04-30-81

Executive Summary
ROMP #30 "Moffitt" - Near Zolfo Springs
Three Wells

G. H. New

Location

This site is located approximately two miles south of Zolfo Springs and one-quarter mile north of the intersection of S.R. 634 and U.S. 17 south on the east side of U.S. 17 south. The wellsite is adjacent to the eastern side of a railroad easement which runs parallel to U.S. 17 on its eastern side. The site is in the SW 1/4, SE 1/4, SE 1/4 of section 3, township 35 south, and range 25 east and at latitude 272728 and at longitude 814757.

Site Easement

The temporary and perpertual easements for this site were obtained from the members of the Causey Estate in January of 1978 for the sum of one dollar.

The permanent easement is 20'x60' with its greater dimension traversing in a east-west direction.

Geology - This site at an elevation of approximately 70' above m.s.l. and is located on the Penholoway terrace. The site is in a flat and grassey pasture which is covered by a black, muck, soil and the ground surface slopes gently towards the east. The surface of the unconfined water table is clearly expressed by the location of nearby ponds and ditches which are used for irrigation.

Drill cuttings from the wells at this site were obtained at 5' intervals from land surface to 1266' below. These cutting were described by a geologist and correlated with other existing information resulting in the following lithologic description (summarized).

0'-15' Undifferentiable Sands - primarily quartz sand with little sorting, some organics present, moderate-high porosity.

15'52' Tamiami FM. - Clay, light greenish gray - brown, sandy contains varing amounts of phosphatic and quartz sands, some limestone stringers, low-moderate porosity.

52'-250' Hawthorn FM. - Clay - and Limestone - grey to green., sandy, limestone - fossiliferous micrite to a dolomitized and erroded, dolostone, off-white, and marl intermixed, porosity from high to low.

250'-345' Tampa FM. - Limestone tan-gray micrite, fossiliferous, dolomitized in places, interbedded with gray-white, silty, clay, the bottom 30' of this section is primarily a blue-green, stiff, waxy, clay.

345'-540' Suwanee Fm - Limestone - biomicrite, tan to off-white, fossiliferous, several genera of common fossils represented, some minor lenses of blue-green, clay some weathering rinds; in general moderate to high porosity.

2 (4/9)

540'-840 Ocala Gp. Fm. - Limestone and Dolostone - biomicrite, tan to cream or light gray, extremely weathered in spots, some sections chalky or friable, vary common foraminifers and Echinoids, some minor clays, the lower portion of this section has undergone more dolomitization, porosity ranges from low-high.

840'-1265 Avon Park Fm - Limestone & Dolomite, predominated by dark-light brown, suciosic, dolomite, in some places dolomite is hard, and impermeable, other zones show pin-point porosity and have many in-filled cavities containing dolomitic silt or clay, limestone is grey-white, fossiliferous, biomicrite, some lenses of dark, brown, organic, clay throughout section.

Hydrology

The water table at this site is apparently confined by clay to the upper 15' of sands. It's level at the time of well construction remained approximately 2 1/2' below land surface.

Several specific capacity tests were attempted in the secondary aquifer one at a depth of approximately 100' which indicated that the specific capacity of the hole at that depth was approximately 0.40 gpm/ft of drawdown. However, most of the time that we were drilling through the secondary artesian aquifer, we were unable to drill on reverse-air rotary because the upper portion of the hole was unstable. Therefore we were unable to test what is considered to be the most productive interval of this aquifer from a depth of 280'-316' below l.s.d. It is felt that the specific capacity of this interval would be considerably higher since it is predomined by limestone and dolomite. The secondary artesian aquifer well was constructed with this as its open interval. After construction and brief well development the water level in this well was approximately 27' below l.s.d.

It is felt that the clay present from a depth of 320'-360' represents a major confining layer between the secondary artesian aquifer above and the primarily Floridan aquifer below.

One specific capacity test was performed through the drill stem at a depth of 420' in the primary (Floridan) aquifer this test resulted in a specific capacity of 2.17 gpm/ft of drawdown for the well at that depth. This number might be low due to the restricted volume of the annulus of the wellbore around the drillstem and the increased friction inside of the drillpipe.

The water levels in this aquifer remained relatively constant at approximately 30' below l.s.d. throughout the well construction. Once a depth of approximately 500' was reached to the total depth of the well. This would indicate that this entire range of depths represents one continuous aquifer. However, certain portions of strata within the Ocala Group and Avon Park Formation probably act as semi or leaky confiners and restrict the movement of aquifer waters somewhat.

Well Construction

Three wells and a water table peizometer were constructed at this site: a Floridan aquifer monitor well 1266' deep, one secondary artesian monitor 316' deep, one water table well, and one water table peizometer.

A. Floridan Aquifer Monitor

The Floridan aquifer monitor was constructed first to a total depth of 1266' This well was constructed using 56' of 14" diameter steel surface casing and 380' of 8" inside diameter p.v.c. wellcasing as the final casing. A bore hole to the depth of the surface casing with a minimum diameter of 18" was drilled first using mud rotary drilling technique. Then the surface casing was grouted into place. During the following phase of well construction (to a depth of 380') both reverse air lifting (to develop the borehole's open interval) and mud rotary drilling techniques were employed. Before drilling the open hole portion of the well the final casing (380' of 8" inside diameter, p.v.c.) was installed and pressure grouted into place with a cement slurry. After setting the final casing the remainder of the borehole was constructed using a 7 5/8" drillbit and the reverse air lift drilling technique. The open hole or monitored portion of this well is from 380'-1266' below l.s.d.

B. Secondary Artesian Monitor

This well was drilled to a total depth of 316' and has 280' of 7 1/4" inside diameter A.B.S. wellcasing grouted into place. This well was constructed using mud rotary drilling technique. After the final casing had been set and the well had been drilled to its final depth the open interval of this well (from 280'-316') was developed by reverse air-lift pumping, using the drill rigs air compressor. This well includes 53' of 14" steel surficial casing which was also grouted into place.

C. Water Table Well & Peizometer

A six-inch diameter surficial monitor well which will be employed in a surficial pump test and a two-inch diameter surficial peizometer were also constructed at this site. The 2" peizometer is expendible and will only be used to monitor water levels in the surficial aquifer while the permanent 6" monitor is being pumped. Afterwards the 6" well shall be used as the permanent monitor. The 6" well was constructed on the perpetual easement and the 2" well was constructed on the temporary easement at a radius of approximately 15' from the 6" diameter well.

Both of these wells are 15' in depth and are screened with #30 slot p.v.c. wellscreen over the interval from 10'-15' below land surface. The interval from 5'-15.5' in each is packed with #6-#20 silica sand to enhance their production. Each well is grouted with a cement slury from 0'-5' below land surface.

All of the wells at this site have been pumped at least briefly for development purposes. The Floridan & secondary artesian monitors were developed by reverse air-lift pumping. The shallow wells were pumped with a small portable gas-powered trash pump and they were briefly surged with compressed air from a portable air compressor. After the shallow wells were surged with air, additional gravel pack material was added to each by means of a 1" p.v.c. tube provided for this purpose (see diagram).

Geophysical Logs

The following types of geophysical logs were run on this well: temperature (gradient), fluid resistivity, caliper, natural gamma emission, electric (spontaneous potential & resistivity). These logs were run from one to three times each.

The electric and gamma logs were run from 56'-360' before the final casing was set in the deep well and again after the hole was completed from 370'-1260'. The caliper, temperature, and fluid resitivity were run before and after setting the final well casing and at the well's total depth (56-365', 370'-660', 370'-1260').

All of the geophysical logs were run under static conditions. Interpretations of these logs were primarily employed in the geology section of this report where they were used to better define formation boundries.

Type Monitor

The Floridan monitor is designed to monitor the level of the potentiometric surface in the Floridan aquifer and to give some idea of the quality of the water from its composite zones.

The secondary artesian monitor is designed to help monitor the levels of the potentiometric surface and the water quality of that aquifer.

The water table wells were designed so that a pump test can be run on that aquifer and to measure the level of the water in that aquifer during the pump test.

Water Quality

ROMP #30-1 - WATER QUALITY*

Sample Depth	Date Collected	Field Conductivity	Temperature	SWFWMD Chloride	Laboratory Sulfate
420'	03/05/81	650 mmho's	23°	-	-
660'	03/11/81	1200	20.0°C	18.5 mg/l	209.6 mg/l
720'	03/11/81	1250	20.0°	19.5	213.6
880'	03/12/81	1300	24.0°	20.0	208.8
1120'	03/19/81	600	28.0°	18.5	204.8
1145'	03/19/81	610	-	18.7	225.3
1200'	03/25/81	675	-	20.0	212.0
1265'	03/25/81	725	-	20.3	220.0

*All water samples were obtained by air-lift pumping through drill stem and as such represent composite samples over the entire open borehole section. (Example casing depth is 380' sample #1 = 660' open hole interval is 380'-660'.)

All of the water quality samples retrieved from this site were from the primary (Floridan Aquifer) and remained within the E.P.A. standards for public drinking water. As is common in much of Hardee County there seemed to be a general increase in sulfate content with depth and the sulfates were higher than is desirable. However, the maximum potable limit of 250 mg/l for sulfates was never reached. It is not known whether sulfate content would change significantly by pumping the well with time.

The upper portion of this borehole was drilled primarily with mud rotary and no water samples were retrieved from the secondary aquifer, therefore, nothing can be stated about its water quality, although it is believed to be better than the Floridan aquifer below it.

U.S.G.S. Notification

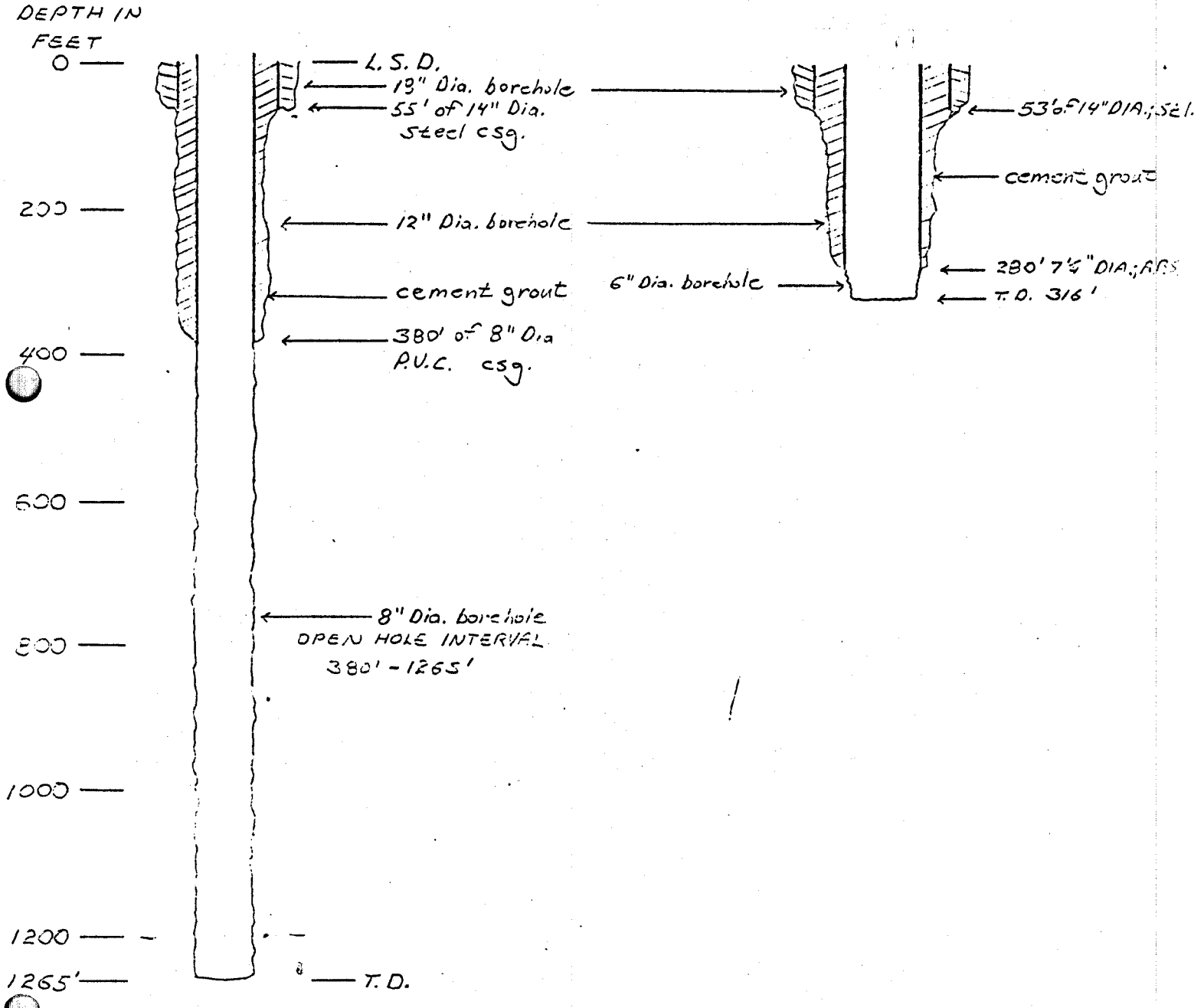
The Technical Support Division of the District was notified that these wells are complete and ready to forward to the U.S.G.S. for instrumentation in May 1981.

GHN:wp2

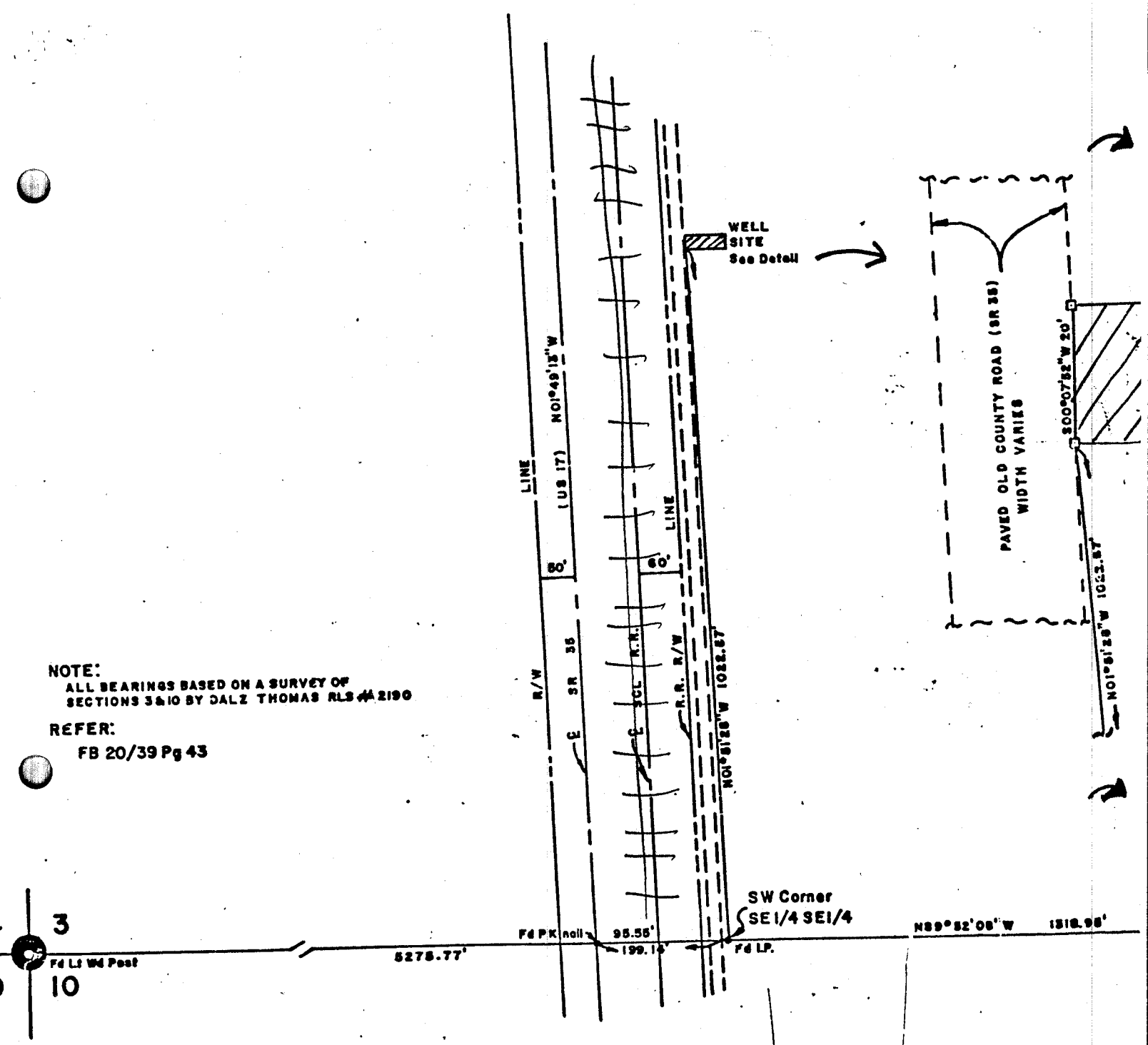
ROMP #30 "MOFFITT"
As Built Diagram

DEEP (PRIMARY) ARTESIAN MONITOR #30-1

SECONDARY ARTESIAN MONITOR #30-2



2 (6/9)



NOTE:
ALL BEARINGS BASED ON A SURVEY OF SECTIONS 3&10 BY DALE THOMAS RLS #2190

REFER:
FB 20/39 Pg 43

SURVEYOR'S CERTIFICATION

s is to certify that the survey shown hereon was de under my supervision and direction and that this t is a true and correct representation of the lands veyed.

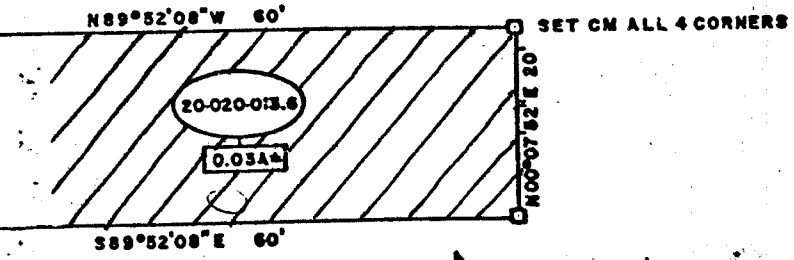
Robert B. Haight

Robert B. Haight
Florida Registered Land Surveyor No. 1986

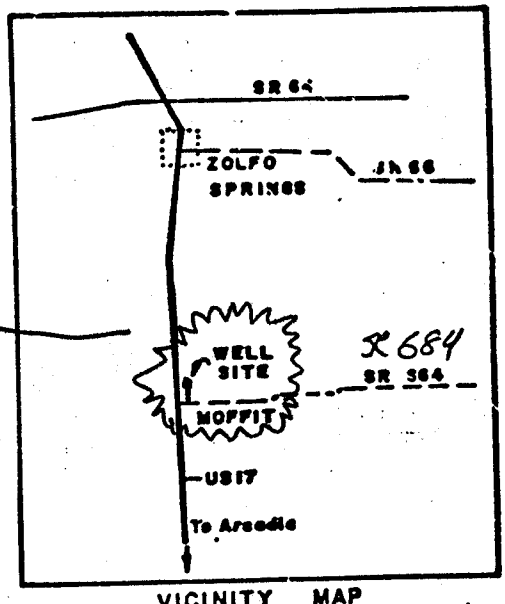
8: .77

Corp. 138M-2 "Ageproof Film"

1



DETAIL
1" = 20'



VICINITY MAP
NTS

3 2
FdCM
10 11

ROMP Site #30

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
PEACE RIVER BASIN

WELL SITE 20·020·013.6

400 feet

MOFFIT (SITE 30) HARDEE COUNTY, FLA.

DRAWN G.C.G.	CHECKED	APPROVED
DATE 4-8-77	SCALE AS SHOWN	SHEET 1 OF 1

DWG NO. 20-020-013S

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W- 15648
TOTAL DEPTH: 01266 FT.
SAMPLES - NONE

COUNTY - HARDEE
LOCATION: T.35S R.25E S.03 D
LAT = N 27D 27M 28
LON = W 81D 47M 57

COMPLETION DATE - N/A
ELEVATION - 070 FT
OTHER TYPES OF LOGS AVAILABLE - GAMMA, FLUID CONDUCTIVITY, SONIC, ELECTRIC

OWNER/DRILLER: SWFWMD; ROMP #30 "MOFFITT" NEAR ZOLFO SPRINGS

WORKED BY: G.L. HENDERSON; CODED AND ENTERED BY RICHARD GREEN 10/90
FROM A GEOLOGIST'S LOG PROVIDED BY SWFWMD.
THIS SITE IS LOCATED APPROX. 2 MILES SOUTH OF ZOLFO SPRINGS AND 1/4
MILE NORTH OF THE INTERSECTION FO S.R. 634 AND U.S. 17 SOUTH
ON THE EAST SIDE OF U.S. 17 NORTH. THE WELLSITE IS ADJACENT
TO THE EASTERN SIDE OF A RAILROAD EASEMENT WHICH RUNS
PARALLEL TO U.S. 17 ON ITS EASTERN SIDE.
DESCRIBED FROM CUTTINGS.
PROJECT #20-020-5194.
NOTE----- DUE TO THE ROCK SEQUENCE FROM 15-52 FEET EXHIBITING
LITHOLOGIC CHARACTERISTICS COMMON TO THE "VENICE CLAY" AND
TO THE REMNENTAL PHOSPHATICS OF THE BONE VALLEY FORMATION,
IT HAS BEEN TENTATIVELY IDENTIFIED AS BEING EQUIVALENT
TO THE TAMIAMI FORMATION.
NOTE--THIS DESCRIPTION IS TOO LONG FOR THE PROGRAM, THEREFORE
THE WELL HAS BEEN SPLIT INTO TWO PARTS, THIS IS PART 1 OF 2.

0.	15.	UNDIFFERENTIATED SAND AND CLAY
15.	52.	TAMIAMI FM.
52.	365.	HAWTHORN GROUP
250.	365.	TAMPA MEMBER OF ARCADIA FM.
365.	540.	SUWANNEE LIMESTONE
540.	840.	OCALA GROUP
540.	650.	CRYSTAL RIVER FM.
650.	720.	WILLISTON FM.
720.	840.	INGLIS FM.
840.	.	AVON PARK FM.

0 - 2 SAND; TRANSPARENT TO WHITE; POSSIBLY HIGH PERMEABILITY, INTERGRANULAR;
RANGE: MEDIUM TO COARSE;
ACCESSORY MINERALS: LIMONITE- %, ORGANICS- %;
OTHER FEATURES: FROSTED;

2 - 4 SAND; DARK YELLOWISH BROWN TO DARK BROWN; POSSIBLY HIGH PERMEABILITY,
INTERGRANULAR; RANGE: MEDIUM TO COARSE;
ACCESSORY MINERALS: LIMONITE-%;
SUBFROSTED QTZ SANDS, ENTIRE SECTION HEAVILY STAINED BY LIMONITIC "HARDPAN"--LIMONITE
CEMENTED SANDSTONE BOULDERS. MODERATE-HIGH POROSITY.

4 - 15 SAND; TRANSPARENT TO WHITE; POSSIBLY HIGH PERMEABILITY, INTERGRANULAR;
RANGE: MEDIUM TO COARSE;
OTHER FEATURES: FROSTED;

15 - 25 CLAY; WHITE TO VERY LIGHT GREEN;
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-%;
SOME OFFWHITE-BLACK PHOSPHATE GRANULES, THIN (4") PHOSPHATIZED LS LEDGE AT 20'. MODERATE POROSITY.

25 - 35 CLAY; WHITE TO VERY LIGHT GREEN; LOW PERMEABILITY;
ACCESSORY MINERALS: DOLOMITE-%;
SANDY CLAY, OFFWHITE-BRIGHT GREENISH WHITE.

35 - 40 CLAY; LIGHT GREENISH GRAY; LOW PERMEABILITY;
SLIGHTLY SANDY. LOW-MOD. POROSITY.

40 - 45 CLAY; LIGHT GREENISH GRAY TO LIGHT YELLOWISH GREEN; LOW PERMEABILITY;
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-%;
SLIGHTLY SANDY, SOME TAN-DARK BRN PHOSPHATE GRANULES.

45 - 52 CLAY; LIGHT YELLOWISH GREEN; LOW PERMEABILITY;
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-%;
LOW-MODERATE POROSITY. COMMENTS AS ABOVE.

52 - 55 LIMESTONE; CREAM TO WHITE;
ACCESSORY MINERALS: SILT- %, PHOSPHATIC SAND-%;
SILTY MARL INTERMIXED WITH CHALKY SPARSE BIOMICRITE. SOME TAN-TANNISH BRN PHOS. GRANULES AND GRAVELS. LOW POROSITY IN MARL, MODERATE POROSITY IN LS.

55 - 60 LIMESTONE; CREAM TO WHITE;
LS-MARL. LIMONITIC SOFT-HARD, CHALKY-SPLINTERY, BIOMICRITE INTERMIXED WITH OFFWHITE, SILTY MARL, ABUNDANT MOLLUSK CASTS, MOLDS, AND SHELL FRAGMENTS. LOW POROSITY IN MARL, MOD-HIGH POROSITY IN LS.

60 - 65 AS ABOVE
MARL IS OFFWHITE-LT GRAY AND SLIGHTLY PHOSPHATIC.

65 - 70 LIMESTONE; CREAM TO LIGHT GRAY;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: CHALKY;
LS-MARL-CLAY. CREAM-OFFWHITE-LT GRAY-YELLOWISH WHITE (STAINED BY LIMONITE), SOFT-HARD, CHALKY-CHERTY IN PARTS, PHOSPHATIC BIOMICRITE, ABUNDANT MOLLUSK CASTS AND MOLDS, SOME SHELL FRAGMENTS, TRACE OF PHOSPHATIZED FOSSIL REMAINS (ONE BARRACUDA TOOTH FOUND), INTERMIXED WITH OFFWHITE TO LT GRAY, VERY PHOSPHATIC, SILTY MARL GRADING TO LT GRAY, PHOSPHATIC STICKY CLAY, SOME BRN-BLK PHOSPHATIC GRAVEL, LOW POROSITY IN CLAY OR MARL, MOD-HIGH POROSITY IN LS.

70 - 75 LIMESTONE; LIGHT GRAY TO BUFF;
SEDIMENTARY STRUCTURES: INTERBEDDED,
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %, PHOSPHATIC GRAVEL- %, DOLOMITE- %;
OTHER FEATURES: CHALKY;
STICKY-CLAYEY, PHOSPHATIC MARL INTERMIXED WITH SOFT, VERY CHALKY, SPARSE BIOMICRITE, SOME PELECYOD CASTS, SOME BRN-BLK PHOS. SANDS AND GRAVELS, TRACE OF HARD, SPLINTERY DOLOMITE LENSES. POROSITY IS LOW IN MARL AND MOD-HIGH IN LS.

75 - 80 LIMESTONE; MODERATE PINK TO BUFF;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, PHOSPHATIC GRAVEL- %, DOLOMITE- %, CLAY- %;
OTHER FEATURES: SPECKLED;
SOFT-HARD, CHALKY SPARSE BIOMICRITE, SPECKLED BY PHOSPHATE. SOME HARD, SPLINTERY LT GRAY-TANNISH GRAY PHOSPHATIC DOLOMITE LENSES, TRACE OF LT GRAY MARL AND CLAY, MODERATE-HIGH POROSITY IN LS.

80 - 84 LIMESTONE; CREAM TO LIGHT GRAY;
GRAIN TYPE: CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, DOLOMITE- %;
OTHER FEATURES: SPECKLED, CHALKY;
CHALKY-MARLY IN PARTS, VERY PURE FOSSILIFEROUS MICRITE, SOME LT-DK GRAY PHOSPHATE SANDS SPECKLING THE LS, TRACE OF PHOS. LT GRAY MARL AND TANNISH GRAY DOLOMITE SPLINTERS, MOD-HIGH POROSITY IN LS.

84 - 86 LIMESTONE; ;
SAME AS 75-80'.

86 - 93 LIMESTONE; LIGHT GRAY; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE, SKELETAL;
GOOD INDURATION;
OTHER FEATURES: CHALKY;
HARD, DENSE, SLIGHTLY MARLY-CHALKY, VERY PURE FOSSILIFEROUS MICRITE. LOW-MODERATE POROSITY.

93 - 100 CLAY; CREAM TO LIGHT GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %, PHOSPHATIC GRAVEL-01%;
OTHER FEATURES: SPECKLED;
SANDY MARL INTERMIXED WITH SOME LT GRAY-BLUISH GRAY CLAY. SECTION IS HEAVILY SPECKLED WITH LT-DK GRAY PHOSPHATE.

100 - 110 CLAY; LIGHT GRAY TO LIGHT BLUISH GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: PHOSPHATIC SAND-%;
MARLY CLAY. SOME LT-DK GRAY PHOSPHATE SANDS.

110 - 120 AS ABOVE
SOME TANNISH GRAY DOLOMITE STRINGERS SCATTERED THROUGHOUT SECTION.

120 - 160 LIMESTONE; WHITE TO LIGHT BLUISH GRAY; MOLDIC, LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, PHOSPHATIC GRAVEL- %;
FOSSILS: SHARKS TEETH, MOLLUSKS, FOSSIL MOLDS;
SOFT-HARD, DENSE, DOLOMITIC, FOSSILIFEROUS MICRITE, SOME HEAVILY ERODED MOLLUSK MOLDS, SOME PHOS. SHARK OR RAY TEETH FOUND, SOME LT-DK GRAY PHOSPHATE SANDS AND GRAVELS. LOW-MODERATE MOLDIC POROSITY.

160 - 180 AS ABOVE
EXCEPT SOME LT GRAY-LT BLUISH GRAY MARLY CLAY.

180 - 195 DOLOMITE; LIGHT TAN; LOW PERMEABILITY;
SEDIMENTARY STRUCTURES: INTERBEDDED,
ACCESSORY MINERALS: LIMESTONE-%;
HARD, FOSSILIFEROUS DOLOMITE INTERMIXED WITH OFFWHITE, SOFT-HARD, DOLOMITIC FOSSILIFEROUS MICRITE, SOME MOLLUSK MOLDS, SOME LT-DK GRAY PHOS. GRAVELS,LOW- MODERATE MOLDIC POROSITY IN LS, VERY LOW POROSITY IN DOLOMITE.

195 - 205 CLAY; LIGHT GRAY TO LIGHT BLUISH GRAY; OL% POROSITY,
SEDIMENTARY STRUCTURES: INTERBEDDED,
ACCESSORY MINERALS: LIMESTONE-%;
MARLY CLAY INTERMIXED WITH TAN, HARD, DOLOMITIC, FOSSILIFEROUS MICRITE, SOME PELECYPOD MOLDS, SOME LT-DK GRAY PHOS. GRAVELS, LOW-MOD. MOLDIC POROSITY IN LS.

205 - 210 LIMESTONE; TAN; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE, SKELETAL;
OTHER FEATURES: DOLOMITIC, FOSSILIFEROUS;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
TRACE OF OFFWHITE, SOFT-HARD, SLIGHTLY DOLOMITIC FOSSILIFEROUS MICRITE, VERY LOW-LOW POROSITY.

210 - 212 LIMESTONE; WHITE; LOW PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-01%;
OTHER FEATURES: DOLOMITIC;
FOSSILS: FOSSIL MOLDS, MOLLUSKS, FOSSIL FRAGMENTS;
SOFT-HARD, SLIGHTLY DOLOMITIC BIOMICRITE, COMMON PELECYPOD MOLDS, LOW-MODERATE MOLDIC POROSITY.

212 - 227 DOLOMITE; LIGHT TAN TO LIGHT BROWN; LOW PERMEABILITY, MOLDIC;
0-10% ALTERED;
HARD BUT BRITTLE, SPLINTERY, PARTLY RECRYSTALLIZED DOLOMITE-- LIGHT GRAY, HARD, HIGHLY MOLDIC, FOSSILIFEROUS DOLOMITE, SOME PELECYPOD MOLDS AND BRYOZOAN PAVEMENT IN LIGHT GRAY DOLOMITE, VERY LOW POROSITY IN BROWN DOLOMITE, LOW MOLDIC POROSITY IN LT GRAY DOLOMITE.

227 - 230 DOLOMITE; LIGHT GRAY; MOLDIC, LOW PERMEABILITY;
ACCESSORY MINERALS: CLAY- %;
OTHER FEATURES: FOSSILIFEROUS;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
HARD, MOLDIC, FOSSILIFEROUS DOLOMITE, SOME GUMMY, OFFWHITE, CLAY INFILLING SOME FOSSIL MOLDS, TRACE OF LT GRAY PHOSPHATIC SANDS AND GRAVELS, VERY LOW POROSITY IN CLAY, LOW MOLDIC POROSITY IN LT GRAY DOLOMITE.

230 - 235 DOLOMITE; BUFF TO LIGHT BROWNISH GRAY; LOW PERMEABILITY, MOLDIC;
0-10% ALTERED;
HARD BUT BRITTLE, PARTLY RECRYSTALLIZED DOLOMITE-- LT TAN-LT BRN, SOFT-HARD, MOLDIC, FOSSILIFEROUS DOLOMITE, POROSITY IS VERY LOW IN HARD DOLOMITE, LOW MOLDIC POROSITY IN SOFT-HARD DOLOMITE.

235 - 240 LIMESTONE; LIGHT TAN TO LIGHT OLIVE BROWN; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: CLAY- %;
OTHER FEATURES: DOLOMITIC;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SOFT, VERY BRITTLE, SLIGHTLY DOLOMITIZED, FOSSILIFEROUS MICRITE, SOME FOSSSIL MOLDS OR VUGS INFILLED BY GUMMY, OFFWHITE CLAY.

240 - 245 LIMESTONE; TAN; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
ACCESSORY MINERALS: ORGANICS-01%;
OTHER FEATURES: FOSSILIFEROUS;
SOFT, FRIABLE, INDURATED FOSSILIFEROUS MICRITE. TRACE OF ORGANICS?. LOW-MODERATE POROSITY.

245 - 250 LIMESTONE; TAN TO LIGHT BROWN;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: PHOSPHATIC SAND-01%, ORGANICS- %;
OTHER FEATURES: DOLOMITIC;
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, MOLLUSKS, FOSSIL MOLDS;
SOFT-HARD, SLIGHTLY DOLOMITIZED BIOMICRITE. COMMON FORAMS, ECHINOID SPINES, MOLLUSK MOLDS AND CASTS, SOME ORGANIC LENSES, TRACE OF LT GRAY PHOS. SANDS, MODERATE-HIGH POROSITY.

250 - 255 LIMESTONE; TAN; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
SEDIMENTARY STRUCTURES: INTERBEDDED,
ACCESSORY MINERALS: CLAY- %, QUARTZ SAND- %, PHOSPHATIC SAND- %;
OTHER FEATURES: DOLOMITIC;
HARD, SPARSE BIOMICRITE, INTERMIXED WITH LT GRAY, SANDY, PHOSPHATIC ORGANIC CLAY, LOW POROSITY.

255 - 260 LIMESTONE; LIGHT TAN; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
SEDIMENTARY STRUCTURES: INTERBEDDED,
ACCESSORY MINERALS: CLAY- %, QUARTZ SAND- %, PHOSPHATIC SAND- %, ORGANICS- %;
OTHER FEATURES: DOLOMITIC;
SOFT-HARD, SLIGHTLY DOLOMITIZED BIOMICRITE, INTERMIXED WITH LT GRAY, SANDY, PHOSPHATIC, ORGANIC CLAY. MODERATE TO HIGH POROSITY IN LS, LOW POROSITY IN CLAY.

260 - 265 DOLOMITE; TAN; LOW PERMEABILITY;
GOOD INDURATION;
HARD, FOSSILIFEROUS DOLOMITE INTERMIXED WITH LT GRAY- TAN, SLIGHTLY DOLOMITIZED BIOMICRITE, SOME PELECYPOD MOLDS AND ARAGONATIZED SHELL FRAGMENTS. SOME LT GRAY SANDY, PHOSPHATIC CLAY INTERMIXED WITH LS IN THE LOWER HALF OF SECTION. LOW-MOD POROSITY IN LS.

265 - 274 LIMESTONE; LIGHT GRAY TO TAN; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: DOLOMITIC;
SLIGHTLY DOLOMITIZED BIOMICRITE. SOFT-HARD. LOW-MODERATE POROSITY.

274 - 278 CLAY; WHITE TO LIGHT GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-%;
SOFT.

278 - 280 CLAY; ;

PHOSPHATIC BIOMICRITE.

280 - 285 LIMESTONE; WHITE TO TAN;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SOFT, FRIABLE, BIOMICRITE, COMMON PELECYPOD CASTS AND MOLDS, SOME ECHINOID TEST FRAGMENTS, ABUNDANT PHOS. SANDS. MODERATE POROSITY.

285 - 289 LIMESTONE; WHITE TO TAN; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: DOLOMITIC;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SOFT-HARD, HIGHLY PHOSPHATIC, SLIGHTLY DOLOMITIC, BIOMICRITE, COMMON MOLLUSK MOLDS AND CASTS, LOW-MOD POROSITY.

289 - 291 LIMESTONE; TAN;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
FOSSILS: MOLLUSKS, FOSSIL MOLDS;
SOFT, FRIABLE, BIOMICRITE, COMMON MOLLUSK MOLDS AND CASTS. MODERATE POROSITY.

291 - 300 CLAY; WHITE TO LIGHT GRAY; LOW PERMEABILITY;
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %, LIMESTONE- %,
PHOSPHATIC GRAVEL-%;
SOFT, SANDY, PHOSPHATIC CLAY, SOME OFFWHITE-TAN, PHOSPHATIC BIOMICRITE, SOME PHOS. SANDS
AND GRAVELS THROUGHOUT SECTION. POROSITY: LOW-MOD. IN LS ,LOW IN CLAY.

300 - 305 LIMESTONE; WHITE; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
SEDIMENTARY STRUCTURES: INTERBEDDED,
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-%;
HARD, PHOSPHATIC BIOMICRITE INTERMIXED WITH OFFWHITE- LT GRAY, SOFT, SANDY, PHOSPHATIC
CLAY, SOME BLACK PHOSPHATIC SANDS, LT GRAY-OFFWHITE DOLOMITE FROM 302.5-303.5',
LOW-MODERATE POROSITY IN LS, LOW POROSITY IN DOLOMITE AND CLAY.

305 - 314 LIMESTONE; LIGHT GRAY TO TAN; LOW PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, PHOSPHATIC GRAVEL- %;
OTHER FEATURES: DOLOMITIC;
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, FOSSIL MOLDS;
SOFT-HARD, SLIGHTLY DOLOMITIZED IN PARTS, COMMON MOLLUSK CASTS AND MOLDS, SOME
ARAGONITIZED SHELL FRAGMENTS, SOME BLACK PHOS. SANDS AND GRAVELS, LOW-MODERATE POROSITY.

314 - 317 DOLOMITE; LIGHT BROWN TO DARK BROWN; LOW PERMEABILITY, MOLDIC;
0-10% ALTERED;
GOOD INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %;
OTHER FEATURES: FOSSILIFEROUS;
HARD, PARTLY RECRYSTALLIZED. SOME BLACK PHOS. SANDS.

317 - 327 CLAY; LIGHT BLUE GREEN TO DARK BLUISH GREEN; LOW PERMEABILITY; MODERATE INDURATION;
WAXY, HYDRATES EASILY.

327 - 330 CLAY; DARK GREEN; LOW PERMEABILITY; GOOD INDURATION;
MARLY-SLIGHTLY WAXY, HYDRATES SLOWLY.

330 - 345 CLAY; DARK BLUISH GREEN; LOW PERMEABILITY; GOOD INDURATION;
MARLY, HYDRATES SLOWLY.

345 - 354 CLAY; DARK GREEN; LOW PERMEABILITY; GOOD INDURATION;
MARLY, SOME GREENISH GRAY CLAY.

354 - 365 CLAY; DARK BLUISH GREEN; LOW PERMEABILITY; GOOD INDURATION;
ACCESSORY MINERALS: CALCILUTITE- %, PHOSPHATIC GRAVEL-%;
CLAY-LIMESTONE. HARD, WAXY CLAY WITH BLACK PHOS. GRAVELS, SOME TAN, FRIABLE, FOSSILIFEROUS
MICRITE.

365 - 375 LIMESTONE; CREAM TO TAN; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: WEATHERED;
FOSSILS: ECHINOID, CORAL, MOLLUSKS, FOSSIL MOLDS, BENTHIC FORAMINIFERA;
SOFT-HARD, FRIABLE, WEATHERED BIOMICRITE, COMMON MOLLUSK CASTS AND MOLDS, FORAMS. SOME ECHINOID SPINES. MODERATE-HIGH POROSITY.

375 - 380 LIMESTONE; CREAM TO TAN; POSSIBLY HIGH PERMEABILITY, INTERGRANULAR;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: COQUINA;
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS;
SOFT-HARD, FRIABLE, COQUINAL BIOMICRITE, ABUNDANT MOLLUSK CASTS AND MOLDS, COMMON FORAMS (COSKINOLINA FLORIDANUS), MODERATE-HIGH POROSITY.

380 - 390 LIMESTONE; TAN; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: QUARTZ SAND- %, CLAY-01%;
FOSSILS: CRUSTACEA;
SOFT-HARD, FRIABLE, SLIGHTLY SANDY, SPARSE BIOMICRITE. SOME CRAB CLAW FRAGMENTS, TRACE OF GREENISH GRAY WAXY CLAY, TRACE OF OFFWHITE-CREAM MARL. MOD-HIGH POROSITY.

390 - 400 LIMESTONE; TAN; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: QUARTZ SAND- %;
FOSSILS: CRUSTACEA;
SOFT-HARD, FRIABLE, SPARSE BIOMICRITE.

400 - 420 LIMESTONE; TAN; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: QUARTZ SAND- %;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, FOSSIL FRAGMENTS;
SOFT-HARD, FRIABLE, SLIGHTLY SANDY BIOMICRITE. COMMON MOLLUSK CASTS OR MOLDS, MOD-HIGH POROSITY.

420 - 440 LIMESTONE; CREAM TO LIGHT TAN; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, FOSSIL FRAGMENTS;
SOFT-HARD, FRIABLE, COMMOM MOLLUSK CASTS, MOLDS, FRAGMENTS. MODERATE-HIGH POROSITY.

440 - 460 LIMESTONE; WHITE TO LIGHT GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
GRAIN SIZE: VERY FINE;
ACCESSORY MINERALS: SPAR-01%;
OTHER FEATURES: WEATHERED;
FOSSILS: MILIOLIDS, BENTHIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS, CORAL;
SOFT, SLIGHTLY WEATHERED MILIOLOIDAL BIOMICRITE. COMMON FORAMS, COMMON MOLLUSK CASTS AND MOLDS, SOME CORAL MOLDS. MOD-HIGH POROSITY.

460 - 465 LIMESTONE; LIGHT GRAY TO LIGHT TAN; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
FOSSILS: MILIOLIDS, MOLLUSKS, FOSSIL MOLDS, BENTHIC FORAMINIFERA;
SOFT, FRIABLE, MILIOLOIDAL BIOMICRITE, COMMON FORAMS AND MOLLUSK MOLDS OR CASTS. HIGH POROSITY.

465 - 475 LIMESTONE; CREAM TO LIGHT TAN; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: PHOSPHATIC SAND-01%;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, MILIOLIDS;
SOFT, FRIABLE, MILIOLOIDAL BIOMICRITE, COMMON SMALL- LARGE CALCITIZED MOLLUSK CASTS AND MOLDS, TRACE OF PHOS. SANDS (CAVINGS?). HIGH POROSITY.

475 - 480 LIMESTONE; CREAM TO LIGHT OLIVE; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: DOLOMITIC;
FOSSILS: MILIOLIDS;
SOFT-HARD, SLIGHTLY DOLOMITIZED IN PARTS, MILIOLOIDAL BIOMICRITE. MODERATE-HIGH POROSITY.

480 - 490 LIMESTONE; CREAM TO LIGHT BROWN; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: PHOSPHATIC SAND-01%;
FOSSILS: BENTHIC FORAMINIFERA, MILIOLIDS, MOLLUSKS, FOSSIL MOLDS;
SOFT, PASTY, MILIOLOIDAL BIOMICRITE, COMMON FORAMS AND MOLLUSK MOLDS AND CASTS. TRACE OF PHOS. (CAVINGS?).

490 - 510 LIMESTONE; CREAM TO TAN; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: DOLOMITIC;
FOSSILS: MOLLUSKS, FOSSIL MOLDS, MILIOLIDS;
SOFT, FRIABLE, MILIOLOIDAL BIOMICRITE WITH SOME LT TANNISH GRAY SIGHTLY DOLOMITIC MOLLUSK MOLDS MOTTLING SECTION, SOME ARAGONATIZED OR CALCITIZED PELECYPOD MOLDS, HIGH POROSITY IN LS. MODERATE POROSITY IN DOLOMITIC LIMESTONE.

510 - 535 LIMESTONE; CREAM TO LIGHT TAN; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
ACCESSORY MINERALS: SPAR- %;
OTHER FEATURES: DOLOMITIC;
FOSSILS: ECHINOID, MOLLUSKS, FOSSIL MOLDS;
SOFT-HARD, SLIGHTLY DOLOMITIC, SPARSE BIOMICRITE GRADING TO BIOMICRITE, COMMON ECHINOID SPINES AND MOLLUSK MOLDS OR CASTS. MODERATE -HIGH POROSITY.

535 - 540 LIMESTONE; CREAM TO LIGHT TAN; MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS;
SOFT-HARD, FRIABLE, MILIOLOIDAL BIOMICRITE, COMMON MOLLUSK MOLDS AND CASTS AND FORAMS. MOD-LOW POROSITY.

540 - 545 LIMESTONE; CREAM TO LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: WEATHERED;
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS, CORAL;
SOFT-HARD,FRIABLE, SLIGHTLY WEATHERED FORAMINIFERAL BIOMICRITE, COMMON MOLLUSK CASTS AND MOLDS, SOME LT GRAY WEATHERED MOLLUSK MOLDS, SOME LT GRAY WEATHERED LARGE FORAMS (LEPIDOCYCLINA OCALANA), TRACE OF CORAL MOLDS, TRACE OF HEAVILY ERODED NUMMULITES SP., MOD-HIGH POROSITY.

545 - 550 AS ABOVE
SOME FREE SPARRY CALCITE CRYSTALS.

550 - 560 LIMESTONE; LIGHT GRAY TO LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: WEATHERED;
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS, FOSSIL FRAGMENTS, FOSSIL MOLDS;
SOFT-HARD, HIGHLY WEATHERED FORAMINIFERAL BIOMICRITE. COMMON MOLLUSK CASTS AND MOLDS, SOME LT GRAY ERODED OR WEATHERED PELECYPOD SHELL FRAGMENTS AND FORAMS (NUMMULITES VANDERSTOKI). MODERATE-HIGH POROSITY.

560 - 565 LIMESTONE; WHITE TO LIGHT TAN; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: WEATHERED;
FOSSILS: FOSSIL MOLDS, MOLLUSKS, BENTHIC FORAMINIFERA;
SOFT, SLIGHTLY WEATHERED FORAMINIFERAL BIOMICRITE. COMMON MOLLUSK MOLDS AND CASTS, COMMON WELL PRESERVED FORAMS (NUMMULITES). HIGH POROSITY.

565 - 575 LIMESTONE; CREAM TO LIGHT TAN;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
GRAIN SIZE: VERY FINE;
OTHER FEATURES: WEATHERED;
FOSSILS: BENTHIC FORAMINIFERA;
SOFT, SLIGHTLY WEATHERED FORAMINIFERAL BIOMICRITE, COMMON FORAMS (LEPS), MODERATE-HIGH POROSITY.

575 - 585 LIMESTONE; WHITE TO CREAM; POSSIBLY HIGH PERMEABILITY, MOLDIC;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: WEATHERED;
FOSSILS: ECHINOID, BENTHIC FORAMINIFERA, MOLLUSKS, FOSSIL MOLDS;
SOFT, CHALKY BUT SLIGHTLY FRIABLE, MODERATELY WEATHERED FORAMINIFERAL BIOMICRITE, COMMON PELECYPOD CASTS, MOLDS, AND SHELL FRAGMENTS, COMMON FORAMS (SOME LT GRAY WEATHERED LEPS, COMMON NUMMULITES), SOME OFFWHITE-GRAY ECHINOID TEST FRAGMENTS (CASSIDULUS?) MODERATE-HIGH POROSITY.

585 - 590 AS ABOVE
EXCEPT ABUNDANT LEPIDOCYCLINA.

590 - 600 AS ABOVE
EXCEPT ONLY SLIGHTLY WEATHERED AND COMMON LARGE GRAY WEATHERED LEPS, COMMON LARGE MOLLUSK MOLD FRAGMENTS, HIGH POROSITY.

600 - 610 LIMESTONE; WHITE TO CREAM; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
GRAIN SIZE: VERY FINE;
OTHER FEATURES: WEATHERED;
FOSSILS: BENTHIC FORAMINIFERA;
SOFT, SLIGHTLY WEATHERED FORAMINIFERAL BIOMICRITE. COMMON SMALL FORAMS. MODERATE-HIGH POROSITY.

610 - 620 LIMESTONE; CREAM; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
FOSSILS: BENTHIC FORAMINIFERA;
SOFT, FRIABLE, FORAMINIFERAL BIOMICRITE. COMMON SMALL FORAMS.

620 - 625 AS ABOVE
EXCEPT COMMON DK GRAY WEATHERED LEPS AND NUMMULITES.

625 - 640 LIMESTONE; CREAM TO LIGHT BROWNISH GRAY; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: WEATHERED;
FOSSILS: BENTHIC FORAMINIFERA, BRYOZOA, CORAL;
SOFT, FRIABLE, FORAMINIFERAL BIOMICRITE, COMMON GRAY WEATHERED SMALLER LEPS, SOME BRYOZOAN PAVEMENT AND BRANCHING CORAL MOLDS. HIGH POROSITY.

640 - 655 LIMESTONE; WHITE TO CREAM; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
FOSSILS: BENTHIC FORAMINIFERA;
SOFT, FRIABLE, MILIOLOIDAL BIOMICRITE, SOME GRAY, WEATHERED LEPS.

655 - 660 LIMESTONE; CREAM TO LIGHT BROWN; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
FOSSILS: MILIOLIDS;
SOFT-HARD, MILLIOLOIDAL BIOMICRITE INTERMIXED WITH FINELY SUCROSIC, LT YELLOWISH TAN DOLOMITE. MOD-HIGH POROSITY.

660 - 665 LIMESTONE; WHITE TO CREAM;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
FOSSILS: MILIOLIDS;
SOFT-HARD, MILLIOLOIDAL BIOMICRITE INTERMIXED WITH FINELY SUCROSIC, TAN-LT BRN DOLOMITE, MOD-HIGH POROSITY IN LS AND LOW-MODERATE POROSITY IN DOLOSTONE.

665 - 675 LIMESTONE; WHITE;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: WEATHERED;
FOSSILS: MILIOLIDS;
SOFT-HARD, HIGHLY WEATHERED MILLIOLOIDAL BIOMCRITE INTERMIXED WITH FINELY SUCROSIC, FRIABLE, SOFT LT BRN DOLOMITE OR DOLOMITE SANDS, SOME CALCAREOUS MARLY LT GRAY CLAY STREAKS IN UPPER HALF OF SECTION, SOME OFFWHITE, FRIABLE, BIOMICRITE SCATTERED IN BOTTOM HALF OF SECTION. MODERATE POROSITY.

675 - 685 LIMESTONE; WHITE TO CREAM; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
OTHER FEATURES: WEATHERED;
FOSSILS: BENTHIC FORAMINIFERA, MILIOLIDS;
SOFT, FRIABLE, SLIGHTLY WEATHERED MILLIOLOIDAL BIOMICRITE, COMMON FORAMS (OPERC. MOODYBRANCHENSIS, AND LEPS), HIGH POROSITY.

685 - 695 LIMESTONE; WHITE TO CREAM; MOLDIC, POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
FOSSILS: BENTHIC FORAMINIFERA, MILIOLIDS;
SOFT, FRIABLE, SLIGHTLY DOLOMITIC, MILLIOLOIDAL BIOMICRITE, ALTERNATING WITH THIN STRINGERS OF HARD, DARK BRN, FOSSILIFEROUS DOLOMITE, FORAMS LOCALLY ABUNDANT IN SOME PARTS OF LS (LEPS), MODERATE POROSITY IN LS, LOW MOLDIC POROSITY IN DOLOSTONE.

695 - 700 AS ABOVE
SOME GRAY WEATHERED FORAMS (LEPS).

700 - 705 AS ABOVE
SOME DOLOMITIZED PELECYPOD MOLDS AND OPERCULINOIDES.

705 - 720 LIMESTONE; WHITE TO CREAM; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
FOSSILS: MILIOLIDS;
SOFT-VERY SOFT, FRIABLE, MILLOILOIDAL BIOMICRITE.

720 - 735 LIMESTONE; CREAM TO TAN; POSSIBLY HIGH PERMEABILITY;
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;
FOSSILS: BENTHIC FORAMINIFERA;
SOFT, FRIABLE, FORAM. BIOMICRITE, SOME OPERCS AND LEPS.

735 TOTAL DEPTH