Regulatory Division
Technical Support Division
Sarasota County Health Dept.
Sarasota USGS (H. Sutcliffe)

cc.

Executive Summary ROMP Coastal Transect--TR 4-2

June 13, 1980

G. H. New

Location - ROMP, Site TR 4-2 is located adjacent to the NE corner of the Sarasota County yard, approximately one-half mile south of the intersection of S.R. 775 and U.S. Highway 41S in Sarasota County. The well is in the southeastern corner of an area used to store shell material just off of S.R. 775. TR 4-2 is in the SW 1/4, SW 1/4, NW 1/4 of Section 34, Township 39S, Range 19E, and North Latitude 27°02'40" and West Longitude 82°23'57".

<u>Easement</u> - This site was obtained from Sarasota County on July 18, 1978. The construction easement for this site is 35'x100' and includes the perpetual easement which is 20'x20'. The easement is recorded in 0.R. Book 1250, pages 1589-1595 at the Sarasota County courthouse.

<u>Geology</u> - This site is located on the Pamlico Terrace at an elevation of approximately 15' above mean sea level and is approximately two miles from the Gulf of Mexico. Geologic information was obtained from 1-7/8" diameter continuous wireline core samples from 50' to a total depth of 609'. An outline of the general geology follows:

DEPTH IN FEET

DESCRIPTION

- 0'-50' Undifferentiated recent to Plio-pleistocene age sand and clay.
- Venice Clay a white to green, waxy, well indurated clay, calcereous in places, contains some minor quartz and phosphatic sand in some zones; low porosity and permeability.
- 77'-437' <u>Hawthorn Formation</u> upper and lower members. A micritic white to grey limestone and dolostone, contains lenses of chert and clay. It has a high percentage of quartz and/or phosphatic sands and small pebbles in some sections. This formation has been subjected to

- 77'-437' significant chemical weathering at this site, resulting in zones of highly transmissive moldic porosity, as well as lenses of dolomite and chert. Some minor organic clays are also present.
- 437'-540' Tampa Formation Limestone, light cream to white color, contains many fossil beds, some phosphatic and quartz sands, some dolomitized zones, has many molds and highly porous zones.
- 540'-609' <u>Suwannee Formation</u> Limestone, micrite-biomicrite, light tan to cream white, cocquina-like with numerous small well preserved fossils, in general, it has good porosity.

<u>Hydrology</u> - The hydrology of this site is a complex, multi-layered aquifer system closely resembling that which has been outlined in the work by Horace Sutcliffe of the U.S. Geological Survey in his publications on the area.

The water table occurs at a shallow depth of about 10' (near sea level) and is confined to the upper 75' of the section by the thick sequence of clay which is known locally as the "Venice Clay."

The first artesian zone occurs in the upper member of the Hawthorn Formation at a depth from 170'-235' below land surface. There are some porous zones in the lower portion of this member which exhibit good transmissivity. The highest water level recorded in this zone was approximately 4' below land surface at a depth of 210' below land surface.

The second artesian zone is separated from the first by a sequence of clayey limestone and clay, approximately 20' thick. This zone occurs in the lower Hawthorn member at depths from 240'-460'. While the water level remained constant throughout this section, lithology varied widely. The water levels stayed at approximately 4' above land surface. The upper part of this section is a highly porous limestone

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and dolomite which is probably the greatest producer of water from this aquifer.

The third artesian zone occurs in the Tampa Formation at a depth from 470'-560' and is separated from the Hawthorn aquifers by a thick section of clay and marly limestone. The observed sudden changes in both water quality and hydrostatic head without doubt indicate that the Tampa aquifer is not hydrologically connected to any of the upper aquifers. The water levels in this zone were steadily near 7' above land surface.

The fourth artesian zone encountered was in the Suwannee Formation beginning at a depth of 570' and continuing on below the total depth penetrated by the exploratory core hole. The highest water levels recorded were in this zone and were over 8' above land surface. While there was a slight difference in the water levels encountered between the Tampa and Suwannee Formations (referred to as third and fourth artesian zones, respectively herein). It cannot be determined that the Tampa and Suwannee Aquifers are entirely separate hydrologic zones. The difference in water levels found in these two zones could be accounted for by differences in porosity and development of solution features within the rock. However, the water level differences encountered between the Tampa and Hawthorn aquifers was abrupt enough to indicate hydrologic separation between the Tampa artesian zone and those artesian zones above.

<u>Core Drilling</u> - Continuous wireline core, water samples, and water level measurements were taken during exploratory drilling. This work was accomplished with the District-owned and operated CME-75 drill rig during the period from June 11, 1979, until August 9, 1979. After completion of the coring, the core hole was filled with neat cement slurry.

Well Construction - The freshwater/saltwater interface monitor into the Tampa Formation was constructed betweed March 18, 1980, and June 2, 1980. This work was completed with the District-owned and operated Portadrill drill rig. Sixty feet of 12" diameter surface casing was pressure grouted in place initially. Following this, the hole was drilled to 462', and 460' of 7" diameter flush joint ABS plastic well casing was cemented into the well as final casing. A six-inch diameter open hole interval of 15' was drilled out below this from a depth of 460'-475'. The open interval of the well was then developed by injection of direct air into the well bore for approximately 20 minutes. Following this, the well was allowed to flow at a rate of approximately 75 gpm overnight into a nearby pond. The developed well then had a static head of approximately 6-1/2' above land surface. Ten feet of ABS plastic pipe was joined onto the existing 460' to contain this flow. Around the plastic pipe, 10' of 12" diameter steel well casing was welded onto the surface casing above ground and a 4' concrete culvert was set at the base. The annular space around both of these was filled with neat cement and shell material to provide a safe protective base for the well and a sturdy structure to which a U.S. Geological Survey monitoring station could be attached. Geophysical Logs - Electric, caliper, gamma, temperature, and fluid conductivity logs were run on the core hole by the Sarasota Office of the U.S. Geological Survey. Type of Monitor - This well was designed to monitor the freshwater/saltwater interface which has been designated as the 250 mg/l isochlor. The open interval of this well has been positioned in the highly productive zone of the Tampa Formation. Water Quality - During the coring of TR 4-2, water samples were obtained for anaylsis of chloride; sulfate and conductivity. Both field analysis and the District laboratory's analysis were employed to determine water quality. Potable water is obtainable throughout the water table and from the first two artesian zones to a

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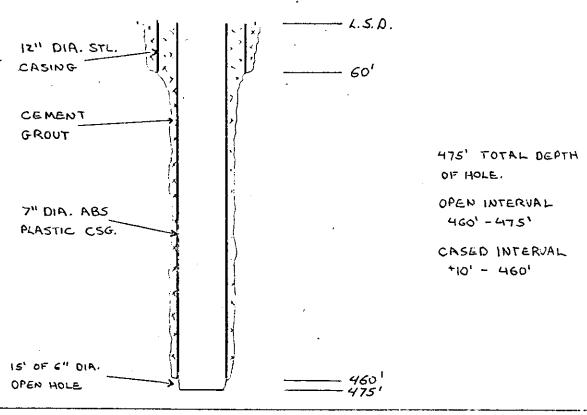
depth of 470'. The chlorides ranged from 15-190 mg/l and the sulfate ranged from 50-250 mg/l. Below 470' and throughout the entire two lower artesian zones, poor quality non-potable water is found. The chlorides below 470' ranged from 290 mg/l to 360 mg/l and the sulfates ranged from 233 mg/l to 1,000 mg/l during coring. A total of 59 water samples were retrieved and analyzed.

<u>U.S. Geological Survey Notification</u> - The District's Technical Support Division was notified in June 1980 that this well was complete and ready for monitoring.

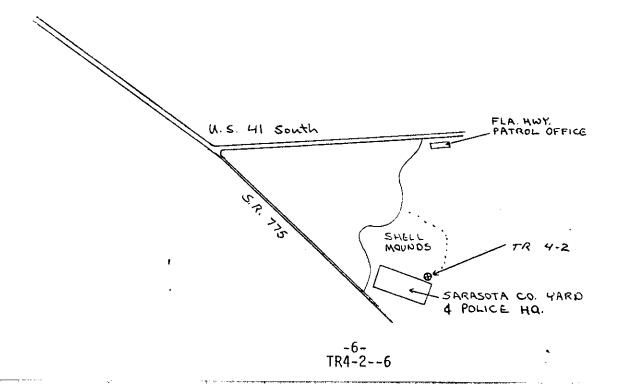
GHN:rls

ROMP COASTAL TRANSLLT

AS BUILT WELL DIAGRAM



SITE LOCATION DIAGRAM
SARASOTA CO. SW, SW, NW SEC. 34, T. 395, R. 19 E.



20' descritions

added to

exercise to the control of the control

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-14871

TOTAL DEPTH: 609.5 FT.

SAMPLES - NONE

COUNTY - W-14871

ELEVATION: 15 FT

LOCATION: T.39S R.19E S.34 A

LAT = 270 02M 40S

LON = 820 23M 57S

COMPLETION DATE: N/A

OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER:S.W.F.W.M.D. [ROMP TR 4-2]

WORKED BY:G. NEW; CODED AND ENTERED BY RICHARD GREEN (10/90)
SITE IS LOCATED ADJACENT TO THE NE CORNER OF THE SARASOTA COUNTY YARD,
APPROX. 1/2 MILE SOUTH OF THE INTERSECTION OF S.R. 775 AND U.S. HIGHWAY 41S.

0. - 77. 090UDSC: UNDIFFERENTIATED SAND AND CLAY

77. - 99.5 VENICE CLAVENICE CLAY

99.5 - 437. 122HTRN HAWTHORN GROUP

437. - 540. 122TAMP TAMPA MEMBER OF ARCADIA FM.

540. - . 123SWNN SUWANNEE LIMESTONE

0 - 2 SAND; DARK YELLOWISH BROWN TO MODERATE YELLOWISH BROWN
40% POROSITY: INTERGRANULAR
GRAIN SIZE: MEDIUM; RANGE: FINE TO MEDIUM
ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
UNCONSOLIDATED
SEDIMENTARY STRUCTURES: INTERBEDDED

**CCESSORY MINERALS: SILT-05%, ORGANICS-20%

- 2 4 SAND; MODERATE DARK GRAY TO DARK GRAY
 40% POROSITY: INTERGRANULAR
 GRAIN SIZE: MEDIUM; RANGE: FINE TO MEDIUM
 FOUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
 UNCONSOLIDATED
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: SILT-03%
- 4 8 SAND; LIGHT BROWNISH GRAY TO LIGHT OLIVE GRAY
 40% POROSITY: INTERGRANULAR
 GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE
 ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
 UNCONSOLIDATED
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: SILT-02%
- 8 9 SAND; GRAYISH BROWN TO DARK YELLOWISH BROWN
 40% POROSITY: INTERGRANULAR
 GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE
 ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
 UNCONSOLIDATED
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: SILT-05%, ORGANICS-10%

- 9 11.5 SAND; MODERATE YELLOWISH BROWN TO DARK GRAYISH YELLOW
 40% POROSITY: INTERGRANULAR
 GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE
 ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
 UNCONSOLIDATED
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: SILT-02%
 SAND, QTZ, FEW ACCESSORY MINERALS. WET AT 5.0' BLS
- 11.5- 16.5 SAND; MODERATE YELLOWISH BROWN TO GRAYISH ORANGE
 40% POROSITY: INTERGRANULAR
 GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE
 ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
 UNCONSOLIDATED
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: ORGANICS-01%
- 16.5- 18.5 SAND; LIGHT GRAYISH BROWN TO GRAYISH BROWN
 40% POROSITY: INTERGRANULAR
 GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE
 ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
 UNCONSOLIDATED
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: ORGANICS-05%
- 18.5- 21.5 SAND; VERY LIGHT ORANGE TO GRAYISH BROWN
 40% POROSITY: INTERGRANULAR
 GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE
 ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
 UNCONSOLIDATED
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: SHELL-30%
 FOSSILS: MOLLUSKS
 SAND, QTZ, INTERBEDDED MOLLUSK SHELL FRAGMENTS
- 21.5- 29 SAND; LIGHT OLIVE GRAY TO OLIVE GRAY
 40% POROSITY: INTERGRANULAR
 GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE
 ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
 UNCONSOLIDATED
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: PHOSPHATIC SAND-02%, SHELL-02%
 FOSSILS: MOLLUSKS
- 29 30 SAND; MODERATE DARK GRAY TO PINKISH GRAY
 40% POROSITY
 GRAIN SIZE: COARSE; RANGE: COARSE TO VERY COARSE
 ROUNDNESS: SUB-ANGULAR TO ROUNDED; MEDIUM SPHERICITY
 UNCONSOLIDATED
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: PHOSPHATIC SAND-20%, SHELL-04%
 LIMESTONE-03%, CLAY-01%
 FOSSILS: MOLLUSKS

30 - 30.5 DOLOSTONE; DARK YELLOWISH BROWN TO LIGHT OLIVE GRAY
02% POROSITY: MOLDIC, LOW PERMEABILITY; 10-50% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-02%, CALCITE-01%

IRON STAIN-01%, PHOSPHATIC SAND-03%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, FOSSIL MOLDS

DOLOSTONE, FOSSILIFEROUS, WEATHERED, INTERBEDDED QTZ SAND PHOSPHATIC SAND AND GRAVEL.

- 30.5- 38 DOLOSTONE; YELLOWISH GRAY TO DARK GRAYISH YELLOW
 20% POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 10-50% ALTERED; SUBHEDRAL
 GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
 MODERATE INDURATION
 CEMENT TYPE(S): DOLOMITE CEMENT
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: QUARTZ SAND-01%, CALCITE-01%
 PHOSPHATIC SAND-02%
 OTHER FEATURES: WEATHERED, CRYSTALLINE, FOSSILIFEROUS
 FOSSILS: MOLLUSKS
- 38 44 DOLOSTONE; YELLOWISH GRAY TO DARK GRAYISH YELLOW
 20% POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 10-50% ALTERED; SUBHEDRAL
 GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
 POOR INDURATION
 CEMENT TYPE(S): DOLOMITE CEMENT
 ACCESSORY MINERALS: PHOSPHATIC SAND-01%
 OTHER FEATURES: WEATHERED, CRYSTALLINE, FOSSILIFEROUS
 FOSSILS: CORAL, MOLLUSKS
- 44 47 DOLOSTONE; YELLOWISH GRAY TO DARK GRAYISH YELLOW
 20% POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 10-50% ALTERED; SUBHEDRAL
 GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
 POOR INDURATION
 CEMENT TYPE(S): DOLOMITE CEMENT
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: PHOSPHATIC SAND-03%, QUARTZ SAND-01%
 OTHER FEATURES: WEATHERED, CRYSTALLINE, FOSSILIFEROUS
 GRANULAR
 FOSSILS: MOLLUSKS
 DOLOMITE, WEATHERED, MOLDIC, INCREASING PHOSPHATIC SAND.

- 47 51 DOLOSTONE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
 05% POROSITY: INTERGRANULAR; 10-50% ALTERED; SUBHEDRAL
 GRAIN SIZE: MICROCRYSTALLINE
 RANGE: MICROCRYSTALLINE TO FINE; GOOD INDURATION
 CEMENT TYPE(S): DOLOMITE CEMENT
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: PHOSPHATIC SAND-10%, QUARTZ SAND-02%
 OTHER FEATURES: GRANULAR, SPECKLED, CRYSTALLINE
- 51 52 DOLOSTONE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
 03% POROSITY: INTERGRANULAR; 50-90% ALTERED; SUBHEDRAL
 GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
 MODERATE INDURATION
 CEMENT TYPE(S): DOLOMITE CEMENT
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: PHOSPHATIC SAND-15%, QUARTZ SAND-05%
 OTHER FEATURES: FROSTED, GRANULAR, SPECKLED, WEATHERED
- 52 53 DOLOSTONE; YELLOWISH GRAY TO LIGHT GREENISH GRAY
 03% POROSITY: INTERGRANULAR; 10-50% ALTERED; SUBHEDRAL
 GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
 GOOD INDURATION
 CEMENT TYPE(S): DOLOMITE CEMENT
 SEDIMENTARY STRUCTURES: INTERBEDDED
 ACCESSORY MINERALS: PHOSPHATIC SAND-10%
 OTHER FEATURES: FROSTED, GRANULAR, SPECKLED, WEATHERED
- 53 54.5 CALCARENITE; LIGHT BROWNISH GRAY
 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %
 PHOSPHATIC GRAVEL- %
 FOSSILS: MOLLUSKS
 SOME PHOS. PEBBLES 1MM SIZED. SOME PELECYPOD FOSSILS AND
 MINOR BLUE- GREEN ACCESSORY PHOSPHATE MINERALS. MODERATE TO
 HIGH POROSITY.
- 54.5- 55.5 AS ABOVE
- 55.5- 56 CHERT; MODERATE GRAY TO WHITE CHERT AND LIMESTONE, GRAYISH WHITE IN COLOR.
- 56 59.5 CALCILUTITE; LIGHT BROWNISH GRAY
 GRAIN TYPE: CALCILUTITE
 ACCESSORY MINERALS: QUARTZ SAND- %, CLAY-%
 MUDSTONE, LIMEY CLAY WITH MINOR QTZ SANDS. MODERATE
 POROSITY.
- 59.5- 64.5 CALCILUTITE; TAN
 GRAIN TYPE: CALCILUTITE
 ACCESSORY MINERALS: PHOSPHATIC SAND-%
 DULL TAN COLOR. ALMOST MARE. ABUNDANT PHOSPHATE GRAINS.
 POROUS MATERIAL.

- 64.5- 66 CALCILUTITE; WHITE
 POROSITY: POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: CALCILUTITE
 FEW FOSSILS AND FEW PHOSPHATES. HIGH POROSITY.
- 66 69.5 CLAY; TAN

 POROSITY: LOW PERMEABILITY

 ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %, QUARTZ SAND-02%

 MARLY CLAY, MUDSTONE, CALCILUTITE.; MOD.-LOW POROSITY.
- 69.5- 74.5 CALCILUTITE; WHITE TO LIGHT TAN
 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: CALCILUTITE
 ACCESSORY MINERALS: ORGANICS-01%, PHOSPHATIC SAND- %
 CHERT-%
 SOME BLACK ORGANICS, SOME BLUE-GREEN PHOS. ACCESSORIES AND
 BLACK PHOSPHATE SANDS. HIGH MOLDIC POROSITY.
- 74.5- 77 LIMESTONE; CREAM TO WHITE
 POROSITY: POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: CALCILUTITE
 ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND-%
 SOME LENSES OF QTZ AND BLACK PHOSPHATES, MINOR BLUE-GREEN
 ACCESSORY PHOSPHATES. MOD.-HIGH POROSITY.
- 77 79.5 CLAY; WHITE TO DARK GREEN
 POROSITY: LOW PERMEABILITY
 SOME BROWN ORGANIC STREAKS, SOME MARLY AREAS. IN WHITE
 AREAS A MARLY CALCAREOUS MUDSTONE, CLAY HAS SOME SANDY
 LENSES.
- 79.5- 84.5 CLAY; DARK GREEN TO LIGHT GREEN
 POROSITY: LOW PERMEABILITY
 ACCESSORY MINERALS: SILT-%
 VERY FINE PARTICLES, SOME SLIGHTLY SILTY AREAS.
- 84.5- 89.5 CLAY; DARK GREEN TO BROWN
 POROSITY: LOW PERMEABILITY
 ACCESSORY MINERALS: ORGANICS-%
 SOME BROWN ORGANIC STREAKS, VERY FINE KAOLIN-LIKE MATERIAL.
- 89.5- 94.5 CLAY; LIGHT GREEN TO WHITE
 POROSITY: LOW PERMEABILITY
 ACCESSORY MINERALS: QUARTZ SAND- %
 OTHER FEATURES: CALCAREOUS
 SOME LIME, AT PLACES "MARLY", MINOR QTZ SANDS.
- 94.5- 98.5 AS ABOVE
- 98.5- 99.5 CLAY; CREAM TO DARK GREEN
 ACCESSORY MINERALS: ORGANICS- %, QUARTZ SAND-%
 MARLY CLAY WITH SOME LENSES OF QTZ SAND AND SOME BLACK
 ORGANICS.

99.5- 104.5 LIMESTONE; CREAM TO WHITE

POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

GRAIN TYPE: CALCILUTITE

ACCESSORY MINERALS: ORGANICS- %, QUARTZ SAND- %

PHOSPHATIC SAND- %

FOSSILS: MOLLUSKS, FOSSIL MOLDS

SOME GRAY QTZ SAND LENSES AND MANY BLACK PHOS. SANDS. SOME LARGE MOLLUSK MOLDS AND SOME ORGANIC STREAKS. HIGH MOLDIC

POROSITY.

104.5- 109.5 LIMESTONE; CREAM TO WHITE

GRAIN TYPE: CALCILUTITE

ACCESSORY MINERALS: PHOSPHATIC SAND-04%

GRADES INTO MORE MOLDIC POROSITY AT BOTTOM.

109.5- 114.5 LIMESTONE; CREAM TO WHITE

POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

GRAIN TYPE: CALCILUTITE, SKELETAL

GOOD INDURATION

FOSSILS: MOLLUSKS, FOSSIL MOLDS

COQUINA-LIKE FORMATION WITH NEARLY COMPLETE CONVERSION OF ARAGONITE TO CALCITE OF THE SHELL FRAGMENTS IN PLACE. MANY

LARGE MOLLUSK MOLDS. HIGH MOLDIC POROSITY.

114.5- 115.5 CLAY; CREAM TO WHITE

POROSITY: LOW PERMEABILITY

OTHER FEATURES: CALCAREOUS

MARLY CLAY.

115.5- 119.5 LIMESTONE; CREAM TO WHITE

POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC GRAVEL- %

OTHER FEATURES: DOLOMITIC

HIGHLY DOLOMITIZED, ABUNDANT GRAY QTZ SAND PATCHES. GOOD

MOLDIC POROSITY.

119.5- 124.5 DOLOSTONE; BLACK TO MODERATE GRAY

POROSITY: LOW PERMEABILITY

DOLOMITE AND CHERT. MOSTLY GREYISH WHITE, HIGHLY

FOSSILIFEROUS WITH CALCITE SPAR LINING ALL OF MOLDIC PORES.

SOME SILICIOUS CEMENT. UPPER FOOT IS DENSE, HARD AND

BLACK, -- BOTTOM 4' IS LIGHTER COLORED AND MORE POROUS.

POROSITY IS MODERATE TO LOW.

124.5129.5 DOLOSTONE; LIGHT BROWN TO DARK GRAY
POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC
CEMENT TYPE(S): SPARRY CALCITE CEMENT, SILICIC CEMENT
ACCESSORY MINERALS: PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %, HEAVY MINERALS-%
DOLOMITE AND CHERT, DOLOMITE BROWN AND CHERT GRAY. HIGHLY
FOSSILIFEROUS WITH INTERCONNECTING MOLDIC PORES THAT ARE
LINED WITH SPARRY CALCITE. MANY PHOSPHATE SANDS AND PEBBLES
(BLK-BRN COLOR). SOME ZIRCON?, POROSITY IS MODERATE TO HIGH
MOLDIC.

129.5- 134.5 DOLOSTONE; CREAM TO WHITE
POROSITY: LOW PERMEABILITY
GOOD INDURATION
ACCESSORY MINERALS: PHOSPHATIC SAND- %, HEAVY MINERALS-%
DENSE AND VERY HARD, WELL CEMENTED. SOME BLACK PHOSPHATIC
GRAINS AND CLEAR AMBER APATITE OR ZIRCON? GRAINS.

134.5- 139.5 DOLOSTONE; CREAM TO WHITE
POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
DENSE AND HARD. CONTAINS FEWER PHOSPHATIC GRAINS AND SOME
LARGE PELECYPOD MOLDS. MODERATE MOLDIC POROSITY.

139.5- 144.5 LIMESTONE; CREAM TO WHITE

POROSITY: POSSIBLY HIGH PERMEABILITY

GRAIN TYPE: CALCILUTITE

ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-%

DENSE AND VERY FINE AT THE TOP OF THE SECTION, MORE POROUS

THROUGH THE BOTTOM HALF OF THE SECTION. MANY LENSES OF LT

GRAY PHOSPHATIC AND QTZ MATERIAL WITH CALCIC CEMENT. TOP OF

SECTION IS WELL CEMENTED WITH GOOD POROSITY. THE BOTTOM HAS

BETTER POROSITY AND ALSO HAS SOME MOLDIC POROSITY.

144.5- 149.5 LIMESTONE; CREAM TO WHITE
POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE
MODERATE INDURATION
ACCESSORY MINERALS: QUARTZ SAND-10%, PHOSPHATIC SAND-10%
APPROX. 20% PHOS. AND QTZ SANDS WITH SOME LARGER SUBANGULAR
QTZ SANDS. FRIABLE WITH FAIR-GOOD CEMENTATION. POROSITY IS
HIGH WITH SOME MOLDIC POROSITY.

149.5- 154.5 LIMESTONE; CREAM TO WHITE
POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %
ORGANICS-%
SOME BROWN ORGANICS. BLACK AND BRN PHOSPHATE SANDS. PHOS.
AND QTZ SAND AS HIGH AS 20%.

154.5- 159.5 LIMESTONE; VERY LIGHT GRAY
GRAIN TYPE: CALCILUTITE
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %
OTHER FEATURES: CHALKY
HIGH PHOS. AND QTZ SAND CONTENT. MATERIAL IS GENERALLY GOOD
OR WELL CEMENTED WITH SOME LENSES OF V.F. POORLY CEMENTED
LIMEY SANDS OR PACKSTONE AND SOME CLAY OR MARL (CALCILUTITE
LENSES). POROSITY IS MODERATE-HIGH. FOSSILS ARE RARE.

159.5- 164.5 LIMESTONE; VERY LIGHT GRAY
GRAIN TYPE: CALCILUTITE, SKELETAL
POOR INDURATION
ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND- %
CHERT-%
APPROX. 25% DK BLACK AND BRN PHOSPHATIC SAND AND QTZ SANDS.
MANY PURPLE AND BLUE-GREEN SPOTS OF HIGHLY WEATHERED OR
LEACHED PHOS. ACCESSORY MINERALS. POORLY CEMENTED AND WELL
SORTED MATERIAL. SOME SMALL NODULES OF DK GREENISH CHERT.
POROSITY IS HIGH AND THIS SANDSTONE HAS A CROSS-BEDDED
APPEAREANCE.

- 164.5- 165.5 CLAY; DARK GREENISH GRAY
 POROSITY: LOW PERMEABILITY
- 165.5- 167.5 LIMESTONE; CREAM TO WHITE BIOMICRITE, GOOD POROSITY.
- 167.5- 169.5 LIMESTONE; CREAM TO WHITE
 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC
 GRAIN TYPE: CALCILUTITE
 ACCESSORY MINERALS: CHERT- %, PHOSPHATIC GRAVEL-%
 MARL WITH ABUNDANT CHERT NODULES AND LARGE PHOSPHATE
 PEBBLES. FAIR-POOR CEMENT, GOOD POROSITY THROUGHOUT.
- 169.5- 170.5 LIMESTONE; CREAM TO WHITE

 GRAIN TYPE: CALCILUTITE

 ACCESSORY MINERALS: CHERT- %, PHOSPHATIC GRAVEL-%
 BLACK CHERT NODULES AND PHOS. PEBBLES. FAIR CEMENT.

 MODERATE-GOOD POROSITY.
- 170.5- 173 LIMESTONE; VERY LIGHT GRAY TO CREAM
 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: CALCILUTITE
 ACCESSORY MINERALS: PHOSPHATIC SAND- %
 PHOSPHATIC GRAVEL- %, QUARTZ SAND- %
 OTHER FEATURES: DOLOMITIC
 HIGHLY DOLOMITIZED. SOME CLEAR BOTROIDAL SILICIOUS OOZE
 COATING MANY LARGE SOLUTION CAVITIES. PHOSPHATE PEBBLES AND
 SAND GRADE OUT TOWARDS BOTTOM OF SECTION. HIGH MOLDIC
 POROSITY- MANY LG PELECYPOD MOLDS.

173 - 174.5 LIMESTONE; CREAM

POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

GRAIN TYPE: CALCILUTITE

GOOD INDURATION

CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX

ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %

ORGANICS- %, PHOSPHATIC GRAVEL-%

SOME LENSES OF BROWN AND BLACK ORGANICS WITH BOTH PHOS.

PEBBLES (BLACK) AND GTZ SANDS. WELL CEMENTED WITH SOME THIN

CLAYS. HIGH MOLDIC POROSITY.

174.5- 179.5 LIMESTONE; CREAM TO LIGHT GRAY

POROSITY: POSSIBLY HIGH PERMEABILITY

GRAIN TYPE: CALCILUTITE

ACCESSORY MINERALS: PHOSPHATIC SAND- %

PHOSPHATIC GRAVEL-%

MICRITE WITH A HIGH PERCENTAGE OF BROWN AND BLACK PHOS.

PEBBLES AND SANDS, RANGES FROM A VERY POORLY CEMENTED LOOSE MATERIAL TO A WELL CEMENTED PARTIALLY DOLOMITIZED LS WITH AS MUCH AS 35% PHOSPHATE. SOME AREAS ARE MARLY, VERY POORLY

SORTED. POROSITY IS GOOD-HIGH.

179.5- 182.5 LIMESTONE; CREAM TO WHITE

POROSITY: POSSIBLY HIGH PERMEABILITY

GRAIN TYPE: CALCILUTITE

GOOD INDURATION

ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND- %

CHERT-%

POORLY SORTED MATERIAL COMPOSED OF MANY PHOS. AND QTZ SANDS

CEMENTED WITH CALCITE AND SOME GRAY CHERT NODULES. GOOD

POROSITY.

182.5- 184.5 DOLOSTONE; LIGHT GRAY TO WHITE

POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

GOOD INDURATION

ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %

PHOSPHATIC SAND- %, CHERT-%

DOLOMITIZED MICRITIC LS. WITH SOME LIGHT BROWNISH CLAYEY OR

PUNKY LENSES AND SOME GRAYISH CHERTS. HIGH MOLDIC POROSITY.

WELL CEMENTED AND HARD.

184.5- 189.5 DOLOSTONE; LIGHT GRAY TO WHITE

POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY

ACCESSORY MINERALS: CLAY- %, PHOSPHATIC GRAVEL- %

PHOSPHATIC SAND-%

DOLOMITIZED LIMESTONE, WITH MANY THIN LENSES OF GRAY CHERT.

POORLY SORTED MATERIAL CONTAINING PHOS. PEBBLES AND SANDS

THROUGHOUT AS WELL AS SOME GRAY- GREEN TO BROWN CLAYS. GOOD

MOLDIC POROSITY.

189.5- 190.5 DOLOSTONE; MODERATE GRAY TO WHITE

POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

GRADE AT BOTTOM TO:

- 190.5- 194.5 DOLOSTONE; MODERATE GRAY TO WHITE

 ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND-%

 HIGHLY DOLOMITIZED CALCARENITE, CONTAINING QTZ SAND AND A

 HIGH PERCENTAGE OF BLK AND BRN PHOS. SANDS. A DENSE, HARD

 AND WELL CEMENTED MATERIAL HAVING MODERATE POROSITY.
- 194.5- 195.5 DOLOSTONE; MODERATE GRAY TO DARK GRAY
 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC
 ACCESSORY MINERALS: CHERT-%
- 195.5- 198.5 DOLOSTONE; MODERATE GRAY TO WHITE

 VERY PURE, DENSE, HARD WITH WELL SORTED AND CEMENTED GRAINS

 OF MUCH LOWER POROSITY.
- 198.5- 199.5 DOLOSTONE;

 VERY DENSE AND PURE, GRADES INTO A GREY PUNKY MATERIAL WITH LOW POROSITY.
- 199.5- 200.5 CLAY; DARK GREENISH GRAY TO WHITE
 POROSITY: LOW PERMEABILITY
 OTHER FEATURES: CALCAREOUS
 SOME THIN WHITE LIMEY LENSES. VERY FINE W/ LOW POROSITY.
- 200.5- 201.5 DOLOSTONE; LIGHT BROWN TO GRAYISH GREEN
 POROSITY: LOW PERMEABILITY
 GOOD INDURATION
 ACCESSORY MINERALS: CLAY-%
 VERY CONSISTENT, WELL SORTED AND CEMENTED.
- 201.5- 204.5 CALCARENITE; LIGHT GRAY TO WHITE

 GRAIN SIZE: VERY FINE

 ACCESSORY MINERALS: PHOSPHATIC SAND-%

 UNIFORM, WELL COMPACTED AND CEMENTED CALCAREOUS SILTSTONE.

 VERY MINOR PHOSPHATE. MODERATE POROSITY.
- 204.5- 209.5 LIMESTONE; LIGHT GRAY TO WHITE

 ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND- %

 CLAY-%

 CALCAREOUS SILTSTONE. WELL SORTED AND HOMOGENOUS. A FINE
 SUGARY APPEARANCE, IN SOME PLACES FRIABLE. MINOR PHOS. AND
 QTZ SANDS. POROSITY IS MOD-GOOD.
- 209.5- 214.5 LIMESTONE; LIGHT GREEN

 ACCESSORY MINERALS: CLAY- %, ORGANICS-%

 CLAYEY MARL, STREAKS OF DK GREEN CLAYS AND SOME BROWN

 ORGANIC STREAKS. FINE WELL SORTED AND CEMENTED MATERIAL

 GRADES AT BOTTOM INTO FINER, DENSER MATERIAL. POROSITY IS

 FAIR TO MODERATE.

- 214.5- 219.5 LIMESTONE; VERY LIGHT GRAY

 GRAIN TYPE: CALCILUTITE

 GRAIN SIZE: FINE; GOOD INDURATION

 CLAYEY CALCILUTITE. WELL SORTED AND CEMENTED SILTSTONE

 HAVING SOME MOLDIC POROSITY. MODERATE POROSITY OVERALL.
- 219.5- 221.5 LIMESTONE; LIGHT GRAY TO LIGHT TAN

 CLAYEY LS, HAVING SOME BROWNISH ORGANIC LENSES (SAME AS

 ABOVE) WITH THE ADDITION OF SOME MINOR PHOS. GRAINS AND

 MORE MOLDIC POROSITY. POROSITY GOOD.
- 221.5- 224.5 DOLOSTONE; LIGHT GRAY TO MODERATE GRAY
 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC, VUGULAR
 ACCESSORY MINERALS: SPAR- %
 FOSSILS: MOLLUSKS, FOSSIL MOLDS
 DOLOMITIZED LS, MANY VUGS OF CALCITE SPAR. HIGH MOLDIC
 POROSITY.
- 224.5- 229.5 DOLOSTONE; LIGHT GRAY TO BROWN
 POROSITY: VUGULAR, POSSIBLY HIGH PERMEABILITY, MOLDIC
 WITH A LARGE AMOUNT OF CRYPTOCRYSTALLINE, VUGGY, HIGH MOLDIC
 POROSITY.
- 229.5- 235.5 AS ABOVE
- 235.5- 239.5 DOLOSTONE; CREAM TO WHITE

 POROSITY: LOW PERMEABILITY

 ACCESSORY MINERALS: PHOSPHATIC SAND- %, ORGANICS-%

 VERY DENSE AND HARD WITH FEW MOLDIC PORES-A HOMOGENOUS

 APPEARANCE. MINOR PERCENTAGE OF VERY EVENLY DISTRIBUTED

 BLACK AND BRN PHOS. SANDS ARE PRESENT AW WELL AS SOME

 ORGANIC STREAKS. LOW-MOD. POROSITY.
- 239.5- 243.5 DOLOSTONE; LIGHT TAN

 POROSITY: LOW PERMEABILITY

 GRAIN SIZE: MICROCRYSTALLINE; GOOD INDURATION

 SEDIMENTARY STRUCTURES: MOTTLED

 DENSE AND HARD. VERY FEW MOLDS. SOME GREY, SPLOTCHY AREAS.
- 243.5- 244.5 LIMESTONE; WHITE TO BROWNISH GRAY
 GRAIN TYPE: CALCILUTITE
 ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %
 SPAR- %
 OTHER FEATURES: CHALKY
 SOME LENSES OF CALCITE AND QTZ SANDS, THE REST IS A VERY
 CHALKY LS WITH THIN, FINE, BLACK STREAKS OF PHOSPHATE
 SANDS. POROSITY IS MODERATE.
- 244.5- 248.5 DOLOSTONE; LIGHT GRAY TO LIGHT BROWN
 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC, VUGULAR
 ACCESSORY MINERALS: ORGANICS-%
 MANY MOLDS OR VUGS OF BRN CRYSTALLINE CALCITE, SOME DK GRAY
 ORGANIC BANDS. HIGH MOLDIC POROSITY.

- 248.5- 249.5 LIMESTONE; CREAM TO LIGHT GRAY
 POROSITY: LOW PERMEABILITY
 ACCESSORY MINERALS: ORGANICS- %, PHOSPHATIC SAND-%
 SLPOTCHY, DENSE, HARD, PARTIALLY DOLOMITIZED. FEW MOLDIC
 PORES, SOME BLACK ORGANICS AND MINOR PHOSPHATE SANDS.
 LOW-MODERATE POROSITY.
- 249.5- 254.5 DOLOSTONE; LIGHT GRAY TO BROWN
 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 SOME BLUE-GREEN WEATHERED PHOSPHATE ACCESSORIES. GOOD
 MOLDIC POROSITY. FRIABLE IN PLACES.
- 254.5- 259.5 DOLOSTONE; LIGHT GRAY TO MODERATE BROWN
 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 ACCESSORY MINERALS: SPAR- %
 FOSSILS: MOLLUSKS, FOSSIL MOLDS
 MATRIX IS GRAY WITH MANY MOLLUSK MOLDS FILLED WITH CALCITE
 SPAR, UPPER PART OF SECTION IS FRAIABLE AND CRUMBLY, THE
 REST IS HARD. SOME MARBLE-LIKE ROCK.
- 259.5- 264.5 AS ABOVE
 WITH SOME LIGHT CREAMY MICRITE THAT IS CHALKY.
- 264.5- 269.5 DOLOSTONE;

 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY

 ACCESSORY MINERALS: CALCILUTITE- %, QUARTZ SAND- %

 PHOSPHATIC SAND-%

 HARD GRAY DOLOMITE AND FINE, FRIABLE MICRITE. MICRITE

 CONTAINS SOME QTZ AND PHOS. SANDS. POROSITY GOOD.
- 269.5- 274.5 CALCARENITE; CREAM TO WHITE
 POROSITY: POSSIBLY HIGH PERMEABILITY
 POOR INDURATION
 CEMENT TYPE(S): CALCILUTITE MATRIX
 ACCESSORY MINERALS: QUARTZ SAND-%
 FRIABLE, A HIGH PERCENTAGE OF QTZ SAND. VERY POROUS.
- 274.5- 276.5 AS ABOVE
- 276.5- 279.5 DOLOSTONE; LIGHT GRAYISH BROWN
 POROSITY: POSSIBLY HIGH PERMEABILITY
 HARD AND DENSE, GRADES AT BOTTOM INTO A CALCARENITE, VERY
 LOOSE, SIMILAR TO BEACH SAND. POROSITY GOOD.
- 279.5- 284.5 SANDSTONE; LIGHT GRAY TO MODERATE GRAY

 POROSITY: POSSIBLY HIGH PERMEABILITY, INTERGRANULAR

 GOOD INDURATION

 CEMENT TYPE(S): CALCILUTITE MATRIX

 ACCESSORY MINERALS: PHOSPHATIC SAND- %, CALCILUTITE-%

 75% QTZ SAND WITH MINOR PHOSPHATE. A WELL CEMENTED QTZ

 BEACH SAND.

- 284.5- 285.5 SANDSTONE; LIGHT GRAY TO MODERATE GRAY POROSITY: POSSIBLY HIGH PERMEABILITY CALCARENITE, FRIABLE, POROUS.
- 285.5- 289.5 LIMESTONE; LIGHT BROWNISH GRAY
 POROSITY: POSSIBLY HIGH PERMEABILITY
 GOOD INDURATION
 ACCESSORY MINERALS: QUARTZ SAND-40%, CLAY-%
 GRADES FROM A WELL CEMENTED QTZ CALCARENITE TO A CLAYEY QTZ
 CALCARENITE AND BACK. OVERALL POROSITY IS HIGH EXCEPT IN
 CLAYEY ZONES.
- 289.5- 294.5 SANDSTONE; CREAM TO WHITE

 POROSITY: POSSIBLY HIGH PERMEABILITY; GOOD INDURATION

 CEMENT TYPE(S): CALCILUTITE MATRIX

 ACCESSORY MINERALS: CLAY-%

 WELL CEMENTED CALCAREOUS QTZ SANDSTONE WITH SOME THIN

 LENSES OF VERY SANDY CLAY. POROSITY GOOD.
- 294.5- 299.5 LIMESTONE; VERY LIGHT GRAY TO MODERATE GRAY

 DOLOMITE AND CALCITE CEMENTED FINE QTZ SANDSTONE, MORE QTZ

 SAND AT BOTTOM OF SECTION. POROSITY FAIR-MODERATE.
- 299.5- 301.5 LIMESTONE; LIGHT GRAY TO LIGHT BROWN
 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 ACCESSORY MINERALS: SPAR- %, CLAY- %
 FOSSILS: MOLLUSKS, FOSSIL MOLDS
 BIOSPARITE. ABUNDANT MOLLUSK MOLDS. FAIR CEMENT. FRIABLE IN
 MOST AREAS, SOME CLAYEY ZONES, HIGH MOLDIC POROSITY.
- 301.5- 304.5 LIMESTONE; CREAM TO LIGHT GRAY
 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC
 GRAIN TYPE: CALCILUTITE
 ACCESSORY MINERALS: SPAR- %
 FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, FOSSIL MOLDS
 SOME SPARITE. FRIABLE. HIGH POROSITY.
- 304.5- 307 CALCARENITE; LIGHT GRAY TO MODERATE GRAY
 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC
 GOOD INDURATION
 OTHER FEATURES: DOLOMITIC
 DENSE, HARD. WELL CEMENTED QTZ CALCARENITE. SOME MOLDS.
- 307 309.5 CALCARENITE; DARK GRAY TO BROWN
 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC
 GOOD INDURATION
 OTHER FEATURES: DOLOMITIC
 WELL CEMENTED. MANY MOLDS. HIGH POROSITY.
- 309.5- 314.5 DOLOSTONE; VERY LIGHT GRAY TO LIGHT BROWN
 GOOD INDURATION
 HARD, DENSE, WELL CEMENTED, HIGHLY DOLOMITIZED LS. SOME
 GREENISH-BLACK STREAKS, FEW MOLDS. POROSITY FAIR.

- 314.5- 319.5 LIMESTONE; LIGHT GRAY

 PARTIALLY DOLOMITIZED SPARITE OR MICRITE. WELL CEMENTED

 DENSE, HOMOGENOUS APPEAREANCE. ALMOST NO OPEN MOLDS OR

 PORES, SOME FRIABLE ZONES. MODERATE POROSITY.
- 319.5- 321 LIMESTONE; LIGHT GRAY TO WHITE
 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: BIOGENIC, CALCILUTITE
 GOOD INDURATION
 ACCESSORY MINERALS: QUARTZ SAND-10%, PHOSPHATIC SAND-10%
 OTHER FEATURES: DOLOMITIC
 FOSSILS: MOLLUSKS, FOSSIL MOLDS
 BIOMICRITE, WELL CEMENTED, 15-20% MIX OF PHOS. AND QTZ
 SANDS. MANY SMALL OPEN PORES. SOME DARK SANDY STREAKS.
 POROSITY MODERATE-HIGH.
- 321 324.5 LIMESTONE; LIGHT GRAY TO MODERATE GRAY
 POROSITY: POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: CALCILUTITE
 ACCESSORY MINERALS: PHOSPHATIC SAND-10%, QUARTZ SAND-10%
 CLAY-%
 MICRITE, CALCARENITE, 15-20% QTZ AND PHOS. SANDS. CALCIC
 CEMENTS, SOME THIN CLAYS, FRIABLE, DENSE, WELL COMPACTED
 HOMOGENEOUS. POROSITY GOOD.
- 324.5- 329.5 LIMESTONE; LIGHT GRAY

 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY

 GRAIN TYPE: CALCILUTITE

 GOOD INDURATION

 ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %

 CLAY-%

 WITH DK GRAY TO BLACK ORGANIC VEINS THROUGHOUT, MINOR

 AMOUNT OF CLAYS, SOME FOSSIL MOLDS, WELL CEMENTED AND

 COMPACTED. POROSITY IS GOOD-HIGH.
- 329.5- 334.5 CALCARENITE; LIGHT GRAY TO CREAM
 POROSITY: POSSIBLY HIGH PERMEABILITY
 GOOD INDURATION
 ACCESSORY MINERALS: ORGANICS- %, QUARTZ SAND- %
 PHOSPHATIC SAND-%
 WELL CEMENTED AND COMPACTED, MANY DK GRAY VEINS OF
 ORGANICS, CALCIC, QTZ, AND PHOSPHATE SANDS, SOME FRIABLE
 ZONES. POROSITY GOOD.
- 334.5- 339.5 CALCARENITE; MODERATE GRAY TO WHITE

 ACCESSORY MINERALS: ORGANICS- %, PHOSPHATIC SAND-%

 SALT AND PEPPER GRAY AND WHITE APPEAREANCE, MANY PHOSPHATIC

 SANDS, FAIR CEMENT, FRIABLE, MANY ORGANIC BANDS OR STREAKS.

 POROSITY IS MODERATE-GOOD.

339.5- 344.5 CALCARENITE;

A LIGHTER SALT AND PEPPER COLOR. CLAYEY IN SPOTS. SOME AREAS OF MORE CONCENTRATED PHOSPHATES. A CALCIC CEMENTED BEACH SAND. POROSITY MODERATE TO GOOD.

344.5- 348.5 AS ABOVE

CLAYEY. GRADES FROM LIGHTER TO DARKER GRAY WITH CHANGES IN THE CONCENTRATION OF PHOSPHATE SAND.

348.5- 349.5 CLAY; DARK GREEN POROSITY: LOW PERMEABILITY ACCESSORY MINERALS: QUARTZ SAND-%

SANDY, DENSE.

349.5- 354.5 CLAY; DARK GREEN

POROSITY: LOW PERMEABILITY
ACCESSORY MINERALS: QUARTZ SAND-%
CLAY AND SANDS- UPPER 1' CLAY, GRADES BACK AND FORTH FROM
CLAY TO V. SANDY CLAY.

354.5- 359.5 AS ABOVE

CLAY W/ VARIABLE AMOUNTS OF WELL CEMENTED BEACH SANDS.

359.5- 364.5 CLAY; MODERATE GRAY TO DARK GRAY POROSITY: LOW PERMEABILITY ACCESSORY MINERALS: QUARTZ SAND- %, ORGANICS-%

SILT TO CLAY SIZED PARTICLES, WELL COMPACTED, FAIR SORTING GRADES FROM PURE CLAY TO A VERY ARENACEOUS CLAY. POROSITY FAIR TO LOW.

364.5- 369.5 SILT; LIGHT GRAY

POROSITY: LOW PERMEABILITY
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
ACCESSORY MINERALS: QUARTZ SAND- %, CLAY- %
PHOSPHATIC SAND- %, CALCILUTITE-%
CLAYEY SILTSTONE. A LARGE % OF SAND AND SILT SIZED QTZ
PHOS., AND CALCIC PARTICLES. WELL SORTED, COMPACTED AND
CEMENTED. POROSITY LOW.

369.5- 374.5 CLAY; VERY LIGHT GRAY

POROSITY: LOW PERMEABILITY
ACCESSORY MINERALS: PYRITE- %, QUARTZ SAND- %, SILT- %
PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS
CLAY AND LIME- STREAKED WITH MANY GRAY, BROWN, AND BLACK
LENSES OF ORGANICS, SOME MARLS, MINOR QTZ AND PHOSPHATE
SANDS AND SILTS. SOME EUHEDRAL PYRITE CRYSTALS IN BLACK

ORGANIC ZONES. POROSITY LOW.

- 374.5- 379.5 CLAY; DARK GREENISH GRAY
 POROSITY: LOW PERMEABILITY
 ACCESSORY MINERALS: ORGANICS- %, PYRITE-01%
 QUARTZ SAND- %
 OTHER FEATURES: CALCAREOUS
 MINOR BLACK AND BRN ORGANIC STREAKS. GRADES AT BOTTOM TO A
 LIMEY ARENACEOUS GREY CALCILUTITE.
- 379.5- 384.5 CLAY; LIGHT GRAY TO MODERATE GRAY
 POROSITY: LOW PERMEABILITY; GOOD INDURATION
 ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %
 OTHER FEATURES: CALCAREOUS
 COMPACT. VERY LIMEY IN SPOTS.
- 384.5- 389.5 CLAY; MODERATE GRAY
 POROSITY: LOW PERMEABILITY
 ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-%
 SILT TO CLAY SIZED PARTICLES, SOME SMALL WELL ROUNDED QTZ
 AND PHOS. SANDS.
- 389.5- 394.5 CLAY; MODERATE GRAY

 POROSITY: LOW PERMEABILITY

 ACCESSORY MINERALS: CHERT- %, ORGANICS-%

 VARYING SHADES OF GRAY. FINER AND MORE INDURATED THAN

 ABOVE. MANY DARK ORGANIC LENSES, SOME THIN CHERT LENSES.
- 394.5- 399.5 CLAY; CREAM TO WHITE

 POROSITY: LOW PERMEABILITY; GOOD INDURATION

 ACCESSORY MINERALS: CALCILUTITE- %, QUARTZ SAND- %

 OTHER FEATURES: CALCAREOUS, CHALKY

 VERY CALCIC AND CHALKY, FINE AND WELL LITHIFIED MATERIAL.
- 399.5- 401.5 LIMESTONE; CREAM

 POROSITY: LOW PERMEABILITY

 GRAIN TYPE: CALCILUTITE

 GRAIN SIZE: VERY FINE; GOOD INDURATION

 ACCESSORY MINERALS: QUARTZ SAND- %

 OTHER FEATURES: CHALKY

 MICRITE AND MARL. DENSE, HARD.
- 401.5- 402.5 LIMESTONE; CREAM

 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

 GRAIN TYPE: CALCILUTITE

 MICRITE, SOME MOLDS AND CRYSTALLINE CALCITE, FRIABLE, GOOD

 POROSITY.
- 402.5- 404.5 CLAY; CREAM TO LIGHT GRAY

 POROSITY: LOW PERMEABILITY

 ACCESSORY MINERALS: QUARTZ SAND- %

 OTHER FEATURES: CALCAREOUS

 MARLY OR LIMEY, WITH SOME WELL MIXED PATCHES OF GRAY QTZ

 BEACH SAND. SHALEY APPEARANCE (MUDSTONE?) SHOWS SOME

 FISSILITY?. POROSITY IS LOW.

404.5- 409.5 LIMESTONE; WHITE
POROSITY: LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
ACCESSORY MINERALS: QUARTZ SAND- %
OTHER FEATURES: CHALKY

CLAYEY MICRITE.

409.5- 414.5 CLAY; LIGHT GRAY TO MODERATE GRAY
POROSITY: LOW PERMEABILITY; GOOD INDURATION
SEDIMENTARY STRUCTURES: FISSILE
OTHER FEATURES: CALCAREOUS
LIMEY, SHALE-LIKE WITH SOME FISSILITY, SILTSTONE?, OR
MUDSTONE, HARD AND DENSE, WELL SORTED AND WORKED.

414.5- 418.5 AS ABOVE

418.5- 419.5 LIMESTONE;

POROSITY: LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: VERY FINE; GOOD INDURATION
ACCESSORY MINERALS: CLAY- %
OTHER FEATURES: CHALKY
FOSSILS: BENTHIC FORAMINIFERA
DENSE, HARD. ABUNDANT SORITES.

419.5- 424.5 CALCILUTITE; LIGHT GRAY TO MODERATE GRAY
POROSITY: LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
ACCESSORY MINERALS: CLAY- %
FOSSILS: BENTHIC FORAMINIFERA
CLAY- LIMEY MUDSTONE, SOME SORITES. HARD, DENSE.

424.5- 429.5 AS ABOVE SOME MINOR SANDS WITH SOME ORGANIC STREAKS.

429.5- 434.5 CLAY; VERY LIGHT GRAY
GOOD INDURATION
ACCESSORY MINERALS: QUARTZ SAND-%
SAME, FINE, HARD, THIN QTZ SAND FINELY SPREAD THROUGHOUT.
CLAY GRADES FROM NO CRACKS TO SOME FISSILITY, MUDSTONE
LIKE.

434.5- 436.5 AS ABOVE
MEDIUM GREENISH GRAY, MOTTLED APPEARANCE.

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- 436.5- 439.5 DOLOSTONE; LIGHT BROWNISH GRAY
 POROSITY: PIN POINT VUGS, MOLDIC, LOW PERMEABILITY
 GOOD INDURATION
 ACCESSORY MINERALS: SPAR-%
 DOLOMITIZED LS, HARD, DENSE, CLAY-LIKE APPEARANCE-- EXCEPT
 VERY HARD, MODERATE MOLDIC POROSITY, MICRO VUGGY MOLDS ARE
 LINED WITH CALCITE SPAR.
- 439.5- 441.5 DOLOSTONE; CREAM TO WHITE

 GRAIN SIZE: FINE; GOOD INDURATION

 FINE DOLOMITIZED MICRITE, HARD, DENSE, SOME MOLDS. POROSITY

 FAIR.
- 441.5- 444.5 LIMESTONE; CREAM TO WHITE

 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY

 GRAIN TYPE: BIOGENIC, CALCILUTITE, CRYSTALS

 ACCESSORY MINERALS: QUARTZ SAND- %

 FOSSILS: MOLLUSKS, FOSSIL MOLDS

 BIOMICRITE, FRIABLE, ABUNDANT MOLLUSK MOLDS, SOME CALCITE

 OOZE COATING MOLDS. POROSITY IS HIGH.
- 444.5- 449.5 LIMESTONE; CREAM TO WHITE

 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

 GRAIN TYPE: BIOGENIC, CALCILUTITE

 ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %

 OTHER FEATURES: FOSSILIFEROUS

 FOSSILS: MOLLUSKS, FOSSIL MOLDS

 BIOMICRITE, FRIABLE, ALL SHELL MATERIAL HAS BEEN CALCIFIED.

 POROSITY IS GOOD.
- 449.5- 453.5 LIMESTONE; CREAM TO WHITE

 POROSITY: POSSIBLY HIGH PERMEABILITY

 ARENACEOUS MICRITE, FEWER MOLDS, VERY FRIABLE, CLAYEY OR

 PUNKY IN SPOTS. POROSITY IS HIGH.
- 453.5- 454.5 CLAY; LIGHT GRAY

 POROSITY: LOW PERMEABILITY

 ACCESSORY MINERALS: QUARTZ SAND- %, CALCILUTITE-%
- 454.5- 459.5 CLAY; CREAM

 POOR INDURATION

 ACCESSORY MINERALS: QUARTZ SAND- %, CALCILUTITE-%

 VERY MARLY AND ARENACEOUS CLAY WITH QTZ AND LIMEY SANDS.

 CRUMBLY AND POORLY CEMENTED. POROSITY IS FAIR.

459.5- 464.5 LIMESTONE; CREAM

POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, PELLET
GOOD INDURATION
OTHER FEATURES: FOSSILIFEROUS
FOSSILS: MOLLUSKS, FOSSIL MOLDS, FOSSIL FRAGMENTS
BIOMICRITE, THE UPPER 1' IS FRIABLE AND THE BOTTOM 4' IS
WELL CEMENTED AND NOT FRIABLE, HIGHLY FOSSILIFEROUS
ABUNDANT MOLLUSK MOLDS AND SHELLS (ALL CONVERTED TO
CALCITE). MANY FECAL PELLETS OR OOLITES 1-2 MM IN DIAMETER.
POROSITY IS MOLDIC AND HIGH.

- 464.5- 469.5 LIMESTONE; CREAM TO LIGHT BROWN
 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
 GRAIN TYPE: BIOGENIC, CALCILUTITE
 GOOD INDURATION
 BIOMICRITE. WELL CEMENTED AND HARD. MANY LARGE MOLDS.
- 469.5- 474.5 LIMESTONE; CREAM

 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

 GRAIN TYPE: BIOGENIC, CALCILUTITE

 MODERATE INDURATION

 BIOMICRITE. WELL CEMENTED IN SOME ZONES AND FRIABLE IN

 OTHERS. MANY SMALL MOLDS AND FEW LARGE MOLDS. FEWER

 FOSSILS. SOME GREEN STAINS IN PORES. HIGH POROSITY.
- 474.5- 479.5 LIMESTONE; CREAM

 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

 GRAIN TYPE: BIOGENIC, CALCILUTITE

 OTHER FEATURES: HIGH RECRYSTALLIZATION

 FOSSILS: MOLLUSKS, FOSSIL MOLDS

 BIOMICRITE. HIGHLY FOSSILIFEROUS, MANY WELL PRESERVED

 TURRITELLA. LOTS OF CALCIFICATION, APPARENTLY THE RESULT OF

 GROUND WATER SOLUTION, SOME GREEN STAINS IN MOLDS, WELL

 CEMENTED IN MOST AREAS, HOWEVER, MOSTLY IT IS FRIABLE.

 POROSITY IS HIGH.
- 479.5- 482 CALCILUTITE; CREAM
 OTHER FEATURES: DOLOMITIC
 PARTIALLY DOLOMITIZED AS ABOVE.
- 482 484.5 LIMESTONE; CREAM TO WHITE
 POROSITY: LOW PERMEABILITY
 GRAIN TYPE: CALCILUTITE
 GOOD INDURATION
 DOLOMITIZED MICRITE. FEW FOSSILS, HARD, DENSE.

484.5- 489.5 LIMESTONE; CREAM

POROSITY: LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
OTHER FEATURES: DOLOMITIC
SOME CLAY MARL, MOST OF THE LS IS PARTIALLY DOLOMITIZED
FEW FOSSILS OR MOLDS, SOME TURQUOISE COLORED STAINS OF
CLAYEY MATERIAL- PROBABLY WEATHERED PHOSPHATE ACCESSORY
MINERALS.

489.5- 494.5 LIMESTONE; CREAM

POROSITY: POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE
OTHER FEATURES: WEATHERED
VERY FRIABLE, MOST FOSSILS HAVE BEEN HIGHLY WEATHERED AND
CAN NO LONGER BE RECOGNIZED. HIGH POROSITY.

494.5- 499.5 AS ABOVE
SOME HARD CALCITE PEBBLES.

499.5- 504.5 LIMESTONE; CREAM

POROSITY: POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: FINE
FRIABLE, LIKE A CRUMBLY LIMESTONE CLAY, POWDERY, FEW
FOSSILS, POROSITY IS HIGH.

504.5- 509.5 LIMESTONE; CREAM

POROSITY: POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE
GRAIN SIZE: FINE
FRIABLE, SLIGHTLY COARSER THAN ABOVE, SOME BLUE-GREEN PHOS.
ACCESSORIES, POROSITY IS HIGH.

509.5- 514.5 LIMESTONE; CREAM

POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE
MODERATE INDURATION
LESS FRIABLE, BETTER LITHIFIED, MANY MOLDS.

514.5- 519.5 AS ABOVE

ONLY COARSER, BETTER LITHIFIED STILL, SOME CALCIFIED FOSSILS. CONTAINS MANY SMALL MOLDS. VERY POROUS MATERIAL.

519.5- 524.5 CALCARENITE; CREAM

POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL GOOD INDURATION OTHER FEATURES: FOSSILIFEROUS

OTHER FEATURES: FOSSILIFEROUS
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, FOSSIL MOLDS
A FOSSIL HASH ALL OF CALCITE COMPOSITION, MANY LARGE MOLDS
1-4 MM IN DIAMETER, GOOD CEMENTATION, FRIABLE, POOR
COMPACTION, FAIR SORTING. EXCELLENT POROSITY.

524.5- 529.5 LIMESTONE; CREAM

POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC GRAIN TYPE: BIOGENIC, CALCILUTITE

BETTER CEMENT. LARGER MOLDS UP TO 1.5 CM IN DIAMETER.

529.5- 534.5 LIMESTONE: CREAM

POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
BIOMICRITE, UPPER HALF OF SECTION IS THE SAME. LOWER PART
OF SECTION GRADES INTO A WELL CEMENTED AND HARD LS. BOTTOM
PART IS LIGHT BROWN-CREAM, W/ SOME POCKETS OF CLAY, FEWER
LARGE MOLDS, MANY SMALL MOLDS, FRIABLE, HIGHLY WEATHERED
SLIGHTLY LESS POROUS.

534.5- 539.5 LIMESTONE; CREAM

GRAIN TYPE: CALCILUTITE

FINE MICRITE OR VERY FINE CALCARENITE. PUNKY ALMOST MARLY FEW FOSSILS, GOOD COMPACTION AND SORTING. MODERATE POROSITY.

539.5- 542.5 CALCARENITE; CREAM TO WHITE

POROSITY: LOW PERMEABILITY

GRAIN SIZE: VERY FINE

OTHER FEATURES: WEATHERED

HAS A LEACHED APPEARANCE. MOST FOSSILS WEATHERED OUT , HARD AND DENSE, LOW POROSITY- CALCILUTITE. HAS INCREASING DENSITY AND HARDNESS AT BOTTOM OF SECTION.

542.5- 545.5 CALCILUTITE; WHITE

POROSITY: LOW PERMEABILITY

GRAIN TYPE: CALCILUTITE

GOOD INDURATION

CHALK, LEACHED OR BLEACHED APPEARANCE, VERY HARD, DENSE ALL FOSSILS DESTROYED, VERY FINE MATERIAL SILT TO CLAY SIZED. A FAULT ZONE WITH SLICKENSIDES APPROX. 6" LONG VERTICALLY AND APPROX 2" HORIZONTALLY. COMPOSED OF CALCITE STRINGERS AND SMASHED OR SMEARED PYRITE CRYSTALS. TWO APPARENT PLANES OF MOVEMENT AT APPROX 115 DEGREES TO EACH OTHER. THE LONGEST DIRECTION OF MOVEMENT IS VERTICAL AND THE SHORTER ONE HORIZONTAL.

545.5- 549.5 LIMESTONE; WHITE TO CREAM

POROSITY: LOW PERMEABILITY

GRAIN TYPE: CALCILUTITE

SEDIMENTARY STRUCTURES: MOTTLED

OTHER FEATURES: CHALKY

DENSE, HARD, SOME POCKETS OF CALCARENITE, FEW FOSSILS PUNKY, MOTTLED, SOME POCKETS OF CHALK-LIKE CALCITE POROSITY IS LOW-MODERATE.

- 549.5- 553.5 CLAY; MODERATE GRAY
 POROSITY: LOW PERMEABILITY
 ACCESSORY MINERALS: QUARTZ SAND- %, CALCILUTITE-%
 MINOR GREEN LENSES. VERY LIMEY AND ARENACEOUS CLAY. PUNKY.
- 553.5- 559.5 CALCARENITE; CREAM

 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

 FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS

 FOSSIL HASH, LEPIDOCYCLINA FAVOSA?, MANY SMALL MOLDS.

 FRIABLE, SOME PUNKY OR CLAYEY AREAS. HIGH POROSITY.
- 559.5- 564.5 CALCARENITE; CREAM

 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC

 FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS

 FOSSIL HASH, VERY FRIABLE, POORLY CEMENTED AND COMPACTED

 SOME MOLDS AND SMALL BROWN POCKETS OF CLAY. VERY POROUS.
- 564.5- 569.5 CALCARENITE; CREAM TO LIGHT BROWN
 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC
 OTHER FEATURES: WEATHERED
 FOSSIL HASH, COMPOSED ALMOST ENTIRELY OF CALCITE. A
 WEATHERED COQUINA IN APPEARANCE, VERY FRIABLE, MANY SMALL
 MOLDS, FOSSILS NOT RECOGNIZABLE DUE TO WEATHERING. (GROUND
 WATER SOLUTION).
- 569.5- 574.5 CALCARENITE; LIGHT BROWN
 POROSITY: POSSIBLY HIGH PERMEABILITY
 FOSSILS: MOLLUSKS, ECHINOID
 FOSSL HASH, 95%+ CALCIC COMPOSITION, MANY SMALL MOLLUSK
 FOSSILS, POROSITY IS HIGH.
- 574.5- 579.5 AS ABOVE
- 579.5- 584.5 CALCARENITE; CREAM

 POROSITY: POSSIBLY HIGH PERMEABILITY, MOLDIC, VUGULAR

 FOSSILS: CORAL, BENTHIC FORAMINIFERA, MOLLUSKS, ECHINOID

 FOSSIL HASH, NEARLY ALL CALCITE COMPOSITION, ABUNDANT

 FOSSILS, ACRAPORA CERVICORNUS. VERY FRIABLE, SOME AMOUNTS

 OF WHITE CLAY OR LIME IN SOME PORES. HIGH MACRO MOLDIC

 POROSITY THROUGHOUT.
- 584.5- 589.5 AS ABOVE
- 589.5- 598.5 EXCEPT MORE LITHIFIEED AND HAVING SMALLER MOLDS, SOME GREEN STAINS LINING MOLDS. MANY TURRITELLA FOSSILS.
- 598.5- 594.5 LIMESTONE; CREAM

 POROSITY: MOLDIC, POSSIBLY HIGH PERMEABILITY

 GRAIN TYPE: CALCILUTITE

 OTHER FEATURES: FOSSILIFEROUS

 WITH LARGER MOLDIC PORES, AND SLIGHTLY BETTER LITHIFIED

 FRIABLE, AND VERY POROUS.

594.5- 599.5 LIMESTONE; CREAM
GRAIN TYPE: CALCILUTITE
SMALLER PORES AND FEWER FOSSILS DUE TO WEATHERING OR
GROUNDWATER SOLUTION.

599.5- 604.5 CALCARENITE; CREAM
POROSITY: POSSIBLY HIGH PERMEABILITY
GOOD INDURATION
OTHER FEATURES: FOSSILIFEROUS
FRIABLE, WELL LITHIFIED, FEW MOLDS, HONOGENEOUS WITH FEW
PARTICLES LARGER THAN SAND SIZED. MANY SMALL FOSSILS
POROSITY IS HIGH.

604.5- 609.5 CALCARENITE; CREAM

POROSITY: POSSIBLY HIGH PERMEABILITY

FRIABLE, WELL SORTED AND COMPACTED TO A SEMI-DENSE MASS

MANY MICRO MOLDS AND PORES, MICROCOQUINA. GOOD POROSITY.

609. TOTAL DEPTH