limestone and chert with very low to low porosity. The third artesian

zone appears to also consist of the following intervals of high porosity: 324'-364', 368'-386', 395'-412', and 418'-432' below LSD. The interval between 265' and 324' below LSD consists of limestone with low-moderate porosity. Starting from a depth of 432' to a depth of 599' below LSD a clay, siltstone and limestone confiner with low-moderate porosity appears to separate the third artesian zone from a fourth artesian zone approximately 598.5' below LSD. The water level in the third artesian zone (lower Hawthorn Formation-upper Tampa Formation) ranged from approximately 23' to 18' above LSD during drilling operations. Upon completion of the deep monitor well, water level measurement for the screened monitor zone (380'-400') was 23.34' above LSD. A fourth artesian zone probably exists below 598.5' (Suwannee Formation). A water level measurement for the screened interval (600'-620' below LSD) was 25.34' above LSD, indicating that the hydraulic head increased with depth and as each of the artesian zones were encountered.

VI. HYDROLOGY

Water quality sampler, measuring specific conductivity, chloride and sulfate values were retrieved at 10' or 20' intervals between 43.5' and 603.5' below LSD during coring operations. With the exception of a reading of 3200 Umhos at 43.5' below LSD, specific conductivity ranged from 1150 to 2210 Umhos between 53.5' and 173.5' below LSD. Chlorides ranged from 250 mg/l to 345 mg/l. Values for sulfates ranged from 20.3 mg/l to 133 mg/l. Water quality changes substantially between 173.5'-183.5' below LSD. Specific conductivity increased from 1800 Umhos to 4250, chlorides 500 mg/l to 1280 mg/l and sulfates 58 mg/l to 258 mg/l.

Within the third artesian zone (249'-265' below LSD) water levels increased from 7.1' to over 20' above LSD, an indication of increased hydraulic head. There appeared to be a slight improvement in water quality, (3700-3800 Umhos) from a high of 4400 Umhos between 183.5' and 233.5' below LSD. Between 283.5' and 383.5' below LSD, specific conductivity increased again, ranging from 5600 to 6100 Umhos, chlorides (1575 mg/l to a high of 2050 mg/l), sulfates (358 to 443.4 mg/l). From 403.5' to 603.5' below LSD, water quality began to improve during coring operations. Specific conductivity dropped to a 3550-4700 Umhos range, chlorides (940-1270 mg/l) and sulfates (430.6'-475.6' mg/l). Sulfate values increased with depth while chlorides decreased.

Three years later while drilling the deep monitor well, water levels, water quality and discharge measurements were taken from the interval 260'-650' below LSD. Water levels ranged between 22' and 23.3' above LSD in the 260'-440' interval. Water levels dropped to 19' above LSD at 560' and began to rise again to a height of 24' above LSD when drilling operations were completed at 650' below LSD. Water quality results were comparable to the water quality data obtained while coring. The deep monitor well (650' below LSD) did show remarkable water quality improvement with depth. At 650' below LSD specific conductivity was 2800 Umhos. Chlorides dropped to 275 mg/l, but sulfates increased to a high of 514.8 mg/l. With one exception, discharge (gal./min.) increased with depth. Discharge ranged from 165 gal./min. to a high of 440 gal./min. at 650' below LSD. Most of the flow, as indicated by the flowmeter, originated in the 260' to 320' depth interval. The electric log indicated a fairly high zone of porosity. Water levels rose, indicating a fairly high zone of transmissivity. Most of the interval from 432' to approximately 475' below LSD appears to high in porosity. Increased flow as indicated by the flow meter and high porosity results from the electric log indicate that the 432'-475' interval is probably a high transmissive zone. Water quality in this interval appears to improve as shown on the fluid conductivity log. The flowmeter indicated that

minor flow occurs below the high flow zone (250'-320') to a final depth of 650' below LSD.

As indicated earlier, upon encountering the Suwannee Formation, a fourth artesian zone was identified from the electric log and the further improvement of water quality. The extent of the artesian zone was not determined. It is recommended that further investigation be initiated by drilling further into the Suwannee Formation and Ocala Group. The investigation of the improved water quality zone is also recommended.

VII. WELL CONSTRUCTION DEEP MONITOR

The TR 3-1 "Pt. Lonesome" deep well was constructed as a triple zoned monitor and drilled to a total depth of 650' below LSD. The intermediate dual monitor was drilled to a depth of 160' below LSD. A water table well was drilled to a depth of 18' below LSD to monitor the unconfined non-artesian aquifer.

(A) The deep monitor well was constructed in the following method: a 22" nominal diameter borehole was drilled to a depth of 55' below LSD, using a 22" bit and conventional mud rotary drilling techniques. A 16" steel surface casing was then seated, but later removed upon completion of drilling. A 14 5/8" bit was used in drilling a 15" nominal borehole to a depth of 250' below LSD. At this depth, 10" PVC casing was seated and pressure grouted to the surface. Upon converting to reverse air drilling techniques, a 9 1/2" drill bit was used to drill a 10" nominal borehole to a depth 650' below LSD. Specific capacity, water quality and water level data was retrieved during this period of drilling. For monitoring the upper portion of the fourth artesian zone, 20' of 3" PVC well screen (600'-620' below LSD) was coupled to a 3" PVC monitor tube extending from -600' to a +28.7' above LSD. White rounded silica gravel (1/4" dia.) was placed in the well from a depth of 650' to 590' below LSD. From 590' to 580' below LSD silica sand (6-20) was placed in the well before injecting cement grout from 580' to 400' below LSD. For monitoring the lower part of the third artesian zone in the Lower Hawthorn Formation, 20' of 2" PVC well screen (400'-380' below LSD) was coupled to a 2" PVC monitor tube (-380' to +28.7' above LSD). White rounded silica gravel (1/4" dia.) was placed in the well from 400' to 375' below LSD. A 5' layer of silica sand (6-20) was placed in the well before injecting cement grout from a depth of 370' to 270' below LSD. An open hole interval (270'-250' below LSD) will monitor the upper part of the third artesian zone in the Lower Hawthorn Formation.

(B) The intermediate well was drilled to the depth of 160' to monitor the upward migration of poorer quality water between 173.5' and 183.5' below LSD. To monitor the Upper Hawthorn Formation, a 12" nominal borehole was drilled to a depth of 55' below LSD. At this depth, 55' of 8" PVC casing was seated and cement grouted from bottom to top. A 7 5/8" bit was then used to drill a 8" nominal borehole to a depth of 160' below LSD. For monitoring the second artesian zone, upward migration and rapid degradation of water quality (173.5'-183.5' below LSD), 20' of 2" PVC well screen (140'-160' below LSD) was coupled to a 2" monitor tube extending (4" PVC + 7' to LSD) from 157' to 140' below LSD. An open hole interval exists from the bottom of the 8" PVC casing (55' to 75') below LSD to monitor the first artesian zone within the Tamiami Formation.

(C) The water table well was drilled to a depth of 19' below LSD. An 12" nominal borehole was drilled to 18' to accommodate a 6" PVC well screen (14'-18') which was coupled to a 6" PVC monitor tube extending from +4' to -14' below LSD. The annulus between the borehole and the monitor tube was filled with silica sand (6-20) from 19' to 4' below LSD. An 8" steel casing (+4' to 1' below LSD) was set in cement grout for a base upon which a monitor box will be placed.

The deep monitor well has a 12" diameter steel protective casing from -6' to +25' above LSD.

VIII. GEOPHYSICAL LOGS

A Suite of geophysical logs were completed with the District's logging equipment. Qualitative and quantitative data from the caliper, gamma, electric temperature, fluid conductivity and flow logs were used to identify zones of high porosity, confiners with low porosity, high flow zones, and water quality. The data was correlated with core and drill cuttings collected at the site.

U.S.G.S. Notification

The Technical Support Section was notified in April, 1984, that TR 3-1 is complete and ready for monitoring by the U.S. Geological Survey.

Definition of Formation Boundries—SPECIAL Note

The specific definition of formations penetrated at this well site was done partially on the basis of biostratigraphic evidence and partially on the basis of lithologic evidence. Additional correlating evidence (geophysical well logs and/or hydrologic data) was also utilized in the delineation of these formation boundaries. Therefore, the chosen formational boundaries are tentative at best, according to standard stratigraphic methods.

Simplified Lithology

<u>Borehole Depth</u> (Ft. Below LSD)	<u>TR 3-1</u>	<u>Name of Rock Unit</u>
LSD - 8.0'	Undifferentiable Sands
8.0' - 22.0'	Caloosahatchee Marl
22' - 97.2'	Tamiami Formation
97.2' - 418.4'	Hawthorn Formation
418.4' - 598.5'	Tampa Formation
598.5' - 650' TD	Suwannee Formation

JLD:cwp



LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W- 15332
TOTAL DEPTH: 603.5 FT.
SAMPLES - NONE

COUNTY - CHARLOTT
LOCATION: T.41S R.21E S.04 A
LAT = N 26D 56M 38
LON = W 82D 13M 07

COMPLETION DATE - N/A

ELEVATION - 7.8 FT

OTHER TYPES OF LOGS AVAILABLE - CALIPER, GAMMA, ELECTRIC, TEMPERATURE, FLUID

OWNER/DRILLER: SWFWMD; ROMP TR 3-1 "PT LONESOME", "INDEPENDANCE VILLAGE" CORE.

WORKED BY: HENDERSON; CODED AND ENTERED BY RICHARD GREEN 10/90 FROM A GEOLOGIST'S LOG PROVIDED BY SWFWMD.

THE TR 3-1 MONITOR WELLSITE IS LOCATED APPROX. 2/3 MILE NORTH OF THE INTERSECTION OF S.R. 771 AND S.R. 776 IN CHARLOTTE COUNTY. THE SITE CAN BE FOUND IN THE GARDENS OF GULF COVE SUBDIVISION BETWEEN BENNETT DRIVE AND THE WEST SIDE OF S.R. 771.

- 0. - 8. UNDIFFERENTIATED SAND AND CLAY
- 8.0- 22.0 CALOOSAHATCHEE FM.
- 22. - 97.2 TAMIAMI FM.
- 97.2- . HAWTHORN GROUP
- 418.4- . TAMPA MEMBER OF ARCADIA FM.

- 0 - 3 SAND; WHITE TO LIGHT GRAY; POSSIBLY HIGH PERMEABILITY, INTERGRANULAR;
RANGE: FINE TO MEDIUM;
ACCESSORY MINERALS: SHELL-%;
ABUNDANT PELECYPOD SHELL FRAGMENTS (PROBABLY DUE TO OVERBURDEN CONTAMINATION AT THIS SITE). MOD-HIGH POROSITY.

- 3 - 5 SAND; LIGHT BROWN TO DARK BROWN; POSSIBLY HIGH PERMEABILITY, INTERGRANULAR;
RANGE: FINE TO MEDIUM;
ACCESSORY MINERALS: ORGANICS- %, SHELL-%;
COMMENTS AS ABOVE. HEAVILY STAINED BY ORGANICS.

- 5 - 8 SAND; LIGHT BROWN TO TAN; POSSIBLY HIGH PERMEABILITY, INTERGRANULAR;
RANGE: FINE TO MEDIUM;
ACCESSORY MINERALS: SHELL- %, IRON STAIN-%;
MODERATE-HIGH POROSITY.

- 8 - 11 SAND; DARK YELLOWISH BROWN; RANGE: FINE TO MEDIUM;
ACCESSORY MINERALS: IRON STAIN- %, SHELL-%;
HEAVILY STAINED BY OXIDES. SOME THIN BUT HARD SHELL BEDS. MODERATE POROSITY.

- 11 - 20 SAND; TAN TO DARK YELLOWISH BROWN; RANGE: MEDIUM TO COARSE;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, IRON STAIN-%;
HEAVILY STAINED BY OXIDES. MODERATE POROSITY.

- 20 - 22 CLAY; LIGHT BLuish GRAY TO DARK GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %, LIMESTONE-%;
SLIGHTLY SANDY, STICKY PHOSPHATIC CLAY, SOME TAN, SLIGHTLY DOLOMITIC LS INTERMIXED.
- 22 - 25 LIMESTONE; TAN TO LIGHT BROWN; LOW PERMEABILITY;
GOOD INDURATION;
OTHER FEATURES: DOLOMITIC;
- 25 - 28.5 DOLOMITE; WHITE TO LIGHT BLUE; MOLDIC, LOW PERMEABILITY;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, CHERT-%;
RECRYSTALLIZED, HEAVILY SPECKED BY V.FINE PHOS. SANDS. VERY LOW MOLDIC POROSITY.
- 28.5- 33.3 DOLOMITE; LIGHT BROWNISH GRAY TO LIGHT BLuish GRAY; LOW PERMEABILITY, MOLDIC;
MODERATE INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, ECHINOID;
PARTLY RECRYSTALLIZED, MOLDIC, HEAVILY SPECKED BY PHOS. SANDS, COMMON PELECYPOD MOLDS WITH
SOME INFILLED BY CORALLINE MATERIAL. V. LOW-LOW MOLDIC POROSITY.
- 33.3- 36 AS ABOVE
SLIGHTLY FRIABLE, HIGHLY PHOSPHATIC. L-M POROSITY.
- 36 - 39 LIMESTONE; LIGHT GRAY TO LIGHT BLuish GRAY; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
MODERATE INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: HIGH RECRYSTALLIZATION, DOLOMITIC;
SLIGHTLY FRIABLE BIOMICRITE, HIGHLY PHOSPHATIC, ABUNDANT BUT HIGHLY ALTERED FOSSIL CASTS
AND MOLDS. LOW MOLDIC POROSITY.
- 39 - 42.5 DOLOMITE; LIGHT GRAY TO DARK GRAY; LOW PERMEABILITY, MOLDIC;
GOOD INDURATION;
SEDIMENTARY STRUCTURES: LAMINATED,
ACCESSORY MINERALS: PHOSPHATIC SAND- %, CLAY- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SLIGHTLY MOLDIC DOLOMITE, COMMON PELECYPOD CASTS AND MOLDS, SOME MOLDS INFILLED BY PHOS.,
DOLOMITIC CLAY. ENTIRE SECTION LAMINATED BY WIDE PHOS. CLAY SEAMS GIVING IT A "VARVY"
APPEARANCE. LOW MOLDIC POROSITY.
- 42.5- 46.2 AS ABOVE
SOME FOSSIL MOLDS INFILLED BY CHERTY LIMONITE CONCRETIONS NEAR 43'.
- 46.2- 47.1 DOLOMITE; LIGHT GRAY TO LIGHT BLuish GRAY; LOW PERMEABILITY, MOLDIC;
GOOD INDURATION;
ACCESSORY MINERALS: CHERT- %, PHOSPHATIC SAND-01%;
SLIGHTLY CHERTY, RECRYSTALLIZED, TRACE OF FOSSIL MOLDS. VERY LOW MOLDIC POROSITY.

- 47.1- 51.2 CLAY; LIGHT BLuish GRAY TO LIGHT GREENISH GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
EARTHY- WAXY.
- 51.2- 54.8 DOLOMITE; LIGHT GREENISH GRAY TO LIGHT BLuish GRAY; LOW PERMEABILITY, MOLDIC;
MODERATE INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SLIGHTLY MOLDIC.
- 54.8- 56.2 LIMESTONE; CREAM TO VERY LIGHT GREEN; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %, SHELL- %;
OTHER FEATURES: CHALKY;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS;
CHALKY-CLAYEY, BIOMICRITE. COMMON TAN CALCITIZED PELECYPOD FRAGS.
- 56.2- 59.7 DOLOMITE; DARK GRAY TO BLACK; LOW PERMEABILITY;
POOR INDURATION;
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-%;
SOFT, SANDY PHOSPHATIC DOLOMITE ALTERNATING WITH DK GRAY TO GREENISH GRAY, HARD,
PHOSPHATIC DOLOMITE. LOW-MOD. POROSITY.
- 59.7- 63.5 DOLOMITE; GREENISH GRAY; LOW PERMEABILITY, MOLDIC;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
ABUNDANT FOSSIL MOLDS, SOME FILLED BY SOFT DOLOMITE DESCRIBED ABOVE. VERY LOW-LOW MOLDIC
POROSITY.
- 63.5- 69.5 SILT; GREENISH GRAY; POSSIBLY HIGH PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
SLIGHTLY FRIABLE SILTSTONE ALTERNATING WITH DARK GRAY, HARD, SLIGHTLY MOLDIC, PHOSPHATIC
DOLOMITE, MOD-HIGH POROSITY IN SILTSTONE; VERY LOW MOLDIC POROSITY IN DOLOMITE.
- 69.5- 71 LIMESTONE; ;
- 71 - 72.5 DOLOMITE; LIGHT GRAY TO GREENISH GRAY; MOLDIC, LOW PERMEABILITY;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, SILT- %;
FOSSILS: FOSSIL MOLDS, MOLLUSKS, FOSSIL FRAGMENTS;
ABUNDANT PELECYPOD MOLDS INFILLED W/ SILTSTONE DESCRIBED ABOVE. COMMON TAN CALCITIZED
PELECYPOD FRAGMENTS. L-M MOLDIC POROSITY.

- 72.5- 76.5 LIMESTONE; GREENISH GRAY; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
MODERATE INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %, SILT- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, FOSSIL FRAGMENTS, BRYOZOA;
SPARSE BIOMICRITE, ABUNDANT CREAM-TAN CALCITIZED PELECYPOD SHELL CROSS SECTIONS, SOME DK
GRAY, SOFT SILTSTONE INFILLING FOSSIL MOLDS, SOME CORALLINE MATERIAL AND BRYOZOAN PAVEMENT
FILLING FOSSIL MOLDS.
- 76.5- 79.2 LIMESTONE; CREAM TO WHITE; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
ACCESSORY MINERALS: QUARTZ SAND- %;
OTHER FEATURES: CHALKY;
SOFT, MOLDIC BIOMICRITE.
- 79.2- 79.7 CLAY; CREAM TO LIGHT GRAY; LOW PERMEABILITY; MODERATE INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CHALKY, CALCAREOUS;
- 79.7- 83.7 CLAY; GREEN TO GREENISH GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, SILT-%;
SOFT BUT DENSE WAXY CLAY INTERMIXED W/ TAN-GREENISH TAN SOFT, PHOSPHATIC, CLAYEY
SILTSTONE, SOME LENSES OF LT-DK GRAY CHERT.
- 83.7- 89 CLAY; DARK GREEN; LOW PERMEABILITY;
SOFT BUT DENSE, WAXY.
- 89 - 94.2 CALCILUTITE; LIGHT YELLOWISH GREEN; LOW PERMEABILITY;
SOFT BUT DENSE, WAXY-EARTHY MUDSTONE.
- 94.2- 97.2 SILT; ; LOW PERMEABILITY;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS;
GREENISH GRAY-LT YELLOWISH GREEN, SOFT BUT DENSE, VERY CLAYEY, LIMEY SILTSTONE.
- 97.2- 103.5 LIMESTONE; CREAM TO WHITE; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: DOLOMITIC;
SLIGHTLY DOLOMITIC SPARSE BIOMICRITE. SOME FOSSIL MOLDS INFILLED BY DK GRAY, SOFT, FINE,
PHOS. SANDS. LOW MOLDIC POROSITY.

- 103.5- 107 LIMESTONE; CREAM TO WHITE; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
GOOD INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
OTHER FEATURES: DOLOMITIC;
SOFT IN PART-HARD, SPARSE BIOMICRITE, SOME CREAM COLORED, WAXY CLAY LENSES, SOME PHOS.
SAND LAMINATIONS.
- 107 - 110.7 DOLOMITE; TAN TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
10-50% ALTERED;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
COMMON MOLLUSK MOLDS AND CASTS, SOME INFILLED BY GRAY, SOFT-HARD, PHOSPHATIC DOLOMITE.
ENTIRE SECTION HEAVILY LAMINATED BY PHOS. SANDS GIVING IT A "VARVY" APPEARANCE, LOW-MOD.
MOLDIC POROSITY.
- 110.7- 114 CALCILUTITE; LIGHT GRAY TO DARK GRAY; LOW PERMEABILITY;
POOR INDURATION;
OTHER FEATURES: CHALKY;
SOFT BUT DENSE, CHALKY MUDSTONE.
- 114 - 123.5 DOLOMITE; TAN TO LIGHT GRAY; LOW PERMEABILITY, MOLDIC; 10-50% ALTERED;
GOOD INDURATION;
FOSSILS: FOSSIL MOLDS, MOLLUSKS, WORM TRACES;
HIGHLY MOLDIC DOLOMITE W/ VERY HARD, RECRYSTALLIZED LT GRAY DOLOMITE SEAMS THROUGHOUT
SECTION, ABUNDANT MOLLUSK CASTS AND MOLDS. LOW-MOD. MOLDIC POROSITY.
- 123.5- 133.5 DOLOMITE; TAN TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SLIGHTLY PHOSPHATIC, MOLDIC DOLOMITE. COMMON SMALL FOSSIL MOLDS, SOME LARGE PELECYPOD
MOLDS. LOW MOLDIC POROSITY.
- 133.5- 141.5 DOLOMITE; LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: FOSSIL MOLDS, MOLLUSKS, ECHINOID;
COMMON LARGE FOSSIL MOLDS, SOME EUPATAGUS? TEST FRAGMENTS.
- 141.5- 153.5 SILT; WHITE TO LIGHT GRAY; LOW PERMEABILITY; MODERATE INDURATION;
SEDIMENTARY STRUCTURES: LAMINATED,
ACCESSORY MINERALS: PHOSPHATIC SAND- %, CLAY- %;
OTHER FEATURES: CALCAREOUS, CHALKY;
SILTSTONE, VERY PHOSPHATIC, CLAYEY, LIMEY, SOME CREAM-OFFWHITE, CHALKY CLAY LAMINATIONS,
LOW-MODERATE POROSITY.

- 153.5- 158.5 AS ABOVE
EXCEPT NO CLAY LAMINATIONS; MOD-HIGH POROSITY.
- 158.5- 163.5 AS ABOVE
SAME AS 141.5-153.5'.
- 163.5- 168.5 AS ABOVE
EXCEPT SOME LT GRAY-LT TANNISH GRAY, HARD, HIGHLY MOLDIC, FOSSILIFEROUS DOLOMITE, COMMON PELECYPOD MOLDS, WITH SOME MOLDS INFILLED BY WORM CASTS AND CORALLINE MATERIAL, LOW-MOD. MOLDIC POROSITY IN DOLOMITE AND L-M POROSITY IN SILTSTONE.
- 168.5- 171.9 AS ABOVE
EXCEPT TRACE ECHINOID CASTS, SOME FOSSIL MOLDS LINED BY CALCITE.
- 171.9- 175 SILT; LIGHT GRAY TO LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY; POOR INDURATION;
SEDIMENTARY STRUCTURES: INTERBEDDED,
ACCESSORY MINERALS: PHOSPHATIC SAND- %, CLAY-%;
SOFT BUT DENSE, LIMEY SILTSTONE INTERMIXED WITH SOME LT GRAY, HARD, CHALKY, CLAY LENSES.
MOD-HIGH POROSITY IN SILTSTONE, LOW POROSITY IN CLAY.
- 175 - 176 SILT; LIGHT BROWNISH GRAY; LOW PERMEABILITY; POOR INDURATION;
SEDIMENTARY STRUCTURES: INTERBEDDED,
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
HIGHLY PHOSPHATIC, SOFT, MARLY, LIMEY SILTSTONE, INTERMIXED W/ TANNISH GRAY, HARD,
PHOSPHATIC, HIGHLY MOLDIC DOLOMITE, ABUNDANT MOLLUSK AND ECHINOID CASTS, SOME PHOSPHATIZED
PELECYPOD CASTS, VERY LOW POROSITY IN SILTSTONE, LOW MOLDIC POROSITY IN DOLOMITE.
- 176 - 179.5 DOLOMITE; ;
- 179.5- 180 CLAY; LIGHT GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
SOFT, HIGHLY PHOSPHATIC.
- 180 - 191 LIMESTONE; CREAM TO WHITE; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: COQUINA, SPECKLED;
MICROCOQUINAL-COQUINAL BIOMICRITE, HEAVILY SPECKED BY PHOS., MOD-HIGH POROSITY.
- 191 - 194.8 LIMESTONE; CREAM TO WHITE; MOLDIC, LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: SPECKLED, COQUINA;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
HEAVILY SPECKED BY PHOS., HIGHLY MOLDIC BIOMICRITE, COMMON LARGE MOLLUSK MOLDS AND CASTS,
LOW-MOD. MOLDIC POROSITY.

- 194.8- 202.5 DOLOMITE; LIGHT GRAY; LOW PERMEABILITY, MOLDIC;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, CLAY- %, PHOSPHATIC GRAVEL-%;
SLIGHTLY FRIABLE, SLIGHTLY MOLDIC, SLIGHTLY CLAYEY NEAR BOTTOM OF SECTION, SOME PHOS.
GRAVEL BRECCIATING BOTTOM HALF OF SECTION, LOW MOLDIC POROSITY.
- 202.5- 206 DOLOMITE; LIGHT GRAY TO DARK GRAY; MOLDIC, LOW PERMEABILITY;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: FOSSILIFEROUS;
HIGHLY MOLDIC, ENTIRE SECTION IS VUBBLED, LOW MOLDIC POROSITY.
- 206 - 206.4 CALCILUTITE; LIGHT TAN; LOW PERMEABILITY;
GOOD INDURATION;
OTHER FEATURES: CHALKY;
DENSE, CHALKY MUDSTONE.
- 206.4- 209.4 DOLOMITE; LIGHT GRAY TO LIGHT BROWNISH GRAY; MOLDIC, LOW PERMEABILITY;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: FOSSILIFEROUS;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
HIGHLY MOLDIC, ABUNDANT LARGE MOLLUSK MOLDS AND CASTS, LOW MOLDIC POROSITY.
- 209.4- 211 CLAY; LIGHT GRAY TO DARK GRAY; LOW PERMEABILITY; POOR INDURATION;
OTHER FEATURES: CALCAREOUS;
SOFT BUT VERY DENSE, LIMEY, STICKY, MARLY.
- 211 - 216 DOLOMITE; LIGHT GRAY; MOLDIC, LOW PERMEABILITY;
POOR INDURATION;
ACCESSORY MINERALS: CLAY-%;
SOFT BUT DENSE, VERY CLAYEY, SLIGHTLY MOLDIC.
- 216 - 216.4 CALCILUTITE; LIGHT GRAY; LOW PERMEABILITY;
POOR INDURATION;
ACCESSORY MINERALS: SHELL- %;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS;
SOFT BUT DENSE, MUDSTONE, SOME PELECYPOD SHELL FRAGMENTS INTERMIXED THROUGHOUT SECTION.
- 216.4- 219.5 LIMESTONE; CREAM TO LIGHT GRAY; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC GRAVEL-01%, ORGANICS-01%;
OTHER FEATURES: FOSSILIFEROUS, CHALKY;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS;
SOFT BUT DENSE, VERY CHALKY-V. CLAYEY, SLIGHTLY MOLDIC, COMMON PELECYPOD SHELL FRAGS,
LOW-MODERATE POROSITY.

- 219.5- 221.5 CALCILUTITE; LIGHT GRAY; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: CLAY- %;
OTHER FEATURES: FOSSILIFEROUS;
SOFT BUT DENSE, VERY CLAYEY MICRITE INTERMIXED WITH SOFT, MARLY, LIMEY CLAY.
- 221.5- 223.5 LIMESTONE; LIGHT GRAY TO LIGHT BROWNISH GRAY; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
POOR INDURATION;
SEDIMENTARY STRUCTURES: MOTTLED,
ACCESSORY MINERALS: CLAY- %;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS;
SOFT BUT DENSE, CLAYEY SPARSE BIOMICRITE MOTTLED BY LT BLUISH GRAY, SLIGHTLY DOLOMITIC,
MOLDIC SPARSE BIOMICRITE, COMMON PELECYPOD SHELL FRAGS., LOW-MODERATE POROSITY.
- 223.5- 225 CALCILUTITE; WHITE TO LIGHT GRAY; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
OTHER FEATURES: CHALKY;
SOFT BUT DENSE MUDSTONE.
- 225 - 226.5 LIMESTONE; ;
SAME AS 221.5-223.5'.
- 226.5- 228.7 SILT; CREAM TO WHITE; LOW PERMEABILITY;
ACCESSORY MINERALS: CLAY- %;
OTHER FEATURES: CHALKY, CALCAREOUS, FOSSILIFEROUS;
SILTSTONE, CHALKY-CLAYEY IN PARTS, LIMEY IN CLAYEY SECTIONS, L-M POROSITY, SLIGHTLY
FOSSILIFEROUS IN PARTS.
- 228.7- 237.1 LIMESTONE; WHITE TO LIGHT BROWNISH GRAY; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-01%;
OTHER FEATURES: CHALKY, FOSSILIFEROUS;
SOFT BUT DENSE.
- 237.1- 237.4 LIMESTONE; LIGHT GRAY TO LIGHT BROWNISH GRAY; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %, PHOSPHATIC GRAVEL- %;
OTHER FEATURES: FOSSILIFEROUS, CHALKY;
FOSSILS: FOSSIL MOLDS;
MICRITE ALTERNATING WITH TAN-DK BRN, EARTHY CLAY STRINGERS, CLAYS MOTTLED BY SMALL
CALCITIZED FOSSIL MOLDS, ENTIRE SECTION HAVING A "BUTTER AND MOLASSES" APPEARANCE, LOW
POROSITY.

- 237.4- 238.3 DOLOMITE; LIGHT GRAY TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
0-10% ALTERED;
GOOD INDURATION;
ACCESSORY MINERALS: CLAY- %;
FOSSILS: FOSSIL MOLDS;
DENSE, MOLDIC DOLOMITE, SOME MOLDS FILLED BY TANNISH GRAY, FOSSILIFEROUS MICRITE AT TOP OF
SECTION, 1/4" WAXY GREEN CLAY SEAM NEAR BOTTOM OF SECTION. LOW MOLDIC POROSITY.
- 238.3- 238.5 CHERT; DARK GRAY; NOT OBSERVED; GOOD INDURATION;
CEMENT TYPE(S): SILICIC CEMENT;
FOSSILS: WORM TRACES;
SOME LARGE WORM BORINGS AT TOP OF SECTION FILLED BY DOLOMITE.
- 238.5- 239.5 DOLOMITE; LIGHT GRAY; LOW PERMEABILITY, MOLDIC; 10-50% ALTERED;
GOOD INDURATION;
ACCESSORY MINERALS: SPAR- %;
FOSSILS: FOSSIL MOLDS;
GRADING TO TAN-LT TANNISH GRAY, PARTLY RECRYSTALLIZED HARD, MOLDIC DOLOMITE, SOME MOLDS
FILLED BY CALCITE SPAR.
- 239.5- 243.2 DOLOMITE; TAN TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
0-10% ALTERED;
GOOD INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC GRAVEL-01%;
SLIGHTLY CLAYEY AT BOTTOM OF SECTION, LOW MOLDIC POROSITY.
- 243.2- 244.5 CLAY; TAN TO LIGHT BROWNISH GRAY; LOW PERMEABILITY; POOR INDURATION;
OTHER FEATURES: CHALKY, DOLOMITIC;
SOFT BUT DENSE, EARTHY DOLOMITE? CLAY.
- 244.5- 247.2 DOLOMITE; CREAM TO TAN; LOW PERMEABILITY, MOLDIC; 0-10% ALTERED;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %;
OTHER FEATURES: CHALKY;
FOSSILS: FOSSIL MOLDS;
COMMON FOSSIL MOLDS, ABUNDANT PHOS. GRAVEL (UP TO 1/2" IN DIAMETER.)
- 247.2- 249.6 DOLOMITE; TAN TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
0-10% ALTERED;
MODERATE INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC GRAVEL- %;
OTHER FEATURES: FOSSILIFEROUS;
FOSSILS: FOSSIL MOLDS;
SOME PELECYPOD MOLDS FILLED BY DK TANNISH BRN CLAY AT TOP OF SECTION. COMMON PHOS.
GRAVELS, LESS ABUNDANT WITH DEPTH., SMALL BLACK PHOS. SEAM AT BOTTOM OF SECTION.

- 249.6- 250.8 LIMESTONE; TAN; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
POOR INDURATION;
ACCESSORY MINERALS: CLAY- %;
FOSSILS: FOSSIL MOLDS;
SOFT BUT DENSE, FRIABLE-SLIGHTLY CLAYEY IN PARTS, SPARSE BIOMICRITE, COMMON FOSSIL MOLDS,
MOD-HIGH POROSITY.
- 250.8- 263.7 LIMESTONE; WHITE TO LIGHT GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
POOR INDURATION;
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CHALKY, COQUINA;
FOSSILS: BRYOZOA, FOSSIL MOLDS, MOLLUSKS, CRUSTACEA;
BIOMICRITE, ABUNDANT PELECYPOD (CHALMYS) CASTS AND MOLDS, SOME CORALLINE MATERIAL FILLING
MOLDS, COMMON BUT ALTERED MICROFAUNA.
- 263.7- 265.3 LIMESTONE; LIGHT GRAY; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
POOR INDURATION;
OTHER FEATURES: COQUINA;
FOSSILS: BRYOZOA, CRUSTACEA, MOLLUSKS, FOSSIL MOLDS;

AND BRANCHING BRYOZOANS, COMMON CRAB CLAW FRAGMENTS, SOME TAN, CALCITIZED OSTREA FRAGMENTS
LAMINATING BOTTOM 2" OF SECTION. VERY HIGH POROSITY.
- 265.3- 293.5 LIMESTONE; LIGHT GRAY TO LIGHT TAN; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
POOR INDURATION;
OTHER FEATURES: CHALKY;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SOFT BUT DENSE, BIOMICRITE, COMMON MOLLUSK MOLDS (CHIONE), AND STEINKERNS (TURRITELLA),
SOME LINED BY CALCITE SPAR. LOW-MOD. POROSITY.
- 293.5- 308.7 LIMESTONE; BUFF TO LIGHT GRAY; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: GLAUCONITE- %, IRON STAIN- %, PHOSPHATIC SAND- %, CLAY- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, BRYOZOA;
SLIGHTLY FRIABLE BIOMICRITE, BOTTOM 1/2 OF SECTION STAINED BY IRON, ABUNDANT TURRITELLA
CASTS AND MOLDS, COMMON CHALMYS, CHIONE CASTS AND MOLDS, SOME TAN CORALLINE MATERIAL, SOME
BRANCHING BRYOZOAN OR CORAL? CASTS, SOME GLAUCONITIC? STAINING OF UPPER 1' OF SECTION.
- 308.7- 310.5 LIMESTONE; BUFF TO TAN; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
OTHER FEATURES: FOSSILIFEROUS;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SOFT, VERY CLAYEY, HIGHLY PHOSPHATIC MICRITE, COMMON SMALL MOLLUSK MOLDS. LOW-MOD.
POROSITY.

- 310.5- 324.1 LIMESTONE; BUFF TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SLIGHTLY CLAYEY- PHOSPHATIC, MOLDIC BIOMICRITE, SOME TAN CORALLINE BIOMICRITE, COMMON MOLLUSK CASTS AND MOLDS.
- 324.1- 328.6 LIMESTONE; LIGHT GRAY TO LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: CALCILUTITE, BIOGENIC;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SOFT BUT DENSE, SLIGHTLY FRIABLE, BIOMICRITE, COMMON MOLLUSK CASTS AND MOLDS, ONE LARGE PELECYPOD SHELL CROSS SECTION FOUND, MODERATE-HIGH POROSITY.
- 328.6- 346 LIMESTONE; LIGHT GRAY TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
MODERATE INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, SPAR- %;
OTHER FEATURES: CHALKY;
FOSSILS: FOSSIL MOLDS, MOLLUSKS, CORAL;
HIGHLY MOLDIC BIOMICRITE, ABUNDANT MOLLUSK MOLDS (TURRITELLA), COMMON CORALLINE CASTS AND CORALLINE MATERIAL FILLING OTHER FOSSIL MOLDS, SOME TAN, CALCITIZED PELECYPOD SHELL CROSS SECTIONS. L-M POROSITY.
- 346 - 350.8 LIMESTONE; LIGHT GRAY TO LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
POOR INDURATION;
OTHER FEATURES: CHALKY;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, BRYOZOA;
SLIGHTLY CHALKY-FRIABLE IN PARTS, MOLDIC BIOMICRITE, COMMON MOLLUSK MOLDS, MODERATE-HIGH POROSITY.
- 350.8- 355.7 LIMESTONE; LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
GOOD INDURATION;
OTHER FEATURES: CHALKY, DOLOMITIC;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
BIOMICRITE, SOME CREAM-OFFWHITE, LIMEY MARL FILLING FOSSIL MOLDS IN MIDDLE OF SECTION. COMMON PECTEN MOLDS, SOME TURRITELLA MOLDS, MOD-HIGH POROSITY.
- 355.7- 358.7 AS ABOVE
EXCEPT COMMON LARGE VUGS COMPLETELY FILLED IN BY ABOVE DESCRIBED MARL THAT IS SLIGHTLY DOLOMITIZED. LOW POROSITY IN MARL.
- 358.7- 361.5 LIMESTONE; ;
SAME AS 346-350.8'.

- 361.5- 364 LIMESTONE; LIGHT GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
POOR INDURATION;
OTHER FEATURES: CHALKY;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, FOSSIL FRAGMENTS;
VERY CHALKY BIOMICRITE, COMMON MOLLUSK MOLDS AND CASTS, COMMON TAN ARAGONITIZED SHELL
FRAGMENTS, MOD-HIGH POROSITY.
- 364 - 368.3 DOLOMITE; TAN TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
0-10% ALTERED;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: FOSSIL MOLDS;
DENSE, PARTLY RECRYSTALLIZED, COMMON FOSSIL MOLDS IN UPPER HALF OF SECTION BECOMING LESS
ABUNDANT TOWARDS BOTTOM, SOME FINE PHOS. SANDS ASSOCIATED WITH THE DOLOMITE. LOW-MODERATE
MOLDIC POROSITY.
- 368.3- 372.3 DOLOMITE; LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
MODERATE INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: FOSSIL MOLDS, MOLLUSKS, FOSSIL FRAGMENTS;
FRIABLE, HIGHLY PHOSPHATIC, UPPER 1/2 OF SECTION HAVING COMMON FOSSIL MOLDS INFILLED BY
FINE PHOS. SANDS, LOWER 1/2 OF SECTION INDURATED WITH COMMON MOLLUSK MOLDS AND CASTS,
TRACE OF CALCITIZED PELECYPOD SHELL FRAGMENTS AT BOTTOM OF SECTION. MOD-HIGH MOLDIC
POROSITY.
- 372.3- 374.5 LIMESTONE; LIGHT GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
POOR INDURATION;
OTHER FEATURES: CHALKY;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SLIGHTLY FRIABLE, BIOMICRITE, COMMON PECTEN AND TURRITELLA MOLDS AND CASTS. MODERATE-HIGH
POROSITY.
- 374.5- 375.6 LIMESTONE; LIGHT GRAY TO LIGHT BROWNISH GRAY; MOLDIC, POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
GOOD INDURATION;
FOSSILS: FOSSIL MOLDS;
BIOMICRITE, COMMON LARGE FOSSIL MOLDS, SOME FILLED BY LT TAN MICRITE OR TAN DOLOMITIC LS.;
MOD-HIGH POROSITY.
- 375.6- 380.5 LIMESTONE; LIGHT GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
MODERATE INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: FOSSIL MOLDS;
SPARSE BIOMICRITE, SLIGHTLY FRIABLE, SOME SMALL FOSSIL MOLDS THROUGHOUT SECTION, MANY
FILLED BY TAN DOLOMITIC LS.

- 380.5- 383.2 LIMESTONE; LIGHT GRAY TO LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CHALKY;
FOSSILS: FOSSIL MOLDS, MOLLUSKS;
SPARSE BIOMICRITE, COMMON SMALL FOSSIL MOLDS W/ SOME CALCITIZED GASTROPOD CASTS,
MODERATE-HIGH POROSITY.
- 383.2- 385.7 LIMESTONE; LIGHT TAN TO LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
MODERATE INDURATION;
OTHER FEATURES: CHALKY;
FOSSILS: FOSSIL MOLDS;
HIGHLY MOLDIC BIOMICRITE, SOME MOLDS FILLED W/ CORALLINE MATERIAL, HIGH POROSITY.
- 385.7- 386.6 SILT; WHITE TO LIGHT GRAY; POSSIBLY HIGH PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS, CHALKY, FOSSILIFEROUS;
SOFT BUT DENSE SILTSTONE, LIMEY, MOD-HIGH POROSITY.
- 386.6- 389.2 DOLOMITE; BUFF TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
0-10% ALTERED;
GOOD INDURATION;
ACCESSORY MINERALS: SILT- %, PHOSPHATIC SAND-%;
DENSE, SLIGHTLY MOLDIC, BLACK PHOS. SANDS SCATTERED THROUGHOUT SECTION, LOW POROSITY.
- 389.2- 391.2 DOLOMITE; BUFF TO LIGHT TAN; LOW PERMEABILITY; 0-10% ALTERED;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CHALKY;
VERY CHALKY, SLIGHTLY HARD.
- 391.2- 395.1 DOLOMITE; TAN TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
0-10% ALTERED;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND-01%;
OTHER FEATURES: FOSSILIFEROUS;
- 395.1- 395.5 CLAY; WHITE TO LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
SOFT BUT DENSE, EARTHY-MARLY IN PARTS.

- 395.5- 403 LIMESTONE; LIGHT TAN TO LIGHT BLUISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
MODERATE INDURATION;
OTHER FEATURES: COQUINA;
FOSSILS: FOSSIL MOLDS, MOLLUSKS, BRYOZOA;
HIGHLY MOLDIC BIOMICRITE, ABUNDANT MOLLUSK MOLDS AND CASTS, COMMON BRYOZOAN PAVEMENT, SOME
CORALLINE MATERIAL INFILLING FOSSIL MOLDS, MOD-HIGH POROSITY.
- 403 - 404.7 LIMESTONE; WHITE TO LIGHT GRAY; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
SOFT BUT DENSE, SLIGHTLY CHALKY, SPARSE BIOMICRITE GRADING TO LIMEY SILTSTONE IN BOTTOM
1/3 OF SECTION. MOD-HIGH POROSITY.
- 404.7- 411.9 DOLOMITE; BUFF TO LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CHALKY;
FOSSILS: FOSSIL MOLDS;
VARIABLE PHOSPHATE CONCENTRATIONS. FRIABLE, SOFT, FOSSIL MOLDS MORE ABUNDANT WITH DEPTH.
- 411.9- 416.7 DOLOMITE; LIGHT GRAY TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, SHELL- %;
FOSSILS: FOSSIL MOLDS, MOLLUSKS;
SOFT BUT DENSE, SLIGHTLY MOLDIC, SOME SMALL PELECYPOD CASTS AND MOLDS, SOME DK TAN
ARAGONITIZED SHELL FRAGMENTS FROM 415-415.7', SOME LARGE FOSSIL VUGS AT BOTTOM OF SECTION.
- 416.7- 417.5 DOLOMITE; TAN; LOW PERMEABILITY; 0-10% ALTERED;
GRAIN SIZE: MICROCRYSTALLINE; GOOD INDURATION;
DOLOMITE SEAMS INTERMIXED W/ PHOSPHATIC DOLOMITE AS DESCRIBED ABOVE.
- 417.5- 418.4 DOLOMITE; LIGHT BROWNISH GRAY; LOW PERMEABILITY;
SOFT BUT DENSE, PHOSPHATIC, SLIGHTLY MOLDIC DOLOMITE AS 411.9-416.7', SOME LTATNA, VERY
HARD, PARTLY RECRYSTALLIZED DOLOMITE LAMINATING BOTTOM 1/2 OF SECTION, SOME VUGS IN LT TAN
DOLOMITE FILLED W/ THE PHOS. DOLOMITE, LOW POROSITY IN LT TAN DOLO., MOD. POROSITY IN
PHOS. DOLOMITE.
- 418.4- 423 CALCILUTITE; LIGHT TAN; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS, CHALKY;
SOFT BUT DENSE, SLIGHTLY CHALKY MUDSTONE, SOME THIN PHOS. STRINGERS LAMINATING UPPER 1' OF
SECTION. MOD-HIGH POROSITY.

- 423 - 429 SILT; BUFF TO LIGHT TAN; POSSIBLY HIGH PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: FOSSILIFEROUS, CALCAREOUS;
SOFT BUT DENSE, SILTSTONE, FRIABLE, PHOS. SANDS INCREASE WITH DEPTH, MORE FOSSILIFEROUS W/
DEPTH. SOME SCATTERED PELECYPOD CASTS AND MOLDS TOWARDS BOTTOM OF SECTION.
- 429 - 431.5 SILT; ;
SOFT BUT DENSE, FRIABLE-CLAYEY PHOSPHATIC, LIMEY SILTSTONE, SECTION ALTERNATES BETWEEN
BUFF-LT TAN, CLAYEY SILTSTONE AND LT TANNISH GRAY, SOFT BUT DENSE, FRIABLE SILTSTONE,
"VARVY" APPEARANCE AT TOP OF SECTION. MODERATE-HIGH POROSITY.
- 431.5- 431.6 CLAY; LIGHT TAN; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CHALKY;
- 431.6- 438.5 SILT; LIGHT BROWNISH GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, CLAY- %;
OTHER FEATURES: CALCAREOUS, CHALKY;
- 438.5- 443.5 AS ABOVE
EXCEPT HEAVILY LAMINATED BY LT-DK BROWN, WAXY, DOLOMITE? CLAY STRINGERS, GIVING THIS
SECTION A "BUTTER AND MOLASSES" APPEARANCE, SOMT TAN, VERY FRIABLE DOLOMITE SEAMS
SCATTERED THROUGHOUT SECTION. MOD-HIGH POROSITY IN DOLOMITE.
- 443.5- 447.5 SILT; LIGHT BROWNISH GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
SOFT-MODERATELY HARD SILTSTONE, LOW-MODERATE POROSITY.
- 447.5- 447.9 CLAY; LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
SOFT BUT DENSE, SLIGHTLY MARLY CLAY.
- 447.9- 449.5 SILT; LIGHT BROWNISH GRAY TO LIGHT GREENISH GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND-0.%;
SILTSTONE. LOW-MODERATE POROSITY.
- 449.5- 457 CLAY; LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, SILT-%;
SOFT BUT DENSE, SLIGHTLY MARLY CLAY INTERMIXED WITH TANNISH GRAY-DK GREENISH GRAY,
SOFT-SLIGHTLY HARD, PHOSPHATIC SILTSTONE, LOW-MODERATE POROSITY.
- 457 - 468.5 LIMESTONE; LIGHT GRAY; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
OTHER FEATURES: FOSSILIFEROUS;
FOSSILS: FOSSIL MOLDS;
FRIABLE, SLIGHTLY MOLDIC MICRITE. LOW-MOD. MOLDIC POROSITY.

- 468.5- 473.5 AS ABOVE
LS AS ABOVE GRADING TO LT GRAY, SOFT BUT DENSE, FRIABLE, LIMEY SILTSTONE, LOW-MOD. POROSITY.
- 473.5- 478.5 SILT; LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, SHELL-01%;
OTHER FEATURES: CALCAREOUS;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS;
SILTSTONE. LOW-MODERATE POROSITY.
- 478.5- 488.5 AS ABOVE
CLAYEY.
- 488.5- 498.5 SILT; LIGHT GRAY TO LIGHT GREENISH GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND-%;
SOFT BUT DENSE, SILTSTONE.
- 498.5- 507 SILT; LIGHT GRAY TO LIGHT GREENISH GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %, SHELL-01%;
OTHER FEATURES: CALCAREOUS;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS;
SILTSTONE. SOFT BUT DENSE.
- 507 - 511.5 AS ABOVE
EXCEPT FOR COMMON PELECYPOD SHELL FRAGMENTS AND BRYOZOANS.
- 511.5- 513 SILT; LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS;
FOSSILS: BRYOZOA;
VERY CLAYEY SILTSTONE. COMMON BRYOZOANS.
- 513 - 513.5 CLAY; LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS;
- 513.5- 520.1 SILT; LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS;
VERY CLAYEY AND LIMEY SILTSTONE.
- 520.1- 523.5 LIMESTONE; CREAM TO LIGHT GRAY; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CHALKY;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS;
FRIABLE, SPARSE BIOMICRITE, COMMON PELECYPOD SHELL FRAGMENTS. LOW POROSITY.

- 523.5- 528.5 LIMESTONE; WHITE TO LIGHT TAN; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
MODERATE INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: COQUINA;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, BRYOZOA;
BIOMICRITE, ABUNDANT MOLLUSK CASTS AND MOLDS. LOW-MOD. POROSITY.
- 528.5- 533.5 LIMESTONE; LIGHT GRAY TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, CLAY- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, BRYOZOA;
SPARSE BIOMICRITE, COMMON MOLLUSK CASTS AND MOLDS, SLIGHTLY CLAYEY IN UNCONSOLIDATED
SECTIONS, L-M POROSITY.
- 533.5- 543.5 SILT; LIGHT GRAY TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, SPAR- %;
OTHER FEATURES: CALCAREOUS;
FOSSILS: FOSSIL MOLDS;

FOSSIL MOLDS FILLED BY CALCITE SPAR, LOW POROSITY.
- 543.5- 548.5 CLAY; LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
MARLY CLAY INTERMIXED W/ LT GRAY-LT GREENISH GRAY, PHOSPHATIC, LIMEY SILTSTONE, SOME
CALCITIZED PELECYPOD SHELL FRAGMENTS, TRACE OF LT-DK BRN ORGANICS, SOME LIGHT BLuish GRAY
PHOSPHATIC BRECCIA.
- 548.5- 549.5 LIMESTONE; WHITE TO LIGHT GRAY; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
MODERATE INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CHALKY;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS;
SLIGHTLY CHALKY, SPARSE BIOMICRITE, COMMON PELECYPOD SHELL FRAGMENTS AND CASTS. LOW
POROSITY.
- 549.5- 550 CLAY; LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS;
SOFT, MARLY, LIMEY.
- 550 - 553.5 LIMESTONE; ;
SAME AS 548.5-549.5'.
- 553.5- 554.5 CLAY; ;
SAME AS 549.5-550'.

- 554.5- 560.8 LIMESTONE; LIGHT GRAY TO LIGHT BLUISH GRAY; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
MODERATE INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
OTHER FEATURES: COQUINA;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS, FOSSIL MOLDS;
COQUINAL BIOMICRITE, ABUNDANT TAN CALCITIZED PELECYPOD SHELL FRAGMENTS, CASTS AND MOLDS
(CHIONE, CHALMYS), COMMON TURRITELLA MOLDS. LOW-MODERATE POROSITY.
- 560.8- 564.7 LIMESTONE; WHITE TO LIGHT GRAY; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
OTHER FEATURES: CHALKY, FOSSILIFEROUS;
SOFT BUT DENSE, VERY CHALKY, MICRITE. LOW POROSITY.
- 564.7- 568.5 LIMESTONE; WHITE TO LIGHT GRAY; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
MODERATE INDURATION;
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %;
OTHER FEATURES: COQUINA;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SLIGHTLY CLAYEY, COQUINAL BIOMICRITE, SOME SMALL TAN CALCITIZED MOLLUSK CASTS AND MOLDS.
LOW-MOD. POROSITY.
- 568.5- 573.5 AS ABOVE
EXCEPT SOME BRIGHT GREEN-DK GREEN GLAUCONITIC? STAINING OF ALTERED FOSSIL MOLDS.
LOW-MODERATE POROSITY.
- 573.5- 579.8 CLAY; LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-01%;
MARLY CLAY INTERMIXED WITH LT GRAY-LT BLUISH GRAY, SOFT BUT DENSE, PHOSPHATIC, LIMEY
SILTSTONE. TRACE OF LT BLUISH GRAY PHOS. PEBBLES. LOW POROSITY.
- 579.8- 583.5 SILT; LIGHT GRAY TO LIGHT GREENISH GRAY; LOW PERMEABILITY; GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: FOSSIL MOLDS;
VERY DENSE SILTSTONE, SLIGHTLY MOLDIC W/ SOME MOLDS FILLED BY OFFWHITE-TAN BIOMICRITE.
- 583.5- 588.5 SILT; LIGHT GRAY TO DARK GRAY; LOW PERMEABILITY; GOOD INDURATION;
SEDIMENTARY STRUCTURES: LAMINATED,
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS;
VERY DENSE, SLIGHTLY LIMEY, SILTSTONE, SECTION LAMINATED BY BANDS OF DK GRAY PHOSPHATIC
SANDS. LOW POROSITY.
- 588.5- 592.5 AS ABOVE
EXCEPT LT-DK GREENISH GRAY, TRACE OF FOSSIL MOLDS FILLED BY CORALLINE MATERIAL.

592.5- 593.5 SILT; WHITE TO LIGHT GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS, CHALKY;
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS;
SOFT BUT DENSE, VERY LIMEY SILTSTONE, SOME PELECYPOD SHELL FRAGMENTS. LOW POROSITY.

593.5- 598.5 CLAY; LIGHT GRAY TO DARK GRAY; LOW PERMEABILITY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CALCAREOUS;
SOFT BUT VERY DENSE, LIMEY.

598.5- 603.5 LIMESTONE; WHITE TO LIGHT GRAY; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
MODERATE INDURATION;
FOSSILS: FOSSIL MOLDS, MOLLUSKS;
HIGHLY MOLDIC BIOMICRITE, ABUNDANT MOLLUSK CASTS AND MOLDS. LOW-MODERATE POROSITY.

603.5 TOTAL DEPTH