Executive Summary ROMP Site No. 31 Three Monitor Wells

<u>Location</u> - ROMP 31 is located on the west side of SR 663 approximately 1.9 miles south of the intersection of SR 64 and SR 663 in Ona which is located in Hardee County. The site is located in Section 9, Township 35 South, Range 24 East and at latitude $27^{\circ}27'15''$, longitude $81^{\circ}55'00''$.

<u>Site Easement</u> - This site was obtained from the Limestone Land Company on August 24, 1973. The Easement is 80 feet by 80 feet and is recorded in Book 160, Pages 347 through 349 of the Hardee County Courthouse. A Temporary Construction Easement was not obtained.

<u>Geology</u> - This site is located on the Wicomico Terrace at an elevation of 80 feet above mean sea level (MSL). Geologic information was obtained from well cuttings from land surface to 1152 feet below land surface datum (LSD). The general geology of this site is as follows:

0-40' Undifferentiated Deposits
40-110' Tamiami Formation
110'-210' Hawthorn Limestone
210'-455' Tampa Limestone
455'-710' Suwannee Limestone
710'-960' Ocala Group
960'-1152' Avon Park Limestone

Hydrogeology - There are at least two separate artesian aquifers in this area. The first artesian zone is located in the lower Hawthorn and upper Tampa limestones. These units are confined above by the clays of the Tamiami and Upper Hawthorn formations and below by the clays of the lower Tampa limestone.

The second artesian zone is found in the Suwannee, Ocala, and Avon Park limestones. This zone is separated from the first artesian system by the Lower Tampa clays. These two zones had a difference in head of 2.38 feet

on 5/19/77 with the first artesian zone having the greater head. The dolomites in the Avon Park limestone appear to be very permeable. This is based upon the resistivity log which shows the dolomite to have a low resistivity versus the limestones which are found above the dolomite section.

Since no pumping tests were conducted on this site there is no data available on either permeability or transmissivity.

Well Construction - Three wells were constructed on this site.

A. Well No. 1 - the deep well which is drilled into the Avon Park limestone was constructed with the District owned Portadrill between April 12 and August 2, 1976 at a cost of \$41,759.17 or \$36.25 per foot.

The well was constructed with 120 feet of 14 inch steel work casing and 460 feet of 8 inch PVC casing. Both of these casings are grouted in place. The well is open from 460 to 1152 feet and monitors the Suwannee, Ocala, and Avon Park limestones.

B. Well No. 2 - the Hawthorn-Tampa monitor well was constructed with the District's Portadrill between April 26 and May 5, 1977 at a cost of \$6,310 or \$18.03 per foot.

This well was constructed with 130 feet of 8 inch PVC casing which was grouted in place. The hole was drilled out to 350 feet and developed.

C. Well No. 3 - the water table monitor was constructed under a contract between Mississippi Chemical and P. E. LaMoreaux & Associates in January, 1976. The well is 15 feet deep and contains 10 feet of slotted PVC below 5 feet of 6 inch PVC casing. The Screen area has a sand pack around it.

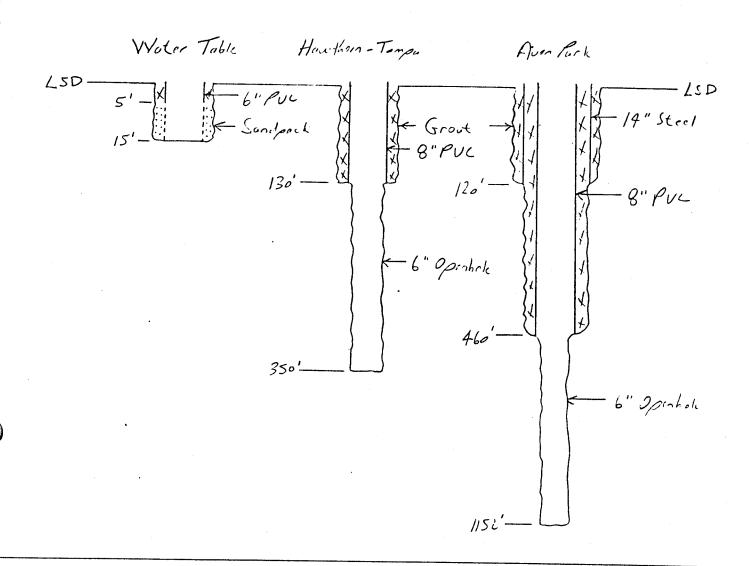
Geophysical Logs - Electric, caliper, gamma, fluid resistivity, and temperature logs were run on the Avon Park well.

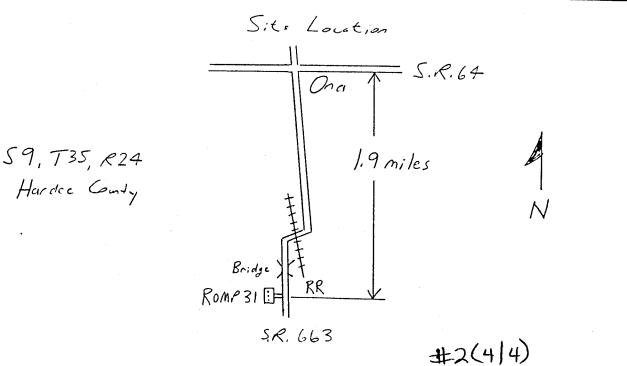
<u>Type of Monitor</u> - The Avon Park and Hawthorn-Tampa wells are potentiometric monitors whereas the shallowest well is a water table monitor.

<u>Water Quality</u> - Although there is not any water quality data in the files the fluid resistivity log indicates a drop in resistivity at \pm 300 feet that confines all the way to the total logged depth of 1144 feet. Since it is doubtful that chlorides alone are causing the problem, especially at \pm 300 feet, the chances are that the dissolved solids and especially sulfates are quite high at this location.

<u>U.S.G.S. Notification</u> - The U.S.G.S. was notified in August, 1976, that the Avon Park well was finished and in July, 1977 that the Hawthorn-Tampa well was completed.

As Built Well Diograms





LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W- 13514

COUNTY - HARDEE

TOTAL DEPTH: 01152 FT.

LOCATION: T.35S R.24E S.09

SAMPLES - NONE

LAT = N 27D 27M 15 LON = W 81D 55M 00

COMPLETION DATE - N/A

ELEVATION - 080 FT

OTHER TYPES OF LOGS AVAILABLE - GAMMA, FLUID CONDUCTIVITY, SONIC, ELECTRIC

OWNER/DRILLER: LIMESTONE LAND COMPANY.; SWFWMD; THIS IS ROMP SITE # 31.

WORKED BY: CODED AND ENTERED BY RICHARD GREEN 8/90 FROM A GEOLOGIST'S (PREEDOM) DESCRIPTION OF CUTTINGS.
CUTTINGS APPARENTLY DESCRIBED EVERY TEN FEET.

SITE IS LOCATED ON THE W. SIDE OF SR 663 APPROX. 1.9 MILES SOUTH OF THE INT. OF SR 64 AND SR 663 IN ONA WHICH IS LOCATED IN HARDEE COUNTY.

0. - 40. UNDIFFERENTIATED SAND AND CLAY

40. - 110. TAMIAMI FM.

110. - 219.455 HAWTHORN GROUP

210. - 455. TAMPA MEMBER OF ARCADIA FM.

455. - 710. SUWANNEE LIMESTONE

710. - 960. OCALA GROUP

960. - 1152. AVON PARK FM.

0 - 5 SAND; BROWN;
GRAIN SIZE: MEDIUM;
ROUNDNESS:SUB-ROUNDED;

5 - 10 NO SAMPLES

10 - 15 SAND; ORANGE TO TAN; RANGE: FINE TO COARSE;
ROUNDNESS:SUB-ROUNDED;
ACCESSORY MINERALS: CLAY-07%, PHOSPHATIC SAND-01%;
CLAYEY, POORLY SORTED, RARE MM SIZE PHOSPHATE GRAINS.

15 - 20 NO SAMPLES

20 - 25 LIMESTONE; YELLOW TO ORANGE;
GRAIN TYPE: CALCILUTITE;
POOR INDURATION;
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX;
ACCESSORY MINERALS: CLAY- %, QUARTZ SAND- %, PHOSPHATIC SAND-%;
MARL, YELLOWISH ORANGE CLAY, CREAM MICRITE, FRIABLE. BLACK PHOS. GRAINS ABUNDANT. QTZ
SAND, POORLY SORTED, F-C, SUBANGULAR TO SUBROUNDED.

25 - 30 NO SAMPLES

30 - 35 AS ABOVE

WITH LARGER PHOS. PEBBLES. MICRITE CONTAINS QTZ SAND AND PHOS. SAND ROUNDED TO SUBROUNDED, POORLY SORTED F-C. MORE FINE SAND THAN ABOVE.

35 - 40 NO SAMPLES

40 - 45 SAND; RED TO BLACK;

GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO MEDIUM;

ROUNDNESS: SUB-ROUNDED;

ACCESSORY MINERALS: CLAY-05%, PHOSPHATIC SAND-03%;

OTHER FEATURES: FROSTED;

PHOS. SAND IS MEDIUM GRAINED. RED AND BLACK.

45 - 50 NO SAMPLES

50 - 55 SAND; TAN TO MODERATE GRAY;

ROUNDNESS: SUB-ROUNDED TO SUB-ANGULAR;

ACCESSORY MINERALS: PHOSPHATIC SAND-01%, PHOSPHATIC SAND-03%;

WELL SORTED. 1-3% FINE PHOSPHATE SAND.

55 - 60 NO SAMPLES

60 - 65 AS ABOVE

65 - 70 NO SAMPLES

70 - 75 SAND; TAN;

GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO ;

ROUNDNESS: SUB-ANGULAR TO SUB-ROUNDED;

ACCESSORY MINERALS: PHOSPHATIC SAND-04%, PHOSPHATIC SAND-06%, CLAY- %;

OTHER FEATURES: PLASTIC;

SAND, FAIRLY WELL SORTED. PHOS. SAND IS BLACK, MEDIUM SIZE. CLAY, PLASTIC, DARK GRAY,

RELATIVELY PURE, CONTAINS RARE QTZ GRAINS.

75 - 80 NO SAMPLES

80 - 85 AS ABOVE

WITH POCKETS OF LOOSELY CONSOLIDATED WHITE MICRITE.

85 - 90 NO SAMPLES

90 - 95 SAND;;

GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE;

ROUNDNESS: WELL-ROUNDED TO SUB-ROUNDED;

ACCESSORY MINERALS: PHOSPHATIC SAND-15%, CALCILUTITE-%;

FAIRLY WELL SORTED, RARE COARSE GRAINS. PHOS. IS BLACK, MEDIUM SIZE, WELL ROUNDED.
CONTAINS POCKETS OF POORLY CONSOLIDATED WHITE MICRITE CONTAINING SAME SANDS AS ABOVE.

95 - 100 NO SAMPLES

100 - 105 33% QTZ SAND, POORLY SORTED SUB ROUNDED TO WELL ROUNDED, 33% WHITE
MICRITE CONTAINING 5% BLACK PHOS. GRAINS. 33% BLACK PHOSPHATE GRAINS FROM SAND SIZE TO
SMALL PEBBLE SIZE.

105 - 110 NO SAMPLES

110 - 115 CLAY; ;
CLAY, GRAY, CRUMBLY, 35%; MICRITE, WHITE, PHOSPHATIC 35%; PHOSPHATE PEBBLES AND MED. PHOS. SAND 30%.

115 - 120 NO SAMPLES

120 - 125 CLAY; MODERATE GRAY;
CLAY, GRAY, CRUMBLY, 50%; PHOSPHATE, BLACK AND TAN, 25%, MICRITE, CREAM, WITH QTZ SAND, 25%.

125 - 130 NO SAMPLES

130 - 135 LIMESTONE; CREAM TO MODERATE GRAY;
GRAIN TYPE: CALCILUTITE;
ACCESSORY MINERALS: CHERT-01%, PHOSPHATIC SAND-10%;
RARE TAN TRANSLUCENT CHERT.

135 - 140 NO SAMPLES

140 - 145 AS ABOVE

145 - 150 NO SAMPLES

150 - 155 AS ABOVE

155 - 160 NO SAMPLES

160 - 165 AS ABOVE

165 - 170 NO SAMPLES

170 - 175 LIMESTONE; CREAM;

GRAIN TYPE: CALCILUTITE;

ACCESSORY MINERALS: PHOSPHATIC SAND-05%, CHERT-01%, CLAY-%;

MICRITE. CONTAINS CM SIZE LENSES OF GRAY INDURATED CLAY.

175 - 180 NO SAMPLES

180 - 185 LIMESTONE; WHITE TO CREAM;

GRAIN TYPE: CALCILUTITE;

ACCESSORY MINERALS: PHOSPHATIC SAND-04%;

CONTAINS SMALL PERCENT OF WHITE CLAY AND FINE BLACK PHOSPHATE.

185 - 190 NO SAMPLES

190 - 195 CALCILUTITE; CREAM;

GRAIN TYPE: CALCILUTITE;

ACCESSORY MINERALS: PHOSPHATIC SAND-03%, PHOSPHATIC GRAVEL-01%, QUARTZ SAND-05%, CHERT-%; ABUNDANT CHERT, MINOR QTZ SAND. CM SIZE DOLOMITE LENSES, GRAY.

195 - 200 NO SAMPLES

200 - 210 AS ABOVE

MICRITE, AS ABOVE, WITH LARGER PHOS. PEBBLES.

210 - 210 NO SAMPLES

210 - 215 CLAY; MODERATE GRAY;

ACCESSORY MINERALS: PHOSPHATIC SAND-02%, PHOSPHATIC SAND-04%;

SOFT, STICKY, BLACK PHOSPHATE.

215 - 220 NO SAMPLES

220 - 225 AS ABOVE

WITH MM SIZE MICRITE LENSES AND MINOR QTZ SAND.

225 - 230 NO SAMPLES

230 - 235 CALCILUTITE; WHITE;

GRAIN TYPE: CALCILUTITE;

ACCESSORY MINERALS: PHOSPHATIC SAND- %, CHERT-05%;

OTHER FEATURES: DOLOMITIC;

MEDIUM SIZE BLACK PHOSPHATE GRAINS; CM THICK DOLOMITE LENSES, GRAY; MINOR GRAYISH TAN

CHERT.

235 - 240 NO SAMPLES

240 - 245 AS ABOVE

WITH LENSES OF DARK GRAY INDURATED CLAY.

245 - 250 NO SAMPLES

250 - 255 AS ABOVE

WITH MORE CHERT.

255 - 260 NO SAMPLES

260 - 265 CALCILUTITE; MODERATE GRAY TO CREAM;

GRAIN TYPE: CALCILUTITE;

GOOD INDURATION;

ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND-05%, DOLOMITE-%;

MICRITE, DOLOMITE, GRAY AND CREAM, VERY HARD.

265 - 270 LIMESTONE; TAN;

GRAIN TYPE: CALCILUTITE;

ACCESSORY MINERALS: DOLOMITE- %, CLAY- %, PHOSPHATIC SAND- %, QUARTZ SAND-05%;

LIMESTONE AND DOLOMITE 50/50. MICRITIC, TAN WITH THIN LENSES OF BLUE AND AMBER CLAY.

CONTAINS BLACK PHOSPHATE SAND AND MINOR SUBROUNDED QTZ SAND.

270 - 280 NO SAMPLES

280 - 285 LIMESTONE; CREAM;

GRAIN TYPE: CALCILUTITE;

POOR INDURATION;

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

CONTAINS ABUNDANT MEDIUM QTZ SAND AND PHOS. SAND WITH SMALL CLAY LENSES, AMBER, SOFT.

285 - 290 NO SAMPLES

290 - 295 CLAY; MODERATE GRAY; POOR INDURATION;

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

SOFT, STICKY, ABUNDANT MEDIUM, ROUNDED QTZ SAND, HIGHLY PHOSPHATIC.

295 - 300 NO SAMPLES

300 - 305 AS ABOVE

305 - 310 NO SAMPLES

310 - 315 LIMESTONE; CREAM;

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

SLIGHTLY CLAYEY, CONTAINS: ABUNDANT QTZ AND BLACK PHOS. SAND; LENSES OF CLAY, INDURATED,

GRAYISH BROWN; SMALL BONES OF DOLOMITE, SUCROSIC; MINOR POCKETS OF CLAY, YELLOW, CRUMBLY.

315 - 320 DOLOMITE; CREAM TO TAN;

ACCESSORY MINERALS: PHOSPHATIC SAND-02%, CLAY-%;

MICRITIC, SLIGHTLY PHOSPHATIC, CONTAINS THIN LENSES OF CLAY, GRAY AND INDURATED.

320 - 325 LIMESTONE; CREAM;

MICRITE, CREAM WITH STICKY, GRAY, PHOSPHATIC CLAY.

325 - 330 NO SAMPLES

LIMESTONE; TAN; 330 - 335

DOLOMITIC MICRITE, CONTAINS LENSES OF INDURATED CLAY, QTZ AND PHOS. SAND WITH MINOR STICKY

GRAY CLAY.

335 - 340 DOLOMITE; TAN TO LIGHT BROWN;
ACCESSORY MINERALS: PHOSPHATIC SAND-02%;
OTHER FEATURES: SUCROSIC;

340 - 345 NO SAMPLES

345 - 350 LIMESTONE;;

GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;

ACCESSORY MINERALS: CHERT-03%, QUARTZ SAND- %, DOLOMITE- %;

OTHER FEATURES: DOLOMITIC;

FORAMINIFERAL BIOMICRITE, DOLOMITIC WITH ABUNDANT QTZ SAND AND MINOR CHERT.

350 - 365 AS ABOVE

365 - 370 NO SAMPLES

370 - 375 CLAY; MODERATE GRAY TO TAN; POOR INDURATION; ACCESSORY MINERALS: PHOSPHATIC SAND-%; SOFT, STICKY.

375 - 380 NO SAMPLES

380 - 385 CLAY; MODERATE GRAY TO TAN; POOR INDURATION;
ACCESSORY MINERALS: CALCILUTITE- %, PHOSPHATIC SAND- %, DOLOMITE-%;
SOFT, STICKY. CONTAINS LENSES OF SOFT, CREAM, DOLOMITIC MICRITE; BLACK PHOS. SAND AND
MINOR LENSES OF TAN PHOSPHATIC DOLOMITE.

385 - 390 NO SAMPLES

390 - 395 CLAY; LIGHT GRAY; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND- %, CHERT-03%, CALCILUTITE-03%;
SOFT, STICKY. MINOR MICRITE LENSES; MINOR CHERT.

395 - 400 NO SAMPLES

400 - 405 AS ABOVE

405 - 410 NO SAMPLES

410 - 415 AS ABOVE

415 - 420 NO SAMPLES

420 - 425 CLAY; GREENISH BLUE; POOR INDURATION;
ACCESSORY MINERALS: PHOSPHATIC SAND-03%;
OTHER FEATURES: CALCAREOUS;

425 - 430 NO SAMPLES

430 - 445 AS ABOVE

445 - 450 NO SAMPLES

450 - 455 CLAY; ; POOR INDURATION;
OLIVE BROWN, SOFT, STICKY, CONTAINS SOME CARBONACEOUS MATTER.

455 - 460 LIMESTONE;;

GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL; ACCESSORY MINERALS: CHERT- %, CLAY- %;

OTHER FEATURES: FOSSILIFEROUS;

FOSSILS: MOLLUSKS;

PACKED MICROBIOMICRITE. PRIMARILY FORMED OF MICROFORAMS AND OTHER MICROFOSSILS. CONTAINS OPALINE, TRANSLUCENT, LIGHT BLUE CHERT; LENSES OF OLIVE GRAY, WAXY CLAY, MOLLUSKS.

460 - 470 NO SAMPLES

470 - 475 LIMESTONE; ; POSSIBLY HIGH PERMEABILITY;

GRAIN TYPE: SKELETAL, BIOGENIC;

PACKED MICROBIOMICRITE, PRACTICALLY A MICROCOQUINA AS SMALL GRAINS FORMED BY POORLY PRESERVED MICRO- FOSSILS ARE VERY WELL SEPARATED AND HAVE VERY LITTLE CEMENT- CREAM, HIGHLY POROUS, LOW DENSITY.

475 - 480 NO SAMPLES

480 - 485 LIMESTONE;;

GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;

MODERATE INDURATION;

ACCESSORY MINERALS: CHERT- %, PYRITE-01%;

PACKED MICROBIOMICRITE, MORE COMPETENT THAN ABOVE. CREAM, CONTAINS TRANSLUCENT CHERT AND PYRITE VEINS.

485 - 490 NO SAMPLES

490 - 495 AS ABOVE

495 - 500 NO SAMPLES

500 - 510 LIMESTONE; CREAM;

GRAIN TYPE: BIOGENIC, SKELETAL, CALCILUTITE;

FOSSILS: MOLLUSKS, ECHINOID, CORAL; PACKED BIOMICRITE. SMALL CORALS?.

510 - 515 AS ABOVE

PLUS MINOR BLUE CHERT.

515 - 520 NO SAMPLES

520 - 525 LIMESTONE;;

GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;

OTHER FEATURES: FOSSILIFEROUS;

FOSSILS: MOLLUSKS, ECHINOID;

FOSSILIFEROUS BIOMICRITE. CONTAINS ABUNDANT REXTALLIZED CALCITE, GRAYISH AMBER TO WHITE,

TRANSLUCENT.

525 - 530 NO SAMPLES

530 - 535 AS ABOVE

535 - 540 NO SAMPLES

540 - 545 LIMESTONE; CREAM;

GRAIN TYPE: BIOGENIC, SKELETAL, CALCILUTITE;

GOOD INDURATION;

OTHER FEATURES: FOSSILIFEROUS;

FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS, ECHINOID, CORAL;

PACKED BIOMICRITE. WELL CEMENTED, GRAINY TEXTURE. FORAMS POORLY PRESERVED.

545 - 550 NO SAMPLES

550 - 555 AS ABOVE

555 - 560 NO SAMPLES

560 - 565 AS ABOVE

565 - 570 NO SAMPLES

570 - 575 AS ABOVE

575 - 580 NO SAMPLES

580 - 585 AS ABOVE

585 - 590 NO SAMPLES

590 - 595 AS ABOVE

595 - 600 NO SAMPLES

600 - 605 AS ABOVE

605 - 610 NO SAMPLES

610 - 615 AS ABOVE

615 - 620 NO SAMPLES

620 - 625 AS ABOVE

625 - 630 NO SAMPLES

630 - 635 AS ABOVE

635 - 640 NO SAMPLES

640 - 645 LIMESTONE; CREAM TO WHITE; MOLDIC;

GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;

ACCESSORY MINERALS: QUARTZ SAND- %, LIMESTONE- %;

OTHER FEATURES: FOSSILIFEROUS:

FOSSILS: BENTHIC FORAMINIFERA, OSTRACODS, ECHINOID, FOSSIL MOLDS, MOLLUSKS;
PACKED BIOMICRITE, GRANULAR, FORMED MOSTLY OF MICROFORAMS WITH MM. SIZED OSTRACODES,
ECHINOIDS. SMALL PELECYPOD MOLDS, LENSES OF BLUISH WHITE LITHOGRAPHIC LS, MINOR WELL
ROUNDED AND HIGHLY POLISHED FINE QTZ SAND.

645 - 660 NO SAMPLES

660 - 665 AS ABOVE

665 - 680 NO SAMPLES

680 - 685 AS ABOVE

WITH LENSES OF CALCITE AND LITHOGRAPHIC LIMESTONE.

685 - 700 NO SAMPLES

700 - 705 AS ABOVE

WITH MINOR LENSES OF INDURATED CLAY.

705 - 710 NO SAMPLES

710 - 715 LIMESTONE; CREAM;

GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL;

OTHER FEATURES: COQUINA, FOSSILIFEROUS;

FOSSILS: BENTHIC FORAMINIFERA;

PACKED BIOMICRITE. GENERALLY FORMED OF MICRO FORAMS. CONTAINS POORLY PRESERVED LEPS, MM

SIZE LENSES OF WHITE CALCITE.

715 - 720 NO SAMPLES

720 - 725 AS ABOVE

WITH WELL PRESERVED LEPIDOCYCLINA OF A DIFF. SPECIES.

725 - 740 NO SAMPLES

740 - 745 LIMESTONE; CREAM;

GRAIN TYPE: BIOGENIC, SKELETAL, CALCILUTITE;

OTHER FEATURES: FOSSILIFEROUS;

FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, OSTRACODS;

PACKED BIOMCRITE. GRAINY TEXTURE CAUSED BY MORE SHARP DEFINITION OF SMALL FORAMS. LEPS,

OPERCS, NUMMULITES.

745 - 760 NO SAMPLES

760 - 765 AS ABOVE

765 - 780 NO SAMPLES

780 - 785 AS ABOVE

WITH HIGHER CONCENTRATION OF LEPIDOCYCLINA.

785 - 800 NO SAMPLES

800 - 805 LIMESTONE;;

GRAIN TYPE: SKELETAL;

OTHER FEATURES: FOSSILIFEROUS, COQUINA;

FOSSILS: BENTHIC FORAMINIFERA, ECHINOID;

FORAM COQUINA. LEPS, NUMMULITES, OPERCS, ECHINOIDS, ALL VERY WELL PRESERVED.

805 - 820 NO SAMPLES

820 - 825 AS ABOVE

825 - 830 NO SAMPLES

830 - 835 LIMESTONE; CREAM;

GRAIN TYPE: BIOGENIC, CRYSTALS, CALCILUTITE;

OTHER FEATURES: FOSSILIFEROUS;

FOSSILS: BENTHIC FORAMINIFERA;

PACKED POORLY WASHED BIOSPARITE, CONTAINS LEPS, NUMMULITES, OPERCS.

835 - 850 NO SAMPLES

850 - 855 AS ABOVE

855 - 870 NO SAMPLES

870 - 875 LIMESTONE; LIGHT BROWN;

GRAIN TYPE: CRYSTALS;

ACCESSORY MINERALS: DOLOMITE- %;

FOSSILS: BENTHIC FORAMINIFERA;

SPARTIE, DOLOMITE, FINE SACCROIDAL TEXTURE, CONTAINS NUMMULITES.

875 - 890 NO SAMPLES

890 - 895 LIMESTONE; LIGHT BROWN; GRAIN TYPE: CRYSTALS;

ACCESSORY MINERALS: DOLOMITE-%;

SPARITE, DOLOMITE, FINE SACCROIDAL TEXTURE, VERY FEW FOSSILS APPARENT.

895 - 900 NO SAMPLES

900 - 905 AS ABOVE

905 - 920 NO SAMPLES

920 - 925 AS ABOVE

925 - 940 NO SAMPLES

940 - 945 AS ABOVE

WITH REAPPEAREANCE OF LEPS, AND NUMMULITES IN ABUNDANCE.

945 - 950 NO SAMPLES

950 - 955 AS ABOVE

PLUS OPERCULINA.

955 - 960 NO SAMPLES

960 - 965 CALCILUTITE; WHITE;

GRAIN TYPE: CALCILUTITE, SKELETAL;

POOR INDURATION;

OTHER FEATURES: FOSSILIFEROUS;

FOSSILS: BENTHIC FORAMINIFERA, ECHINOID;

SOFT, FRIABLE. CONTAINS DICTY. COOKI, COSKINOLINA FLORIDANA, LEPIDOCYCLINA, OPERCS,

ECHINOID FRAGS.

965 - 970 NO SAMPLES

970 - 975 AS ABOVE

975 - 980 NO SAMPLES

980 - 985 DOLOMITE; LIGHT BROWN TO WHITE;

OTHER FEATURES: CALCAREOUS;

FOSSILS: BENTHIC FORAMINIFERA, ECHINOID;

ABUNDANT FOSSILS REPLACED BY WHITE TRANSLUCENT CALCITE. FOSSILS ARE WELL PRESERVED AND DISTINCTLY SEPARATED FROM DOLOMITE MATRIX. CONTAINS OPERCS, LEPS, COSKINOLINA FLORIDANA,

DICTY. COOKI.

985 - 995 NO SAMPLES

995 - 1000 AS ABOVE

BUT CONTAINING MORE ABUNDANT CALCITE REPLACED FOSSILS EQUALING 40% OF TOTAL LITHOLOGY.

1000 - 1015 NO SAMPLES

1015 - 1020 LIMESTONE; WHITE;

GRAIN TYPE: SKELETAL, CALCILUTITE, BIOGENIC;

OTHER FEATURES: CHALKY;

FOSSILS: BENTHIC FORAMINIFERA:

PACKED BIOMICRITE FORMED MAINLY OF SMALL FORAMS. CONTAINS DICTY. COOKI, COSKINOLINA

FLORIDANA, LEPS, LITUONELLA?.

1020 - 1030 NO SAMPLES

1030 - 1035 LIMESTONE; WHITE;

GRAIN TYPE: BIOGENIC, SKELETAL, CALCILUTITE;

ACCESSORY MINERALS: SPAR- %;

OTHER FEATURES: CHALKY;

FOSSILS: BENTHIC FORAMINIFERA;

PACKED BIOMICRITE WITH INTERSPERSED SPARRY CEMENT. ABUNDANT SMALL OPERCS, NUMMULITES,

DICTY. COOKI, COSKINOLINA FLORIDANA.

1035 - 1040 NO SAMPLES

1040 - 1045 DOLOMITE; ;

SAME AS 980-985 BUT MORE COARSELY SUCROSIC.

1045 - 1055 NO SAMPLES

1055 - 1060 LIMESTONE; ;

GRAIN TYPE: BIOGENIC, SKELETAL, CALCILUTITE;

POOR INDURATION;

OTHER FEATURES: CHALKY, FOSSILIFEROUS;

FOSSILS: ECHINOID, BENTHIC FORAMINIFERA;

PACKED BIOMICRITE, SOFT, COMPOSED PRIMARILY OF MICROFORAMS. NEARLY A COQUINA. CONTAINS

MANY ECHINOID SPINES.

1060 - 1070 NO SAMPLES

1070 - 1075 DOLOMITE; LIGHT BROWN; POSSIBLY HIGH PERMEABILITY, PIN POINT VUGS;

GOOD INDURATION;

HARD, DENSE, WITH LENSES OF MICROCOQUINA WITH HIGH DEGREE OF SOLUTION OF MICROFOSSILS

LEAVING A MICROVUGGY TEXTURE.

1075 - 1090 NO SAMPLES

1090 - 1095 DOLOMITE; BROWN; POSSIBLY HIGH PERMEABILITY;

ACCESSORY MINERALS: LIMESTONE- %;
OTHER FEATURES: FOSSILIFEROUS;

HIGHLY POROUS, FINE SUCROSIC TEXTURE, CONTAINS LENSES OF WHITE PACKED BIOMICRITE FORMED

PRIMARILY OF VERY SMALL FORAMS.

1095 - 1100 NO SAMPLES

1100 - 1105 AS ABOVE

1105 - 1110 NO SAMPLES

1110 - 1115 LIMESTONE; ;

GRAIN TYPE: BIOGENIC, SKELETAL, CALCILUTITE; FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, CORAL;

PACKED BIOMICRITE, FORMED MOSTLY OF VERY SMALL FORAMS. OPERCS, ECHINOID FRAGS, SMALL

CORALS.

1115 - 1135 NO SAMPLES

1135 - 1140 LIMESTONE; ;

FORAMS WITH 10-15% LARGER FORAMS.

1140 - 1142 NO SAMPLES

1142 - 1152 DOLOMITE; DARK BROWN; POSSIBLY HIGH PERMEABILITY;

GOOD INDURATION;

OTHER FEATURES: SUCROSIC:

TOP OF MAJOR WATER PRODUCER. VERY HARD AND POROUS.

1152 TOTAL DEPTH