

Executive Summary
ROMP Site 125
Core and Monitor Well

Location - ROMP Site No. 125 is located on the southwest corner of the intersection of Schoolcraft Drive and State Route 40A in Levy County. The site is located in Section 33, Township 16 South, Range 16 East and at latitude 29°02'30", longitude 82°41'25".

Site Easement - This site was obtained from the School Board of Levy County on July 19, 1977 for the sum of one dollar. The Perpetual Easement is 20 feet by 20 feet and is adjoined by a Temporary Construction Easement which is 30 feet by 60 feet. The temporary easement was also obtained on July 19, 1977 for a period of 24 months and expires of July 18, 1979. These easements are recorded in O.R. Book 110, Pages 38 through 45 of the Levy County Courthouse.

Reason for Coring - This site was cored in order to determine the quality of the water at this site. This area is known to be high in both chlorides and sulfates and core and water samples were obtained in order to determine if one or both were a major problem in this area.

Geology - This site is located on the Silver Bluff Terrace at an elevation of approximately 10 feet above mean sea level (MSL). Geologic information was obtained from continuous wire line core sampling from the surface to 296 feet below land surface datum (LSD). The generalized geology of this site is as follows:

0-12.5'	Ocala Group
12.5'-296'	Avon Park Limestone

Hydrogeology - The water level data recorded during the coring operations indicates that a double aquifer system might exist in the Avon Park at

this site. During coring operations the water levels dropped from approximately 2.3 feet to 5.1 feet below LSD. The change in water levels started around 110 feet below LSD and reached their final elevation at a depth of about 240 feet below LSD. Since the geophysical logs and the geologist's description do not indicate any confining beds it is difficult to explain this phenomena. Apparently the beds of limestone and dolomite in the zone between 110 and 240 feet below LSD form some sort of an aquitard.

No pumping tests were conducted on this well, therefore, there are no estimates on permeability or transmissivity available for this site. The formation porosity as described by the site geologist was generally moderate to low.

Core Drilling - Core and water samples were obtained at this site by the District owned CME at a cost of \$9,592 or \$32.40 per foot.

Core samples of 1 7/8 inch diameter were obtained by continuous wire line core, described by the District's field geologist, and boxed for shipment to the University of Florida for detailed analysis. Upon completion of coring operations the core hole was grouted up with a neat cement slurry. This hole was cored between September 21 and November 2, 1977.

Well Construction - This well was constructed by reverse air by the District owned Portadrill at a cost of \$15,317 or \$54.70 per foot.

This well was constructed with 24 feet of 14 inch and 36 feet of 12 inch steel work casing and 270 feet of 6 inch PVC. All of the casings were grouted in place with a cement grout and upon completion of grouting operations, the well was drilled out to 280 feet and developed. This well was constructed between July 17 and August 16, 1978.

Geophysical Logs - Caliper, gamma, fluid resistivity, and temperature logs were obtained on the core hole.

Type of Monitor - ROMP 125 is a sulfate monitor designed to monitor the 250 milligram per liter (mg/l) sulfate level.

Water Quality - During the coring of this site it was determined by on site water analysis that chlorides were not a problem at least down to a depth of 295 feet. The chloride concentrations ranged from 6 to 30 mg/l. The major water quality problem is the concentration of sulfates. From a depth of 244.5 to 294.5 feet below LSD the sulfates increased from 32 to 475 mg/l. Since the sulfates exceeded the recommended 250 mg/l limit for sulfates in drinking water, it was decided to monitor the 250 mg/l sulfate mark in this well. A total of 39 water samples were obtained at this site.

U.S.G.S. Notification - SWFWMD Planning Section was notified on March 2, 1979 that this well was complete and ready for monitoring.

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W- 13886

COUNTY - LEVY

TOTAL DEPTH: 00296 FT.

LOCATION: T.16S R.16E S.33

SAMPLES - NONE

LAT = N 29D 02M 30

LON = W 82D 41M 25

COMPLETION DATE - N/A

ELEVATION - 010 FT

OTHER TYPES OF LOGS AVAILABLE - NONE

OWNER/DRILLER: SWFWMD ROMP SITE # 125; CORE AND MONITOR WELL

WORKED BY: CODED AND ENTERED BY RICHARD GREEN 8/90 FROM A GEOLOGIST'S

(K. FREEDOM) DESCRIPTION OF WIRE LINE CORE SAMPLES.

THIS SITE IS LOCATED ON THE SW CORNER OF THE INTERSECTION OF

SCHOOLCRAFT DRIVE AND STATE ROUTE 40A IN LEVY COUNTY.

CRACKERTOWN # 1.

0. - 12. Ocala Group

12. - 296. Avon Park fm.

0 - 4 Limestone; cream;

Grain type: biogenic, calcilutite;

Poor induration;

biomicrite, grainy, friable. mod-low porosity.

4 - 7 Limestone; cream;

Grain type: biogenic, calcilutite, skeletal;

Poor induration;

Accessory minerals: iron stain- %;

Other features: fossiliferous;

Fossils: mollusks;

biomicrite, grainy, friable with large pelecypods and gastropods. streaked with iron

stain. porosity is moderate to low but higher than above.

7 - 12.5 Limestone; cream to moderate gray;

Grain type: biogenic, calcilutite, skeletal;

Moderate induration;

Other features: medium recrystallization;

Fossils: mollusks;

biomicrite, contains large pelecypods and gastropods. moderate porosity. some

recrystallization.

12.5- 24 NO SAMPLES

Mostly brown lignite and silty micritic dolostone.

- 24 - 39.5 DOLOMITE; MODERATE GRAY TO TAN; LOW PERMEABILITY;
GRAIN SIZE: FINE; POOR INDURATION;
ACCESSORY MINERALS: SILT-%;
MICRITIC, SILTY, FRIABLE, FINE TEXTURE. V. LOW POROSITY.
- 39.5- 54.5 DOLOMITE; MODERATE GRAY TO TAN;
MODERATE INDURATION;
ACCESSORY MINERALS: SPAR- %, SILT-%;
SILTY, BETTER LITHIFICATION THAN ABOVE. BECOMES INCREASINGLY SPARRY AND MORE LITHIFIED
WITH DEPTH.
- 54.5- 62.5 LIMESTONE; LIGHT BROWN; MOLDIC;
GRAIN TYPE: BIOGENIC, CRYSTALS, SKELETAL;
MODERATE INDURATION;
BIOSPARITE, VARIABLE INDURATION, FRIABLE IN PLACES.
- 62.5- 77 LIMESTONE; TAN;
GRAIN TYPE: CRYSTALS, CALCILUTITE;
ACCESSORY MINERALS: SPAR- %, ORGANICS-%;
SPARRY MICRITE, SOMEWHAT SILTY TEXTURE WITH ZONES OF HARD POROUS SPARITE. NUMEROUS THIN
STREAKS OF BLACK ORGANIC MATTER. MODERATE POROSITY.
- 77 - 102 LIMESTONE; ;
GRAIN TYPE: CALCILUTITE, CRYSTALS;
ACCESSORY MINERALS: ORGANICS- %;
OTHER FEATURES: DOLOMITIC;
MICRITE AND SPARITE. SOMEWHAT FRIABLE. CONTAINS MINOR DOLOMITIZATION AND BLACK ORGANIC
FLAKES THROUGHOUT. POROSITY IS GENERALLY HIGH BUT POORLY CONNECTED.
- 102 - 102.2 CLAY; BROWN TO BLUE;
ACCESSORY MINERALS: CALCILUTITE-%;
MIXED WITH CARBONATE MUD.
- 102.2- 105 LIMESTONE; TAN TO MODERATE GRAY;
GRAIN TYPE: CALCILUTITE;
MICRITE, HARD, POROSITY IS MOD-LOW.
- 105 - 105.2 CLAY; MODERATE GRAY;
PLATEY, WAXY.
- 105.2- 107 LIMESTONE; TAN TO MODERATE GRAY;
GRAIN TYPE: CALCILUTITE;
GOOD INDURATION;
MICRITE, HARD, POROSITY IS MOD-LOW.
- 107 - 107.3 CLAY; MODERATE GRAY TO DARK BROWN;
VERY WAXY AND DENSE.

- 107.3- 109.5 LIMESTONE; ;
GRAIN TYPE: CALCILUTITE;
MICRITE, GRAINY, PUNKY, POROSITY IS LOW.
- 109.5- 111 LIMESTONE; WHITE;
GRAIN TYPE: CALCILUTITE;
GRAIN SIZE: FINE;
SEDIMENTARY STRUCTURES: MOTTLED,
MICRITE, MOTTLED WITH GRAINY, PUNKY LS AS IN 107.3-109.5'.
- 111 - 112 LIMESTONE; BROWN; POSSIBLY HIGH PERMEABILITY;
POOR INDURATION;
MICRITE AND SPARITE, VERY POROUS AND SOMEWHAT FRIABLE.
- 112 - 125 DOLOMITE; LIGHT TAN; LOW PERMEABILITY;
GOOD INDURATION;
MICRITIC, HARD, LOW-MOD POROSITY IN ZONES.
- 125 - 159 LIMESTONE; CREAM;
GRAIN TYPE: CALCILUTITE;
GRAIN SIZE: FINE; MODERATE INDURATION;
MICRITE, SOMEWHAT FRIABLE, VERY EVEN TEXTURE.
- 159 - 174 DOLOMITE; TAN TO MODERATE GRAY;
SPARRY, MOSTLY PRIMARY POROSITY WITH SOME POROUS FRACTURED ZONES.
- 174 - 182.5 DOLOMITE; TAN TO CREAM;
MODERATE INDURATION;
OTHER FEATURES: CALCAREOUS;
DOLOSTONE AND LIMESTONE. MICRITIC SPARITE. COMPOSED MOSTLY OF ECHINOIDS AND FORAMS. VERY
GRAINY. POROSITY IS LOW-MODERATE.
- 182.5- 194 DOLOMITE; LIGHT BROWN;
GRAIN SIZE: FINE; MODERATE INDURATION;
SLIGHTLY SPARRY, FINELY CRYSTALLINE TO DENSE. GRADES FROM VERY HARD TO VERY LOOSE
LITHIFICATION.
- 194 - 214 DOLOMITE; TAN TO LIGHT BROWN; FRACTURE;
SPARRY. APPROX. 50% IS HIGH SECONDARY POROSITY, WHILE THE REST OF THE INTERVAL IS NON
POROUS.
- 214 - 224 DOLOMITE; CREAM; LOW PERMEABILITY;
POOR INDURATION;
ACCESSORY MINERALS: ORGANICS-%;
SOMEWHAT FRIABLE WITH ORGANIC STAINS, POROSITY IS GENERALLY LOW BUT INCREASES WITH DEPTH.

- 224 - 243 DOLOMITE; CREAM; LOW PERMEABILITY, POSSIBLY HIGH PERMEABILITY;
GRAIN SIZE: FINE; POOR INDURATION;
MICRITIC, FINE TEXTURE, MINOR COMPETENT LENSES. POROSITY IS GENERALLY LOW WITH HIGHER
POROSITY IN HARD ZONES.
- 243 - 244 DOLOMITE; MODERATE GRAY;
MODERATE INDURATION;
MICRITIC. BETTER INDURATION THAN ABOVE.
- 244 - 249 DOLOMITE; CREAM;
UNCONSOLIDATED;
VERY GRAINY, RETRIEVED AS DOLOMITE SAND.
- 249 - 253 DOLOMITE; CREAM TO LIGHT TAN; POSSIBLY HIGH PERMEABILITY, PIN POINT VUGS;
SPARRY, POROSITY IS MM SIZE OR LESS, ABUNDANT AND WELL CONNECTED.
- 253 - 269 DOLOMITE; CREAM; LOW PERMEABILITY;
POOR INDURATION;
ACCESSORY MINERALS: CLAY-%;
MINOR CLAY. VERY LOOSELY LITHIFIED AND GRAINY. LOW POROSITY. RETRIEVED MOSTLY AS SAND.
- 269 - 274 LIMESTONE; CREAM; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
GRAIN SIZE: FINE; MODERATE INDURATION;
ACCESSORY MINERALS: ORGANICS- %, CLAY-03%;
OTHER FEATURES: DOLOMITIC;
MICRITE, FINE GRANULAR TEXTURE. GENERALLY LOOSE LITHIFICATION WITH HARD LENSES. CONTAINS
ORGANIC STREAKS AND MINOR CLAY. LOW POROSITY.
- 274 - 276 DOLOMITE; ; LOW PERMEABILITY;
MODERATE INDURATION;
SLIGHTLY MICRITIC. MODERATE INDURATION WITH HORIZONTAL WEAK ZONES. VERY LOW POROSITY.
- 276 - 289 DOLOSTONE SAME AS 269-274'.
- 289 - 296 LIMESTONE; CREAM; LOW PERMEABILITY;
GRAIN TYPE: CALCILUTITE;
GRAIN SIZE: FINE; POOR INDURATION;
OTHER FEATURES: DOLOMITIC;
DOLOMITIC MICRITE. FINE GRANULAR TEXTURE. GENERALLY LOOSELY LITHIFIED WITH ZONES OF TIGHT
LITHIFICATION POROSITY IS PRIMARY AND POORLY CONNECTED.
- 296 TOTAL DEPTH