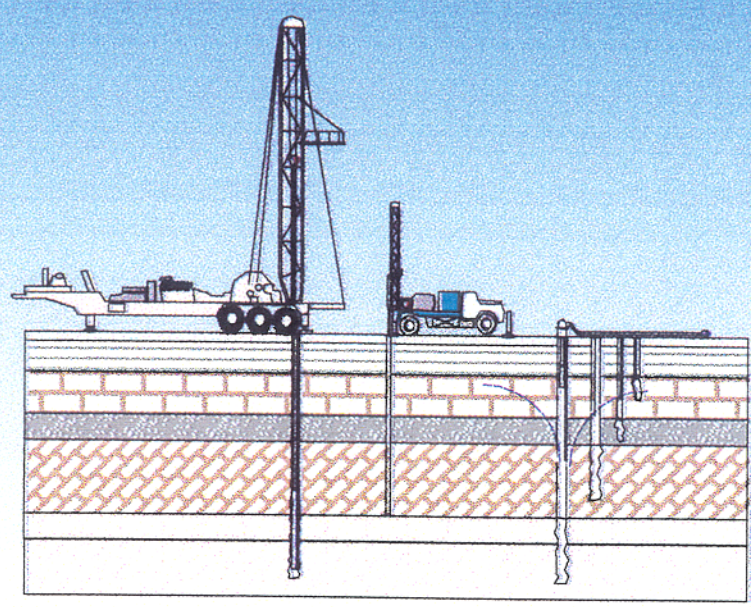
ROMP TR20-3 (CHASSAHOWITZKA 3)
CORE DRILLING AND TESTING REPORT
SALTWATER INTERFACE MONITOR-WELLSITE
HERNANDO COUNTY, FLORIDA



Geohydrologic Data Section
Resource Data Department
Southwest Florida Water Management District

July 1998

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By R. A. Lee

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The geological evaluations and interpretations contained in the *ROMP TR20-3 Core Drilling and Testing Report* have been prepared by or approved by a Certified Professional Geologist in the State of Florida, in accordance with Chapter 492, Florida Statues.

Richard A. Lee
Professional Geologist
License No. PG 0000956

Date: 7/20/98

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1.0 INTRODUCTION

The ROMP TR20-3 Chassahowitzka 3 wellsite was obtained from the Florida Game and Fresh Water Fish Commission (FGFWFC) in September 1997 for the construction of several temporary Floridan wells and a permanent pair of Floridan and Surficial monitor wells. Core drilling with data collection and monitor-well construction are planned in two different phases, and will be presented as a two volume report: Volume One - **Core Drilling and Testing**, Volume Two - **Monitor-Well Construction**.

The ROMP TR20-3 wellsite, is the landward terminus of a transect line in northwestern coastal Hernando County (Figure 1), also referred to as NHT-3, NHT-2, and NHT-1 of the Hernando Coastal Transect. In addition, wellsite TR20-2 is scheduled to be constructed on FGFWFC property to the west of US 19 and south of the Citrus/Hernando County line. The proposed TR20-1 wellsite will be drilled furthermost to the west and on the Southwest Florida Water Management District's (District) property. These sites will include a paired well cluster to monitor water quality and potentiometric water levels in the Floridan and surficial aquifers.

2.0 SITE LOCATION

The ROMP TR20-3 Chassahowitzka 3 wellsite is located in Hernando County, approximately two and one-half miles south of the Citrus/Hernando County line, and just west of US 19 (Figure 1). The wellsite is located on the FGFWFC's Chassahowitzka property in Section 13, Township 21 south, Range 17 east, or latitude 28^0 39' 28", longitude 82^0 33' 15". Land surface is approximately 14 ft above the National Geodetic Vertical Datum of 1929 (NGVD).

3.0 DATA COLLECTION METHODS

The first phase, exploratory coring from land surface to 654 feet (ft) below land surface (bls), began in June 1997 and was completed in October 1997. The next phase of work, monitor-well construction, will be performed by a contracted drilling company during Fiscal Year 1998. Hollow-stem auger, wire-line coring and mud-rotary drilling methods were used to collect lithologic samples with depth. Water samples were collected with a wire-line stainless steel

bailer from an open-hole interval determined by casing sets and use of a corehole packer. The hollow-stem auger method was initially used in the unconsolidated surficial sediments. The wire-line coring method was employed after encountering competent limestone. The mud-rotary method was used to install polyvinyl-chloride (PVC) and four-inch HW casing to various depths, allowing advancement of the core-hole. All ground-water samples were collected in accordance with ROMP Water Quality Sampling Protocol.

3.1 LITHOLOGIC SAMPLING

Coring at the TR20-3 wellsite was accomplished with the District owned Central Mine Equipment (CME) 75 rotary core drilling rig from June 1997 to October 1997. The rig drilled with water, which allowed water sampling during the drilling operation. Typically, surficial sediments are sealed off with the installation of surface casing. Temporary four-inch HW casing is also advanced as coring proceeds. Slightly less than three-inch (2.752-in) outside diameter (OD) NQ core rods were used to drill and collect the approximate 1 3/4-inch diameter core. The actual core is retrieved with a five-ft wire-line inner core barrel. The circular diamond bit at the tip of the drill rods, cuts the rock and allows it to pass into the inner core barrel. The core barrel and core is then removed by wire-line. The core was collected continuously and retrieved at five-ft intervals. When a core run had poor returns, a bag sample of cuttings was collected. Core was recovered to a total depth of 654 ft bls. Figure 2 represents a diagram of the wire-line coring apparatus.

Three wells were installed on the temporary easement. The first well, drilled using hollow-stem augers incorporating a split spoon sampler, yielded continuous unconsolidated lithologic samples from land surface to 65 ft bls. The well was then converted into a two-inch water supply well for the core drilling operation.

The coring operation was started at corehole 1 (ch-1) 15 ft to the east of the water supply well. Limestone was first encountered 70 ft bls and PVC surface casing was set to 77 ft. Core (rock) and sand was then collected to the total depth of 187 ft bls. Alternating limestone and sand beds made for poor core recovery. When a small sinkhole developed approximately ten ft to the north of the rig, the well was converted into a shallow Upper Floridan monitor

(Figure 3) and the rig moved 150 ft to the east. The third well (ne corner of construction easement) then became the primary test corehole (ch-2). Competent limestone was encountered 19 ft bls. Core recovery was generally very good to a total depth of 654 ft bls. Drilling was terminated when 50 ft of interstitial evaporites were encountered. The corehole (ch-2) was then converted into an Upper Floridan monitor well (Figure 4). Description of the core is presented in Appendix A.

3.2 GROUND-WATER SAMPLING

Ground-water samples were generally collected at 15 or 30-ft cored intervals, using a 15 ft, 1.66-inch diameter, stainless steel bailer equipped with top and bottom check balls (Figure 5). This occurred immediately following an air-lift in the borehole for removal of cuttings and water circulated during the drilling process. Additional samples were collected when a change in lithology or conductivity of the drilling discharge. The air-lift process entails lowering an airline (generally PVC) down the drill pipe and pumping air inside. As the air rises in the drill pipe, water from all non-cased permeable zones enters the borehole, travels down to the bit and rises up into the pipe along with the air, to be discharged to a pit. When the drill bit is near the bottom of the hole, water and drill cuttings will circulate up and out of the well. When the hole has been cleaned, the drill pipe is raised 20 ft off bottom with continued air-lifting, thereby drawing in and filling the lower interval with water from the bottom of the hole. Lowering the bailer through the drill bit into the bottom of the hole, then displaces water in the bailer with water from the lower interval.

As the open-hole interval increased from the previous casing set, water samples were derived from a mixture of all permeable zones. In an effort to collect discreet water quality samples, a remotely deployed wireline packer was used to isolate sample intervals. The corehole packer is designed to sample a discreet interval by placement of the drill bit at the top of the interval being sampled. The packer was lowered through the rods and bit and pressured with water to inflate the packer elements. This seals off any up-hole water communication into the sampled interval (Figure 6). The sample interval would then be considered from the base of packer to the bottom of the corehole. Airlifting the well through the rods and packer induces flow from the sample interval below the packer. Discharge water quality was monitored for stabilized

temperature and conductivity readings. Following a purge of approximately two volumes of the drill rods, water quality was generally stable. The bailer was used to retrieve the sample in the drill rods just above the packer, as opposed to collecting water being discharged at the surface, which was influenced by the injection of surface air (i.e. pH and temperature). Sampling by this method provided the best control and results for ground-water profiling.

If use of the packer was not feasible (highly transmissive surrounding rock or crumbly/ incompetent borehole) water was purged as described above without the packer. This method worked well, but water may enter the sample zone from any non-cased zone, therefore results were not as reliable as when the packer was used.

Samples were filtered through a 0.45 micron membrane and analyzed in the field for temperature, specific conductance, pH, chloride, sulfate and density. Generally, samples collected at 30-ft intervals were split and three 250-ml bottles of groundwater were also delivered to the District's Environmental Chemistry Laboratory for verification and more extensive analyses. Chain-of-Custody forms were used to track the samples. Section 6.0 and Table 1 presents the results of the ground-water samples collected in the field and analyzed by the District's laboratory.

3.3 GEOPHYSICAL LOGGING

Borehole geophysical logs are useful in determining subsurface geologic and groundwater characteristics. Collection of these logs is accomplished by lowering a geophysical tool into a monitor well and measuring the response of the formations to a variety of tests.

Borehole geophysical logs at TR20-3 were collected from the second corehole (ch-2) using the District's caliper tool and Slimline Electromagnetic Inductance tool. A caliper tool measures the inside diameter of a well using a three-arm spreader. The Slimline Inductance tool measures gamma, resistivity and specific conductance. Gamma radiation is emitted by radioactive isotopes in certain types of disintegrating geologic materials. Low permeable clay units tend to trap ions, such as potassium isotopes, as they migrate with groundwater. Measurement of gamma radiation, therefore can be used qualitatively as an indicator of

lithology. Technical problems with the Inductance tool however, rendered the resistance and conductivity readings as unusable and are not presented.

The caliper log demonstrates several areas of interest, such as the presence of cavities from 270 to 280 ft bls. These correspond to cavities in the rock core and with drops in the drill pipe noted while coring. A constriction at around 460 ft bls, corresponds with a five-ft layer of clay in the core and a kick in the gamma log at that depth. The borehole geophysical log traces produced are presented in Figure 7.

3.4 PHOTOLINEAR ANALYSIS

When it was determined that the first wells drilled on-site were constructed in a solution feature, it was decided that a photolinear analysis of the site might be a helpful tool in well placement. Surface linear features may result from many different processes, some man-induced some natural. Sub-surface fractures or especially faults are two such natural features that may translate to the surface and be evident in a photolinear analysis. Intersecting fractures or faults make good candidates for solution features or sinkholes, since it would be easier for the vertical movement of groundwater at such intersections.

A photolinear analysis of the general wellsite area, was conducted by Bob Evans, C.P. of the Mapping and Geographic Information Section at the District. The two sources used in the analysis were B/W D.O.T. Imagery PD2545-4-13, scale 1:24,000, dated October 25, 1979 and C.I.R. National High Altitude Program, frame 299-6, scale 1:40,000, dated February 9, 1985. Within the general area, seven linear traces were detected. One linear trace runs through the wellsite and intersects another trace just west of the wellsite. That trace was mapped from D.O.T. imagery, and may be associated with Indigo Lane. Figure 8 locates the linear features mapped on the Chassahowitzka quadrangle.

4.0 GEOLOGY

The ROMP TR20-3 wellsite is located within the Gulf Coastal Lowlands physiographic province, a division of the Mid-Peninsular zone of the Floridan Peninsula (White, 1970). The

site is within the SWFWMD Coastal Rivers Basin and is located southeast of the Chassahowitzka River in Citrus County. The wellsite elevation is approximately 14 ft NGVD.

4.1 STRATIGRAPHY

The ROMP TR20-3 wellsite stratigraphy was described from detailed examination of the lithologic samples (split spoon and core) from land surface to a depth of 654 ft bls. The stratigraphy of the wellsite is such that undifferentiated sand and clay lie unconformably on older limestones and dolostones of the Upper Floridan aquifer, as is typical for the coastal region of Hernando and Citrus Counties (ROMPs TR19-3, TR20-2 (now 108), and TR21-2). The lithologic log describing the core is presented in Appendix A.

4.1.1 Undifferentiated Surficial Deposits

The Pliocene to recent undifferentiated surficial sand and clay deposits at ROMP TR20-3 vary drastically in thickness across the general area. For example, the first corehole (ch-1) was drilled within a karst solution feature and the first limestone encountered was 70 ft bls, while 150 ft to the east, limestone was encountered at 19 ft bls. This is typical for karst covered terrain. Generally, the unconsolidated sediments consisted of very fine quartz sand with clay layers of varying thicknesses.

4.1.2 Ocala Limestone (Upper Eocene)

While coring the first core site, alternating beds of thin limestone and sand made core recovery poor. Uppermost limestone encountered at the second core site is the Late Eocene age Ocala Limestone. The Ocala extends from 19 ft bls to approximately 225 ft bls. The Ocala Limestone is a highly fossiliferous, fine-grained, poorly cemented shallow marine limestone. The limestone is predominantly a chalky, foraminiferal calcarenite with minor interbedded quartz sand and clay. Thin dolostone lenses are also present. Common foraminifera include *Lepidocyclina sp* . and *Nummulites sp.* . Pelecypods, gastropods, milliolids and echinoids are also common. The Ocala Limestone in the northern part of the District is noted for being weathered and having large amounts of secondary and cavernous porosity (ROMP wellsites

TR19-2, TR19-3, TR20-1 (now 108C), TR20-2 (now 108), TR21-2, and TR21-3). Indeed, sinkhole development is directly related to such cavernous areas near land surface. Several cavities were also detected while drilling; the largest being seven ft from top to bottom (174.5 ft bls - 181.5 ft bls). Typically, the non-cavity, more permeable units in the core had a higher fossil and fossil mold content.

4.1.3 Avon Park Formation (Lower Eocene)

The Avon Park Formation is Middle Eocene in age and extends from 225 ft bls to more than 654 ft bls in the Chassahowitzka area. Progression into the Avon Park Formation is marked by echinoids (*Neolaganum dalli*) and a noticeable increase in porosity of the limestone and dolostone. The Avon Park Formation is also characterized by alternating beds of well indurated, fossiliferous limestone and dolostone (Henderson, 1982). At TR20-3 the limestones of the Avon Park Formation are typically dolomitic in nature with varying degrees of alteration. From approximately 600 ft bls to 604 ft bls, a cavity was noted during drilling. A core sample was recovered from the floor of the cavity containing 0.3 ft of evaporitic sediments and which graded into a series of organic laminae within the limestone. The occurrence of evaporites marked the transition from the Upper Floridan aquifer into the Middle Confining Unit of the Floridan aquifer system (Ryder, 1985). In-filled porosity features, as well as interbedded dolostone and gypsum/anhydrites persisted to the total core exploration of 654 ft bls. Coring was terminated by confirming the Middle Confining Unit had been penetrated when 50 ft of persistent "evaporites" were recovered.

5.0 HYDROLOGY

The hydrology at the TR20-3 wellsite is an unconfined Upper Floridan aquifer system. Water levels in the unconsolidated surficial sands remained basically unchanged throughout drilling indicating the lack of a surficial aquifer. The existence of the solution feature to the west (ch-1), breaches through the thin clays at the base of the surficial deposits to the underlying carbonates. The base of the Upper Floridan aquifer system typically is marked by a transition from carbonates of the Avon Park Formation to beds of vertically persistent, intergranular evaporites termed "Middle Confining Unit" by Ryder (1985).

Water levels fluctuated slightly at approximately nine ft bls during the early coring phase to 16 ft bls when the corehole (ch-2) was finished and water density had increased due to a rise in dissolved solids. Water levels in the first corehole (ch-1) turned monitor-well on the original core site, closely matched water levels in the second corehole (ch-2), while conductivity values remained similar. Below 500 ft bls, water in the corehole (ch-2) degraded with rising chlorides and sulfates and the water level, influenced by density differences, declined accordingly. The wellsite is approximately 14 ft above NGVD, therefore water levels were generally five ft above NGVD. The United States Geological Survey (USGS) creates a potentiometric map for the different aquifers in the District. Data points are scarce in the study area, however the projected elevation of the potentiometric surface in the study area is fairly close to what was measured during coring and well construction (Mattie et al, 1996 and Metz et al, 1997). This site will be included in future potentiometric data collection.

6.0 GROUND-WATER QUALITY

Ground-water samples were collected with depth throughout the cored section, all of which were under Floridan aquifer head levels. Ground-water sampling methodologies are detailed in Section 3.2. The results of field and laboratory analyses are presented in Table 1. Figure 9 profiles the chloride and sulfate concentrations and the specific conductance values of ground-water samples collected while core drilling, to the total depth of 654 ft bls.

Ground-water quality remained fairly constant to a depth of 519 ft bls where chloride and sulfate readings began to increase significantly. A decrease in chlorides and sulfates at around 560 ft bls indicated a zone of fresher water, or lower permeability, below the initial zone of chloride penetration. The first chloride readings measured six mg/L and did not rise above ten mg/L until 379 ft bls. At a depth of 514 ft bls, a packer test with the sample interval from 487 ft to 514 ft, yielded a water sample with a chloride value of 158 mg/L. A packer test below that test, with an interval spanning 525 ft to 534 ft bls, indicated a chloride value of 1,097 mg/L, which became the target depth for the water quality monitor to be constructed on-site. Chlorides decreased at the next packer test (536 ft - 564 ft bls) to 437 mg/L. The next water sample at a depth of 594 ft bls, was not taken using the packer, and the chloride reading rose

to 2,083 mg/L Chloride readings recorded from the bottom hole interval when coring was finished measured 9,910 mg/L.

Specific conductance readings ranged from 215 umhos/cm to 32,640 umhos/cm. Sulfate readings ranged from two mg/L at the beginning of the water profile to 3,525 mg/L in the final sample. Total dissolved solids ranged from 110 mg/L to 21,870 mg/L (Table 1).

7.0 WELL CONSTRUCTION

Wells drilled in the first phase of well construction were all drilled with the District's CME drilling rig on the temporary easement. The intent was to use them as monitors to be plugged and abandoned when all tests were completed.

The first well drilled on-site was constructed using hollow-stem augers to a depth of 65 ft bls. A two-inch string of PVC with 50 ft of 0.02 slot screen and 15 ft of blank, was placed in the augers. As the augers were removed, sand was poured in around the PVC up to a depth of 13 ft bls. From 13 ft to 11 ft bls, "Enviroplug" bentonite chips capped and sealed the sand from the cement (11 ft to LSD) placed on top of the bentonite. This well was used as a water supply for the rest of the drilling on-site.

Fifteen ft to the east, 20 ft of 10-inch PVC was emplaced in a 13-inch hole and grouted to land surface. A 3 3/4-inch tri-cone bit was used to drill to 77 ft bls. Limestone was encountered at 70 ft bls. The hole was then reamed out to 9 3/4-inch to a depth of 78 ft. Seventy-seven ft of six-inch PVC was then emplaced in the hole and grouted to surface. Following placement of the six-inch casing, coring was started, however there was no recovery from 78 ft to 82 ft bls. Instead fine sand was encountered. The hole was then reamed 5 5/8-inches to 92 ft and the temporary four-inch HW casing set in place. Coring proceeded to 124 ft bls, however core recovery was generally less than 60%. A 3 3/4-inch pilot hole was then drilled to 186 ft. Generally one-ft limestone stringers separated layers of fine sand to a depth of 182 ft. The four-inch HW casing was then advanced to 187 ft bls. By the following day a small sinkhole had formed approximately ten ft in front of the drill rig. All non-grouted pipe was tripped out of

the hole and a two-inch well was constructed. Figure 3 is a graphic representation of the well construction for this monitor.

The next hole was drilled approximately 150 ft to the east and became the primary corehole. Twenty ft of 16-inch PVC was set and grouted to land surface in a 19-inch hole. A 5 5/8-inch pilot hole was then drilled and the temporary four-inch HW casing set to 30 ft bls. Wire-line coring commenced from 30 ft bls to 199 ft bls, when problems with sand and caving forced the advancement of the four-inch temporary casing. The HW casing was advanced two more times to a final depth of 190 ft bls. Core continued to be retrieved from 199 ft to a total depth of 654 ft bls. The borehole was back-plugged to a depth of 480 ft bls so that the well could be used as an observation monitor for the scheduled Aquifer Performance Test. The monitor was constructed as a combination open-hole and sand-packed screen monitor well. Figure 4 graphically represents the details of the construction.

All wells drilled on the temporary construction easement will be plugged and abandoned before the wellsite is complete.

8.0 SUMMARY

Core drilling and testing at ROMP TR20-3 Chassahowitzka 3, was conducted from June 1997 to October 1997. The site was cored to the Middle Floridan Confining Unit, and was to have an APT conducted on-site. Several on-site karst solution features, however, and the proximity to US 19 raised concerns of possible safety issues. The middle wellsite (TR20-2) will now be designed to conduct an APT.

A rotary auger split spoon system was employed to collect unconsolidated surficial samples and a wireline coring system was used to collect consolidated samples to a total depth of 654 ft bls. Hydrologically, the site is characterized as an unconfined Floridan aquifer system. Ground-water samples were collected on a 15 to 30 ft interval during coring to characterize the ground-water quality at TR20-3. Water quality remained very good with low total dissolved solids (TDS <1,000 mg/L) from land surface to 519 ft bls. Below 519 ft, the water quality degraded until TDS exceeded 21,000 mg/L. Water levels were measured daily to characterize

the potentiometric water level at different depths. Above 519 ft bls, water levels were approximately nine ft bls or five ft above NGVD. As water quality degraded with depth, associated potentiometric water levels declined also. The potentiometric water level measured from a packered interval at the bottom of the corehole (ch-2) (605 ft - 654 ft bls) were 16 ft bls or two ft below NGVD.

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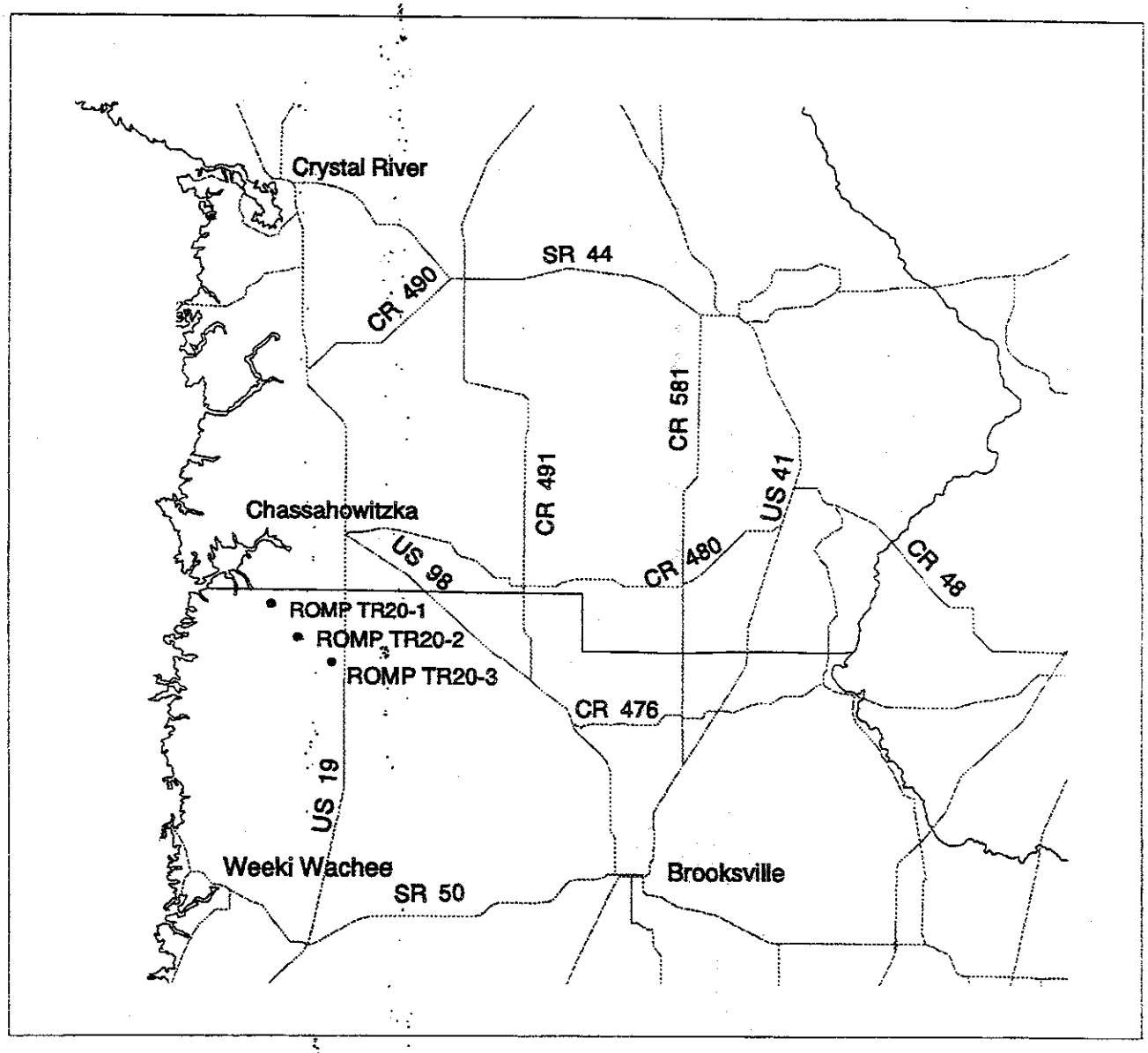
FIGURES



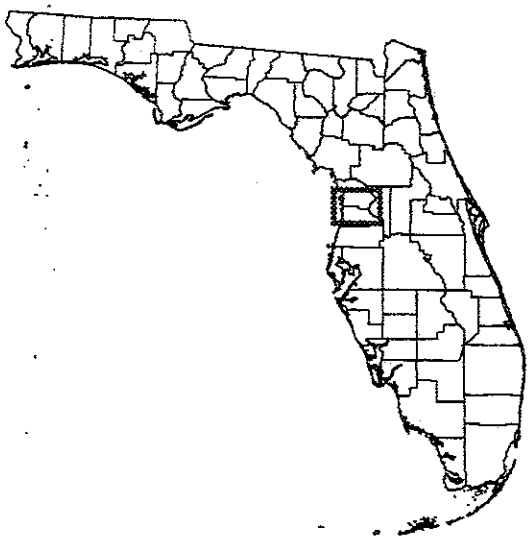


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FIGURE 1 ROMP TR20-3 (CHASSAHOWITZKA 3)

TR20 TRANSECT WELLSITE LOCATIONS

NORTHWEST HERNANDO COUNTY

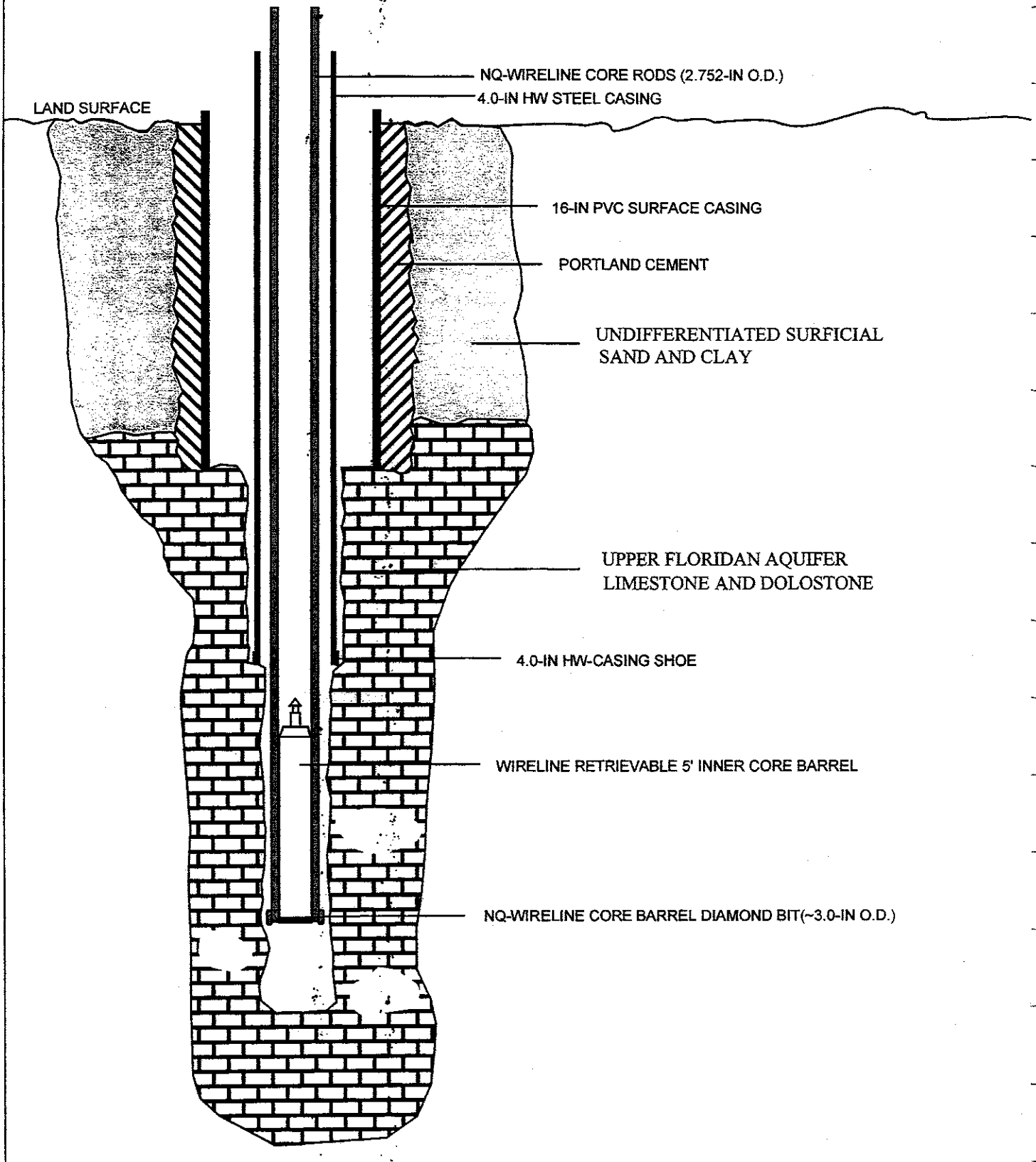

FIGURE 2. ROMP TR20-3 (CHASSAHOWITZKA 3)

CORE DRILLING DIAGRAM

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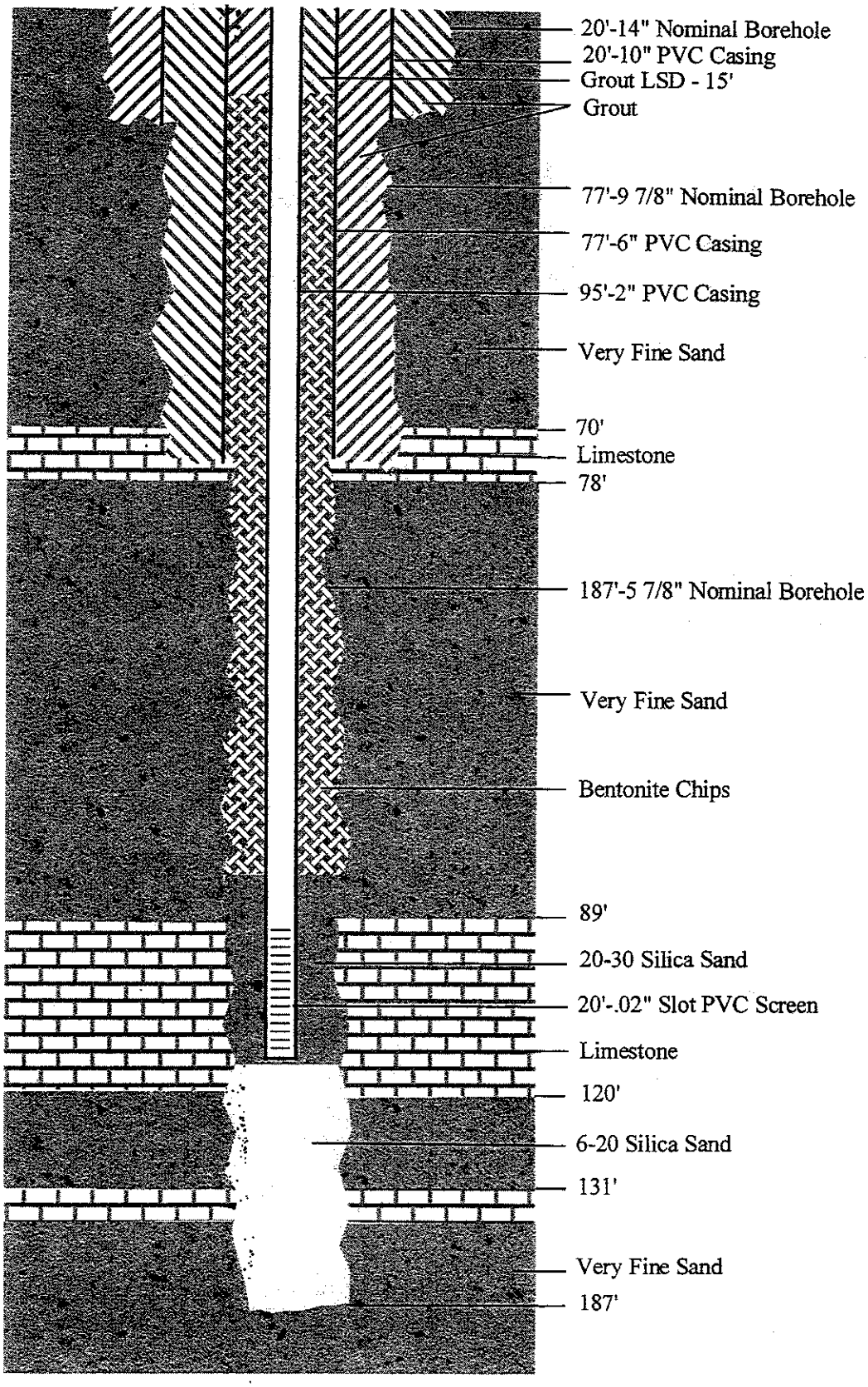

FIGURE 3. ROMP TR20-3 (CHASSAHOWITZKA 3)
UPPER FLORIDAN OBSERVATION MONITOR-WELL
CONSTRUCTED FROM INITIAL TEST HOLE

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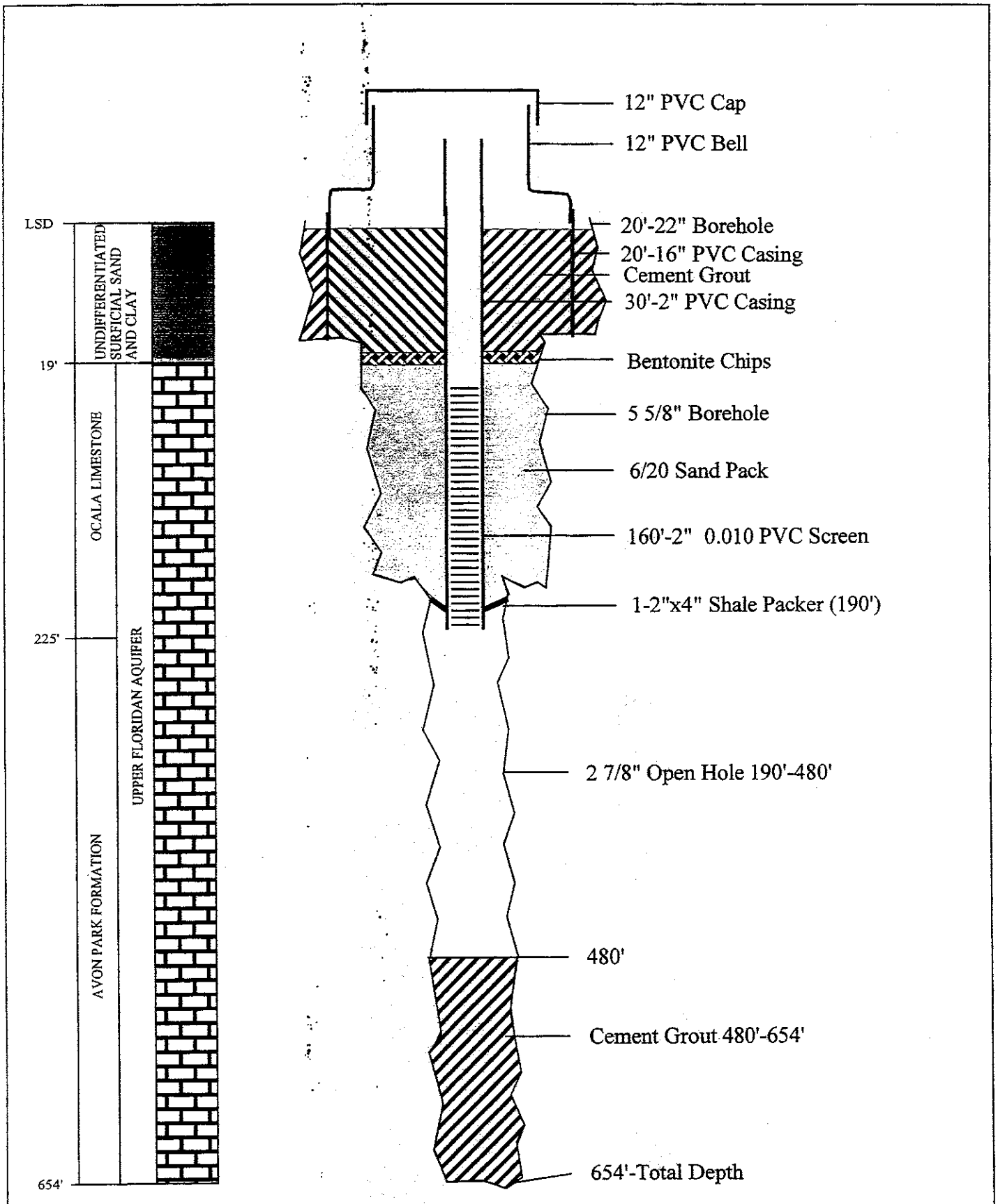

FIGURE 4. ROMP TR20-3 (CHASSAHOWITZKA 3)
UPPER FLORIDAN OBSERVATION MONITOR-WELL CONSTRUCTED FROM PRIMARY COREHOLE

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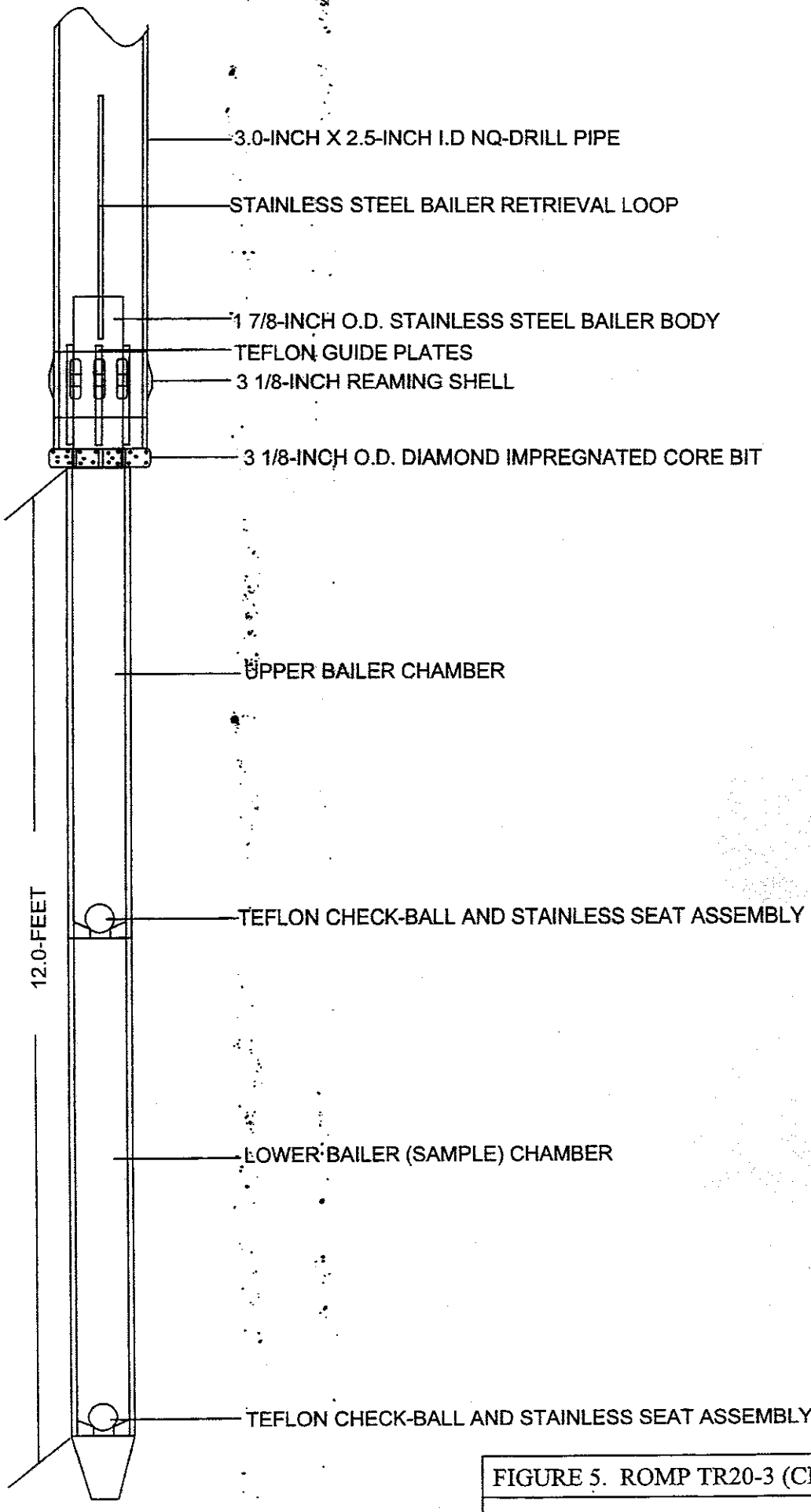

FIGURE 5. ROMP TR20-3 (CHASSAHOWITZKA 3)

STAINLESS STEEL BAILER DIAGRAM

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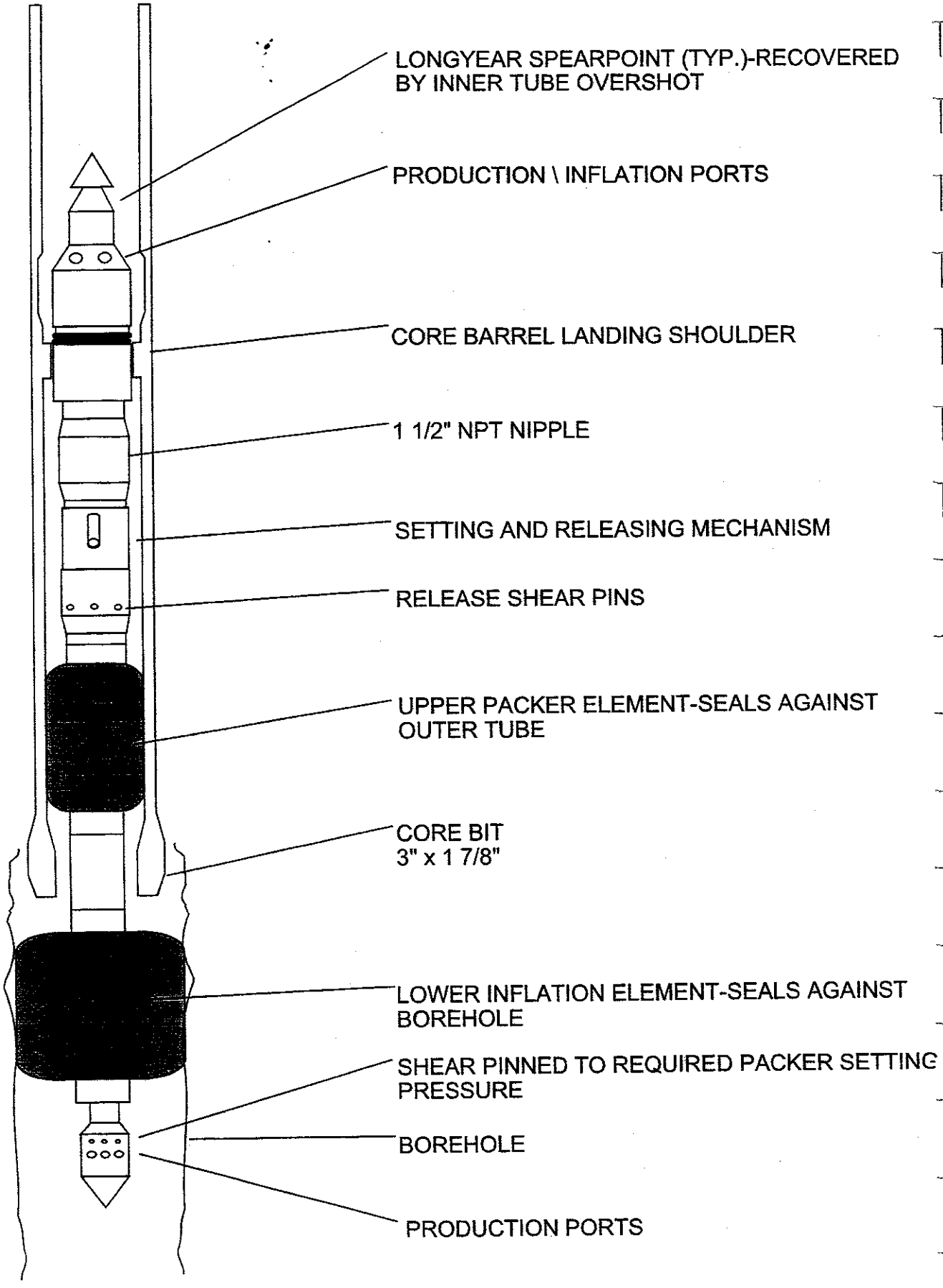

FIGURE 6. ROMP TR20-3 (CHASSAHOWITZKA 3)

DEPLOYED COREHOLE PACKER FOR 3"x 1 7/8" CORE BIT DEVELOPED BY TAM INTERNATIONAL, INC.

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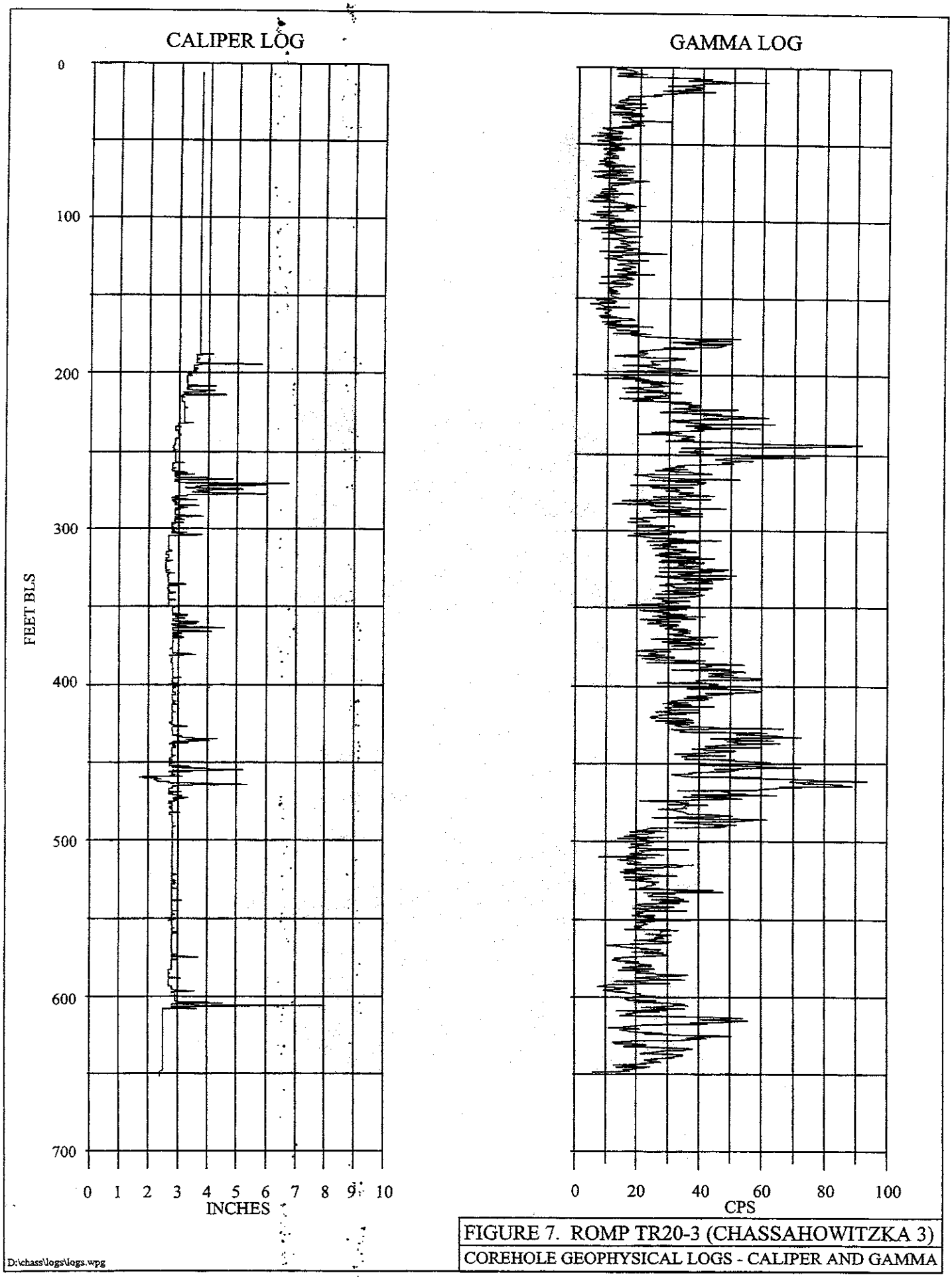
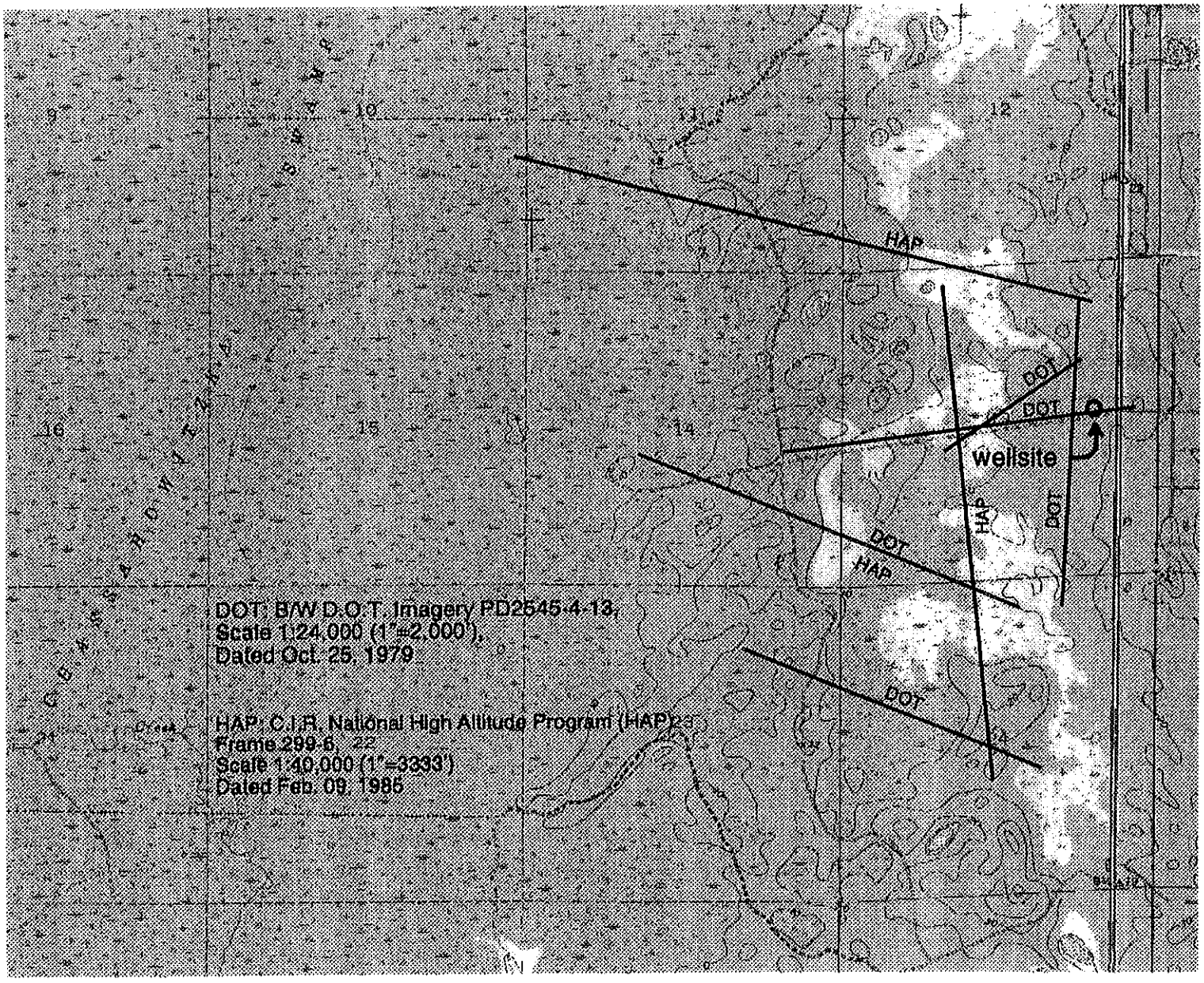


FIGURE 7. ROMP TR20-3 (CHASSAHOWITZKA 3)
COREHOLE GEOPHYSICAL LOGS - CALIPER AND GAMMA



Photolinear Analysis
by Bob Evans, C.P.

Figure 8. Photolinear Analysis of ROMP TR20-3 Wellsite Area

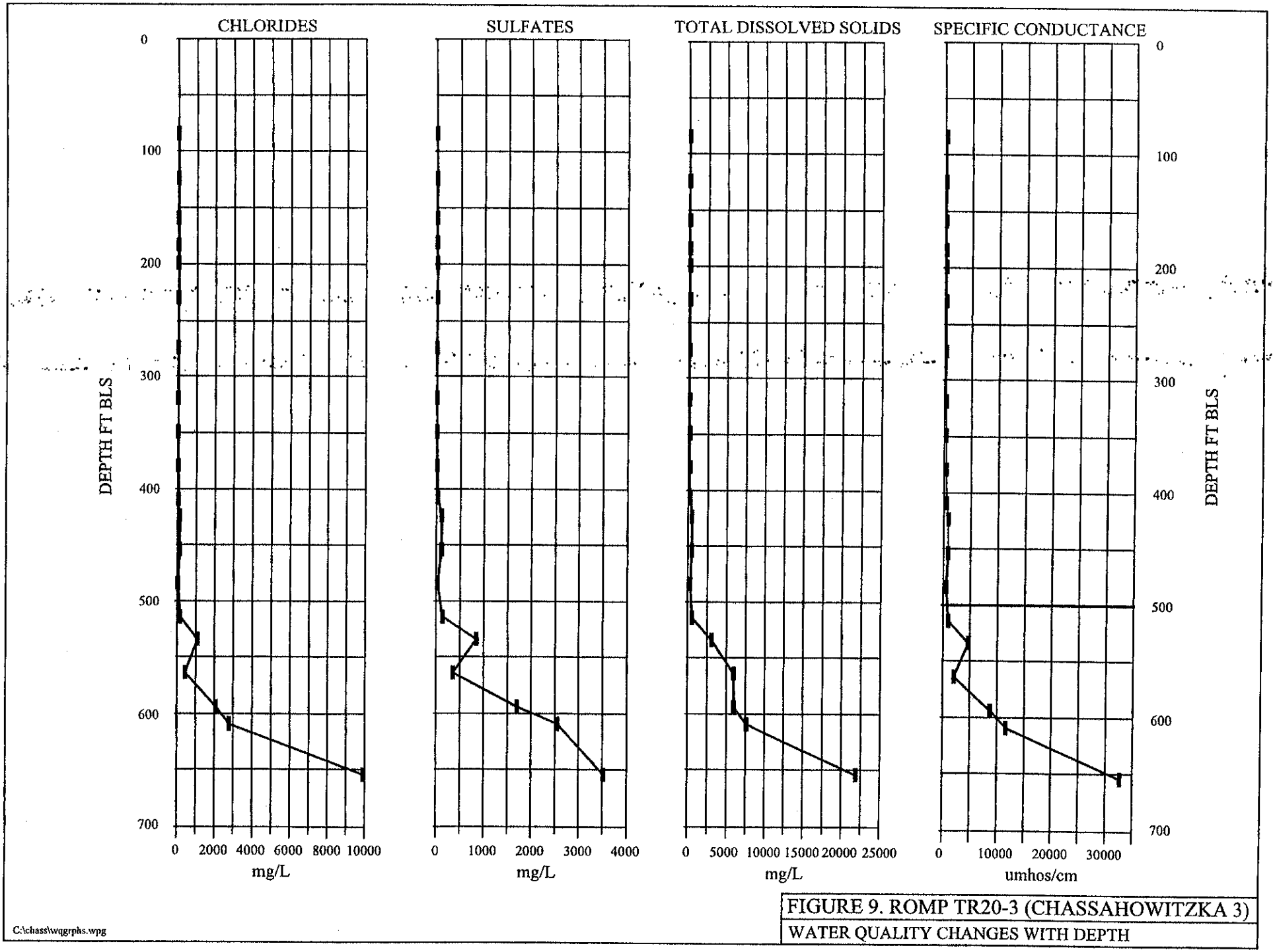


FIGURE 9. ROMP TR20-3 (CHASSAHOWITZKA 3)
WATER QUALITY CHANGES WITH DEPTH

TABLES

TABLE 1. WATER QUALITY RESULTS FROM BOTTOM WATER SAMPLED DURING CORING (LABORATORY PROCESSED)

DATE (M/D/Y)	DEPTH (ft bls) P=PACKER TEST	FIELD TEMP. (deg. C)	SPECIFIC CONDUCT. (umhos/cm)	WATER DENSITY (g/cm^3)	pH	TOTAL DISSOLVED SOLIDS (mg/L)	CHLORIDE (mg/L)	SULFATE (mg/L)	TOTAL ALKALINITY (CaCO3) (mg/L)	BROMIDE (mg/L)	ION BALANCE (%)	CALCIUM (mg/L)	MAGNESIUM (mg/L)	SODIUM (mg/L)	POTASSIUM (mg/L)	IRON (mg/L)	SILICA (mg/L)	TOTAL HARDNESS (as CaCO3)
07/30/97	84	24	215	1.0001	8	110	6.09	2.04	95	<.05	1.53	39.4	1.23	2.62	0.08	<30	3.4	103
07/31/97	124	25.8	186	1.0001	6.8	93	6.13	3.12	80	<.05	1	30.3	1.08	3.36	0.1	<30	3	80.1
08/05/97	159-P	24.2	177	1.0001	7.3	103	5.55	1.99	75	<.05	-0.34	29.9	1.2	2.29	0.19	52	3.1	79.6
08/06/97	184-P	24.1	230	1.0001	7.3	127	6.68	3.42	101	<.05	-0.65	35.3	4.3	2.87	0.16	<30	3.5	106
08/12/97	199	23.4	293	1.0002	8.1	159	7.85	8.23	133	<.05	-0.57	38.7	6.96	11.2	0.44	<30	4.1	125
08/13/97	229	23.3	292	1.0002	8.1	163	8.26	5.92	130	<.05	2.15	43.6	8.72	4.29	0.25	<30	4.3	145
08/14/97	274-P	24.9	330	1.0002	7.8	167	8.16	6.22	145	<.05	0.85	43	11.5	4.83	0.3	<30	4.3	155
08/19/97	319	24.2	325	1.0002	8	176	7.8	5.97	151	<.05	0.26	38.8	13.7	6.79	0.44	<30	4.4	153
08/26/97	349-P	24.6	336	1.0002	7.8	216	9	7.33	157	<.05	-2.11	40	15.1	4.81	0.42	<30	4.7	162
08/27/97	379-P	24.1	365	1.0002	8	197	12.1	11	153	<.05	1.33	43.3	15.3	6.63	0.46	<30	4.7	171
09/02/97	409	24.7	520	1.0003	8.2	305	41.1	40	161	0.16	0.57	51.4	18.4	26.2	1.77	<30	4.8	204
09/02/97	424	24.2	834	1.0005	8.3	507	112	109	139	0.36	2.89	60.4	25.8	75.1	4.68	<30	5.2	257
09/03/97	454	24.2	823	1.0005	8.1	486	114	109	157	0.36	-2.24	63.6	26.5	61.9	4.78	<30	4.9	268
09/04/97	484	24.2	510	1.0003	8.3	291	28.5	27.3	169	<.05	0.26	48.7	17.5	19.9	1.42	36	5.2	194
09/08/97	514-P	24	964	1.0005	8	555	158	136	101	0.47	-0.67	54.3	26.6	91.1	5.67	44	2.1	245
09/08/97	534-P	24	4730	1.0026	7.9	3064	1097	849	135	3.65	-2.05	212	111	652	28.4	3206	5.1	986
09/09/97	564-P	24.8	2090	1.0012	7.8	5933	437	356	135	1.27	0.22	1.06	57.3	276	12.1	1690	4.4	501
09/10/97	594	25.4	8750	1.0051	7.7	5965	2083	1704	131	8.08	0.22	496	190	1274	46.2	1004	6	2021
09/15/97	609-P	25.3	11620	1.007	7.5	7583	2784	2550	141	9.94	-0.74	748	245	1684	57.1	1122	6.9	2877
09/15/97	654-P	24.7	32640	1.017	6.8	21870	9910	3525	119	43.2	1.1	1032	701	5715	180	26170	3.5	5464

D:\CHASS\TR20-3WQ.WB2

APPENDIX A

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-17692
TOTAL DEPTH: 654 FT.
SAMPLES - NONE

COUNTY - HERNANDO
LOCATION: T.21S R.17E S.13 DB
LAT = 28D 39M 28S
LON = 82D 33M 15S

COMPLETION DATE: 01/10/97
ELEVATION: 14 FT

OTHER TYPES OF LOGS AVAILABLE - CALIPER, CALIPER, GAMMA

OWNER/DRILLER:SWFWMD ROMP TR20-3 CHASSAHOWITZKA 3 (HERNANDO) GEORGE DEGROOT, DRILL ER

WORKED BY:RICHARD A. LEE, SWFWMD GEOLOGIST
HOLLOW-STEM AUGER SAMPLES, 0-19.0'
NQ WIRELINE CORE SAMPLES, 19.0-654.0'
CORE DRILLING CONDUCTED WITH FRESHWATER FROM SHALLOW FLORIDAN WELL ON-SITE. ROUTINE POTENTIOMETRIC AND WATER QUALITY PROFILING CONDUCTED DURING CORE DRILLING. DETAILED TEST DATA AVAILABLE FROM SWFWMD HYDROLOGIC DATA SECTION

0.0	-	19.0	090UDSC	UNDIFFERENTIATED SAND AND CLAY
19.0	-	225.0	1240CAL	OCALA GROUP
225.0	-	.	124AVPK	AVON PARK FM.

0 - 30 NO SAMPLES

30 - 30.2 CLAY; YELLOWISH GRAY
05% POROSITY: NOT OBSERVED; UNCONSOLIDATED
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-10%, IRON STAIN-05%

30.2- 34 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-25%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, ECHINOID

34 - 34 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCARENITE-10%
OTHER FEATURES: WEATHERED, PLASTIC
FROM 30.6-74.0 ALTERNATING CALCILUTITE AND WEATHERED
CALCARENITE ALL WHITE (29), FOSSILS INDICATE OCALA
FORMATIONS.

34 - 35 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-25%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

35 - 39 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCARENITE-10%
OTHER FEATURES: WEATHERED, PLASTIC

39 - 39.3 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
05% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-20%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

39.3- 44 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCARENITE-10%
OTHER FEATURES: WEATHERED, PLASTIC

44 - 45.5 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-25%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

45.5- 59 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCARENITE-10%
OTHER FEATURES: WEATHERED, PLASTIC

59 - 64.5 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-20%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

64.5- 69 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCARENITE-10%
OTHER FEATURES: WEATHERED, PLASTIC

69 - 69.5 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-20%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

69.5- 70.5 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCARENITE-10%
OTHER FEATURES: WEATHERED, PLASTIC

70.5- 71 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-25%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

71 - 74 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCARENITE-10%
OTHER FEATURES: WEATHERED, PLASTIC

74 - 83.3 CALCARENITE; VERY LIGHT ORANGE TO LIGHT YELLOWISH ORANGE
20% POROSITY: INTERGRANULAR, MOLDIC, FRACTURE
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO VERY COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-20%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

83.3- 84.3 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
65% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-30%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

84.3- 89 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCARENITE-10%
OTHER FEATURES: WEATHERED, PLASTIC

89 - 89.7 CALCARENITE; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: COARSE; RANGE: LITHOGRAPHIC TO MEDIUM
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-25%
OTHER FEATURES: WEATHERED

89.7- 90.5 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCARENITE-20%
OTHER FEATURES: WEATHERED, PLASTIC

90.5- 93.5 CALCARENITE; VERY LIGHT ORANGE
20% POROSITY: MOLDIC, INTERGRANULAR, FRACTURE
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: COARSE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-30%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, ECHINOID

93.5- 94.4 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
55% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-35%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

94.4- 98.6 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-20%, IRON STAIN-05%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

98.6- 104.3 CALCARENITE; LIGHT YELLOWISH ORANGE TO VERY LIGHT ORANGE
20% POROSITY: MOLDIC, FRACTURE, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-30%, IRON STAIN-15%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, ECHINOID

104.3- 113.7 CALCARENITE; VERY LIGHT ORANGE
20% POROSITY: MOLDIC, FRACTURE, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-20%, IRON STAIN-05%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, ECHINOID

113.7- 139 CALCARENITE; LIGHT YELLOWISH ORANGE TO VERY LIGHT ORANGE
20% POROSITY: MOLDIC, FRACTURE, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-20%, IRON STAIN-15%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA
114-0139 VERY LITTLE RECOVERY FROM CORE BARREL - 6%
PROBABLY SAMPLE 15 MORE SIMILAR TO LOWER CALCARENITE THAT
FOLLOWS

139 - 140.5 CALCARENITE; VERY LIGHT ORANGE
20% POROSITY: MOLDIC, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-20%, CALCITE-02%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

140.5- 141 CALCARENITE; VERY LIGHT ORANGE
35% POROSITY: MOLDIC, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-20%, CALCITE-05%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

141 - 144 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: MOLDIC, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-20%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

144 - 146 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-20%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

146 - 150 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: MOLDIC, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-30%, CALCITE-03%
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA

150 - 152 CALCARENITE; VERY LIGHT ORANGE
20% POROSITY: MOLDIC, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-20%, CALCITE-05%
OTHER FEATURES: WEATHERED
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS

152 - 154 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: MOLDIC, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-30%
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS

154 - 170 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-20%, CALCITE-05%
IRON STAIN-05%
OTHER FEATURES: WEATHERED
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS

170 - 171 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-50%
OTHER FEATURES: WEATHERED
FOSSILS: BENTHIC FORAMINIFERA

171 - 174.5 CALCARENITE; VERY LIGHT ORANGE
20% POROSITY: MOLDIC, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-20%
OTHER FEATURES: WEATHERED
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS
VOID FROM 174.5-181.0

174.5- 183.8 DOLOSTONE; DARK YELLOWISH ORANGE TO GRAYISH ORANGE
20% POROSITY: VUGULAR, PIN POINT VUGS, FRACTURE
50-90% ALTERED; ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE
ACCESSORY MINERALS: IRON STAIN-10%, CHERT-05%

183.8- 184.8 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
20% POROSITY: MOLDIC, VUGULAR, PIN POINT VUGS
10-50% ALTERED; ANHEDRAL
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE
ACCESSORY MINERALS: CHERT-02%
FOSSILS: BENTHIC FORAMINIFERA

184.8- 189.6 DOLOSTONE; VERY LIGHT ORANGE TO GRAYISH ORANGE
05% POROSITY: FRACTURE, PIN POINT VUGS; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE
ACCESSORY MINERALS: IRON STAIN-05%, CHERT-05%

189.6- 193.3 DOLOSTONE; VERY LIGHT ORANGE TO GRAYISH ORANGE
15% POROSITY: MOLDIC, FRACTURE, PIN POINT VUGS
50-90% ALTERED; ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE
ACCESSORY MINERALS: CHERT-05%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA

193.3- 194.5 DOLOSTONE; LIGHT YELLOWISH ORANGE TO DARK YELLOWISH ORANGE
25% POROSITY: VUGULAR, MOLDIC; 50-90% ALTERED; ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE
ACCESSORY MINERALS: IRON STAIN-05%, CHERT-05%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA

194.5- 196 DOLOSTONE; GRAYISH ORANGE TO GRAYISH BROWN
20% POROSITY: MOLDIC; 50-90% ALTERED; ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA

196 - 196.2 DOLOSTONE; GRAYISH ORANGE
05% POROSITY: INTERGRANULAR; 50-90% ALTERED; ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; UNCONSOLIDATED
CEMENT TYPE(S): DOLOMITE CEMENT
ACCESSORY MINERALS: DOLOMITE-10%

196.2- 196.5 DOLOSTONE; GRAYISH ORANGE
15% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: CHERT-05%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA

196.5- 199.2 DOLOSTONE; LIGHT YELLOWISH ORANGE TO VERY LIGHT ORANGE
08% POROSITY: FRACTURE, PIN POINT VUGS; 50-90% ALTERED
ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: CHERT-10%, IRON STAIN-10%
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL MOLDS

199.2- 200 DOLOSTONE; GRAYISH ORANGE
18% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL MOLDS

200 - 201.5 DOLOSTONE; LIGHT YELLOWISH ORANGE TO VERY LIGHT ORANGE
20% POROSITY: FRACTURE, MOLDIC; 50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE
ACCESSORY MINERALS: CHERT-05%
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, FOSSIL MOLDS
VOID WITHIN LAST SECTION

201.5- 202.9 DOLOSTONE; GRAYISH ORANGE
30% POROSITY: MOLDIC, VUGULAR, PIN POINT VUGS
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MOTTLED, NODULAR, MASSIVE
ACCESSORY MINERALS: DOLOMITE-05%, CHERT-05%
FOSSILS: CORAL, FOSSIL MOLDS, BENTHIC FORAMINIFERA
DOLOSTONE CLASTS COLOR - 35

202.9- 203.2 DOLOSTONE; LIGHT YELLOWISH ORANGE TO VERY LIGHT ORANGE
20% POROSITY: FRACTURE, MOLDIC; 50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED
ACCESSORY MINERALS: CHERT-05%
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, FOSSIL MOLDS
VOID WITHIN LAST SECTION

203.2- 203.4 DOLOSTONE; GRAYISH ORANGE
10% POROSITY: MOLDIC, PIN POINT VUGS; 10-50% ALTERED
FIBROUS
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BIOTURBATED, MASSIVE
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, FOSSIL MOLDS

203.4- 207 CALCARENITE; VERY LIGHT ORANGE TO GRAYISH ORANGE
10% POROSITY: MOLDIC, VUGULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 15% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED, BANDED
ACCESSORY MINERALS: QUARTZ SAND-05%, CHERT-07%
FOSSILS: FOSSIL MOLDS, MOLLUSKS
VOID 207-208

207 - 208.5 CALCARENITE; GRAYISH ORANGE TO VERY LIGHT ORANGE
10% POROSITY: VUGULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: CHERT-05%, QUARTZ SAND-02%
CALCITE-05%
FOSSILS: FOSSIL MOLDS

208.5- 210.2 CALCARENITE; VERY LIGHT ORANGE TO GRAYISH ORANGE
15% POROSITY: MOLDIC, PIN POINT VUGS, VUGULAR
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO GRAVEL
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED, BANDED
ACCESSORY MINERALS: QUARTZ SAND-05%, CHERT-05%
FOSSILS: FOSSIL MOLDS, ORGANICS
VOID 210.5-211

210.2- 211.6 CALCARENITE; LIGHT YELLOWISH ORANGE
07% POROSITY: PIN POINT VUGS, INTERCRYSTALLINE, FRACTURE
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: NODULAR, MASSIVE
ACCESSORY MINERALS: ORGANICS-05%, CHERT-05%
IRON STAIN-05%
FOSSILS: FOSSIL MOLDS, NO FOSSILS

211.6- 213.5 CALCARENITE; GRAYISH ORANGE
10% POROSITY: PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: QUARTZ SAND-10%
FOSSILS: ORGANICS, NO FOSSILS

213.5- 214 CALCARENITE; VERY LIGHT ORANGE
20% POROSITY: VUGULAR, FRACTURE, MOLDIC
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED
ACCESSORY MINERALS: CALCITE-10%, DOLOMITE-05%
QUARTZ SAND-02%
OTHER FEATURES: CHALKY
FOSSILS: FOSSIL MOLDS

214 - 214.6 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: VUGULAR, FRACTURE, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 17% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BANDED, BIOTURBATED, NODULAR
ACCESSORY MINERALS: CALCITE-10%, QUARTZ SAND-02%
IRON STAIN-05%
FOSSILS: NO FOSSILS

214.6- 215 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: PIN POINT VUGS, VUGULAR, FRACTURE
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED
ACCESSORY MINERALS: CALCITE-05%, QUARTZ SAND-10%
FOSSILS: FOSSIL MOLDS

215 - 218 CALCARENITE; VERY LIGHT ORANGE
07% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 15% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED, BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-08%
FOSSILS: NO FOSSILS

218 - 218.5 CALCARENITE; VERY LIGHT ORANGE TO DARK YELLOWISH ORANGE
25% POROSITY: VUGULAR, FRACTURE, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO GRANULE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED, CROSS-BEDDED
BRECCIATED, LAMINATED
ACCESSORY MINERALS: IRON STAIN-05%, QUARTZ SAND-15%
CALCITE-05%
FOSSILS: NO FOSSILS, FOSSIL MOLDS

218.5- 223 CALCARENITE; GRAYISH BROWN TO GRAYISH ORANGE
10% POROSITY: PIN POINT VUGS, FRACTURE, VUGULAR
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED, MOTTLED
ACCESSORY MINERALS: CHERT-05%, QUARTZ SAND-20%
ORGANICS-10%
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL MOLDS, BRACHIOPOD, ORGANICS
BENTHIC FORAMINIFERA

223 - 224.8 CALCARENITE; GRAYISH BROWN TO GRAYISH ORANGE
07% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE, BRECCIATED
NODULAR
ACCESSORY MINERALS: CHERT-05%, QUARTZ SAND-25%
ORGANICS-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS, ORGANICS

224.8- 225.7 CALCARENITE; YELLOWISH GRAY
05% POROSITY: PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-30%, CALCITE-05%
ORGANICS-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL MOLDS, ECHINOID

225.7- 228.3 CALCARENITE; GRAYISH BROWN TO YELLOWISH GRAY
08% POROSITY: PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED, MOTTLED
NODULAR
ACCESSORY MINERALS: QUARTZ SAND-20%, ORGANICS-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL MOLDS, ECHINOID

228.3- 230.9 CALCARENITE; YELLOWISH GRAY
15% POROSITY: MOLDIC, PIN POINT VUGS, VUGULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-25%, ORGANICS-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL MOLDS, ECHINOID

230.9- 231.5 DOLOSTONE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
05% POROSITY: PIN POINT VUGS, MOLDIC; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, BEDDED
ACCESSORY MINERALS: QUARTZ SAND-15%, ORGANICS-05%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, MOLLUSKS

231.5- 232.1 DOLOSTONE; MODERATE YELLOWISH BROWN
30% POROSITY: MOLDIC, PIN POINT VUGS, VUGULAR
10-50% ALTERED; ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, CROSS-BEDDED
ACCESSORY MINERALS: QUARTZ-30%, ORGANICS-10%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, MOLLUSKS

232.1- 232.5 DOLOSTONE; VERY LIGHT ORANGE
05% POROSITY: PIN POINT VUGS, MOLDIC; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-10%
FOSSILS: NO FOSSILS

232.5- 236 CALCARENITE; VERY LIGHT ORANGE
30% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-15%, QUARTZ-15%
OTHER FEATURES: FOSSILIFEROUS
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, MOLLUSKS
ECHINOID, CORAL

236 - 238 CALCARENITE; VERY LIGHT ORANGE
05% POROSITY: PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE; 10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BEDDED, BANDED
ACCESSORY MINERALS: QUARTZ SAND-05%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA

238 - 240.6 CALCARENITE; VERY LIGHT ORANGE
35% POROSITY: MOLDIC, PIN POINT VUGS, VUGULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: COARSE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-15%
OTHER FEATURES: CHALKY
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, MOLLUSKS

240.6- 241.9 CALCARENITE; VERY LIGHT ORANGE TO GRAYISH ORANGE
07% POROSITY: PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, GRADED BEDDING, LAMINATED BEDDED
ACCESSORY MINERALS: QUARTZ SAND-05%

241.9- 245 CALCARENITE; YELLOWISH GRAY
07% POROSITY: PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, GRADED BEDDING, LAMINATED BEDDED
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-05%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA

245 - 245.6 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-05%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, MOLLUSKS ECHINOID

245.6- 247.6 CALCARENITE; VERY LIGHT ORANGE TO YELLOWISH GRAY
05% POROSITY: PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE; 15% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED, MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-20%
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, ECHINOID

247.6- 249.3 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC, VUGULAR, FRACTURE
GRAIN TYPE: CALCILUTITE, INTRACLASTS
55% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-10%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, MOLLUSKS
ECHINOID

249.3- 249.9 CALCARENITE; VERY LIGHT ORANGE TO YELLOWISH GRAY
05% POROSITY: PIN POINT VUGS, FRACTURE
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-15%, CHERT-10%

249.9- 252.9 CALCARENITE; YELLOWISH GRAY
05% POROSITY: PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE; 15% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-10%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA

252.9- 258.7 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: MOLDIC, PIN POINT VUGS, FRACTURE
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-10%, CHERT-05%
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, MOLLUSKS
ECHINOID

258.7- 261.3 CALCARENITE; VERY LIGHT ORANGE TO LIGHT YELLOWISH ORANGE
05% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-15%, CHERT-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS
CAVITY 259.5 TO 260.2; CAVITY AND BROKEN BITS OF LS AND DS
261.2 TO 263.5

261.3- 263.5 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: VUGULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BRECCIATED
ACCESSORY MINERALS: QUARTZ SAND-30%, CLAY-05%

263.5- 266.7 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC, FRACTURE, VUGULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-25%, CHERT-10%
CALCITE-05%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA
2657 TO 2664; .7' VOID .3' FROM BOTTOM OF SECTION.

266.7- 268.5 DOLOSTONE; GRAYISH ORANGE
05% POROSITY: MOLDIC, PIN POINT VUGS, FRACTURE
10-50% ALTERED; ANHEDRAL
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: QUARTZ SAND-20%, CHERT-20%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, MOLLUSKS

268.5- 268.9 CALCARENITE; GRAYISH ORANGE TO DARK YELLOWISH ORANGE
05% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BANDED, LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-20%, CHERT-20%
268.9-2783 NUMEROUS CAVITIES

268.9- 278.3 CALCARENITE; GRAYISH ORANGE
20% POROSITY: VUGULAR, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: QUARTZ SAND-10%, CALCITE-30%, CLAY-05%

278.3- 284 CALCARENITE; VERY LIGHT ORANGE TO DARK YELLOWISH ORANGE
40% POROSITY: VUGULAR, MOLDIC
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-15%, CALCITE-35%
FOSSILS: FOSSIL MOLDS, MOLLUSKS
PREVIOUS VUGS LINED W/ CRYSTALLINE CALCITE

284 - 291 DOLOSTONE; GRAYISH ORANGE
20% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CLAY-05%, QUARTZ SAND-05%
OTHER FEATURES: GRANULAR
FOSSILS: FOSSIL MOLDS, MOLLUSKS

291 - 291.3 CALCARENITE; VERY LIGHT ORANGE TO DARK YELLOWISH ORANGE
40% POROSITY: VUGULAR, MOLDIC
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-15%
FOSSILS: FOSSIL MOLDS, MOLLUSKS

291.3- 293.5 DOLOSTONE; GRAYISH ORANGE
20% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CLAY-05%, QUARTZ SAND-05%
OTHER FEATURES: GRANULAR
FOSSILS: FOSSIL MOLDS, MOLLUSKS

293.5- 296 CALCARENITE; VERY LIGHT ORANGE TO DARK YELLOWISH ORANGE
40% POROSITY: VUGULAR, MOLDIC
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-15%
FOSSILS: FOSSIL MOLDS, MOLLUSKS

296 - 299 DOLOSTONE; GRAYISH ORANGE
30% POROSITY: INTERGRANULAR, MOLDIC, FRACTURE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CLAY-05%, QUARTZ SAND-10%
OTHER FEATURES: GRANULAR
FOSSILS: FOSSIL MOLDS, MOLLUSKS, ECHINOID

299 - 299.3 CALCARENITE; GRAYISH ORANGE TO MODERATE YELLOWISH BROWN
05% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: CALCITE-05%, CHERT-05%

299.3- 299.9 CALCARENITE; GRAYISH ORANGE
25% POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE; 70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: GRANULE; RANGE: LITHOGRAPHIC TO MEDIUM
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: QUARTZ SAND-10%
OTHER FEATURES: GRANULAR, DOLOMITIC

299.9- 301.5 DOLOSTONE; GRAYISH ORANGE TO MODERATE YELLOWISH BROWN
35% POROSITY: INTERGRANULAR, INTERCRYSTALLINE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
OTHER FEATURES: GRANULAR
FOSSILS: ECHINOID

301.5- 301.8 CALCARENITE; LIGHT YELLOWISH ORANGE
45% POROSITY: VUGULAR
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED
ACCESSORY MINERALS: QUARTZ SAND-05%
FOSSILS: ECHINOID
VOID IN HALF OF CORE

301.8- 304.5 DOLOSTONE; GRAYISH ORANGE
20% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, INTERBEDDED
ACCESSORY MINERALS: CALCITE-05%
FOSSILS: ECHINOID

304.5- 308.8 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
05% POROSITY: PIN POINT VUGS, MOLDIC; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: QUARTZ SAND-05%
FOSSILS: ECHINOID

308.8- 308.9 DOLOSTONE; GRAYISH ORANGE
25% POROSITY: PIN POINT VUGS, MOLDIC; 50-90% ALTERED
FIBROUS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%
OTHER FEATURES: GRANULAR

308.9- 309.5 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
10% POROSITY: PIN POINT VUGS, VUGULAR, FRACTURE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BANDED, BEDDED
ACCESSORY MINERALS: QUARTZ SAND-05%
FOSSILS: ECHINOID

309.5- 315 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
25% POROSITY: MOLDIC, PIN POINT VUGS, FRACTURE
50-90% ALTERED; FIBROUS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE, INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-05%
FOSSILS: ECHINOID, FOSSIL FRAGMENTS

315 - 315.9 DOLOSTONE; GRAYISH BROWN TO GRAYISH ORANGE
15% POROSITY: MOLDIC, VUGULAR, PIN POINT VUGS
50-90% ALTERED; ANHEDRAL
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR
ACCESSORY MINERALS: CALCITE-05%, QUARTZ SAND-05%
FOSSILS: ECHINOID

315.9- 316.4 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
25% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
FIBROUS
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE, INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-05%
FOSSILS: ECHINOID, FOSSIL MOLDS

316.4- 317 DOLOSTONE; GRAYISH BROWN TO GRAYISH ORANGE
15% POROSITY: MOLDIC, VUGULAR, PIN POINT VUGS
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: MEDIUM; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR
ACCESSORY MINERALS: CALCITE-05%, QUARTZ SAND-05%
FOSSILS: ECHINOID, FOSSIL MOLDS

317 - 320.4 DOLOSTONE; GRAYISH BROWN TO GRAYISH ORANGE
20% POROSITY: FRACTURE, PIN POINT VUGS, VUGULAR
50-90% ALTERED; ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, NODULAR
ACCESSORY MINERALS: QUARTZ SAND-05%, CALCITE-05%
IRON STAIN-05%
FOSSILS: ECHINOID, FOSSIL MOLDS

320.4- 324.4 DOLOSTONE; GRAYISH ORANGE
08% POROSITY: MOLDIC, PIN POINT VUGS, FRACTURE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%, CALCITE-05%
FOSSILS: ECHINOID, FOSSIL MOLDS

324.4- 327.3 DOLOSTONE; GRAYISH ORANGE
08% POROSITY: MOLDIC, PIN POINT VUGS, FRACTURE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%, CALCITE-05%
FOSSILS: ECHINOID, FOSSIL MOLDS

327.3- 327.5 DOLOSTONE; GRAYISH BROWN
05% POROSITY: VUGULAR, PIN POINT VUGS; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, GRADED BEDDING
INTERBEDDED
ACCESSORY MINERALS: CALCITE-05%

327.5- 329 DOLOSTONE; GRAYISH BROWN
15% POROSITY: PIN POINT VUGS, MOLDIC, FRACTURE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%, GLAUCONITE-05%
CALCILUTITE-05%, IRON STAIN-05%
FOSSILS: ECHINOID, FOSSIL MOLDS

329 - 331 DOLOSTONE; GRAYISH ORANGE
15% POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCILUTITE-10%
FOSSILS: FOSSIL MOLDS, ECHINOID, MOLLUSKS

331 - 334.4 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
15% POROSITY: PIN POINT VUGS, INTERGRANULAR, FRACTURE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, NODULAR
ACCESSORY MINERALS: CALCILUTITE-30%, CHERT-08%
PREVIOUS SECTION INTERLAYERED DS AND LS

334.4- 337.3 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
15% POROSITY: FRACTURE, PIN POINT VUGS, INTERGRANULAR
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BRECCIATED, MOTTLED, CROSS-BEDDED
ACCESSORY MINERALS: CALCILUTITE-10%, CHERT-10%

337.3- 339 DOLOSTONE; GRAYISH ORANGE
05% POROSITY: PIN POINT VUGS, FRACTURE
GRAIN SIZE: VERY FINE

339 - 341.7 DOLOSTONE; GRAYISH ORANGE TO GRAYISH BROWN
15% POROSITY: VUGULAR, FRACTURE, PIN POINT VUGS
10-50% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BRECCIATED, MOTTLED, NODULAR
ACCESSORY MINERALS: CALCILUTITE-35%, CHERT-05%
OTHER FEATURES: CALCAREOUS
BRECCIATED DOLOSTONE AND LIMESTONE

341.7- 342.3 DOLOSTONE; VERY LIGHT ORANGE
05% POROSITY: PIN POINT VUGS, FRACTURE; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE

342.3- 349 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
15% POROSITY: FRACTURE, PIN POINT VUGS, MOLDIC
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO COARSE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BRECCIATED, MOTTLED, NODULAR
ACCESSORY MINERALS: CALCILUTITE-25%, CHERT-05%
IRON STAIN-02%
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL MOLDS

349 - 352.8 DOLOSTONE; GRAYISH ORANGE
08% POROSITY: PIN POINT VUGS, INTERGRANULAR
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE

352.8- 354.3 DOLOSTONE; YELLOWISH GRAY TO VERY LIGHT ORANGE
10% POROSITY: FRACTURE, INTERGRANULAR, PIN POINT VUGS
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR, BRECCIATED
ACCESSORY MINERALS: IRON STAIN-05%

354.3- 358.1 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
08% POROSITY: MOLDIC, FRACTURE, PIN POINT VUGS
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO COARSE
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR
ACCESSORY MINERALS: CLAY-05%, QUARTZ SAND-08%
FOSSILS: ECHINOID, FOSSIL MOLDS

358.1- 359.8 DOLOSTONE; VERY LIGHT ORANGE TO YELLOWISH GRAY
15% POROSITY: MOLDIC, PIN POINT VUGS, FRACTURE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR, BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-15%
FOSSILS: FOSSIL MOLDS, CORAL, MOLLUSKS

359.8- 362 DOLOSTONE; GRAYISH ORANGE
08% POROSITY: PIN POINT VUGS, POSSIBLY HIGH PERMEABILITY
INTERGRANULAR; 50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE

362 - 362.7 DOLOSTONE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC; 50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-05%
FOSSILS: FOSSIL MOLDS, MOLLUSKS

362.7- 364 DOLOSTONE; GRAYISH ORANGE
08% POROSITY: PIN POINT VUGS, INTERGRANULAR, FRACTURE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, CROSS-BEDDED
ACCESSORY MINERALS: CHERT-08%, CALCILUTITE-05%

364 - 365.5 DOLOSTONE; GRAYISH ORANGE
15% POROSITY: PIN POINT VUGS, POSSIBLY HIGH PERMEABILITY
INTERGRANULAR; 10-50% ALTERED; FIBROUS
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
OTHER FEATURES: CALCAREOUS

365.5- 366.1 DOLOSTONE; GRAYISH ORANGE
08% POROSITY: PIN POINT VUGS, INTERGRANULAR
10-50% ALTERED; FIBROUS
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
OTHER FEATURES: DOLOMITIC
FOSSILS: ECHINOID, FOSSIL MOLDS

366.1- 374.5 DOLOSTONE; GRAYISH ORANGE
20% POROSITY: PIN POINT VUGS, INTERGRANULAR, FRACTURE
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BRECCIATED, MOTTLED, NODULAR
ACCESSORY MINERALS: CALCILUTITE-10%, QUARTZ SAND-05%
OTHER FEATURES: CALCAREOUS
FOSSILS: MOLLUSKS

374.5- 380.5 DOLOSTONE; GRAYISH ORANGE
45% POROSITY: MOLDIC, PIN POINT VUGS, INTERGRANULAR
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: COARSE; RANGE: MICROCRYSTALLINE TO VERY COARSE
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-05%
OTHER FEATURES: FOSSILIFEROUS, CRYSTALLINE
FOSSILS: MOLLUSKS

380.5- 383.5 DOLOSTONE; GRAYISH ORANGE
15% POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: CROSS-BEDDED, BEDDED
ACCESSORY MINERALS: QUARTZ SAND-05%, CHERT-08%
OTHER FEATURES: CALCAREOUS
FOSSILS: MOLLUSKS, ECHINOID, FOSSIL MOLDS
LARGE GASTRAPOD 383.2

383.5- 384.1 CALCILUTITE; YELLOWISH GRAY
05% POROSITY: LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED, INTERBEDDED
ACCESSORY MINERALS: ORGANICS-05%
OTHER FEATURES: PARTINGS

384.1- 387.4 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
25% POROSITY: INTERGRANULAR, FRACTURE
GRAIN TYPE: INTRACLASTS, CALCILUTITE
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: COARSE; RANGE: LITHOGRAPHIC TO VERY COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BRECCIATED, MOTTLED, NODULAR
ACCESSORY MINERALS: DOLOMITE-30%, CALCILUTITE-20%
ORGANICS-10%
OTHER FEATURES: DOLOMITIC
FOSSILS: MOLLUSKS, FOSSIL MOLDS

387.4- 389 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, BEDDED
ACCESSORY MINERALS: DOLOMITE-10%, CALCILUTITE-25%
ORGANICS-05%, QUARTZ SAND-05%
OTHER FEATURES: DOLOMITIC

389 - 390.6 CALCARENITE; VERY LIGHT ORANGE
20% POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, BRECCIATED
ACCESSORY MINERALS: DOLOMITE-15%, QUARTZ SAND-15%
OTHER FEATURES: DOLOMITIC
FOSSILS: MOLLUSKS, FOSSIL MOLDS

390.6- 391.2 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
50% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: DOLOMITE-10%, QUARTZ SAND-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: MOLLUSKS, FOSSIL MOLDS

391.2- 394 CALCARENITE; VERY LIGHT ORANGE TO MODERATE LIGHT GRAY
20% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BRECCIATED, MOTTLED
ACCESSORY MINERALS: DOLOMITE-20%, QUARTZ SAND-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: MOLLUSKS, FOSSIL MOLDS

394 - 399 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BRECCIATED
ACCESSORY MINERALS: CALCITE-05%, QUARTZ SAND-05%
IRON STAIN-05%
OTHER FEATURES: POOR SAMPLE
FOSSILS: MOLLUSKS, FOSSIL FRAGMENTS
PREVIOUS 5' ONLY 12% RECOVERY

399 - 406.3 CALCARENITE; GRAYISH ORANGE TO YELLOWISH GRAY
15% POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO VERY COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BRECCIATED, BEDDED, LAMINATED
MOTTLED
ACCESSORY MINERALS: CALCITE-05%, DOLOMITE-10%
QUARTZ SAND-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: MOLLUSKS, FOSSIL MOLDS

406.3- 407.2 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: DOLOMITE-05%
OTHER FEATURES: DOLOMITIC

407.2- 408.7 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: INTERGRANULAR, PIN POINT VUGS, FRACTURE
GRAIN TYPE: CALCILUTITE, INTRACLASTS
30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, CROSS-BEDDED
OTHER FEATURES: DOLOMITIC

408.7- 410 CALCARENITE; WHITE TO VERY LIGHT ORANGE
12% POROSITY: FRACTURE, MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
50% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BANDED, BRECCIATED
ACCESSORY MINERALS: DOLOMITE-10%, IRON STAIN-05%
OTHER FEATURES: CHALKY

410 - 424 CALCARENITE; VERY LIGHT ORANGE
12% POROSITY: INTERGRANULAR, FRACTURE, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BRECCIATED, BEDDED, MOTTLED
ACCESSORY MINERALS: DOLOMITE-25%, IRON STAIN-05%
ORGANICS-02%, QUARTZ SAND-08%
OTHER FEATURES: DOLOMITIC

424 - 425.5 CALCARENITE; VERY LIGHT ORANGE TO PINKISH GRAY
20% POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: COARSE; RANGE: LITHOGRAPHIC TO VERY COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BRECCIATED, MOTTLED
ACCESSORY MINERALS: DOLOMITE-30%, ORGANICS-02%
OTHER FEATURES: DOLOMITIC

425.5- 429 CALCARENITE; YELLOWISH GRAY
08% POROSITY: FRACTURE, PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: ORGANICS-05%
OTHER FEATURES: CHALKY

429 - 432 CALCARENITE; VERY LIGHT ORANGE TO YELLOWISH GRAY
08% POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
65% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: COARSE; RANGE: LITHOGRAPHIC TO VERY COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR
ACCESSORY MINERALS: DOLOMITE-15%, ORGANICS-05%
429'-439' POOR RECOVERY; CRUMBLY

432 - 439.4 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: FRACTURE, INTERGRANULAR, MOLDIC
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, BRECCIATED
ACCESSORY MINERALS: DOLOMITE-20%, QUARTZ SAND-10%
ORGANICS-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: MOLLUSKS, FOSSIL MOLDS

439.4- 451 CALCARENITE; VERY LIGHT ORANGE TO YELLOWISH GRAY
15% POROSITY: INTERGRANULAR, FRACTURE, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO VERY COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BRECCIATED, MOTTLED, NODULAR
ACCESSORY MINERALS: DOLOMITE-10%, ORGANICS-05%
QUARTZ SAND-05%
OTHER FEATURES: DOLOMITIC
444'-449' 14% RECOVERY

451 - 456.5 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: MOLDIC, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED, NODULAR
ACCESSORY MINERALS: DOLOMITE-10%, ORGANICS-03%
QUARTZ SAND-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: MOLLUSKS, FOSSIL MOLDS

456.5- 456.8 CLAY; DARK YELLOWISH BROWN
05% POROSITY: NOT OBSERVED; MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: ORGANICS-80%
OTHER FEATURES: PLASTIC

456.8- 457.8 CLAY; LIGHT OLIVE GRAY
05% POROSITY: NOT OBSERVED, INTERGRANULAR; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: ORGANICS-15%, CALCILUTITE-40%
OTHER FEATURES: CALCAREOUS
PREVIOUS SECTION GRAY CLAY WITH CALCAREOUS BITS THROUGHOUT

457.8- 458 CALCARENITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: CLAY-15%

458 - 458.2 CLAY; BLACK TO DARK BROWN
05% POROSITY: NOT OBSERVED, FRACTURE; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: ORGANICS-70%, CALCILUTITE-20%
OTHER FEATURES: PLATY, PARTINGS

458.2- 459 CALCILUTITE; YELLOWISH GRAY
10% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: ORGANICS-20%
OTHER FEATURES: SPECKLED

459 - 459.8 CALCARENITE; GRAYISH ORANGE
05% POROSITY: FRACTURE, NOT OBSERVED
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED
ACCESSORY MINERALS: ORGANICS-25%

459.8- 460 CLAY; PINKISH GRAY TO VERY LIGHT ORANGE
05% POROSITY: NOT OBSERVED; POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED
ACCESSORY MINERALS: ORGANICS-15%

460 - 460.2 CLAY; BLACK TO VERY LIGHT ORANGE
10% POROSITY: LOW PERMEABILITY; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: LAMINATED
ACCESSORY MINERALS: ORGANICS-80%, IRON STAIN-05%
CALCILUTITE-15%
OTHER FEATURES: PLATY, PARTINGS

460.2- 460.8 CALCILUTITE; YELLOWISH GRAY
05% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: ORGANICS-05%
OTHER FEATURES: CHALKY

460.8- 461.8 CLAY; BLACK
05% POROSITY: NOT OBSERVED; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: ORGANICS-85%, QUARTZ SAND-05%
CALCILUTITE-05%
OTHER FEATURES: PLATY, PARTINGS

461.8- 464 CALCILUTITE; YELLOWISH GRAY
05% POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: ORGANICS-30%, QUARTZ SAND-05%

464 - 468.3 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: INTERGRANULAR, PIN POINT VUGS, FRACTURE
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: ORGANICS-10%, QUARTZ SAND-08%
OTHER FEATURES: CHALKY
UNCONFORMITY?

468.3- 469 CALCARENITE; DARK GRAYISH RED
25% POROSITY: MOLDIC, PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CRYSTALLINE
FOSSILS: MOLLUSKS, FOSSIL MOLDS

469 - 470.4 CALCARENITE; YELLOWISH GRAY
10% POROSITY: PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE
RANGE: MICROCRYSTALLINE TO VERY FINE; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-10%
OTHER FEATURES: LOW RECRYSTALLIZATION

470.4- 480.8 CALCARENITE; YELLOWISH GRAY
15% POROSITY: INTERGRANULAR, PIN POINT VUGS, FRACTURE
GRAIN TYPE: CALCILUTITE, INTRACLASTS
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-15%
POOR RECOVERY; CRUMBLY

480.8- 481.2 CALCARENITE; YELLOWISH GRAY
10% POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, INTERBEDDED
ACCESSORY MINERALS: ORGANICS-20%, QUARTZ SAND-15%

481.2- 485.4 CALCARENITE; YELLOWISH GRAY
05% POROSITY: NOT OBSERVED
GRAIN TYPE: CALCILUTITE; 70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED, CROSS-BEDDED
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-05%
OTHER FEATURES: CHALKY

485.4- 487 CALCARENITE; YELLOWISH GRAY
05% POROSITY: NOT OBSERVED
GRAIN TYPE: CALCILUTITE; 70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO VERY FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED, CROSS-BEDDED
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-20%
OTHER FEATURES: CHALKY, VARIEGATED

487 - 488.5 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
05% POROSITY: NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BRECCIATED, MOTTLED, LAMINATED
ACCESSORY MINERALS: CALCILUTITE-40%
OTHER FEATURES: SPECKLED

488.5- 489 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: PIN POINT VUGS, NOT OBSERVED
GRAIN TYPE: CALCILUTITE, INTRACLASTS
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: QUARTZ SAND-05%
OTHER FEATURES: CHALKY

489 - 495.8 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: PIN POINT VUGS, FRACTURE, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-10%
OTHER FEATURES: CHALKY
FOSSILS: CORAL

495.8- 497 CALCARENITE; VERY LIGHT ORANGE
05% POROSITY: NOT OBSERVED
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-08%
OTHER FEATURES: CHALKY

497 - 497.9 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED, INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-05%
OTHER FEATURES: CHALKY

497.9- 501 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-30%, ORGANICS-05%
OTHER FEATURES: CHALKY

501 - 504 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-05%
OTHER FEATURES: CHALKY
POSSILS: MOLLUSKS, CORAL, WORM TRACES

504 - 504.4 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-05%
DOLOMITE-08%

504.4- 509.1 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-20%.
OTHER FEATURES: DOLOMITIC, GRANULAR

509.1- 512.4 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-05%
OTHER FEATURES: CHALKY

512.4- 519.3 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
85% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: CROSS-BEDDED, LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-15%
FOSSILS: MOLLUSKS, CORAL, FOSSIL MOLDS

519.3- 523.8 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
85% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-10%
OTHER FEATURES: GRANULAR, VARIEGATED

523.8- 525.3 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-10%
FOSSILS: MOLLUSKS, WORM TRACES, FOSSIL MOLDS
CELESTITE 02%

525.3- 528 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-10%
FOSSILS: MOLLUSKS, FOSSIL MOLDS

528 - 529.6 CALCARENITE; VERY LIGHT ORANGE TO GRAYISH BROWN
15% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED, INTERBEDDED
ACCESSORY MINERALS: ORGANICS-05%, QUARTZ SAND-15%
OTHER FEATURES: VARIEGATED

529.6- 531.4 CALCARENITE; VERY LIGHT ORANGE
05% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-08%, ORGANICS-02%

531.4- 532.3 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-08%, ORGANICS-02%

532.3- 533.5 CALCARENITE; GRAYISH ORANGE
08% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED, CROSS-BEDDED
ACCESSORY MINERALS: QUARTZ SAND-08%, ORGANICS-10%
OTHER FEATURES: VARIEGATED

533.5- 534 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: NOT OBSERVED
GRAIN TYPE: CALCILUTITE; 05% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
OTHER FEATURES: CHALKY

534 - 535.3 CALCILUTITE; VERY LIGHT ORANGE
10% POROSITY: VUGULAR
GRAIN TYPE: CALCILUTITE; 10% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%
OTHER FEATURES: CHALKY

535.3- 537.7 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-02%
CELESTITE 02%

537.7- 538.8 CALCARENITE; VERY LIGHT ORANGE
30% POROSITY: MOLDIC, VUGULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-08%
OTHER FEATURES: LOW RECRYSTALLIZATION, FOSSILIFEROUS
FOSSILS: MOLLUSKS, FOSSIL MOLDS, WORM TRACES
CELESTITE 02%

538.8- 540.2 CALCARENITE; VERY LIGHT ORANGE TO YELLOWISH GRAY
10% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-10%
OTHER FEATURES: PLATY, VARIEGATED
FOSSILS: MOLLUSKS, FOSSIL MOLDS

540.2- 542 CALCARENITE; VERY LIGHT ORANGE
05% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-02%
OTHER FEATURES: CHALKY

542 - 545 CALCARENITE; VERY LIGHT ORANGE
20% POROSITY: MOLDIC, PIN POINT VUGS, VUGULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-15%
FOSSILS: MOLLUSKS, FOSSIL MOLDS
CELESTITE 05%

545 - 547.2 CALCARENITE; VERY LIGHT ORANGE
12% POROSITY: MOLDIC, FRACTURE
GRAIN TYPE: CALCILUTITE, INTRACLASTS
20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BRECCIATED, MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%
OTHER FEATURES: CHALKY
FOSSILS: MOLLUSKS, FOSSIL MOLDS
CELESTITE 10%

547.2- 547.5 CALCARENITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: ORGANICS-15%, QUARTZ SAND-05%
OTHER FEATURES: CHALKY

547.5- 547.8 CALCARENITE; YELLOWISH GRAY
05% POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED, BRECCIATED
ACCESSORY MINERALS: QUARTZ SAND-15%, ORGANICS-05%

547.8- 549.3 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
60% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-02%
OTHER FEATURES: LOW RECRYSTALLIZATION
549-554 ONLY 16% RECOVERY-POLLOWING DESCRIPTIONS Z WITHIN
CELESTITE 02%

549.3- 553.8 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC, VUGULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
50% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX

553.8- 554.7 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BRECCIATED
ACCESSORY MINERALS: QUARTZ SAND-10%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, FOSSIL MOLDS

554.7- 555.4 CALCARENITE; VERY LIGHT ORANGE
25% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BRECCIATED
ACCESSORY MINERALS: QUARTZ SAND-10%
OTHER FEATURES: WEATHERED
FOSSILS: MOLLUSKS, FOSSIL MOLDS
CELESTITE 20%

555.4- 557 CALCARENITE; VERY LIGHT ORANGE
10% POROSITY: INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
85% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: MEDIUM; RANGE: LITHOGRAPHIC TO COARSE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BRECCIATED
ACCESSORY MINERALS: QUARTZ SAND-15%
OTHER FEATURES: WEATHERED
POSSILS: PLANT REMAINS

557 - 558 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: NOT OBSERVED
GRAIN TYPE: CALCILUTITE; 15% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-15%
OTHER FEATURES: CHALKY

558 - 559.2 CALCARENITE; VERY LIGHT ORANGE
05% POROSITY: NOT OBSERVED
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED, MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-25%
OTHER FEATURES: CHALKY

559.2- 560.1 CALCILUTITE; VERY LIGHT GRAY
05% POROSITY: NOT OBSERVED
GRAIN TYPE: CALCILUTITE; 15% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO VERY FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-15%, ORGANICS-05%
OTHER FEATURES: CHALKY, VARIEGATED

560.1- 562.1 CALCARENITE; VERY LIGHT ORANGE
12% POROSITY: PIN POINT VUGS, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: QUARTZ SAND-10%
FOSSILS: MOLLUSKS, FOSSIL MOLDS

562.1- 563 CALCARENITE; VERY LIGHT ORANGE
05% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
ACCESSORY MINERALS: QUARTZ SAND-05%
OTHER FEATURES: CHALKY

563 - 564.6 CALCARENITE; YELLOWISH GRAY
05% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED, MOTTLED
ACCESSORY MINERALS: ORGANICS-10%, QUARTZ SAND-05%
OTHER FEATURES: VARIEGATED

564.6- 565.9 CALCARENITE; YELLOWISH GRAY
20% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-05%
OTHER FEATURES: FOSSILIFEROUS
FOSSILS: CORAL, MOLLUSKS, FOSSIL MOLDS

565.9- 569.6 CALCARENITE; WHITE
18% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-10%
OTHER FEATURES: FOSSILIFEROUS
FOSSILS: MOLLUSKS, CORAL, FOSSIL MOLDS
CELESTITE 05%

569.6- 576.2 CALCARENITE; YELLOWISH GRAY
08% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-05%
POSSILS: MOLLUSKS, FOSSIL MOLDS, PLANT REMAINS
CELESTITE 02%

576.2- 579 CALCARENITE; YELLOWISH GRAY
15% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED, MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-15%, ORGANICS-05%
FOSSILS: MOLLUSKS, CORAL, ECHINOID, FOSSIL MOLDS

579 - 580.2 CALCILUTITE; YELLOWISH GRAY TO DARK YELLOWISH BROWN
05% POROSITY: MOLDIC
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO VERY FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-10%
OTHER FEATURES: PLATY

580.2- 582 CALCARENITE; YELLOWISH GRAY
15% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED, MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-15%, ORGANICS-05%
OTHER FEATURES: LOW RECRYSTALLIZATION
FOSSILS: MOLLUSKS, FOSSIL MOLDS, WORM TRACES

582 - 584.4 CALCILUTITE; VERY LIGHT ORANGE
08% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED, MASSIVE
ACCESSORY MINERALS: ORGANICS-10%, QUARTZ SAND-05%
CHERT-08%
OTHER FEATURES: CHALKY
FOSSILS: WORM TRACES, FOSSIL MOLDS
COUPLE OF ORGANIC LAYERS AND ONE LAYER OF CHERT (BLACK)
ABOVE

584.4- 584.6 CHERT; LIGHT GRAYISH BROWN TO BLACK

584.6- 585.7 CALCARENITE; VERY LIGHT ORANGE
12% POROSITY: PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION

585.7- 587.2 CALCILUTITE; VERY LIGHT ORANGE
05% POROSITY: PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-05%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION

587.2- 596.2 CALCARENITE; VERY LIGHT ORANGE
15% POROSITY: MOLDIC, PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
40% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-05%
CHERT-02%, QUARTZ-01%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION
FOSSILS: MOLLUSKS, FOSSIL MOLDS, ECHINOID, WORM TRACES

596.2- 599.8 CALCARENITE; VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE; 30% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: QUARTZ SAND-20%, ORGANICS-10%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION

599.8- 600.2 CALCARENITE; VERY LIGHT ORANGE
08% POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
50% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
ACCESSORY MINERALS: QUARTZ SAND-20%, ORGANICS-10%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION
4' CAVITY

600.2- 604 NO SAMPLES

604 - 604.2 GYPSUM; WHITE
05% POROSITY: NOT OBSERVED

604.2- 605.2 CALCARENITE; GRAYISH ORANGE
05% POROSITY: PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-15%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION

605.2- 606.7 CALCARENITE; GRAYISH ORANGE
10% POROSITY: PIN POINT VUGS, INTERGRANULAR, MOLDIC
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR
ACCESSORY MINERALS: QUARTZ SAND-10%, ORGANICS-10%
OTHER FEATURES: DOLOMITIC, MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL MOLDS

606.7- 608.6 CALCARENITE; OLIVE GRAY TO GRAYISH BROWN
15% POROSITY: MOLDIC, PIN POINT VUGS, INTERGRANULAR
GRAIN TYPE: CALCILUTITE, INTRACLASTS
80% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO COARSE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR, LAMINATED
ACCESSORY MINERALS: ORGANICS-25%, QUARTZ SAND-10%
OTHER FEATURES: DOLOMITIC
FOSSILS: PLANT REMAINS

608.6- 610.9 CALCARENITE; MODERATE YELLOWISH BROWN TO GRAYISH BROWN
05% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
75% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR, LAMINATED
ACCESSORY MINERALS: ORGANICS-05%, QUARTZ SAND-10%
OTHER FEATURES: DOLOMITIC

610.9- 611.6 CALCARENITE; YELLOWISH GRAY
08% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: GYPSUM-15%, QUARTZ SAND-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, FOSSIL MOLDS

611.6- 612.3 GYPSUM; WHITE
05% POROSITY: NOT OBSERVED

612.3- 612.6 CALCARENITE; YELLOWISH GRAY
08% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, INTRACLASTS
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: GYPSUM-15%, QUARTZ SAND-05%
OTHER FEATURES: DOLOMITIC
FOSSILS: ECHINOID, FOSSIL MOLDS

612.6- 613.7 GYPSUM; WHITE
05% POROSITY: NOT OBSERVED

613.7- 614.5 CALCARENITE; YELLOWISH GRAY
05% POROSITY: NOT OBSERVED
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO FINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
ACCESSORY MINERALS: GYPSUM-20%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION
FOSSILS: WORM TRACES, ECHINOID, FOSSIL MOLDS

614.5- 614.9 GYPSUM; WHITE
05% POROSITY: NOT OBSERVED

614.9- 617.5 CALCARENITE; YELLOWISH GRAY
08% POROSITY: MOLDIC, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: VERY FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: GYPSUM-15%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS, VERTEBRATE

617.5- 617.8 GYPSUM; WHITE TO VERY LIGHT GRAY
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: CALCILUTITE-15%

617.8- 618.8 CALCARENITE; DARK YELLOWISH BROWN TO BROWNISH GRAY
05% POROSITY: PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, BIOGENIC
70% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: FINE; RANGE: LITHOGRAPHIC TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED
ACCESSORY MINERALS: QUARTZ SAND-50%, QUARTZ SAND-15%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION

618.8- 620.5 DOLOSTONE; YELLOWISH GRAY
05% POROSITY: PIN POINT VUGS
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR
ACCESSORY MINERALS: ORGANICS-10%, QUARTZ SAND-20%
OTHER FEATURES: DOLOMITIC, LOW RECRYSTALLIZATION
CALCAREOUS

620.5- 621.1 DOLOSTONE; YELLOWISH GRAY
08% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED
ACCESSORY MINERALS: GYPSUM-08%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CALCAREOUS
FOSSILS: FOSSIL MOLDS

621.1- 621.3 GYPSUM; WHITE
05% POROSITY: NOT OBSERVED

621.3- 622.3 DOLOSTONE; YELLOWISH GRAY
10% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED, MASSIVE
ACCESSORY MINERALS: GYPSUM-10%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CALCAREOUS
FOSSILS: MOLLUSKS, FOSSIL MOLDS

622.3- 622.6 GYPSUM; WHITE
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: DOLOMITE-20%

622.6- 622.8 DOLOSTONE; YELLOWISH GRAY
05% POROSITY: NOT OBSERVED; 50-90% ALTERED; ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED
ACCESSORY MINERALS: GYPSUM-10%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CALCAREOUS

622.8- 623.2 GYPSUM; WHITE TO YELLOWISH GRAY
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: DOLOMITE-10%

623.2- 623.5 DOLOSTONE; YELLOWISH GRAY
05% POROSITY: PIN POINT VUGS; 50-90% ALTERED; ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED
ACCESSORY MINERALS: GYPSUM-15%, ORGANICS-05%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CALCAREOUS

623.5- 623.9 GYPSUM; WHITE TO YELLOWISH GRAY
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: DOLOMITE-10%

623.9- 625.2 DOLOSTONE; YELLOWISH GRAY
05% POROSITY: PIN POINT VUGS; 50-90% ALTERED; ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: GYPSUM-20%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CALCAREOUS

625.2- 625.7 GYPSUM; WHITE TO YELLOWISH GRAY
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: DOLOMITE-25%

625.7- 626.2 DOLOSTONE; YELLOWISH GRAY
05% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: GYPSUM-25%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CALCAREOUS
FOSSILS: FOSSIL MOLDS

626.2- 626.4 CALCILUTITE; GRAYISH BROWN
05% POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE; 20% ALLOCHEMICAL CONSTITUENTS
GRAIN SIZE: LITHOGRAPHIC; RANGE: LITHOGRAPHIC TO FINE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: LAMINATED, BEDDED
ACCESSORY MINERALS: ORGANICS-30%
OTHER FEATURES: PLATY, PARTINGS

626.4- 627 DOLOSTONE; YELLOWISH GRAY
05% POROSITY: INTERGRANULAR; 10-50% ALTERED; ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED, BEDDED
ACCESSORY MINERALS: QUARTZ SAND-05%, ORGANICS-05%
OTHER FEATURES: CALCAREOUS, SPECKLED

627 - 631.5 DOLOSTONE; YELLOWISH GRAY
10% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: GYPSUM-10%
FOSSILS: MOLLUSKS, ECHINOID, BENTHIC FORAMINIFERA
FOSSIL MOLDS
SMALL .05' LAYER OF ORGANICS UNCONSOLIDATED.

631.5- 632.7 DOLOSTONE; YELLOWISH GRAY
10% POROSITY: MOLDIC, PIN POINT VUGS; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: GYPSUM-10%, CLAY-05%, ORGANICS-05%
SMALL .05' LAYER OF UNCONSOLIDATED BROWN CLAY WITHIN UNIT.

632.7- 634 DOLOSTONE; YELLOWISH GRAY
15% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: ORGANICS-05%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, POSSIL MOLDS

634 - 635.5 DOLOSTONE; YELLOWISH GRAY
05% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: ORGANICS-05%
FOSSILS: FOSSIL MOLDS

635.5- 637.1 DOLOSTONE; YELLOWISH GRAY
10% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: ORGANICS-05%
FOSSILS: MOLLUSKS, ECHINOID, BENTHIC FORAMINIFERA
FOSSIL MOLDS

637.1- 637.4 GYPSUM; VERY LIGHT GRAY TO WHITE
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: DOLOMITE-10%

637.4- 639.9 DOLOSTONE; YELLOWISH GRAY
08% POROSITY: MOLDIC, PIN POINT VUGS; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: GYPSUM-10%, ORGANICS-05%
QUARTZ SAND-05%
FOSSILS: MOLLUSKS, FOSSIL MOLDS

639.9- 640.1 GYPSUM; VERY LIGHT GRAY TO WHITE
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: DOLOMITE-20%

640.1- 641.1 DOLOSTONE; YELLOWISH GRAY TO VERY LIGHT ORANGE
08% POROSITY: MOLDIC, PIN POINT VUGS; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, LAMINATED
ACCESSORY MINERALS: GYPSUM-10%, ORGANICS-05%
QUARTZ SAND-05%
FOSSILS: MOLLUSKS, FOSSIL MOLDS

641.1- 641.4 GYPSUM; VERY LIGHT GRAY TO WHITE
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: DOLOMITE-25%

641.4- 642.2 DOLOSTONE; YELLOWISH GRAY TO VERY LIGHT ORANGE
05% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-15%, IRON STAIN-02%
GYPSUM-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, FOSSIL MOLDS

642.2- 642.6 GYPSUM; VERY LIGHT GRAY TO WHITE
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: DOLOMITE-15%

642.6- 644.4 DOLOSTONE; YELLOWISH GRAY TO VERY LIGHT ORANGE
05% POROSITY: MOLDIC, PIN POINT VUGS; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-15%, IRON STAIN-05%
GYPSUM-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: MOLLUSKS, BENTHIC FORAMINIFERA, FOSSIL MOLDS

644.4- 648.2 DOLOSTONE; YELLOWISH GRAY TO VERY LIGHT ORANGE
05% POROSITY: MOLDIC, PIN POINT VUGS; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
ACCESSORY MINERALS: QUARTZ SAND-15%, ORGANICS-02%
GYPSUM-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: MOLLUSKS, FOSSIL MOLDS

648.2- 650.2 DOLOSTONE; YELLOWISH GRAY TO VERY LIGHT ORANGE
10% POROSITY: MOLDIC, PIN POINT VUGS; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MOTTLED, NODULAR, BIOTURBATED
ACCESSORY MINERALS: QUARTZ SAND-15%, ORGANICS-02%
GYPSUM-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: MOLLUSKS, FOSSIL MOLDS

650.2- 651.8 DOLOSTONE; YELLOWISH GRAY TO VERY LIGHT ORANGE
10% POROSITY: MOLDIC, PIN POINT VUGS; 10-50% ALTERED
ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO FINE
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: LAMINATED
ACCESSORY MINERALS: QUARTZ SAND-08%, GYPSUM-30%
OTHER FEATURES: CALCAREOUS

651.8- 652 GYPSUM; VERY LIGHT GRAY TO WHITE
05% POROSITY: NOT OBSERVED
ACCESSORY MINERALS: DOLOMITE-30%

652 - 654 DOLOSTONE; YELLOWISH GRAY TO VERY LIGHT ORANGE
05% POROSITY: NOT OBSERVED; 10-50% ALTERED; ANHEDRAL
GRAIN SIZE: FINE; RANGE: MICROCRYSTALLINE TO MEDIUM
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BIOTURBATED
ACCESSORY MINERALS: GYPSUM-30%, CALCILUTITE-10%
OTHER FEATURES: CALCAREOUS
FOSSILS: MOLLUSKS, FOSSIL MOLDS

654 TOTAL DEPTH

APPENDIX B

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		
PROGRESS	TASK	DATE 7/9/97	SITE HYDROLOGIST RAL
DEPTH 104'	PROPOSED TOTAL DEPTH 800'	FORMATION/AQUIFER FAS	DATE MOVED ON SITE 6/17/97

ROMP SITE NAME/NUMBER TR 20-3 CHASS 3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0800	1100	3	CoRING 104' - 124'. THEN INTO FINE SANDS 1
			PULLED CORE RODS AND WENT BACK W/ 6 3/4
			BIT TO DRILL TO ROCK. LS STRINGER @ 131'
1130	1500	3.5	148 + DOWN TO 177' MIXED MUD FOR SAND CONTROL
		.5	PULLED DRILL RODS TO 5' BELOW CASING SET
		.5	CREW DISCONNECTED PUMP FOR MECHANIC TO WORK

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	G.D. T.L.		1
PROGRESS 29'	TASK	DATE 7/29/97	SITE HYDROLOGIST RAC
DEPTH 30'	PROPOSED TOTAL DEPTH 600'	FORMATION/AQUIFER OCALA / FAS	DATE MOVED ON SITE 6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER TR 20-3 CHASS 3
FROM	TO		DETAILS OF OPERATIONS
0830			WORKED ON HYDRAULIC LEAKS + MISALIGNED
	1330		SHAFT
1330	1600		CORED TO 59' BLS + PULLED NQ RODS &
			TO CASING

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	G.D. T.L		2
PROGRESS 25'	TASK	DATE 7/30/97	SITE HYDROLOGIST RAK
DEPTH 59'	PROPOSED TOTAL DEPTH 600'	FORMATION/AQUIFER OCALA	DATE MOVED ON SITE 6/17/97

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	ROMP SITE NAME/NUMBER TR 20-3 CHASS 3 / DETAILS OF OPERATIONS
0830			CORED TO 84' BLS GOOD ROCK @ 75'
			PULLED NQ RODS + ADVANCED 4" HW T
	1500		75.5' CLEAN HOLE FOR WQ SAMPLE
	1645		CREW LEAVES

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	G.D. TL, SM	3

PROGRESS	TASK	DATE	SITE HYDROLOGIST
50'		7/3/97	RAL

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
84'	600'	OCALA	6/17/97

ROMP SITE NAME/NUMBER: TR 20-3 CHASS 3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0800	0830		WATER LEVEL READINGS
0830			CORING
			AIRLIFT @ 104' 1030
			AIRLIFT @ 124' BAD RECOVERY FOR 20'
1500			CREW PULLED RODS

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD SM		4
PROGRESS	TASK	DATE	SITE HYDROLOGIST
15'		8/4/97	RAC
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
134'	600'	FAS	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER: TR 20-3 CHASS 3
FROM	TO		DETAILS OF OPERATIONS
			CORED TO 149' AIRLIFT CUTTINGS

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	GD RAL	5

PROGRESS	TASK	DATE	SITE HYDROLOGIST
35'		8/5/97	RAL

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
149'	600'	FAS	6/17/97

ROMP SITE NAME/NUMBER: TR 20-3 CHASS

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
			CORED TO 159' AIR LIFT, PACKER TEST BE
			@ 144' PACKER @ 147'
			CORED TO 174' AIRLIFT CUTTINGS
			HOLD 174.5' - 181.5'
			CORED TO 184' AIRLIFT - WATER IRON
			STAINED

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD SM		6
PROGRESS	TASK	DATE	SITE HYDROLOGIST
15'		8/6/97	RM
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
184'	600'	FAS	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER TR20-3 CLASS 3
FROM	TO		DETAILS OF OPERATIONS
			PACKER TEST. BIT @ 170' HOLE OPEN TO 1
			CORED TO 199'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD SM		7
PROGRESS	**TASK**	**DATE**	**SITE HYDROLOGIST**
Ø		8/7/97	RAL
DEPTH	**PROPOSED TOTAL DEPTH**	**FORMATION/AQUIFER**	**DATE MOVED ON SITE**
199'	600'	FAS	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER: TR 20-3 CHASS 3
FROM	TO		DETAILS OF OPERATIONS
			CREW Required W/ 6" BIT TO

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD RAL		8
PROGRESS	TASK	DATE	SITE HYDROLOGIST
8'		8/11/97	RAL
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
199'	600'	FAS	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER: TR 20-3 CHASS 3
FROM	TO		DETAILS OF OPERATIONS
			REAMED 6" TO 184'
			SET 4" CASING TO 185'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		9
PROGRESS	**TASK**	**DATE**	**SITE HYDROLOGIST**
30'		8/12/97	RAL
DEPTH	**PROPOSED TOTAL DEPTH**	**FORMATION/AQUIFER**	**DATE MOVED ON SITE**
199'	600'	FAS OCALA	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER: TR 20-3 CHASS 3
FROM	TO		DETAILS OF OPERATIONS
			CREW REAMED FROM 185' - 199' W/ 3 3/4" B.
			TOOK WQ SAMPLE
			CORED -214' AIR LIFT CUTTINGS
			CORED -229' AIR LIFT CUTTINGS

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	GD TL	10

PROGRESS	TASK	DATE	SITE HYDROLOGIST
45'		8/13/97	RAL

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
229	600'	FAS OCALA	6/17/97

ROMP SITE NAME/NUMBER: TR 20-3 CLASS 3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
			AIR LIFT FOR WQ SAMPLE 15 THRU
			COLLAR - 244 AIR LIFT FOR CUTTINGS
			COLLAR - 259 WQ SAMPLE (AIR LIFT)
			269' 8" CAVITY + 2" CAVITY
			274' 8" ROCK IN LAST CORE RUN - MOSTLY
			CAVITIES AIR LIFT W/ PACKER IN HOLE
			(INTO AVON PARK)

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		11
PROGRESS	TASK	DATE	SITE HYDROLOGIST
0		8/14/97	RAL
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
274	600'	FAS AV PK	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER: TR 20-3 CHASS 3
FROM	TO		DETAILS OF OPERATIONS
			PACKER TEST 1ST THING
			PURGE 40MIN CREW MADE A COUPLE
			[redacted] PUMP HEADS FOR DRILL PIP
			RESET PACKER FOR NEXT TEST
			NO CORING

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		12
PROGRESS	TASK	DATE	SITE HYDROLOGIST
45'		8/18/97	DAL
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
274	600'	FAS AUPK	6/12/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER TR 20-3
FROM	TO		DETAILS OF OPERATIONS
			Colmb START @ 274'
			AIR LIFT CUTTNGS @ 289'
			AIR LIFT WQ NO SAMPLE TO LAB @ 304'
			AIRLIFT CUTTNGS @ 319' - END of DAY

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		13
PROGRESS 20'	TASK	DATE 8/19/97	SITE HYDROLOGIST RAL
DEPTH 319'	PROPOSED TOTAL DEPTH 600'	FORMATION/AQUIFER FAS / AUPK	DATE MOVED ON SITE 6/17/97

ROMP SITE NAME/NUMBER: T2 20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
			AIR LIFTING FOR CUTTINGS + WQ SAMPLE
			CORING AIR LIFT @ 334'
			FINISHED @ 339'
			~~BIT~~ INNER BARREL LOCKED IN @ 340' HAD
			TO PULL DRILL RODS TO FREE

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	GD SM→TL	14

PROGRESS	TASK	DATE	SITE HYDROLOGIST
10'		8/20/97	RAL

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
339'	600'	FAS/AVPK	6/17/97

ROMP SITE NAME/NUMBER: TR 20-3 CLASS 3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
			RAN DRILL RODS BACK TO BOTTOM + AIR
			LIFTED
			CORING AFTER LUNCH
			CORED TO 349' RISING CORE.
			~~PACKER TEST~~ W/O PACKER

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		15
PROGRESS	TASK	DATE	SITE HYDROLOGIST
20'		8/26/97	RAL
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
349'	600'	FAS / AVPK	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER: TR 20-3 CHASS 3
FROM	TO		DETAILS OF OPERATIONS
			PACKER TEST @ 349'
			CORED TO 369'
			SITE BROKEN INTO ON SUNDAY - (GENERATOR
			PRESSURE WASHER, OIL, KEYS STOLEN

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		16
PROGRESS 25'	TASK	DATE 8/27/97	SITE HYDROLOGIST RAL
DEPTH 369'	PROPOSED TOTAL DEPTH 600'	FORMATION/AQUIFER FAS/AVPIC	DATE MOVED ON SITE 6/17/97

ROMP SITE NAME/NUMBER TR 20-3 CHASS 3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
			CORED TO 379'. AIR LIFT FOR WQ
			W/ BAILER SINCE ROCK IS VERY CRUMBLY
			RODS PUMPED 20' OFF BOTTOM, THEN RODS
			LOWERED DOWN FOR SAMPLE
			LOCKSMITH HERE @ 1100 OUT @ 1500
			PACKER TEST - DIDNT GIVE PROPER RESULTS
			TOOK SAMPLE AFTER PACKER REMOVED
			CORED TO 394'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		17
PROGRESS 5'	TASK	DATE 8/28/97	SITE HYDROLOGIST RAL
DEPTH 394'	PROPOSED TOTAL DEPTH 600'	FORMATION/AQUIFER FAS / ARPK	DATE MOVED ON SITE 6/17/97

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	ROMP SITE NAME/NUMBER TR20-3 CLASS 3 / DETAILS OF OPERATIONS
			CREW WAS GOING TO REAM TO 3 3/4" BUT
			DECIDED TO CORE THEN RIG BROKE
			ONLY 5' CORED TO 399'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		18
PROGRESS 50.5'	TASK	DATE 9/2/97	SITE HYDROLOGIST RAL (VC WSM)
DEPTH 399'	PROPOSED TOTAL DEPTH 600'	FORMATION/AQUIFER FAS/AUPK	DATE MOVED ON SITE 6/17/97

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	ROMP SITE NAME/NUMBER TR 20-3 CHASS3 DETAILS OF OPERATIONS
			CREW CREW6 WQ SAMPLE W/ BAILER @ 40
			WQ SAMPLE W/ BAILER @ 424' ROCK TOOCREW6
			FOR PACKER SET
			WQ SAMPLE W/ BAILER @ 439'
			CORED TO 439'
			CORED TO 451.5'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	6D TL		19
PROGRESS	TASK	DATE	SITE HYDROLOGIST
35'		9/3/97	RAC
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
451.5	600'	Arpk / FAS	6/17/97

ROMP SITE NAME/NUMBER: TR 20-3 CHASS3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
			AIR LIFTED WQ SAMPLE
			FINISHED DRILLING 5' RUN TO 454'
			NEXT RUN INTO DARK THEN LIGHT CLAY
			~~[illegible]~~ AIR LIFTED CUTTINGS BIT LIT
			CHANGE IN WQ @ 469'
			CORED TO 484' HAD PROBLEMS W/ RECOV
			474'-479' + BEFORE

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		20
PROGRESS 30'	TASK	DATE 9/4/97	SITE HYDROLOGIST RAL
DEPTH 484'	PROPOSED TOTAL DEPTH 600'	FORMATION/AQUIFER AU PK / FAS	DATE MOVED ON SITE 6/17/97

ROMP SITE NAME/NUMBER: TR 20-3 CHASS

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
			WQ SAMPLE w/ BAILER w/ UP HOLE SEALED
			BY CLAY UNIT OVERNIGHT
			CME 85 ON SITE @ 1000 FOR DEMO
			CORED TO 514'
			PACKER TEST w/ BIT @ 487'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		21
PROGRESS	TASK	DATE	SITE HYDROLOGIST
20'		9/8/97	RAL
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
514'	600'	AVPK / & FAS	6/17/97

ROMP SITE NAME/NUMBER: ROMP TR 20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
			PACKER SAMPLE MONDAY MORNING
			CORED 7' + RODS BOUND UP W/ SAND
			AIR LIFTED SAND + CUTTINGS
			CORED TO 534' AIR LIFTED CUTTINGS
			+ WQ SAMPLE - ONE REDOUB 4000,
			OTHERS - 1600 - PACKER TEST

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		22
PROGRESS 45'	TASK	DATE 9/9/97	SITE HYDROLOGIST RAL
DEPTH 534'	PROPOSED TOTAL DEPTH 600'	FORMATION/AQUIFER AVPK / FAS	DATE MOVED ON SITE 6/17/97

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	ROMP SITE NAME/NUMBER TR 20-3 CLASS 3 / DETAILS OF OPERATIONS
			CORING KT THING
			CORED TO 579
			AIR LIFT @ 549', 564', 574'
			PACKER @ 564'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	CD TL		23
PROGRESS	TASK	DATE	SITE HYDROLOGIST
30'		9/10/97	RAL
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
599'	600'	AUPK / FAS	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER
FROM	TO		DETAILS OF OPERATIONS
			BAILER SAMPLE 1ST THRU 6
			CORED TO 609' ENAP @ 604'
			VOIDS - ENAP @ BOTTOM CTOP OF NEXT R
			PACKER @ 597' 1ST RUN FAILED

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
AME	GD TL		24
PROGRESS	TASK	DATE	SITE HYDROLOGIST
30'		9/15/97	RAL
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
609'	600'	ANPK / FAS	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER TR 20-3 CHASS
FROM	TO		DETAILS OF OPERATIONS
			PACKER TEST AGAIN BIT @ 596' PACKER @
			11 GPM EVAPS FROM 604' ↓
			CORED AFTER LUNCH
			CORED TO 639'
			AIRLIFT @ 624', 639'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	GD TL		25
PROGRESS	TASK	DATE	SITE HYDROLOGIST
15		9/16/97	RAL
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
639'	600'	AVPK/FAS	6/17/97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER
			TR 20-3
FROM	TO		DETAILS OF OPERATIONS
			CORED TO 654'
			SET PACKER @ 606'
			RAN PACKER TEST ON EVAP ZONE
			PUMPED 1 GPM
			RECOVERY SHUT OFF @ 1815
			ALLOWED TO FULLY RECOVER OVERNIGHT

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	GD TL	26

PROGRESS	TASK	DATE	SITE HYDROLOGIST
TD		9/17/97	RAC

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
1654'	1600'	AV PK / FAS	6/17/92

ROMP SITE NAME/NUMBER: TR 20-3 CHASS 3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
			WL IN NQ 16.76 BCS ANNULUS 1089'
			BAILER WQ SAMPLE COND 32,000 umhos
			CL⁻ 9,500 mg/L
			TRIPPED NQ OUT OF HOLE

APPENDIX C

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		1
PROGRESS 65'	TASK Hollow stem	DATE 6-17-97	SITE HYDROLOGIST Rick Lee
DEPTH 65'	PROPOSED TOTAL DEPTH 10'	FORMATION/AQUIFER surficial	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0830	1.5	Mob to TR-20-3
0830	1030	2	Finish rig set up
1030	1215	1.75	Start to hollow stem auger
1215	1245	.5	Lunch
1245			Start augering at 15'. Can't get recovery
			Greg arrives he says to auger with out
	1400	1.75	spoon, Auger to 50'
1400	1415	.25	Have meeting about hole
1415	1500	.75	Greg says to auger till we hit rock
1500	1530	.5	Rig won't turn augers past 65'
1530	1630	1	Set rig up for try core
1630	1730	1	Mob to temple

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		2
PROGRESS	TASK	DATE	SITE HYDROLOGIST
—	Set 2" well	6-18-97	
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
65'	65'	Surficial	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR 20-3
0815	0900	.75	Finish rig up for mud
0900			Call Rick Lee about well design
			Wait on Murphy to Bring .010-2" pvc
			Water level at 8.3'. Do paper work
	1200	3	Rebuild Kelly swivel
1200	1230	.5	Lunch
1230			Rebuild breakout wrench
			Grease rig. Clean out dog house
	1630	4	Murphy arrives with wrong screen
1630	1730	1	Mob to Tampa

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		3
PROGRESS	TASK	DATE	SITE HYDROLOGIST
—	2" well	6-18-97	
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
65'	65'	Surficial	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0745	.75	Mob to Brill
0745	0830	.75	Talk to Rick Lee about job
0830	1045	2.25	Talk with Greg about well site
			Fill out some speedys
1045	1115	.5	Mob to TR-20-3
1115	1130	.25	Trip hole
1130			CME men arrive at site with Greg
	1230	1	Have meeting about rig
1230	1300	.5	Lunch
1300	1400	1	Have meeting about rig with CME
1400			Run in hole with 50' of screen 15' of blank 2'
	1530	1.5	add sand trip augers. 15' of augers 22 trips sa
1530	1615	.75	Do paper work clean up site secure wel
1615	1730	1.25	Mob to Tampa

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
814/CME	Tim L., Rick L.		4
PROGRESS	TASK	DATE Mon 6-23-97	SITE HYDROLOGIST Rick Lee
DEPTH 65'	PROPOSED TOTAL DEPTH 65'	FORMATION/AQUIFER	DATE MOVED ON SITE 6-17-97

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	ROMP SITE NAME/NUMBER TR 20-3 / Chassahowitzka - 2" Supply We DETAILS OF OPERATIONS
0700	0800	1.00	Fuel truck in Tampa, change equipment
			from truck 447 to 427.
0800	0930	1.50	Travel to site
0930	1030	1.00	Work with Mechanic on rig (cathead
1030	1130	1.00	Service Rig
1130	1200	0.50	Lunch
1200	1430	2.50	Install 2" supply well
1430	1500	0.50	Stop work for Thunderstorm
1500	1600	1.00	Finish installation of 2" supply well
			Used 1 25 cubit feet 20-30 sand (from
			13' to 65').
			one bag enviroplug (from 11
			to 13'),
			40 gal cement slurry (fro
			Ø to 13').
1600	1615	0.25	Secure site
1615	1730	1.25	Travel to Tampa.

Tim Lohner 6-23-97

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
814/CME	Tim L. Justin F.		5
PROGRESS	TASK	DATE Tue 6-24-97	SITE HYDROLOGIST Tim Lohner
DEPTH 65'	PROPOSED TOTAL DEPTH 65'	FORMATION/AQUIFER	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER: Chassahowitzka-3 / TR20-3 (2" supply well)

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0800	1.00	Travel to Brooksville
0800	1200	4.00	George is still out sick. Decide to travel
			to Barnes in Tampa to pick up 40' of 10"
			casing (PVC). Travel to Tampa and back
			to Brooksville.
1200	1230	0.50	Lunch
1230	1300	0.50	Load 120' of 6" PVC casing at Brooksvil
1300	1345	0.75	Travel to site
1345	1400	0.25	Service Rig
1400	1430	0.50	Top of cement on 2" supply well from 6
			to 4'. (20 gal cement slurry).
1430	1645	1.50	Develope 2" well and unload casing
1645	1715	0.50	Thunder storm and secure site.
1715	1730	1.25	Travel to Tampa

Tim Lohner 6-24-97

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
814/CME	Tim L. Justin F.		6
PROGRESS	TASK	DATE Wed 6-25-97	SITE HYDROLOGIST Tim Lohner
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER: Chassahowitzka-3 / TR20-3 (core hole)

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Travel to site
0815	0830	0.25	Service Rig
0830	0930	1.00	Develope 2" supply well. Water level 9.35' to top of casing. Casing is one foot a/s. Water level after one hour recovery 9.41'. Top of casing
0930	1200	2.50	Move Rig to corehole and dig pit for mud Rotary.
1200	1230	0.50	Lunch
1230	1600	3.50	Finish digging pit. Set up Rig. Set up "Big Red" mud pump for mud Rotary. Set up Rig for mud Rotary. Locate and make up 13" bit. Set up Rig and tremie to cement.
1600	1615	0.25	Secure site
1615	1730	1.25	Travel to Tampa

Tim Lohner 6-25-97

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
814/CME	Tim L. Justin F.		07
PROGRESS Drill from 0' to 20'	TASK	DATE Thu 6-26-97	SITE HYDROLOGIST Tim Lohner
DEPTH 20'	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER: Chassahowitzka-3/TR20-3 (Core hole)

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Travel to site
0815	0830	0.25	Service Rig
0830	0930	1.00	Prepare to drill, mix gel
0930	1130	2.00	Drill 13" hole from 0' to 20'.
1130	1300	1.50	Pull out of hole, RUN 20' of 10" PVC
			casing and mix and pump 120 gal cement
			slurry.
1300	1330	0.50	Lunch
1330	1430	1.00	Clean up site
1430	1600	1.50	Prepare to drill out casing
1600	1615	0.25	Secure site
1615	1730	1.25	Travel to Tampa

Jim Lohner 6-26-97

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
814/CME	Tim L. Justin F.		8
PROGRESS	TASK	DATE Mon 6-30-97	SITE HYDROLOGIST James Clayton
DEPTH 20'	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER: Chassahowitzka-3 / TR20-3 (Core hole)

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0730	0.50	Fuel truck and tank
0730	0815	0.75	Travel to Brooksville
0815	0930	1.25	Load cement and pick up Mudder Goose
0930	1000	0.50	Travel to site
1000	1100	1.00	Tag cement at 8' in annulus. Mix and pump. 40 gal cement slurry.
1100	1130	0.50	Service Rig
1130	1200	0.50	Back Goose in place on site.
1200	1230	0.50	Lunch
1230	1515	2.75	Set up Goose. Hook up Moyno pump to mix mud.
1515	1600	0.75	Mix mud and fill up Goose.
1600	1615	0.25	Secure site
1615	1730	1.25	Travel to Tampa.

Tim Lohmeyer 6-30-97

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L Justin F	8

PROGRESS	TASK	DATE	SITE HYDROLOGIST
76' of 3¾	3¾ pilot	7-1	Jim Clayton

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
76	1000'	Surficial	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0800	1	Mob to Bill
0800	0830	.5	Drop off leave papers to Pam Lee
0830	0900	.5	Talk to Greg. Tim loads up 4 pallets gel 1 cement
0900	1015	1.25	Mob to TR-20-3 unload cement & gell
1015	1300		Start to drill from 20' to 72' with 3¾" tricone
		1.75	Stop mix up gell
1300	1330	.5	Lunch
1330			Drill from 72' to 77' hit fine stone
	1430	1	at 70' Lost 50% circulation
1430			Trip hole prep 6" pvc casing. Make
	1600	1.5	up front header
1600			& go to Bill to round up 10" bit
	1715	1.25	sub tim works on site & secure well
1715	1800		Mob to Tampa. Look in Tampa for
		.75	bit sub

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D. Tim L. Justin F.	9

PROGRESS	TASK	DATE	SITE HYDROLOGIST
77' of 6" 78' of 9 3/4 hole	9 3/4 ream	7-2	Jim Clayton

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
78'	1000	Surficial	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0745	.75	Talk to Loyd about 10" bit sub
0745	0845	1	Mob to TR-20-3
0845	0945	1	Weld bars on 7 3/4" bit to make it 9 3/4"
0945	1045	1	Start to drill with 9 3/4" bit to 78'
1045	1100	.25	Circulate hole
1100	1230	1.5	Trip hole Run in 77' of 6" sch 40 PVC
1230	1300	.5	Lunch
1300			Mix up 40-47# bag of cement or 180 gal
	1400	1	~~Mix~~ of cement
1400			Pump 180 gal of cement displace with 11 1/2
			Clean out pump. Look good back up
			clean up site, secure well & site
	1600	2	Do paper work
1600	1730		Mob to Tampa check in pickups

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		10
PROGRESS	TASK	DATE	SITE HYDROLOGIST
10'	6" All out	7-7-97	Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
82'	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3 Core Hole

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0800	1	Swich out trucks to pool truck
0800	0900	1	Mob to TR-20-3
0900			Tag cement in 6" annulus at 16'. Mix up 10
	1000	1	50# bags cement. Grout to the top
1000	1115	1.25	Service rig, goose + big vel
1115			Drill out 6" with 5 7/8" bit to 77'
	1230	1.25	Trip hole
1230	1300	.5	Lunch
1300			Trip in core barrel. Start to core at 77'
			to 78.5' No recovery. Core from 78.5' to 82'
	1400	1	no recovery. Sand drilling. Hose blew out
1400	1530	1.5	Trip NQ Secure well + site
1530			Mob to Brill to have meeting with
	1700	1.5	Engr
1700	1730	.5	Mob to Tampa

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim C		11
PROGRESS 22'	TASK coring	DATE 7-8-97	SITE HYDROLOGIST Rick Lee
DEPTH ~~22'~~ 1041'	PROPOSED TOTAL DEPTH 1000'	FORMATION/AQUIFER floridan	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER: TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0730	.5	Check out pool truck
0730	0830	1	Mob to TR-20-3
0830			Trip in 5 5/8" bit. Drill 77' to 92' hit
	1230	4	rock at 82'. Set 92' of 4" Ø HW
1230	1300	.5	Lunch
1300			Drill out 4" with 3 3/4 bit to 92'
			Trip MTK. Trip in NQ Set rig up with
	1445	1.75	new Loader
1445	1600		Start Coring from 92' to 104'
1600			Glue together 100' of 1/2" pvc air line
	1630	.5	secure well & site
1630	1730	1	Mob to Tampa

Water Level SW 9.5' CH 9.65'

92' TO 94' 60%
94' TO 99' 62%
99' TO 104' 50%

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		12
PROGRESS 73'	TASK coring	DATE 7-9-97	SITE HYDROLOGIST Rick Lee
DEPTH 117'	PROPOSED TOTAL DEPTH 1000'	FORMATION/AQUIFER floridan	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0730	.5	Check out pool truck
0730	0830	1	MB to TR-20-3
0830			Start to Core from 104' TO 124'. Hit sand
	1100	2.5	at 120' Trip NQ
1100	1200	1	Wait on water level to rise
			Fill water truck. Set up for tri cone
			Trip in hole with 3 7/8 bit
1200	1230	.5	Lunch
1230			Start to drill 3 7/8 from 92' to 177
	1515	3.75	Sand drilling with 1' rock stringers
1515			Call Bob about rig repair on Thursday
	1645	1.5	The diff. Locks on mono pump
1645	1800	1.25	MB to Tampa
			104' 109' 100%
			water levels SW 9.85' 109' 114' 62%
			CH 8.9' 114' 119' 48%
			119 124 12%

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	13

PROGRESS	TASK	DATE	SITE HYDROLOGIST
0	R.J Repair	7-10-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
177'	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR 20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0545	0700	1.25	Mob to TR-20-3
0700			Arrive at job site. Tim and AL install
	0800	1	wilden pump on rig
0800			Bob drives install new Mono pump
	1200	4	repair 2" steel hose
1200			Bob gets stuck in sand
	1300	1	Tim and AL winch him out
1300	1330	.5	Lunch
1330	1430	1	Do paper work
1430	1500	.5	Mob to Bull to talk to Guy
1500	1600	1	Mob to Tampa

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	14

PROGRESS	TASK	DATE	SITE HYDROLOGIST
4" hole 46' 6" hole 27'	6" Ream	7-14-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
117	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3 core hole

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0730	.5	Fuel up 447
0730	0845	1.25	Mob to TR-20-3
0845	0915	.5	Service rig
0915	0930	.25	Go over phone bill with Tim
0930			Mix gel Trip in hole to 140' Hole sanded in
			Bit plugged trip hole. Trip in to 140'. Drill
			to 175' Mix mud. Drill to 182' hard rock
			to 184' drill to 186' still in rock. Call
	1245	3.25	in to Rick Lee tell him the depths
1245	1315	.5	Lunch
1315			Trip out 3¾" bit. Trip out 4" casing
			Bob Wilson arrives on site at 2:00pm to 2:45pm
			to fix bit seal. Mix mud trip in 6" bit to
	1600	2.75	90' Drill from 90' to 117'
1600	1615	.25	Mix mud for tomorrow
1615	1630	.25	Secure Site + well
1630	1730	1	Mob to Tampa

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
814/CME	Tim L. Stewart M.		15
PROGRESS	**TASK**	**DATE** Tue 7-15-97	**SITE HYDROLOGIST** Tim Lohner
DEPTH 186'	**PROPOSED TOTAL DEPTH**	**FORMATION/AQUIFER**	**DATE MOVED ON SITE** 6-17-97

ROMP SITE NAME/NUMBER Chassahowitzka / TR20-3 (Core hole)

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0800	1.00	Travel to Brooksville
0800	0830	0.50	Load supplies (Gel and Carbonox)
0830	0900	0.50	Travel to site
0900	0915	0.25	Service Rig
0915	0930	0.25	Look for Keys to Rig
0930	1100	1.50	Murphy went back to district for Keys
			Then returned to site,
1100	1200	1.00	Ream from 117' to 147'. No fluid Return
			mix mud.
1200	1230	0.50	Lunch
1230	1345	1.25	Ream from 147' to 182'. No fluid Return
1345	1415	0.50	Call Brooksville office, Decide to Ream
			to 186'.
1415	1530	1.25	Hole was heaving. Work to open hole,
			Could not keep hole open.
1530	1600	0.50	Pull bit into casing
1600	1615	0.25	Secure site
1615	1730	1.25	Travel to Tampa

Tim Lohner 7-15-97

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	16

PROGRESS	TASK	DATE	SITE HYDROLOGIST
10 of 6" hole 187 of 4"	6" Ream 4" Casing	7-16-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
187'	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3 core hole

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0800	1	Mob to TR-20-3
0800			Mix up mud. Drill out legs at 88'
			Ream back down to 177' Drill from 177' to
			187' Mix + pump lots of mud. Call Rich
			Lee. Wait on Rich + Don to bring unit logger
	1230	4.5	Mix Mud
1230	1300	.5	Jack
1300	1400	1	Rich + Don arrive on site to log hole
1400			Trip in 187' of 4" casing. Drill
	1600	2	down the last 20' of 4"
1600	1615	.25	Secure well + site
1615	1730		Mob to Tampa

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George Tim L. Greg M	17

PROGRESS	TASK	DATE	SITE HYDROLOGIST
2" well	2" well set	7-17-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
115'	1000'		6-17-97

ROMP SITE NAME/NUMBER: TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0715	.25	Fuel 447
0715	0830	1.25	Mob to TR-20-3
0830			Drive on site find rig. We have a sink hole
			15' in front of rig 25' across. Call Greg tell
	0930	1	him about sink hole. He say he is on his way
0930	1030	1	Greg arrive on site talk about sink hole + work
1030	1200	1.5	Greg wants to drill out 4" casing because it is
			packed off w/sand from 140'-180'
1200	1230	.5	Lunch
1230	1300	.5	Do paper work
1300			Greg arrive back Sand back core hole to
			115' pulling 4" casing at the same time with
			16 bags 6/20 sand set 115' of 2" pvc with 20'
			of screen sand in with 6 bags 20/30, 4 bags
			hole plug to 60' BLS pull out all of 4" casing
	1630	3.5	Rig down move off of well
1630	1700	.5	Do paper work
1700	1730		Mob to B well,
1730			Mob to Jasper

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D. Tim L	18

PROGRESS	TASK	DATE	SITE HYDROLOGIST
	Set up	7-21-97	None "Rick Lee"

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
0	1000'		6-17-97 ~~7-21-97~~

ROMP SITE NAME/NUMBER: TR-20-3 core Hole 2

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0730	.5	Check out #447
0730	0815	1.25	Mob to TR-20-3
0815	1200	3.75	Rig down
1200	1230	.5	Lunch
1230	1430	2	Rig down
1430	1615	1.75	Reroble sandreels on cme
1615	1730	1.25	Mob to Tampa

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D. Tim L	19

PROGRESS	TASK	DATE	SITE HYDROLOGIST
	Set up	7-22-97	None "Rick Lee"

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
0	1000		6-17-97

ROMP SITE NAME/NUMBER: TR-20-3 core Hole 2

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0745	.75	Mob to HQ
0745			Have meeting with Greg Q about new core hole
	0930	1.75	on TR-20-3. Look for bit + subs
0930	1000	.5	Mob to TR-20-3
1000			Meet with Paul + Mike the payloader crew from
			Tampa. Bob W is replacing seals on Mono pump
			Transmission. Start to move rig over to new
	1200	2	core site + trailer
1200	1230	.5	Lunch
1230	1500	2.5	Finish mob over to new site
1500			Mike + Paul are done they load up and leave
	1615	1.25	Tim and I set rig up
1615	1645	.5	Mob to Brell HQ
1645	1730	.75	Have meeting with Greg Q
1730	1815	.75	Help Tim L back up Trailer. Work on lights
1615	1900	.75	Mob to Tampa

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
814/CME	Tim L. Stewart M.	20

PROGRESS	TASK	DATE	SITE HYDROLOGIST
		Wed 7-23-97	Tim Lohner

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
			6-17-97

ROMP SITE NAME/NUMBER: Chassahowitzka / TR20-3 (COREHOLE)

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Load PVC casing at Barnes Supply (Tampa
0815	0915	1.00	Travel to Brooksville
0915	0930	0.25	Meet with Stewart Murphy and leave reciept for PVC casing.
0930	1000	0.50	Travel to site
1000	1100	1.00	Unload supplies and spot air compressor
1100	1230	1.50	Run 2" water line approx. 150' from water well to corehole for suction line for Centrifugal Pump.
1230	1300	0.50	Lunch
1300	1400	1.00	Clean out 500 gal. tank and 5" suction hose. Change fittings on Big Red pump.
1400	1515	1.25	Mix gel and fill Mudder Goose and dig ditch for discharge from hole.
1515	1545	0.50	Hook up air compressor to Rig and circulate mud system.
1545	1600	0.25	Secure site
1600	1730	1.50	Travel to Tampa

Tim Lohner 7-23-97

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	21

PROGRESS	TASK	DATE	SITE HYDROLOGIST
20' of 19" hole 20' 16" casing	16" casing	7-24-97	None "Rick Lee"

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
19.5	1000'	Surficial	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3 core Hole 2

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0715	.25	~~Fuel up 447~~
0715	0830	1.25	Mob to TR-20-3
0830			Start to Drill 19" hole to 19.5
	1200	3.5	Set 20' of 16" PVC grout with 21-50# bgs
1200	1230	.5	Lunch
1230			Break down 2 7/8 If drill pipe in 5' lengths
			Mix up 35-50# cement bags get returns.
			Cement 4 Tubes back in 16" casing.
			Clean up site Secure well Load up 50'
			of 2" screen for Chris T, Load up chains
	1500	2.5	for Kevin D
1500	1600	1	Do paper Work
1600	1630	.5	Mob to Drill
1630	1645	.25	Unload chains for Kevin
1645	1700	.25	Talk to Greg
1700	1800	1	Mob to Tampa unload PVC for Chris T
			Finish paper work

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		22
PROGRESS	**TASK**	**DATE**	**SITE HYDROLOGIST**
	Grout	7-28-97	Rick Lee
DEPTH	**PROPOSED TOTAL DEPTH**	**FORMATION/AQUIFER**	**DATE MOVED ON SITE**
31	1000'	Surficial	6-17-97

ROMP SITE NAME/NUMBER TR-20-3-B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0100	0730	.5	Check out #447
0730	0845	1.25	Mob to TR-20-3-B
0845			Take water levels. Read rusty note
			wrote by Jim Clayton about old water sample
	1200	3.25	Mix up 30-50#
1200	1230	.5	Lunch
1230			Drill 5 7/8" hole from 18' to 30' Rock drilling
			10% circulation. Trip MJR Trip in HW 4" to 30'
			with 31' casing Trip in NQ Clean out hole
	1615	3.75	Set rig up for NQ Secure well & site
1615	1730	1.25	Mob to Tampa
			Water Levels S 9.75' A 8.5

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		23
PROGRESS	TASK	DATE	SITE HYDROLOGIST
29'	core	7-29-97	Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
59	1000'	floridan	6-17-97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER TR-20-3-B
FROM	TO		DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3-B
0815			Take water levels, set well A up for
	0900	.75	air lift
0900			Develop core hole A & try to fix moro
			pump motor like BB KW said to. Go
	1100	2	to town to get new bushing fix it
1100			Call Greg about moro pump. He says to plum
	1200	1	in big red and use it
1200	1230	.5	Lunch. Go to town run my own tin to get part
			for moro pump
1230	1600	3.5	Core from 30' - 59'
1600	1615	.25	Hose blew out repair hose
1615	1645	.5	Trip out 5' NQ pipe Secure well & site
1645	1600		Mob to Tampa
			water levels S 9.8 A 8.85

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		24
PROGRESS	TASK	DATE	SITE HYDROLOGIST
25'	core	7-30-97	Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
84'	1000	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3-B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0745	.75	Mob to HQ
0745	0815	.5	Pick up subs + phone + paper work
0815	0900	.75	Mob to TR-20-3
0900	0930	.5	Fuel rig Take water levels
0930	1115	1.75	Trip in hole to 59' Core from 59' to 84'
1115	1230	.75	Trip NQ + HW casing Trip in 5⅞ bit
1230	1300	.5	Lunch
1300			Drill 5⅞" hole from 30' to 74'
			Trip out NJR + 5⅞ bit. Set 75.5' of
	1545	2.75	HW casing Drill out with 5⅞ bit Trip NQ
1545	1600	.75	Develop core hol at 84' at 25 gpm
1600	1615	.25	Take water sample
1615	1630	.25	Secure well + site
1630	1645	.25	Call Trey
1645	1800	1.25	Mob to Tampa
			Water level S 9.78 A 9.8

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		25
PROGRESS 40'	TASK Core	DATE 7-31-97	SITE HYDROLOGIST Rick Lee
DEPTH 124'	PROPOSED TOTAL DEPTH 1000'	FORMATION/AQUIFER floridan	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER: TR-20-3 B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob To TR-20-3
0815	0900	.75	Take water level
0900	1025	1.50	Core from 84' to 104'
1025	1035	.20	Air lift hole at 104'
1035			Core from 104' to 124' have core problem
	1230	2.5	with core falling out or falling up
1230	1300	.5	Air lift core hole
1300	1330	.5	Trip
1330	1345	.25	Air lift to set pumping rate Take water samp
1345	1400	.25	Core from 124 to 129' No recovery
1400			Call Jay about no recovery. He says to
	1415	.25	set back on water flows try 5' run again
1415			Core from 129' to 134' No recovery try
	1500	.75	out 50' of NQ
1500			Secure well + site Do paper work
			water levels S 9.82 M 9.8 B 10.9

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D	Rick Lee	26

PROGRESS	TASK	DATE	SITE HYDROLOGIST
15'	coring	8-4-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
149'	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0715	.25	Wait on mechanic to find out status of #447
0715	0800	.75	Transfer tools from #447 to #427 Fuel up
0800	0830	.50	Mob to Boell
0830	0900	.50	Load up small test sub pump
0900	1000	1	Mob to TR-20-3
1000			Trip in to 134' Core from 134 to 139' 10% recov
			Trip out NQ pipe. NQ has old core stuck inside
	1200	2	barrel
1200	1230	.5	Lunch
1230			Trip in To 105' NQ stops ream back to 139'
	1430	2	air lift core hole. Pat shows me about pace
1430			Core from 139' to 149' making 2.5' runs.
	1615	1.75	air lift core hole. Call in to Greg
1615	1730		Mob to Tampa
			water levels 59.63'A 9.63'B 10.72

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George.D, Rick.Lee, Greg.M,		27
PROGRESS	TASK	DATE	SITE HYDROLOGIST
35'	Coring	8-5-97	Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
184'	1000'		6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3
0815	0900	.75	Take water levels
0900	1000	1	Start to Core from 149' TO 159'
1000	1		Air lift core hole & swab out NQ. Do
	1400	6	packer test 141'
1400	1600	2	Start to core from 159' TO 174'
1600			Air lift core hole. Start to core from 174' to 1
	1615	.25	void from 174.5' TO 181'
1615	1645	.5	Air lift core hole
1645	1700	.25	Secure well & site
1700	1815	1.25	Mob to Tampa
			Water levels S 9.62' A 9.62' B 10.2'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Murphy		28
PROGRESS 15'	TASK Coring	DATE 8-6-97	SITE HYDROLOGIST Rick Lee
DEPTH 199'	PROPOSED TOTAL DEPTH 1000'	FORMATION/AQUIFER floridan	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0715	.25	Fuel 427
0715	0830	1.25	Mob to TR-20-3
0830	0900	.5	Take water levels
0900	1100	2	Develop core hole pulling some sand
1100	1245	1.75	Set packer at 171' run test
1245	1315	.5	Lunch
1315	1545	3	Start core at 184' TO 199'
1545	1600	.25	Air lift core hole pulling some sand
1600	1615	.25	Secure well & site
1615	1730	1.25	Mob to Tampa
			Water levels S 9.6' A 9.6' R 10.7

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D S, Murphy		29
PROGRESS	**TASK**	**DATE**	**SITE HYDROLOGIST**
50'	5 5/8 Rotary	8-7-97	Rick Lee
DEPTH	**PROPOSED TOTAL DEPTH**	**FORMATION/AQUIFER**	**DATE MOVED ON SITE**
110'	1000'	Avon park	6-17-97

ROMP SITE NAME/NUMBER TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3B
0815	0900	.75	Take water levels
0900			Trip in to 174' Ream hard to 199'
	1030	1.5	air lift
1030			Stall pulling sand. We have to advance H
	1300	2.5	casing. Trip out NQ + HW
1300	1330	.5	Lunch
1330			Trip in 5 5/8 bit to 60' Drill to 110'
	1500	1.5	Trip back up to 80' 100% circulation loss
1500			Secure well + site Do paperwork
	1600		Call Greg
1600	1730		Mob to Tampa turn in paperwork
			Water levels S 9.62' A 9.62' B 10.7'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D	Rick Lee	30

PROGRESS	TASK	DATE	SITE HYDROLOGIST
75 of 5/187 of 4"	set 4"	8-11-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
185'	1000'	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0800	1	Fuel up Lee up
0800	0915	1.25	Mob to TR-20-3B
0915	0945	.5	Take water levels
0945			Trip 5⅞" bit to 110' drill to 185'
	1200	2.25	100% lost circulation
1200	1230	.5	
1230	1300	.5	Bad weather. lightning + rain
1300	1545	2.75	Trip bole set 187' of HW4" casing 186" BLS
1545	1615	.5	Secure well + site
1615	1730	1.25	Mob to Tampa
			water levels S 9.5' A 9.5' B 10.8'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D	Tim L	31

PROGRESS	TASK	DATE	SITE HYDROLOGIST
20'	core	8-12-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
229'	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3B
0815	0900		Take water levels
0900			Trip in 3 3/4" bit ream out 4" to 199'
	1230	3.5	trip out mjr trip in NQ. Swab & air lift
1230	1300	.5	Lunch
1300	1330	.5	air lift
1330	1700	3.5	Core from 199' to 229' secure well & site
1700	1815	1.25	Mob to Tampa
			water levels A 9.21' B 10.34'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim C		32
PROGRESS	TASK	DATE	SITE HYDROLOGIST
50'	coring	8-13-97	Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
274	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3B
0815	0845	.5	The water levels
0845	0930	.75	Air lift fuel air compressor
0930	1200	2.5	Core from 224' to 244' air lift
1200	1230	.5	Lunch
1230	1600	3.5'	Core from 244' to 274' air lift
1600	1615	.25	Secure well + site
1615	1730	.75	Mob to Tampa
			water levels A 9.2' B 10.35'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		33
PROGRESS packer	TASK ~~Packer~~	DATE 8-14-97	SITE HYDROLOGIST Rick Lee
DEPTH 2741	PROPOSED TOTAL DEPTH 1000'	FORMATION/AQUIFER floridan	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3B
0815	0845	.5	Take water levels
0845	1030	1.75	Ri left hole & ~~unit~~ WCO set up packer
1030	1200	1.5	Set packer up & pump
1200	1400	2	start test + ½ hour lunch
1400	1500	1	Remove packer, & clean set, pack up
1500	1615	1.25	Do paper work, load up generator
1615		1.25	Mob to Jasper

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		34
PROGRESS 40'	TASK core	DATE 8-18-97	SITE HYDROLOGIST Rick Lee
DEPTH 314	PROPOSED TOTAL DEPTH 1000'	FORMATION/AQUIFER floridan	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0730	.5	Load up 447
0730	0800	.5	Mob to HQ
0800	0845	.75	Load up generator + pick up spare plane
0845	0915	.5	Mob to TR-20-3
0915	0930	.25	Take water levels
0930	1000	.5	Service rig
1000	1145	1.75	Core from 274' to 289'
1145	1215	.5	Lunch
1215	1400	1.75	Core from 289' to 304' making 2.5' run
1400	1500	1	Air lift pulling some sand
1500	1630	1.5	Core from 304' TO 314'
1630	1700	.5	Air lift became rig + well
1700	1815	1.25	Mob to Tampa
			water levels S 9.36' A 9.4' B 10.5'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	35

PROGRESS	TASK	DATE	SITE HYDROLOGIST
25'	Coring	8-19-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
339'	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0830	1.5	Mob to TR-20-3
0830	0900	.5	Take water levels
0900	1000	1	Air lift well at 310' and 290'
1000	1030	.5	Take Bailer sample
1030	1200	1.5	Core from 314' TO 329'
1200	1230	.5	Lunch. Air lift
1230	1300	.5	Air lift at 300'
1300	1330	.5	Take bailer sample
1330			Start core at 329' to 339' had to go to
			1' runs barrel pecks off. Inner barrel
	1500	1.5	stuck Call Greg. He not in
1500	1600	1	Trip tole to see why inner barrel is stu
1600	1630	.5	Rock stuck. inner barrel to core barrel
1630			Secure site + well Call Greg
	1745	1.25	Mob to Tampa
			water levels S 9.36' A 9.4' B 10.5'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	36

PROGRESS	TASK	DATE	SITE HYDROLOGIST
10'	Coring	8-20-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
349'	1000'	flor. dan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0800	1	Mob To HQ
0800	0845	.75	Pick up supplies
0845	0915	.5	Mob to TR-20-3
0915	0945	.5	Take water levels
0945			Trip in hole to 324' Ream To 339'
	1130	1.75	air lift
1130	1200	.5	Lunch
1200	1400	2	Core from 339' to 349'
1400	1515	1.25	Air lift 349' and 329'
1515	1545	.5	Take bailer samples
1545	1645	1	Do paper work secure rig + well
1645			Mob to Tampa
			water levels S 9.39' A 9.39' B 9.5'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George DeGroot	37

PROGRESS	TASK	DATE	SITE HYDROLOGIST
0	CR	8-25-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
349'	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0800	1730	10	Did NOT Core Due To theft

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	38

PROGRESS	TASK	DATE	SITE HYDROLOGIST
20'	CR	8-26-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
369'	1000'	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0715	.25	Fuel up 447
0715	0830	.75	Mob to TR-20-3
0830	0900	.5	Take water levels
0900	0930	.5	Take bailer sample
0930	1000	.5	Repair air compress wont start
1000	1030	.5	Air lift
1030	1245	2.25	Set packer run test Take 1/2 hr. Lunch
1245	1315	.75	Take bailer samples
1315	1345	.5	Remove packer
1345	1430	.75	Core from 349' to 354' Air lift
1430	1530	1	Core from 354' - 364' Air lift
1530	1600	.5	Core from 364' - 369'
1600	1630	.5	Secure well + site
1630	1745	1.25	Mob to Tampa
			Water level S 9.52' A 9.52' B 10.61'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	39

PROGRESS	TASK	DATE	SITE HYDROLOGIST
25'	CR	8-27-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
394'	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TA-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3
0815	0845	.5	Take water levels
0845	0900	.25	Fill out time sheets
0900	1030	1.5	Core from 369' to 379'
1030	1200	1.5	Air lift Take bailer samples
1200	1230	.5	Lunch
1230	1330	1	Set packer run test Take ½ hr Lunch
1330	1400	.5	Take Bailer samples
1400	1600	2	Core from 379 to 394' Air lift
1600	1630	.5	Secure well + site
1630	1715	.75	Set up keys to take in for spares
1715	1830	1.25	Mob to Tampa
			water levels S 9.56' A 9.56' B 10.68'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		40
PROGRESS	TASK	DATE	SITE HYDROLOGIST
5'	CR	8-28-97	Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
399	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3
0815	0845	.5	Take water levels
0845	0930	.75	Service rig
0930	1030	1	Greg arrives at site Have meeting
1030	1045	.25	Air lift Take water sample
1045	1100	.25	Core from 394' to 399'
1100			Rig down due to transmission Call Bob
	1200	1	Bob said he will be here in 2 hours
1200	1230	.5	Lunch
1230			Rig down John the welder arrives on
			site to beef up hinges on tool trailer
			Rebuild packer fix step on rig trip
	1430	2	up 10' fill out speedys
1430			Bob arrives on site to look at rig
	1500	.5	he will come back on 8-29-97 to repair
1500	1615	1.25	Mob to trailer
1615	1700		Do paper work

water levels S 9.6' A 9.6' B 10.72'

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D, Tim L	41

PROGRESS	TASK	DATE	SITE HYDROLOGIST
52.5'	CR	9-2-97	Rick Lee 0915 to 1000 Tim Clayton

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
451.5	1000'	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3 B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0730	.5	Check out pool truck #478 move stuff from #407
0730	0815	.75	Mob to P.O.
0815			Talk to Bert Wilson about rig. Pick up drill rods from John
	0830	.25	Talk to Ken D
0835	0900	.5	Mob to TR-20-3B
0905	0930	.5	Take water levels S 9.7' F 9.7' D 10' 0910 Jim arrives
0930	1000	.5	Repair air line
1000	1015	.5	Air lift at 399' lots of cuttings
1015	1100	.75	Core from 399 to 409 air lift
1100	1115	.25	Develop well at 409 and 20' up Take Bailer sample
1115	1300	1.75	Core from 409 to 424 air lift
1300	1330	.5	"Lunch" Develop well
1330	1400	.5	Develop well 20' up from 424 Take Bailer sample
1400	1530	1.5	Core from 424 to 439 air lift
1530	1600	.5	Develop well 20' up from 439 Take Bailer sample
1600			Core from 439 to 451.5 making 30" runs bit plugged at 4[illegible]
	1745	1.75	air lift
17.45	1800	.25	Secure site & well
1800	1915		Mob to tampa

Start 1594
End 1601

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	42

PROGRESS	TASK	DATE	SITE HYDROLOGIST
32.5	CR	9-3-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
484	1000	floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3 B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3
0815	0845	.5	Take water levels S 9.71' A 9.69' B 10.82'
0845	0900	.25	Core from 451.5 TO 454' air lift
0900	1000	1	Develop well at 454 and 20' [illegible]
1000			Core from 454' TO 469' making short runs "clay"
	1330	5.5	air lift
1330	1400	.5	Develop well + Lunch
1400			Core from 469' to 484 making short runs
	1830		"clay + soft rock" air lift
1830	1845		Trip up 13' off of bottom to run [illegible]
			samples in tommorow morning. Secure well
			site
1845	2000		Mob to Tampa

Start 1601
end 1610

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW George D Tim L		REPORT NO. 43
PROGRESS 30 1 packer TD	TASK CR	DATE 9-4-97	SITE HYDROLOGIST Rick Lee
DEPTH 514	PROPOSED TOTAL DEPTH 1000	FORMATION/AQUIFER Floridan	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3B
0815	0845	.5	Take water levels S 9.72' A 9.7' B 10.78' WQ 10.35
0845	0945	1	Take bailer samples. swab out WO air lift
0945	1130	1.75	Core from 480 To 499 air lift
1130	1200	.5	Develop well 20' up from 499 Take bailer sam
1200	1245	.75	Greg arrives on site look at CME 85
1245	1300	.25	Take bailer samples
1300	1330	.5	Core from 499' TO 504'
1330	1400	.5	Lunch with Greg + Mark + CME
1400	1530	1.5	Core from 504' TO 514 air lift
1530	1730	2	Develop well + swab pkr set packe
1730	1845		Start Test Dig pit load up back
1845	1915		Remove water level tape + well
1915			Mob to 40 Drop off bailer

Start 3rd

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George LeGrost	4/4

PROGRESS	TASK	DATE	SITE HYDROLOGIST
20 1 packer Test	CR	9-8-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
539	1000'	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0715	.25	Check out pool truck Fuel up
0715	0800	.75	Mob to yd Q
0800	0815	.25	Turn in paper work. Talk with Rick Lee
0815	0845	.5	Mob to TR-20-3
0845	0915	.5	Take water levels S 9.75 A 9.75 B 10.86'
0915	0945	.5	Take baler samples
0945			Core from 514' to 521' got stuck in hole
	1030	.75	work NQ pipe + air lift
1030			Pipe free pulling lots of sand + air lift
	1200	1.5	rebuild packer
1200	1230	.5	Develop well 501' take baler sample
1230			Core from 521 to 531' air lift
	1415	1.75	Take Test
1415			Develop well 20 ft from 534' take baler s
	1600	1.75	Work hole NQ, air lift
1600	1715	1.25	Set packer run test
1715			Wait on water level, take baler samp
	1845	1.5	Remove packers, secure well + site
1845	2000	1.25	Mob to Tampa

12.5

Start 1617
end 1623

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D	Tim L	45

PROGRESS	TASK	DATE	SITE HYDROLOGIST
45' 1 packer test	CR	9-9-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
579	1060'	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3S

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR 20-3S
0815	0845	.5	Take water levels S 9.77' A 9.77' D 10.94'
0845	1015	1.5	Core from 534' to 549' air lift
1015	1045	.5	Develop well 20 gpm from 549' "rebuild packer"
1045	1245	2	Core from 549' to 564' air lift
1245	1315	.5	Develop well "Lock"
1315	1430	.75	Swab NO Develop NO Trip up set packer
1430	1530	1	Run test
1530			Wait on water level Take water sample
	1600	.5	Remove packer
1600	1800	2	Core from 564 to 579' air lift
1800	1815	.25	Secure well & site

1800

10.75

Lat. 1623
and 1632

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D		46
PROGRESS	**TASK**	**DATE**	**SITE HYDROLOGIST**
30'	CR	9-10-97	Rick Lee
DEPTH	**PROPOSED TOTAL DEPTH**	**FORMATION/AQUIFER**	**DATE MOVED ON SITE**
609	1000'	Floridan	6-17-97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER TR-20-3B
FROM	TO		DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3R
0815	0845	.5	Take water Levels @ 9.8' A 9.76' B 10.91'
0845	0930	.75	Rig down due to swivel repair
0930	1000	.5	Take Bailer sample
1000	1145	1.75	Core from 579' to 594' air lift
1145	1215	.5	Develop well 20' up from 594' Take Bailer sample
1215	1430	2.25	Core from 594 to 609' air lift
1430	1500	.5	Develop well & "Leach"
1500	1600	1	Swab NO air lift set packer
1600			Packer deflated. trip packer tear down
	1800	2	packer all the way & and rebuild
1800	1915	1.25	Mob to Tampa

11.75

start 1632
end 1638

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George D Tim L	47

PROGRESS	TASK	DATE	SITE HYDROLOGIST
	CR	9-15-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
	1000'	Floridan	6-17-97

MILITARY TIME TIME LOG		ELAPSED TIME	ROMP SITE NAME/NUMBER TR-20-3B
FROM	TO		DETAILS OF OPERATIONS
0700	0730	.5	Check out pool truck fuel up
0730	0845	1.25	Mob to TR-20-3B
0845	0915	.5	Take water levels 59.76' A 9.76' B 11.09'
0915	0945	.5	Air develop well
0945	1015	.5	Set packer
1015	1130	1.25	Stat. packer test at 596' Take Data & water C
1130	1200	.5	Remove packer
1200	1230	.5	Lunch
1230	1545	3.25	Core from 609' TO 624' Rod drilling air lift
1545	1830	2.75	Core from 624' TO 639' air lift
1830	1845	.25	Secure rig & well
1845	2000	1.25	Mob to Tampa

Start 1638
end 1646

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim L		48
PROGRESS	TASK	DATE	SITE HYDROLOGIST
15' packer test	CR	9-16-97	Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
654'	1000'	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3a

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3
0815	0845	.5	Take water level = 9.77' A 9.77' B 11.0'
0845	1215	3.5	Core from 63' to 654' air lift
1215	1245	.5	Develop well Surf
1245	1315	.5	Develop well
1315			Trip up to set packer at 605
	1445	1.5	install set
1445	1600	3	Start test
1600			End test leave packer in hole
	1615	.25	rig up back for switch back
1615	1830	.25	Secure rig + well + site
1830	1945		Mob to Tampa

Start 1646
end 1651

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D	Tim L	19

PROGRESS	TASK	DATE	SITE HYDROLOGIST
	Loging	9-17-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
654	654	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3B
0815	0845	.5	The water levels S 9.8' A 9.8' B 10.89' N3 16
0845	0930	.75	Pre meeting with Ste Mundy about supplies
0930	1000	.5	Take both samples remove packer
1000	1130	1.5	Trip hole
1130	1230	1.	Make up new core barrel
1230	1300	.5	Lunch
1300			Kevin arrives on site. Log hole
			Rebuild packer
	1700	4	Probe set attempt at 1145
1700	1715	.25	Leave well & site
1715	1830	1.25	Mob to Tampa

Start 1651
end 1654

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George & Tim L		50
PROGRESS	TASK	DATE	SITE HYDROLOGIST
	Logging	9-18-97	Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
	554'	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3C

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3C
0815	0845	.5	Take wate levels S 97' A 9.66' D 11.
0845			Trip in to clean hole to 650'
	1100	2.25	Trip up to 550
1100	1200	1	Start logging
1200	1230	.5	Lunch
1230	1330	1	Start logging
1330	1345	.25	Trip up to 450'
1345	1415	.5	Start logging
1415	1430	.25	Trip up to 350'
1430	1515	.75	Start logging
1515	1545	.5	Trip all the way out
1545	1700	1.25	Start logging
1700	1715	.25	Done logging secure well + site
1715	1830	1.25	Mob to Tampa

Start 1654
and 1657

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George L Tim L	51

PROGRESS	TASK	DATE	SITE HYDROLOGIST
Pump 40bbl cement	Backplug	9-22-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
?	654'	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0715	.25	Check out pool truck
0715	0800	.75	Mob to PHQ
0800	0930	1.5	Have Meeting with Rick Lee
0930	1000	.5	Mob to TR-20-3A
1000	1030	.5	Take water levels S 9.66 A 9.66 B 10.9
1030	1200	1.5	Trip in 1" tremie
1200	1215	.25	Tremie stops at 590' Tie to work line
1215	1245	.5	Lunch
1245			Call Rick to tell him abt 590' Top
	1330	.75	He says to pump cement from 590' to 500'
1330	1400	.5	Mix up 45 gallons of cement
1400			Pump 45 gallon Trip up tremie 120'
	1700	3	Repair Pressure on good & service rig
1700			Trip in Tremie it stops at 490' Call
		.25	Rick. He says to call it a day
1715			Secure well & site. Lunch my
	1730	.25	Knee clinic on rig
1730	1845	1.25	Mob to HQ to talk to Ty about K
1845	1930	.75	Mob to Tampa

Start 1657
end 1660

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
CME	George O. Tim L. Earl Young	52

PROGRESS	TASK	DATE	SITE HYDROLOGIST
	Back plug	9-23-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
	654'	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3A

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0715	.25	Fuel up 478#
0715	0800	.75	Mob to 94Q
0800	0830	.5	Check out Earl safety Equipment & uniforms
0830	0930	1.	Have meeting with Tim & Rick & Earl about well
0930	1000	.5	Mob to TR-20-3A
1000	1030	.5	Take water levels S 9.69' A 9.69' B 11.
1030	1200	1.5	Trip out 1" Trimmie trip in MTR To 585
1200	1230	.5	Lunch
1230			Trip out MTR trip in 1" Trimmie
			1" Trimmie stops work Trimmie down
	1500	2.5	To 585
1500			Mix and pump 40 sk cement
	1600	1	Trip up hole 120'
1600	1615	.25	Secure well & site
1615	1730	1.25	Mob To Tampa

(10)

start 1660
end 1664

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D Tim ! Earl Y		53
PROGRESS	TASK Back plugs	DATE 9-24-97	SITE HYDROLOGIST Rick Lee
DEPTH	PROPOSED TOTAL DEPTH 654	FORMATION/AQUIFER Floridan	DATE MOVED ON SITE 6-17-97

ROMP SITE NAME/NUMBER: TR-20-3A

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3A
0815	0845	.5	Take water levels S 9.7' A 9.7' B 10.[illegible]
0845			Trip 1" down to 601 trip up mix up
	1015	1.5	50 gal with 5% bentonite trip up 120'
1015	1230	2.25	Clean up site of wornout 100 in dumper
1230	1300	.5	Lunch
1300			Try cement trip in trimmie to 601'
			Pump down 55 gal of gell
			Mix + pump 40 gal cement with 5% ge
	1415	1.25	trip up 120'
1415	1700	2.75	Clean up Hoose set road ready
1700			Trip in trimmie to 601' pump 50 gal
	1800	1	gel Mix + pump 50 gal cement
1800	1815		Secure rig + well
1815	1930		Mob to Tampa

12

start 1664
end 1667

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
	George D Farin	54

PROGRESS	TASK	DATE	SITE HYDROLOGIST
		9-25-97	Rick Lee

DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
	654	Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0745	.75	Mob to HQ
0745	0800	.25	Pick up time sheets for Earl
0800	0830	.5	Mob to TR-20-3A
0830	0900	.5	Take water levels WS 9.7' UFL 9.7' B 10.9
0900			Trip in Drummie Tag up at 600'. Pump 55 gal mud Mix and pump 40 gal cement with
	1000	1	5% Bentonite trip up 120'
1000	1200	2	Clean Rig
1200	1230	.5	Lunch
1230	1300		Clean Rig
1300			Trip in Drummie To 599 Mix up 55 gal of gel Mix + pump 40 Sack of cement
	1400	1	+ 5% Bentonite trip up 120'
1400	1630	2.5	Clean Rig
1630			Trip in Drummie To 500' Mix up 55 gal of gel Mix + pump 40 Sack of cement
	1730	1	Pull up 120'
1730	1745	.25	Secure well + site
1745	1900	1.25	Mob to Tampa

Start 1607
end 1670

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	George D, Tim L, Earl Y		55
PROGRESS	TASK: Back plug	DATE: 9-29-97	SITE HYDROLOGIST: Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER: Floridan	DATE MOVED ON SITE: 6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0730	.5	Check out pool truck
0730	0815	.75	Take Earl to HQ to straiten out paper work
0815	0900	.75	Earl goes to finance I talk to Jim C
0900	0930	.5	Mob to TR-20-3B
0930			Take water levels S 9.18' A 9.3' B 10.8
1	1000	.5	Trip trimmie in hole set top at 597.5'
			Trimmie 100 lbs of sand to 588'
			Mix + pump 35 gal with 5% bentonite
	1100	1	trip up 120
1100	1200	1	Clean up top of water truck
1200	1230	.5	lunch
1230	1330	1	Clean up top of water truck
1330			Trip Trimmie in to top cement at 538'
			Mix and pump 15 gal with 5% bentonite
	1430	2	Trip up 120
1430			Move and clean up NQ trailer move coring trailer
	1630	2	over
1630			Trip in trimmie to top cement 516'
	1700	.5	Mix and pump 10 gal trip up 40, sound
1700	1815	1.25	Mob to HQ to pick up 5' of 2"
1815	1900	.75	

1670
1673

(11.5)

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME: CME	CREW: George D Tim L Earl Y		REPORT NO. 56
PROGRESS: set 2 well	TASK: Install 2" well	DATE: 9-30-97	SITE HYDROLOGIST: Rick Lee
DEPTH: 190'2"	PROPOSED TOTAL DEPTH: 500'	FORMATION/AQUIFER	DATE MOVED ON SITE: 6-17-97

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0830	1.25	Mob to HQ to talk to Bob Wilson
0830	0900	.5	Mob to TR-20-3B S 9.11' A 9.10' R 10.36
0900	0930	.5	Take water levels
0930			Tag cement at 478' trip out 1" tremie
			trip in 160' of 2"-10 slot screen 30' of blank
			2.5' of screen. add 6" of pellets on top of
	1200	2.5	packer
1200	1230	.5	Lunch
1230			Tremie in 6/20 sand to 28' BLS using
			60-50# bags 1 bag bentonite pellets to 25' BLS
	1615	3.75	Grout in 2" with 10-50# bags cement
1615	1630		Secure well + site
1630	1745		Mob to Tampa

start 1673
end 1678

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW	REPORT NO.
	George D Earl Y	57

PROGRESS	TASK	DATE	SITE HYDROLOGIST
	Grout	10-1-97	Rick Lee

DEPTH L	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
	478'	Floridan	

ROMP SITE NAME/NUMBER: TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0815	1.25	Mob to TR-20-3B
0815	0845	.5	Take water levels S 9.1' A 9.1' B 10.8
0845			Top cement at 17' Grout to surface with
	1200	3.25	46 Rds 50# Install 12" puc riser Check Bottom
1200	1230	.5	Lunch
1230	1330	1	Develop well
1330	1400	.5	Check Bottom
1400	1600	2.0	Rig down rig
1600	1700	1	Mob rig to TR-20
1700	1745	.75	Mob to Tampa

10.25

Start 1678 13972
end 1680 13998

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW		REPORT NO.
CME	Grace D	Earl 4	58
PROGRESS	TASK	DATE	SITE HYDROLOGIST
	Repair	10-2-97	Rick Lee
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER	DATE MOVED ON SITE
		Floridan	6-17-97

ROMP SITE NAME/NUMBER: TR-20-3D

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0900	1730	10	Rig down due to repairs
			Transmission, crown shims, Hydro valve
			Governer, throttle cable

SWFWMD GEOHYDROLOGIC DATA
DAILY DRILLING/CORE REPORT

RIG NO/NAME	CREW George D Earl Y	REPORT NO. 59
PROGRESS	TASK Move Trailers	DATE 10-6-97
DEPTH	PROPOSED TOTAL DEPTH	FORMATION/AQUIFER Floridan
SITE HYDROLOGIST Rick Lee		
DATE MOVED ON SITE 6-17-97		

ROMP SITE NAME/NUMBER TR-20-3B

MILITARY TIME TIME LOG FROM	TO	ELAPSED TIME	DETAILS OF OPERATIONS
0700	0800	1	Fuel up 447 tie up Rig down
			Due to Transmision, Hydro Valve, Rig Brakes
0800	0915	1.25	Mob to TR-20-3B
0915			Tampa dump loader was arrive on site
	1200	2.75	to move trailer out to the road
1200	1230	.5	Lunch
1230			Clean up pre scrap fill in mud pits
	1400	1.5	with backhoe
1400	1445	.75	Mob to TR-12 with air compressor
1445	1530	.75	Work on repairs with Bob + Earl
1530	1645	1.25	Mob pump truck to Gibbons
1645	1730	.75	Mob to Tampa

10 hrs