

WELL CUTTINGS PROCESSING FORM

SFWMD ID NO.: 085-33 WELL CONST. PERMIT NO.: N/A

WELL NAME: Monreve APT GEOPHY. LOG AVAIL. Yes No

COUNTY: Martin SFWMD GEOPHY.# 085000081

LOCATION: SE 1/4 of SW 1/4 of SW 1/4 of Sec. 25 Twp. 39 Rge. 40

Latitude 270246 Longitude 801758

Planar X 728050 727050 Planar Y 986500

DRILLER: Tony Lubrano DATE DRILLED Aug. 15, 1989

DEPTH (ft) 130' ELEVATION (NGVD) 22 TOPO SURVEY

NO. OF SAMPLES _____ NO. OF SPLITS 2 DATE SENT _____

SENT TO: BOG USGS _____ OTHER _____

WATER SAMPLE: CHLORIDES (mg/l) _____
LAB SAMPLE # _____

HYDRAULIC DATA AVAILABLE:
SPECIFIC CAPACITY Yes No
PUMP TEST Yes No

COMPLETION INFO: PLUGGED TEST MONITOR PRODUCTION

DRILLING METHOD: CABLE TOOL JET AUGER
 ROTARY: Mud Air Reverse Dual Wall

CASING: TYPE: PVC GALV. STEEL
DIAMETER: 6" INTERVAL: 0-30'

SCREEN: TYPE: PVC GALV. STEEL
DIAMETER: 6" INTERVAL: 30'-70'

GEOLOGIST DESCRIPTION: NO YES _____

COMMENTS: Monreve Ranch

ranch manager - Jim Haygood 287-3046

SOUTH FLORIDA WATER MANAGEMENT DISTRICT

PROJECT Martin APT's WELL NO. MW 1 DATE 8/15/89
Monneue Ranch

DEPTH	DESCRIPTION - ROCK TYPE, COLOR, HARDNESS, OTHER
0-2	white sand
2-3	dk brown sand
3-4	med. brown sand, minor silt
4-5	silty, clayey sand
5-7	gray silty sand
7-10	sandstone, fine sand
10-12	pinkish whole & broken shell
12-14	as above with sandstone
14-21	orange, gray shell, sandstone (slower drilling, grinding)
21-25	fine sand
25-30	fine sand-sized shell fragments, pinkish
30-32	hard dk gray sandstone & pink whole & broken shell
32-35	gray limestone, minor shell
35-51	gray shelly limestone
51-54	hard grey limestone & shell ^{fragments}
54-59	sand, fine shell fragm., minor limestone
59-62	orange shell (whole & broken), gray limestone
62-66	fine sand, mod. cemented limestone, shell fragm.
66-71	white & orange shell fragm., gray sandstone
71-74	soft & mod. hard gray sandstone, shell
74-80	soft silty sandstone, shell frag.
80-85	gray silt, shell fragm.
85-91	silt, shell, sand
91-105	shell fragm., fine sand, minor silt, poorly consol. limestone
105-111	poorly consol. limestone, shell fragm.
111-115	phosphatic limestone, shell
115-124	gray green phosph. micritic shell fragm. silt ^{bit} chatter
124-132	dk. green silt, limestone (bit chatter), shell fragm.

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - SFNMD

WELL NUMBER: W- 33

COUNTY - MARTIN

TOTAL DEPTH: 00130 FT.

LOCATION: T.39S R.40E S.25 C

33 SAMPLES FROM 0 TO 130 FT.

LAT = N 27D 02M 46

LON = W 80D 17M 58

COMPLETION DATE - 08/15/89

ELEVATION - 022 FT

OTHER TYPES OF LOGS AVAILABLE - GEOLOGIST, ELECTRIC, GAMMA, CALIPER

OWNER/DRILLER: MONREVE RANCH APT SITE; DRILLER; T. LUBRAND

WORKED BY: E. HOPKINS & K. ADAMS; SAMPLE QUALITY: GOOD

- 0 - 2 SAND; YELLOWISH GRAY; 20% POROSITY, INTERGRANULAR;
GRAIN SIZE: MEDIUM; RANGE: FINE TO MEDIUM;
ROUNDNESS: SUB-ROUNDED TO SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: ORGANICS-01%;
OTHER FEATURES: FROSTED;
- 2 - 3 SAND; BLACK; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: ORGANICS-01%;
OTHER FEATURES: FROSTED;
- 3 - 4 SAND; DARK YELLOWISH BROWN; 15% POROSITY, INTERGRANULAR;
GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE;
ROUNDNESS: SUB-ROUNDED TO SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: ORGANICS-10%, IRON STAIN-%;
- 4 - 5 SAND; DARK YELLOWISH BROWN; 15% POROSITY, INTERGRANULAR;
GRAIN SIZE: MEDIUM; RANGE: VERY FINE TO COARSE;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: SILT-10%, IRON STAIN-%;
COARSE GRAINS FROSTED
- 5 - 7 SAND; OLIVE GRAY; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO COARSE;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-15%, IRON STAIN-%;
- 7 - 10 SANDSTONE; LIGHT OLIVE GRAY TO LIGHT OLIVE; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; MODERATE INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: CALCILUTITE-15%, SILT-05%;
FOSSILS: FOSSIL FRAGMENTS;
- 10 - 12 SHELL BED; VERY LIGHT ORANGE; 25% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY, ;
UNCONSOLIDATED;
ACCESSORY MINERALS: QUARTZ SAND-05%;
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, BRYDZOA;
- 12 - 14 AS ABOVE
WITH 5% SANDSTONE PIECES

- 14 - 20 SHELL BED; VERY LIGHT ORANGE TO MODERATE LIGHT GRAY; 20% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY; UNCONSOLIDATED;
FOSSILS: SPICULES, FOSSIL FRAGMENTS, BRYOZOA, MOLLUSKS;
WITH 10% SANDSTONE PIECES, DRILL BIT GRINDING SLOWER
- 20 - 25 SAND; GRAYISH BROWN; 20% POROSITY, INTERGRANULAR;
GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO MEDIUM;
ROUNDNESS: SUB-ANGULAR TO SUB-ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: SHELL-15%;
- 25 - 30 SAND; YELLOWISH GRAY TO VERY LIGHT ORANGE; 25% POROSITY, INTERGRANULAR;
GRAIN SIZE: MEDIUM; RANGE: MEDIUM TO COARSE;
ROUNDNESS: SUB-ROUNDED; LOW SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: SHELL-40%;
OTHER FEATURES: FROSTED;
FOSSILS: FOSSIL FRAGMENTS;
- 30 - 32 SHELL BED; YELLOWISH GRAY TO MODERATE GRAY; 25% POROSITY, INTERGRANULAR; UNCONSOLIDATED;
ACCESSORY MINERALS: LIMESTONE-20%, CALCILUTITE-02%;
WITH 20% DARK GRAY SANDSTONE
- 32 - 35 SANDSTONE; YELLOWISH GRAY TO MODERATE GRAY; 15% POROSITY, INTERGRANULAR, PIN POINT VUGS;
GRAIN SIZE: FINE; RANGE: FINE TO MEDIUM;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; GOOD INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: CALCILUTITE-20%, SHELL-05%;
SAND GRAINS APPEAR FUSED, SOME SANDSTONE CONTAINS FINE SHELL FRAG
- 35 - 40 LIMESTONE; MODERATE GRAY TO YELLOWISH GRAY; 15% POROSITY, INTERGRANULAR, MOLDIC;
GRAIN TYPE: INTRACLASTS, BIOGENIC; 60% ALLOCHEMICAL CONSTITUENTS;
GRAIN SIZE: MEDIUM; RANGE: FINE TO COARSE; GOOD INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT;
ACCESSORY MINERALS: QUARTZ SAND-50%, CALCITE-20%, CALCILUTITE-20%;
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS;
- 40 - 45 AS ABOVE
- 45 - 51 SANDSTONE; YELLOWISH GRAY TO MODERATE GRAY; 15% POROSITY, INTERGRANULAR, PIN POINT VUGS;
GRAIN SIZE: FINE; RANGE: FINE TO MEDIUM;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; GOOD INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: CALCILUTITE-20%;
FOSSILS: FOSSIL MOLDS;
- 51 - 54 AS ABOVE
WITH 30% LOOSE SHELL FRAGM, 1% PHOSP GRANULES
- 54 - 59 SHELL BED; GRAYISH ORANGE; 25% POROSITY, INTERGRANULAR; UNCONSOLIDATED;
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-01%, QUARTZ SAND-02%;
FOSSILS: FOSSIL FRAGMENTS;
WITH 5% SANDSTONE PIECES

- 59 - 62 SHELL BED; GRAYISH ORANGE; 25% POROSITY, INTERGRANULAR, POSSIBLY HIGH PERMEABILITY;
UNCONSOLIDATED;
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS;
WITH 10% SANDSTONE, MOSTLY WHOLE TELLINA BIVALVES
- 62 - 66 SANDSTONE; MODERATE GRAY TO GRAYISH ORANGE; 15% POROSITY, INTERGRANULAR, PIN POINT VUGS;
GRAIN SIZE: FINE; RANGE: FINE TO MEDIUM;
ROUNDNESS: SUB-ROUNDED; MEDIUM SPHERICITY; GOOD INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: CALCILUTITE-15%, SHELL-15%, PHOSPHATIC SAND-01%;
- 66 - 71 LIMESTONE; LIGHT OLIVE GRAY TO YELLOWISH GRAY; 15% POROSITY, INTERGRANULAR;
GRAIN TYPE: INTRACLASTS, BIOGENIC; 70% ALLOCHEMICAL CONSTITUENTS;
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE; GOOD INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX, SPARRY CALCITE CEMENT;
ACCESSORY MINERALS: QUARTZ SAND-50%, SHELL-30%, CALCILUTITE-15%, CALCITE-05%;
FOSSILS: FOSSIL FRAGMENTS;
- 71 - 74 SANDSTONE; LIGHT OLIVE GRAY; 15% POROSITY, INTERGRANULAR, PIN POINT VUGS;
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE;
ROUNDNESS: SUB-ROUNDED; MEDIUM SPHERICITY; GOOD INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: CALCILUTITE-20%, PHOSPHATIC SAND-01%;
FOSSILS: FOSSIL FRAGMENTS;
- 74 - 80 SANDSTONE; LIGHT OLIVE GRAY; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE;
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY; POOR INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX;
ACCESSORY MINERALS: CALCILUTITE-15%, SILT-07%, SHELL-05%;
- 80 - 85 SAND; GREENISH GRAY; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO FINE;
ROUNDNESS: SUB-ROUNDED; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-20%, SILT-05%, SHELL-05%, PHOSPHATIC SAND-01%;
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, MOLLUSKS;
- 85 - 91 LIMESTONE; MODERATE GRAY; 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN TYPE: INTRACLASTS, BIOGENIC; 30% ALLOCHEMICAL CONSTITUENTS;
GRAIN SIZE: FINE; RANGE: FINE TO COARSE; POOR INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: SHELL-40%, CALCILUTITE-40%, QUARTZ SAND-20%;
FOSSILS: FOSSIL FRAGMENTS, SPICULES;
- 91 - 95 LIMESTONE; YELLOWISH GRAY; 12% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN TYPE: INTRACLASTS, BIOGENIC; 50% ALLOCHEMICAL CONSTITUENTS;
GRAIN SIZE: FINE; RANGE: FINE TO COARSE; POOR INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: SHELL-40%, CALCILUTITE-40%, QUARTZ SAND-20%;
FOSSILS: BENTHIC FORAMINIFERA, BARNACLES, BRYOZOA, SPICULES, FOSSIL FRAGMENTS;
- 95 - 100 AS ABOVE

- 100 - 105 SHELL BED; LIGHT OLIVE GRAY; 20% POROSITY, INTERGRANULAR; UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-15%, QUARTZ SAND-10%;
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, BARNACLES, SPICULES, WORM TRACES;
- 105 - 111 SHELL BED; LIGHT GRAY TO LIGHT OLIVE GRAY; 20% POROSITY, INTERGRANULAR; UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-10%, QUARTZ SAND-10%, PHOSPHATIC SAND-01%;
FOSSILS: FOSSIL FRAGMENTS, BRYOZOA, BARNACLES, MOLLUSKS, BENTHIC FORAMINIFERA;
- 111 - 115 LIMESTONE; LIGHT OLIVE GRAY; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN TYPE: INTRACLASTS, BIOGENIC; 55% ALLOCHEMICAL CONSTITUENTS;
GRAIN SIZE: FINE; RANGE: VERY FINE TO COARSE; POOR INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: CALCILUTITE-45%, QUARTZ SAND-30%, SHELL-25%, PHOSPHATIC SAND-01%;
FOSSILS: FOSSIL FRAGMENTS, BARNACLES, BENTHIC FORAMINIFERA, SPICULES, BRYOZOA;
- 115 - 120 LIMESTONE; LIGHT OLIVE GRAY; 15% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN TYPE: INTRACLASTS, BIOGENIC; 40% ALLOCHEMICAL CONSTITUENTS;
GRAIN SIZE: FINE; RANGE: VERY FINE TO COARSE; POOR INDURATION;
CEMENT TYPE(S): CALCILUTITE MATRIX;
ACCESSORY MINERALS: CALCILUTITE-60%, QUARTZ SAND-30%, SHELL-10%, PHOSPHATIC SAND-01%;
FOSSILS: FOSSIL FRAGMENTS;
- 120 - 124 AS ABOVE
- 124 - 132 SAND; OLIVE GRAY; 20% POROSITY, INTERGRANULAR, LOW PERMEABILITY;
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE;
ROUNDNESS: SUB-ANGULAR; MEDIUM SPHERICITY; UNCONSOLIDATED;
ACCESSORY MINERALS: CALCILUTITE-15%, SILT-05%, PHOSPHATIC SAND-03%;
FOSSILS: FOSSIL FRAGMENTS;
- 132 TOTAL DEPTH