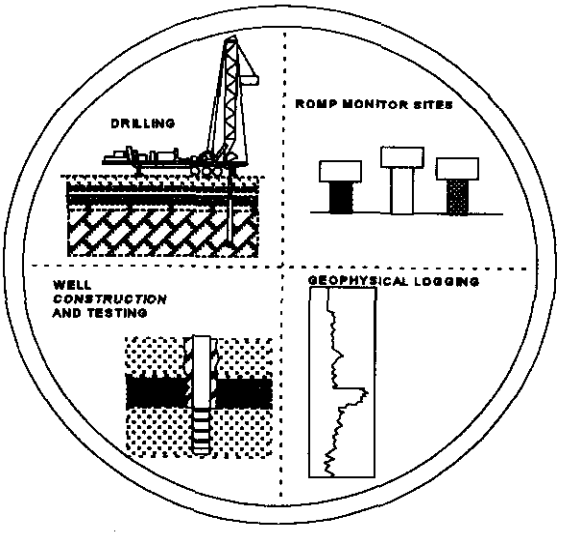
DRILLING AND TESTING REPORT
ROMP 22-UTOPIA



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DRILLING AND TESTING REPORT
ROMP 22 UTOPIA
WATER RESOURCE ASSESSMENT PROJECT
SARASOTA, FLORIDA

JANUARY, 1995

The geological evaluation and interpretations contained in the ROMP 22 Drilling and Testing Report, were prepared by, or reviewed by, a certified Professional Geologist in the State of Florida.

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1.0 PROJECT DESCRIPTION

The Regional Observation and Monitor-Well Program (ROMP) has completed hydrogeologic investigations for the Water Resource Assessment Project (WRAP) Site No. 7, Utopia. The objective of the project is to define aquifer characteristics from land surface to the base of the upper Floridan aquifer. The ROMP provided the following services: test well drilling, well construction, formation packer testing, and aquifer performance tests (APTs). In conjunction with the drilling and testing program, the ROMP provided project oversight during the collection of water quality samples (for water quality profiles, geophysical logs, hydrologic data for profiling, and lithologic data. During the construction of the observation/monitor wells, hydrogeologic data was collected from the surficial, intermediate and the upper Floridan aquifer systems. A site location map is included as Figure 1. Locations of all monitor-wells completed to date are shown in Figure 2.

The following report contains the data collected during the core drilling, well construction, and testing of the monitor-wells for the site.

2.0 SITE LOCATION

The ROMP 22 (WRAP No. 7) wellsite is located near Utopia, Sarasota County, Florida. The wellsite can be found by proceeding 6.2-miles east on S.R. 780 (Fruitville Road) from I-75. Turn right at the entrance of Hi-Hat Ranch and travel south 1.7 miles. Turn left (east) and continue traveling for one-half mile toward a pump station. The wellsite is approximately 600-feet southeast of the pump station. The wellsite is located in the northeast 1/4 of the northeast 1/4 of Section 31, Township 36 South, Range 20 East, at latitude 27°18'13" and longitude 82°20'12".

3.0 DRILLING METHODS AND DATA COLLECTION

Initial exploratory drilling was conducted from June to August of 1991, starting with hollow-stem auger drilling from 0-16.0 feet below land surface (BLS), followed by split spoon sampling from 12.5-34.0 feet BLS. Continuous wire-line coring was initiated at 34.0 feet BLS and continued to a depth of 1204 feet BLS. Additional exploratory drilling was completed to a depth of 1813.0 feet BLS. The initial core drilling phase was conducted to determine the baseline hydrogeologic conditions and obtain lithologic information to determine well construction parameters. Subsequent to the determination of hydrogeologic conditions, the construction of a network of permanent monitors and temporary observation wells was initiated. Mud rotary techniques were employed to construct shallow monitors in the surficial and intermediate aquifers, as well as casing points for deeper monitors. Reverse circulation drilling techniques were employed to complete the network of monitor wells.

3.1 Collection of Lithologic Samples During Continuous Coring Operations

The initial exploratory drilling phase employed wire-line core drilling techniques. Lithologic samples were collected utilizing a Longyear continuous wire line sampling system. A temporary 4-inch flush thread steel casing was advanced to successively greater depths to facilitate the coring process. The lithologic samples were obtained with a 3-inch flush-thread NQ® wire-line sampling system, which utilizes a retrievable 1 7/8-inch inner barrel to collect the core samples, This drilling technique was employed to collect lithologic and water quality samples to 1204-feet BLS.

3.2 Collection of Lithologic Samples during Reverse-Air Drilling

Well cutting samples were collected at intervals of 5 to 10-feet from, 1204.0 to 1795.0-feet below land surface (BLS). The drill pipe volume and length of drill pipe were used to calculate the travel time for

the drill cuttings to circulate to the surface in order to assure a representative collection of formation samples with depth. The geologic samples were described using a rock color chart, hand lens, microscope (when applicable), and fossil identification guide. All lithologic samples were archived by the Florida Geologic Survey (FGS). A lithologic log, compiled by a Southwest Florida Water Management District (SWFWMD) Hydrologist and checked by the FGS for ROMP 22 is included as Appendix F. Daily drilling reports (i.e., compiled by the drill-crew supervisor(s) are included as Appendix H.

3.3 Collection of Water Samples for Laboratory Analysis

During the initial core-drilling phase, water samples were collected based on the relative production capacity of the formation, as determined from the lithologic description or by a marked increase in the potentiometric surface during drilling. Fluctuations in potentiometric levels and field water quality data dictated the collection schedule for analytical laboratory samples. Water samples were collected on intervals of 20 to 40-feet. Subsequent, to the advancement of the core rods the inner barrel is retrieved utilizing the wire-line system. The drill string is left on bottom and the borehole is evacuated utilizing a reverse-air purging technique. This purging process is continued, with the drill string raised 20-feet off bottom, until at least one volume of water is removed from the borehole. "One volume" of water is defined as the amount of fluid (ie., water) that has been recirculated to continue the drilling process. The volume of water is recorded by a totalizing flow-meter which can be consulted during the drilling and purging process. Following the purging process, a wire-line stainless-steel bailer is lowered in the core rods to a point approximately 12-feet below the core bit, which, corresponds to the sample interval. The water is transferred from the bailer to a pre-cleaned 1 gallon plastic jug, and a small portion is used to measure temperature, fluid conductivity, and pH (i.e., standard field analysis). The remaining sample is run through a filtration apparatus equipped with a 0.45 micron filter membrane. The sample is split, and a portion is analyzed in the field for sulfate and chloride. A partial or standard complete is collected for laboratory analysis based on fluctuations in field data. Chain-of-custody forms were used to track samples.

During the final phase of exploratory drilling water samples were collected at each drill pipe change (every 20-30 feet) during reverse-air circulation drilling. After advancing the exploratory drill string 20-30 feet, reverse-air circulation is maintained at the bottom of the hole to remove drill cuttings, and continued until the discharge water appeared relatively clear (several minutes). To collect a representative sample, the drill string was raised 20-30 feet, and circulation continued for several more minutes. Finally, the drill string is lowered back to bottom, and a wire-line bailer is lowered in the bore of the drill pipe, for sample retrieval. Water sample handling and field analysis techniques are the same as above. Tables(s) 2-10 presents the results of field and laboratory analysis. A detailed description of water

sampling techniques utilized during core and exploratory drilling are included in the ROMP comprehensive water quality sampling plan and is included as Appendix A.

3.4 Formation Packer Testing

Formation packer tests were conducted in the Avon Park Exploratory Monitor, and the Avon Park Production Well. The packer tests were conducted in the Ocala Limestone and non-permeable sections of the Avon Park Formation. Packer tests were conducted to determine the relative confinement characteristics of low-permeability sections within the Ocala Limestone and Avon Park Formation and, to collect a representative water quality sample for analytical laboratory analysis. The results of the packer tests are included in subsequent sections of this report. Appendix B presents a detailed explanation of the ROMP packer test methodology and data collection activities.

3.5 Aquifer Performance Test (APTs)

Subsequent to the construction of the observation and monitor well network, aquifer performance tests (APT) were conducted in the Lower Intermediate aquifer (Hawthorn Group), Suwannee Limestone, and the Avon Park Formation. Suwannee and Avon Park production wells (i.e., open-hole interval isolated to the tested unit) were utilized as pumping wells. Drawdown versus time values were collected in the production and observation wells. The pumping phase for the Lower Intermediate APT was run for 50 hours. The Suwannee and Avon Park APT(s) were run for 36 and 81 hours, respectively. The results of the tests are presented in subsequent sections of this report. The data collected, and preliminary aquifer analysis for the Lower Intermediate and Suwannee APTs are included as Appendix C. Data and aquifer analysis for the Avon Park Formation APT are included in Appendix D. Table 11 summarizes the resultant hydrologic data.

3.6 Geophysical Logging

Geophysical logs were run at various stages during test well drilling and construction. The geophysical logging tools were calibrated before use. The caliper tool was calibrated in the field. The multi-function tool was calibrated by the manufacturer (Century Geophysical) in 1990, and additional calibration events were preformed by the ROMP geophysical logging manager. A discussion of selected geophysical logs is included in Section 7.0 of this report.

4.0 GEOLOGY

The ROMP 22 wellsite lies within the physiographic province known as the Gulf Coastal Lowlands. The wellsite is located on Talbot Terrace at an approximate elevation of 35-feet NGVD. The Talbot Terrace was formed during one of the many fluctuations in Pleistocene sea level which inundated the Florida Peninsula during interglacial episodes (White, 1970).

Principal surface drainage in the wellsite vicinity is provided by Cow Pen Slough and Howard Creek, a small tributary of the Myakka River and the Lake Myakka drainage system. Natural drainage features in the wellsite area have been channelized and extensive ditch systems have been constructed to improve drainage in the flat terrain.

Geologic interpretations at ROMP 22 were made from lithologic materials collected during core drillling and exploratory drilling. The stratigraphic sequence and thickness of the formation underlying the site are presented on Figure 3.

The uppermost geologic unit in the wellsite vicinity is the Quaternary age Undifferentiated Surficial Deposits. These deposits are composed of fine to medium grained, iron stained quartz sand and alluvium to a depth of 18.6-feet BLS. These shallow marine deposits are composed of interbedded yellowish gray to light brown quartz sand and grayish green to moderate yellowish green, clayey quartz sand.

The top of the Hawthorn Group sediments was identified at a depth of 18.6 -feet BLS and extend to a depth of 373.5-feet BLS. The Hawthorn consists of the Peace River Formation and Arcadia Formation, ranging in age from Pliocene to early Miocene. The Peace River Formation extends from 18.6 to 64.7-feet BLS and consists of interbedded phosphatic clay, clayey sand, limestone, and dolostone. The Arcadia Formation underlies the Peace River Formation from 64.7 to 373.5-feet BLS, and includes the Tampa Member from 163.5 to 323.0-feet BLS, with undifferentiated Arcadia Formation continuing from 323.5 to 373.5-feet BLS. The Tampa member is primarily composed of calcilutite, clay, and minor amounts of calcarenite and dolomite. The upper undifferentiated Arcadia Formation consists of sandy, phosphatic calcarenite, calcilutite and clay. The sand component is composed of both quartz and phosphate grains. The base of the upper Arcadia consists of calcilutite with phosphate pebbles and streaked, mottled, yellowish green to light greenish clay. Some calcite-filled fractures and chert were described in core samples. A bed of dolostone extending from 363.5 to 373.5-feet BLS forms the base of the lower Undifferentiated Arcadia Formation.

The Suwannee Limestone (373.5 to 639.0-feet BLS), of Oligocene age, is composed primarily of light gray to yellowish-gray limestone. The limestone is typically packestone to grainstone, variably moldic with trace amounts of clay and quartz sand in the upper portion. The Suwannee Limestone appears to be hydraulically continuous and semi-confining beds are absent. The lower portion of the Suwannee is more calcilutitic and consolidated than the upper portion. Much of the Suwannee described at the site is fossiliferous, consisting of foraminfera (*Coskilina floridana, Gypsina globia, Rotalia mexicana, Sorites sp.)*, gastropod molds (Turitella), echinoid molds, spines, bryozoa and worm traces. A bed of light olive gray to grayish brown dolostone was described in core samples near the base of the formation. A light grayish green to light yellowish green laminated, plastic clay seam (638.0 to 639.9-feet BLS) appears to mark the unconformable contact with the underlying Ocala Limestone.

The Ocala Limestone (639.0 to 941.0-feet BLS) of late Eocene Age was differentiated from the overlying Suwannee Limestone on the basis of lithologic and faunal differences. Lithology ranges from a weathered wackestone to packstone with a variable amount of calcilutite matrix in the upper portion to a grainstone in the central and lower portions of the unit. The upper Ocala Limestone (638.0 to 808.0-feet BLS) consists of foraminiferal, chalky, fine grained, yellowish gray to light orange calcilutite and fine grained calcarenite. Between the depth of 808.6 to 832.5-feet BLS, the Ocala lithology becomes more crystalline and dolomitic. Interbedded calcilutite and dolostone were described in the core samples between 832.5 and 941.0 feet BLS. Subhedral to euhedral dolomite crystals were also identified in samples from the lower Ocala. Porosity is variable within this unit and is generally moldic and intergranular with occassional macrofossil molds. The foraminfera, *Lepidocyclina ocalana and Nummulites sp.*, were also identified in the core samples from the Ocala, as well as the echinoid, *Neolaganum durhamii.*

The Avon Park Formation was identified from the Ocala by lithologic changes, and the presence of organic material. Faunal indicators desribed in the Avon Park Formation include the echinoid *(Neolaganum dalli)* and the foraminifera (*Coskolina floridana).* Interbedded dolomitic limestone and massive crystalline, sucrosic dolostone is the predominant lithology. Fractured dolostone was identified in the core samples between 1143.0 to 1204.0-feet BLS. Core drilling activities ceased at 1204.0-feet BLS, and drill cuttings were collected from 1204.0 to 1795.0-feet BLS for lithologic description. The highly permeable zone in the Avon Park Formation is a moderate light to brown highly fractured dolomite. This zone is the primary production unit within the formation and is approximately 440.0-feet thick. In addition to drill cuttings, a 3-inch core sample was obtained from the Avon Park Formation utilizing a standard, rotary mud barrel assembly. The core was taken from the bottom of the exploratory borehole from 1795.0 to 1813.0-feet BLS. Intergranular gypsum and anhydrite was encountered in the Avon Park at 1730.0-feet

BLS. However, massive amounts of interbedded gypsum and anhydrite were encountered at a depth of 1795.0 to 1813.0-feet BLS. These deposits are nodular but also appear to have infilled the pore space within the formation material. The massive gypsum/anhydrite and gypsum-filled porosity characterize the lower lithology of the confining unit of the Upper Floridan Aquifer system.

5.0 HYDROLOGY

5.1 Surficial Aquifer System

The surficial aquifer system consists primarily of permeable quartz sand in the undifferentiated surficial deposits and extends from land surface to 18.6-feet BLS. Permeability decreases with depth due to lithologic variations. These marine terrace deposits are composed of clean quartz sands that grade downward into clayey sands to sandy clay beds.

Water levels in the surficial aquifer system at the wellsite vary in response to seasonal rainfall patterns, and from treated effluent water that is pumped into the nearby retention lake and surrounding fields. Water levels are variable, and appear to fall within a range of 1.0 to 5.0-feet BLS.

5.2 Intermediate Aquifer System

The intermediate aquifer system includes all permeable and confining units between the overlying surficial aquifer system and the underlying Floridan aquifer system. Locally the intermediate aquifer system consists of the confining beds and two semi-permeable zones within the Hawthorn Group sediments. A dolostone bed (31.0 to 34.0-feet BLS) was identified as the top of the intermediate aquifer system. The upper confining beds are composed of interbedded dolostone, clay, and calcilutite. These beds extend from 31.0 to 87.0-feet BLS and include clastics and carbonates belonging to the Peace River Formation and the upper Arcadia Formation.

The 1st transmissive zone is present in the upper Arcadia Formation (87.0 to 154.3-feet BLS). The zone monitored by the upper intermediate monitor is composed of fractured calcilutite, clay (107.3 to 123.5-feet BLS) and permeable calcarenite. Core analyses identified two intervals (139.0 to 141.0 feet BLS and 148.0 to 154.3-feet BLS) that displayed a significant percentage of porosity in this unit. The confining unit underlying the 1st transmissive zone extends from 154.3 to 233.2-feet BLS, and is composed of interbedded clay, chert, calcilutite and dolostone.

The 2nd transmissive zone is present from 233.0 to 363.5-feet BLS and is composed of calcarenite, quartz sand and sandstone of the lower Arcadia Formation. A small confining unit consisting of dolostone extends from 363.5 to 373.5 feet BLS, separating the intermediate aquifer system from the underlying Floridan aquifer system. The potentiometric surface is nearly the same in the two systems (i.e., 2nd transmissive zones and Floridan Aquifer).

5.3 Upper Floridan Aquifer System

The upper Floridan Aquifer system in descending order, is composed of the Suwannee Limestone, Ocala Limestone, and the Avon Park Formation. The top of the upper Floridan aquifer was identified at about 373.5-feet BLS by a vertically continuous calcilutite and calcarenite of the Suwannee Limestone. The base of the system was encountered at approximately 1730.0-feet BLS, corresponding with the first occurrence of vertically persistent sequence of intergranular evaporite minerals within dolostone and dolomitic limestone of the Avon Park Formation.

Although the formations comprising the Floridan aquifer are hydraulically continuous, several distinct permeable zones were identified from core analysis and review of cuttings obtained during advancement of the borehole during the exploratory drilling program. Two zones of increased permeability were identified. The upper permeable zone includes the Suwannee and Ocala Limestones, to a depth of 884.0-feet BLS. The lower permeable zone is seperated from the upper by semi-confining beds composed mostly of calcilutitic limestone. Continuing, the lower permeable zone is composed of permeable, fractured calcarenite, and extends from 1006.0 to 1520.0-feet BLS.

Some fracture features were described in the semi-confining beds which extend from 1114.0 to 1120.0-feet BLS. Review of the lithologic log, was instumental in the determination of the extent of the most permeable zone within the Avon Park Formation. In addition, geophysical logs were also consulted to delineate the zone. Fracture features, and resisitivty signatures as determined from caliper (CAL) and resistivity logs (16, 64 RES), indicated an area of fractured, moderate to highly recystallized dolomite. These fracture features increase from 1450.0 to 1560.0-feet BLS and resistivity signatures increased, from 1120.0 to 1280.0-feet BLS. The extent of the highly fractured, sucrosic dolomite is approximately 440.0-feet thick (ie., 1120.0 to 1560.0-feet BLS).

6.0 WATER QUALITY

6.1 Surficial Aquifer System

Surfical water quality samples were obtained during the coring of Corehole No. 1. A standard complete analysis was also conducted on a water sample obtained from the surficial observation well, having a screen interval of 7.0 to 27.0-feet. Specific conductivity was 405 µmhos. Chloride, sulfate and TDS were, 42.0 mg/L, 26.0 mg/L, and 330.0 mg/L respectively. Tables 2 and 7 presents the results of field and laboratory analyses, respectively.

6.2 Intermediate Aquifer System

Water quality samples were obtained for field and analytical laboratory analysis during the core drilling operations associated with Corehole No. 1. Tables 2 and 7 presents the results field and laboratory analysis. Specific conductivity ranged between 715-720 µmhos. Chloride concentrations were in the 60.0 to 64.0 milligrams/liter (mg/L) range. Sulfate concentrations ranged between 36.0 and 42.0 mg/L. Total dissolved solids (TDS) values ranged between 428.0 and 441.0 mg/L. Appendix D presents calculations to determine the milli-equivalent values for major ions. Stiff diagrams associated with these calculations are also presented in Appendix D. Figure 4 through 5 present conductivity, chloride, sulfate, calcium, magnesium, and total alkalinity plots.

Some water quality differences exist between the 1st and 2nd permeable zones (across the interval of 179.0 to 238.5 feet BLS). Fluid conductivity increased from 725 µmhos to 1080 µmhos. Chloride, also increased from 64.0 mg/L to 160.0 mg/L. Sulfates and TDS, increased from 37.0 mg/L to 56.0 mg/L, and 434.0 mg/L to 630 mg/L, respectively. Review of the stiff diagram generated for the sample interval 280-feet BLS, indicates major ions that dominate the water quality sample are, sodium, potassium, and chloride. Table(s) 3 and 8 present the results from field and analytical laboratory data for the second permeable zone. Figure 6 presents conductivity, chloride and sulfate plots.

6.3 Upper Floridan Aquifer System (UFAS)

Water quality samples were collected during the core drilling phase of Corehole No. 2 and the core drilling phase of the Suwannee Production well. This sampling phase included the interval from, 398.0 to 1204.0-feet BLS. Specific conductivity gradually increased with depth, and reached a value of 3200 µmhos. Overall, chloride concentrations changed slightly. The values ranged from 18.0 mg/L to a high of 20.0 mg/L. Sulfate concentrations increased from 340.0 mg/L to 1310.0 mg/L. TDS increased

from 759.0 mg/L to 2244.0 mg/L due to elevated concentrations of sulfate. Water quality samples were collected during the exploratory drilling phase of the Avon Park Monitor. This sampling phase included the interval, 1204.0 to 1660.0-feet BLS. From 1204.0 to 1660.0-feet BLS, specific conductivity increased from 1750 µmhos to 3300µmhos. Chloride increased slightly from 23.0 mg/L to 26.0 mg/L. Sulfate increased from 1310 mg/L to 1751 mg/L. The interval 1600.0 to 1813.0-feet BLS (ie., exploratory borehole), the water quality degraded from 2350 µmhos to 94,300 µmhos. Chlorides increased from 24.0 to 29,030.0 mg/L. Sulfates increased from 1631.0 to 4,845.0 mg/L (See Appendix D for milli-equivalent calculations and associated Stiff diagrams). Review of the Stiff diagrams generated for water samples collected from the Upper Floridan Aquifer indicate two specific types of water quality regimes. The interval, 635.0 to 1680.0-feet BLS, is dominated by calcium, and bicarbonate. Tables 6 and 11 present field and analytical laboratory results for the Avon Park Production Well (exploratory section). Figures 10 through 12 present conductivity, chloride, sulfate, calcium, magnesium, and total alkalinity plots.

7.0 GEOPHYSICAL LOGGING

Geophysical logs were run in three phases; during exploratory drilling, well construction and after the completion of wells. Each logging phase contained one two three logging events, depending on the progression of drilling. The logs were used as an aid in delineating geologic formations, zones of discrete water quality, flow zones, and formation/aquifer characteristics. Additionally, logs were used to determine appropriate packer points, calculate amounts of well construction material, and verify the integrity of well construction. Table 12 summarizes the geophysical logs run on the wellsite. Selected logs are included in Appendix D.

7.1 Phase 1 Logging

The first phase of geophysical logging was conducted in three logging events during the initial exploratory core drilling from land surface to 1204.0-feet BLS. Caliper (CAL), gamma ray (GR), spontaneous potential (SP), and a single point resistance (RES) were run during core drilling activities. A composite geophysical log was generated for log review and interpretation. The composite geophysical log generated for review is presented on Figure 22.

Logging event one was conducted during core drilling and lithologic sampling of Corehole No. 1 (i.e., upper intermediate temporary observation well, LS-123.4-feet BLS). CAL, GR, SP, and RES logs were run on the corehole with the 4 -inch flush joint, retrievable steel casing (HW) set at 37.0-feet BLS.

Logging event two was conducted during coring activities associated with Corehole No. 2. The well was configured with a 6-inch diameter PVC casing to 60.0-feet BLS, 4-inch HW steel casing to 213.0-feet BLS, and a 3.0-inch open hole to 355.0-feet BLS. Several large peaks identified in the GR log, these peaks were coincident with phosphatic clay beds within the Peace River Formation. The interval from land surface to 373.0-feet BLS contains an active GR signature representative of Hawthorn Group sediments. This activity corresponds with limestone, dolostone, and sand, interbedded with phosphatic carbonates and clays within the Hawthorn Group.

Logging event three was conducted during core drilling and lithologic sampling of Corehole No. 3. The well was configured with; 4-inch HW steel casing set to 409.0-feet BLS, and a 3-inch open hole to 1204.0-feet BLS. CAL, GR, SP, and RES (i.e., long short normal logs) were run on the corehole subsequent to total depth. The logs were run to evaluate the water quality and hydrogeologic characteristics of the Ocala Limestone. The caliper log showed a minor washout zone from 880.0 to 920.0-feet BLS, and a gauge hole from 920.0 to 1160.0-feet BLS with a minor washout zone from 1160.0-feet BLS to total depth. Overall, the caliper log displayed a gauge hole corresponding with fairly competent limestones and dolomite of the Ocala and Avon Park Formations. The GR activity reduced slightly at 373.0-feet BLS, indicating a mineralogic/formation change at the Hawthorn Group/Suwannee Limestone contact. From 639.0 to 941.0-feet BLS, GR activity increased slightly with the occurrence of limestone and dolomite within the Ocala. A GR peak was identified at 941.0-feet BLS, corresponding with an organic layer at the Ocala/Avon Park contact. The GR signature varied slightly from 941.0 to 1204.0-feet BLS. The SP log showed a large peak at 941.0-feet BLS that corresponded with an organic layer within the dolomite. From 941.0 to 1204.0-feet BLS the log displayed minor variations. The RES log showed a series of peaks which corresponded with interbedded organic layers.

7.2 Phase 2 Logging

Phase 2 logging was conducted in two events during the active construction of the Avon Park monitor. Initially, the Avon Park monitor was intended to serve as a platform for the deep exploratory drilling. The exploratory drilling included a series of formation packer tests within the Avon Park formation, and lithologic sampling from 1204.0 to the base of the UFAS, identified by the occurrence of vertically persistent gypsum and anhydrite. Due to the drilling problems, specifically borehole obstructions, the exploratory section of the Avon Park monitor was abandoned. A series of caliper logs were run to determine the occurrence of borehole obstructions. These logs will not be considered for review. A composite geophysical log was generated for log review and interpretation. The composite geophysical log generated for review is presented on Figure 23.

Logging event one was run from 600.0 to1204.0-feet BLS, during the drilling of the Avon Park monitor. CAL, GR, SP, and RES log were run prior to the setting of the 6.0-inch PVC casing.

Logging event 2 was run from 1200.0 to 1640.0-feet BLS. The caliper log was run from 1200.0 to 1640.0-feet BLS. The GR, SP, and RES logs were run from 1100.0 to 1534.0-feet BLS. The caliper log showed large washout features in the fractured dolomite. These washout zones were composed of poorly indurated sucrosic, crystalline dolostone which, is typical of the highly permeable zone in the Avon Park Formation. The GR log showed an increase in activity from 1205.0 to 1295.0-feet BLS, this increase is attributable to a higher percentage of interbedded organics within the sequence. From 1205.0 to 1295-feet BLS, the SP, and RES logs indicated a sequence of resistive dolomite. The interval from 1204.0 to 1640.0-feet BLS displayed GR, SP, and RES curves that are typical of a sequence of resistive dolomite and dolomitic limestones.

7.3 Phase 3 Logging

Phase three logging was conducted during the active construction of the Avon Park production well. Due to the drilling problems encountered during the construction of the Avon Park monitor, deep exploratory work was conducted through the bottom of the Avon Park production well. Subsequent, to the completion of the exploratory drilling the well was reconfigured, by plugging the exploratory section. CAL, GR, RES, FL TEMP (fluid temperature), and FL RES (fluid resistivity) logs were run to determine the water quality and hydrogeologic characteristics of the Avon Park formation, and to select formation packer setting depths.

Logging event one was from 912.0 to 1695.0-feet BLS. A series of caliper logs were run again to determine the depths of several borehole obstructions encountered during drilling of the exploratory section. These logs will not be considered for review.

Logging event two was from 896.0 to 1798.0-feet BLS. The FL RES log remained relatively stable from 1400.0 to 1690.0-feet BLS. However, the log showed a marked increase in activity below 1690.0-feet BLS, indicating degradation of borehole water quality. The borehole fluid temperature showed a shift at 1505.0-feet BLS indicating a water producing zone. The caliper log delineates the dolostone section of the Avon Park Formation, (1120.0 to 1560.0-feet BLS) and the washout features of the highly permeable zone from, 1480 to 1560.0-feet BLS. The interval from 1700.0 to 1798.0-feet BLS, showed a more competent zone and was utilized for packer testing. The fluid resistivity also indicates a stable water quality across the dolostone section. The GR log showed a signature typical of dolomitic limestones and

dolomite. However, activity was increased in specific intervals. Zones of increased activity corresponded with layers of organic material, and the first occurrence of gypsum nodules. Deflections in the SP curve also correspond with the occurrence of interbedded organic and evaporites. The LSN and RES logs showed another zone of increased activity from 1525.0 to 1620.0-feet BLS, indicating a more competent dolomite zone (i.e., fractured features less prevalent). LSN and RES logs showed large peaks from 1695.0 to 1725.0-feet BLS and 1740.0-feet BLS. These peaks corresponded with the gypsum nodules identified at 1730.0-feet BLS.

8.0 HYDRAULIC CHARACTERISTICS

Collection of hydraulic data during the exploratory test drilling at ROMP 22 ranged from basic water level or head measurements, to specialized formation packer testing, and multi-well Aquifer pumping tests.

Determination of hydraulic characteristics of the auifers and confining units were determined, by the following criteria:

- water levels were measured every morning, during exploratory drilling;
- core samples were obtained from selected intervals during coring and analyzed for vertical permeability;
- packer tests were conducted at selected intervals, Appendix E;
- an aquifer performance test (APT) was conducted by pumping a monitor well installed in the Lower Intermediate aquifer, Hawthorn Group,
- an aquifer performance test (APT) was conducted in the Suwannee Limestone, utilizing a production well whose open-hole interval was isolated to the Suwannee Limestone,
- subsequent to the construction of the Avon Park monitor and the Avon Park production well an APT was conducted. All of the pumping test data associated with the Avon Park APT is included in Appendix C.

8.1 Corehole Data

Water levels were measured using an electronic water level indicator referenced to ground level. Large shifts in water level may be due to changes in the borehole configuration, i.e. the open-hole interval, and changes in the water column due to saline conditions.

Seven samples were selected from continuous core material for permeameter analysis. One core sample was collected from the Arcadia Formation (Hawthorn Group). Three samples were collected from the Ocala Group and three were selected from the Avon Park Formation. The core samples were placed in a falling head permeameter and vertical hydraulic conductivity (K_v) was obtained utilizing fresh-water.

The permeability of the Ocala Limestone was determined by core analysis and conducting formation packer testing. Vertical conductivity (k_v),as determined by the falling head permeameter tests, yielded an average k_v of 2.10e-03 ft/day.

The results of the permeameter tests are presented in Table 13. These values represent average k_v for each formation tested.

8.2 Packer Testing

Packer tests were conducted at selected intervals in the Ocala Limestone and Avon Park Formation to determine hydraulic properties of semi-confining units in the Floridan aquifer. Off bottom packer tests were conducted utilizing a Tam-J packer, with gland sizes ranging, 6.0 to 8.0-inches in diameter. In off-bottom packer testing an open section of the borehole is sealed off by the inflatable packer, then the section is stressed by pumping. Two pressure transducers are utilized during the test. A high pressure transducer is placed in the open-hole section isolated by the packer element, and a low pressure transducer is installed in the well's annulus. The pressure transducer installed in the annulus, measures variations in water levels above the isolated interval. The results of the packer tests are summarized in Table 14 and 15.

Horizontal conductivity (k_h) for the Ocala limestone, as determined by formation packer testing, yielded an average value of 1.43e-01 ft/day.

The hydraulic characteristics of the evaporite sediments of the Avon Park Formation were estimated, utilizing formation packer tests. It was determined, that k_h (average) was 3.58e-02 ft/day.

The packer tests were analyzed using standard aquifer analysis techniques. An explanation of packer testing methods is included in Appendix B. Results of the packer test are presented in Appendix F.

8.3 Aquifer Performance Testing

A 50 hour pumping phase APT was conducted in the Lower Intermediate aquifer. A temporary observation well constructed from Corehole No. 2 was used to measure drawdown response. The horizontal conductivity (k_h) was calculated, and based on the results of the drawdown versus time values collected from the observation well, k_h was determined to be 5.16 ft/day.

A 36 hour pumping phase APT was conducted in the Suwannee Limestone of the upper Floridan aquifer. The open-hole interval was designed to fully penetrate the Suwannee Formation. The horizontal conductivity (k_h) was calculated , and based on the results of the drawdown versus time values collected during the test, k_h was determined to be 33.26 ft/day.

The hydraulic characteristics (i.e., transmissivity (T) and conductivity (k_h) for the Avon Park formation were determined by conducting an APT. The Avon Park APT was run for 81 hours, at a pumping rate of 3,500 gallons per minute. Drawdown in the production well and the observation well, were 24.80 feet and 3.80 feet respectively. Transmissivity and hydraulic conductivity values were calculated, T was determined to be 247,000.0 ft^2/day, and k_h, 343.0 ft/day.

9.0 SUMMARY

A network of temporary and permanent observation/monitor wells were constructed for the project. Extensive testing and sampling was performed during well construction including coring, lithologic sampling, geophysical logging, packer testing, aquifer performance testing (APT), and water quality sampling.

The final monitoring intervals were based on lithologic and water quality interpretations of data collected during the extensive testing program. The following table provides a listing of the network of observation/monitor well and the monitored zones.

Designation	Monitored Zone
Surficial Observation Well	7-27 feet BLS
Upper Intermediate OB-WELL	90-125 feet BLS
Lower Intermediate OB-WELL	229-272 feet BLS
Suwannee Pumped Well	409-635 feet BLS
Surficial Monitor	7-17 feet BLS
Intermediate Monitor	100-125 feet BLS
Lower Intermediate Monitor	230-290 feet BLS
Suwannee Monitor	400-635 feet BLS
Avon Park Monitor	1200-1660 feet BLS
Avon Park production well	940-1685 feet BLS

The results (k_v,k_h) for the Ocala Limestone, fall within a range of reported values (Fetter, Applied Hydrogeology, 1980). However, review of the results for permeameter and formation packer testing indicates some variation in vertical and horizontal conductivity. These results indicate conductivity values are most effected by lithologic variations within the Ocala Limestone.

Review of the geophysical logs collected for the Avon Park Production well indicated that the primary production interval intersected by the open bore-hole was isolated to the highly fractured sucrosic dolomites. However, there were two other zones within the open-hole interval that contributed a significant amount of water from the formation.

REFERENCES

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TABLES

Table 1. Well Construction Details

	LOCATION[1]									
	1	2	3	4	5	6	7	8	9	10
DEPTH[2]	28.0[3]	130.0	272.0	635.0	18.0	125.0	290.0	635.0	1540.0	1440.0
CASING										
1.25" SCH 40 PVC		30-90	40-235							
2" SCH 40 PVC		30	40							
6" SCH 40 PVC					6					
6" SCH 80 PVC	7'		60	160-409		90	230	400	1200	
12" SCH 80 PVC				200			40	50		
12" STEEL									650	180-940
18" STEEL				40					100	220
24" STEEL										40
SCREEN										
1.25" PVC 0.020[4]		90-125								
1.25" PVC 0.030[5]			228-272							
6" PVC 0.010[6]	20				7-17					
FILTER PACK[7]										
20/30	6-28		228-272		5-18					
6/20		90-132								
OPEN HOLE INTERVAL				409-635		90-125	230-290	400-635	1200-1450	940-1440

\1 WELL LOCATION AND DESIGNATION
1 Surficial Observation Well
2 Upper Intermediate Observation Well, 1st Transmissive Zone
3 Lower Intermediate Observation Well, 2nd Transmissive Zone
4 Suwannee Production Well
5 Surficial Monitor as built
6 Intermediate Monitor, as built 1st Transmissive Zone
7 Lower Intermediate Monitor, as built 2nd Transmissive Zone
8 Suwannee Monitor, as built
9 Avon Park Monitor
10 Avon Park Production Well

\2 FEET

\3 FEET BELOW LAND SURFACE

\4 0.020 -INCH SLOTTED WELL SCREEN

\5 0.030-INCH SLOTTED WELL SCREEN

\6 0.010-INCH SLOTTED WELL SCREEN

\7 SILICA SAND PACK

Table 2. Results of Field Analyses for Upper Intermediate (COREHOLE NO. 1)

DATE (M/D/Y)	DEPTH (FT BLS)	WATER LEVEL (FT BLS)	SPECIFIC COND. (uMHOS)	WATER TEMP. (CELSIUS)	WATER DENSITY (HYDROM)	CHLORIDE (mg/l) (HACH)	SULFATE (mg/l) (HACH)	pH
06/24/91	28.0	3.65	405	24.25	NR	45	50	5.69
06/25/91	69.0	8.08	NR+	NR	1.0000	NR	NR	NR
06/25/25	89.0	8.53	720	23.50	NR	80	77	7.32
06/26/91	99.0	NR	715	24.00	1.0000	80	50	7.24
06/26/91	119.0	NR	720	24.25	1.0000	80	50	7.19
06/26/91	139.0	8.75	725	24.00	1.0000	80	40	7.20
06/27/91	159.0	12.05	730	24.00	1.0000	85	40	7.22
06/27/91	179.0	11.63	725	24.50	1.0000	80	40	7.17
07/01/91	179.0	10.86	NR	NR	1.0000	NR	NR	NR

* UPPER INTERMEDIATE OBSERVATION WELL

HOLLOW STEM 0'-12'

SPLIT SPOON 12.5'-31'

WIRELINE 31'-37'. SET 4-INCH HW-STEEL CASING @ 37' B.L.S.

+NR=NO READING TAKEN

Table 3. Result of Field Analysis, for Lower Intermediate (COREHOLE NO. 2)

DATE (M/D/Y)	DEPTH (FT BLS)	WATER LEVEL (FT BLS)	SPECIFIC COND. (uMHOS)	WATER TEMP. (CELSIUS)	WATER DENSITY (HYDROM)	CHLORIDE (mg/l) (HACH)	SULFATE (mg/l) (HACH)	pH
07/03/91	238.5	9.46	NR+	NR	NR	NR	NR	NR
07/09/91	238.5	9.12	1080	24.75	NR	170	90	7.54
07/10/91	278.5	9.82	1000	24.75	1.0005	180	90	7.47
07/10/91	318.5	8.94	1100	25.00	1.0005	120	190	7.47
07/11/91	358.5	9.18	1090	24.75	1.0005	130	160	7.57
07/11/91	378.5	8.52	1000	25.00	1.0005	80	200	7.56
07/15/91	378.5	8.57	NR	NR	1.0005	NR	NR	NR
07/18/91	378.5	7.77	NR	NR	NR	NR	NR	NR
07/22/91	398.5	7.97	NR	NR	NR	NR	NR	NR
07/22/91	398.5	NR	1010	25.00	NR	35	300	7.60
07/22/91	438.5	7.75	1015	25.00	1.0005	35	400	7.58
07/23/91	438.5	7.92	NR	NR	1.0005	NR	NR	NR
07/23/91	458.5	NR	1025	24.75	NR	35	250	7.60
07/23/91	498.5	7.52	1020	24.75	1.0005	35	300	7.62
07/24/91	498.5	7.73	NR	NR	1.0005	NR	NR	NR
07/24/91	533.5	7.52	1095	24.75	NR	40	250	7.55
07/24/91	533.5	7.36	NR	NR	1.0008	NR	NR	NR
07/30/91	573.5	NR	1100	25.00	1.0008	35	400	7.56
07/30/91	613.5	7.16	1180	25.00	1.0008	35	375	7.55
07/31/91	633.5	NR	NR	NR	1.0010	NR	NR	NR
07/31/91	653.5	NR	1120	24.75	NR	35	350	7.62
07/31/31	673.5	7.19	1100	24.75	1.0008	35	350	7.54

* LOWER INTERMEDIATE OBSERVATION WELL

6-INCH DIAMETER CASING L.S.D.-60', DRILLED 6-INCH DIAMTER BOREHOLE TO 213' B.L.S.

SET 4-INCH HW STEEL CASING AT 213' B.L.S.

RESET 4-INCH HW STEEL CASING AT 361' B.L.S.

WIRELINE TO 375

+NR= NO READING TAKEN

Table 4. Results of Field Analysis, Suwannee Pumped Well

DATE (M/D/Y)	DEPTH (FT BLS)	WATER LEVEL (FT BLS)	SPECIFIC COND. (uMHOS)	WATER TEMP. (CELSIUS)	WATER DENSITY (HYDROM)	CHLORIDE (mg/l) (HACH)	SULFATE (mg/l) (HACH)	pH
08/26/91	654.5	NR+	1200	27.00	1.0008	35	400	7.58
08/26/91	674.0	7.45	1210	27.50	1.0010	35	425	7.51
08/27/91	674.0	NR	NR	NR	1.0010	35	NR	NR
08/27/91	714.0	7.14	1260	27.00	NR	35	425	7.62
08/28/91	754.0	NR	1270	27.00	1.0010	35	425	7.65
08/28/91	794.0	7.29	1270	27.00	1.0010	35	425	7.64
09/03/91	794.0	6.86	NR	NR	1.0010	NR	NR	NR
09/04/91	814.0	NR	NR	NR	NR	NR	NR	NR
09/04/91	834.0	7.14	1330	27.50	NR	35	400	7.44
09/05/91	834.0	8.34	NR	NR	1.0010	NR	NR	NR
09/09/91	834.0	8.12	NR	NR	NR	NR	NR	NR
09/10/91	854.0	8.19	1895	27.50	NR	35	800	7.53
09/11/91	874.0	NR	1900	27.50	1.0015	30	850	7.47
09/18/91	894.0	NR	NR	NR	1.0015	NR	NR	NR
09/18/91	914.0	9.65	1650	28.00	NR	40	600	7.34
09/19/91	914.0	NR	NR	NR	1.0010	NR	NR	NR
09/19/91	954.0	10.47	1720	28.00	NR	40	700	7.32
09/23/91	974.0	10.25	NR	NR	1.0015	NR	NR	NR
09/24/91	994.0	NR	1790	28.00	NR	35	800	7.54
09/24/91	1034.0	9.4	2190	28.75	1.0015	35	850	7.36
09/25/91	1064.0	10.34	NR	NR	1.0015	NR	NR	NR
09/25/91	1074.0	9.65	2200	28.75	NR	35	900	7.40
09/26/91	1104.0	NR	NR	NR	1.0015	NR	NR	NR
09/27/91	1114.0	NR	2500	28.50	NR	35	1300	7.35
09/27/91	1134.0	11.03	2280	28.50	1.0015	30	1200	7.36
09/30/91	1134.0	11.33	NR	NR	1.0015	NR	NR	NR
09/30/91	1154.0	NR	2380	28.40	NR	35	1400	7.37
10/01/91	1164.0	10.97	NR	NR	1.0015	NR	NR	NR
10/01/91	1194.0	11.11	2390	28.25	NR	35	1400	7.36
10/02/91	1204.0	9.94	2460	28.00	1.0015	35	1400	7.36

*SUWANNEE PUMPED OBSERVATION WELL

WIRELINE 635'-874'

SET 4-INCH HW STEEL CASING 878' B.L.S.

WIRELINE 878'-1204'

+NR=NO READING TAKEN

Table 5. Results of Field Analysis, Avon Park Monitor

DATE (M/D/Y)	DEPTH (FT BLS)	WATER LEVEL (FT BLS)	SPECIFIC COND. (uMHOS)	WATER TEMP. (CELSIUS)	WATER DENSITY (HYDROM)	CHLORIDE (mg/l) (HACH)	SULFATE (mg/l) (HACH)	pH
10/03/91	1204.0	25.44	NR+	NR	1.0015	NR	NR	NR
05/26/93	1200.0	23.98	1750	28.00	1.0015	30	800	7.60
06/10//93	1220.0	23.1	2420	30.50	NR	35	1400	7.52
06/15/93	1260.0	23.08	2800	28.00	1.0015	40	1600	7.07
06/16/93	1280.0	20.1	NR	NR	1.0020	NR	NR	NR
06/22/93	1280.0	20.2	2700	29.00	NR	80	1600	7.38
06/23/93	1300.0	NR	2500	28.00	1.0004	80	1600	6.82
06/23/93	1320.0	NR	2600	29.00	1.0004	80	1575	6.84
06/23/93	1340.0	NR	2600	29.00	1.0004	80	1600	6.92
06/23/93	1360.0	NR	2700	30.00	1.0004	80	1125	7.43
06/23/93	1380.0	20.12	2850	32.00	1.0004	80	1350	6.74
06/24/93	1400.0	NR	2700	28.00	1.0004	60	900	6.85
06/24/93	1420.0	18.3	2700	29.00	1.0005	40	1600	7.02
06/29/93	1440.0	14.24	NR	NR	NR	NR	NR	NR
07/12/93	1440.0	14.26	NR	NR	NR	NR	NR	NR
07/13/93	1460.0	NR	2700	30.00	1.004	100	1800	7.61
07/13/93	1480.0	NR	2900	30.00	1.0040	100	1600	7.37
07/13/93	1500.0	NR	3000	31.00	1.0020	60	1600	7.52
07/14/93	1520.0	14.3	2600	28.00	1.0030	40	1350	7.43
07/14/93	1540.0	NR	3000	30.00	1.0040	40	1350	7.08
07/14/93	1560.0	14.24	2900	29.00	1.0030	40	1350	7.71
07/15/93	1580.0	NR	2800	29.00	NR	60	1800	7.31
07/15/93	1600.0	NR	3000	29.00	1.003	60	1800	7.31
07/15/93	1620.0	14.24	3200	30.00	1.0030	40	1800	7.38
07/19/93	1640.0	NR	3100	32.00	1.0025	60	1750	7.18
07/19/93	1660.0	NR	3300	32.00	1.0025	60	1800	7.27

* AVON PARK MONITOR

6" SCH 80 PVC CASING TO 1220' B.L.S.

6" NOMINAL OPEN BOREHOLE TO 1660' B.L.S.

Table 6. Results of Field Analysis, Avon Park Production Well (exploratory section)

DATE (M/D/Y)	DEPTH (FT BLS)	WATER LEVEL (FT BLS)	SPECIFIC COND. (uMHOS)	WATER TEMP. (CELSIUS)	WATER DENSITY (HYDROM)	CHLORIDE (mg/l) (HACH)	SULFATE (mg/l) (HACH)	pH
10/07/93	1568	NR	2650	28	NR	NR	NR	7.93
10/07/93	1573	NR	2700	28	NR	NR	NR	7.99
10/07/93	1590	NR	2800	29	NR	NR	NR	7.85
10/07/93	1620	NR	2500	30	NR	60	1800	8
10/11/93	1650	11.9	NR	NR	NR	NR	NR	NR
10/11/93	1658	11.9	2550	30	NR	NR	NR	8.1
10/11/93	1665	NR	2500	30	NR	NR	NR	8.1
10/11/93	1672	NR	2500	30	NR	NR	NR	8.14
10/11/93	1675	NR	2500	30	NR	NR	NR	8.11
10/11/93	1680	NR	2550	30	NR	40	2200	7.73
10/11/93	1690	NR	2700	32	NR	NR	NR	8.09
10/12/93	1690	11.2	NR	NR	NR	NR	NR	NR
10/25/93	1695	NR	2900	30	NR	60	2000	7.58
10/25/93	1700	NR	3200	32	NR	NR	NR	7.89
10/26/93	1710	11.74	2400	27	NR	NR	NR	7.89
10/26/93	1725	NR	2000	28	NR	40	1350	7.58
10/26/93	1745	NR	3000	28	NR	NR	NR	7.89
10/26/93	1750	NR	4000	29	NR	NR	NR	8.82
10/26/93	1755	NR	4100	30	NR	NR	NR	8.95
10/27/93	1768	10.25	2500	25	NR	120	1800	7.68
10/27/93	1775	NR	NR	NR	NR	NR	NR	NR
10/27/93	1780	NR	2800	28	NR	NR	NR	7.75
10/27/93	1785	NR	3000	29	NR	NR	NR	7.75
10/27/93	1795	NR	3200	30	NR	NR	NR	7.32
10/28/93	1795	12.02	NR	NR	NR	NR	NR	NR
11/01/93	1795	11.1	NR	NR	NR	NR	NR	NR
11/02/93	1795	35.2	18000	22	NR	8000	1800	6.63
11/03/93	PT-5	35.2	25500	24.5	NR	25500	14025	7.16

* AVON PARK PRODUCTION WELL (EXPLORATORY SECTION)

12" PRODUCTION CASING SET AT 0'-760' B.L.S.

DRILLED TO 1660' B.L.S. 11 7/8" NOMINAL BOREHOLE

DRILLED 5 5/8" EXPLORATORY SECTION TO 1795' B.L.S. (TOTAL DEPTH)

Table 7. Results of Laboratory Analyses for Upper Intermediate (COREHOLE NO. 1) **

DATE (M/D/Y)	DEPTH (FT BLS)	SPECIFIC COND. (uMHOS)	WATER DENSITY	pH	ION%	CHLORIDE	SULFATE	TDS	Ca	Mg	TOTAL ALKALIN. (CaCO3)	K	Na	Fe	SILICA	Br	TOTAL HARDNESS (CaCO3)
06/24/91	28.0	FS@	FS	FS	NR	42.0	26.0	330.0	25.0	13.0	85.0	2.0	20.0	NS	NS	NS	NS
06/25/91	69.0	FS	FS	FS	NR	NS++	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
06/25/25	89.0	FS	FS	FS	NR	64.0	42.0	432.0	68.0	28.0	249.0	1.5	40.0	NS	NS	NS	285.0
06/26/91	99.0	FS	FS	FS	NR	60.0	36.0	435.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
06/26/91	119.0	FS	FS	FS	NR	68.0	36.0	441.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
06/26/91	139.0	FS	FS	FS	NR	63.0	37.0	428.0	57.0	24.0	245.0	1.40	34.8	NS	NS	.21	NS
06/27/91	159.0	FS	FS	FS	NR	66.0	37.0	437.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
06/27/91	179.0	FS	FS	FS	NR	64.0	37.0	434.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/01/91	179.0	FS	FS	FS	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

* UPPER INTERMEDIATE OBSERVATION WELL

HOLLOW STEM 0'-12'

SPLIT SPOON 12.5'-31'

WIRELINE 31'-37'. SET 4-INCH HW-STEEL CASING @ 37' B.L.S.

NR+=NO READING

NS++=NO SAMPLE COLLECTED

FS@= FIELD SAMPLE

**SAMPLES COLLECTED WITH A WIRE-LINE THIEF SAMPLER

Table 8. Results of Laboratory Analyses, Lower Intermediate (COREHOLE NO. 2)**

DATE (M/D/Y)	DEPTH (FT BLS)	SPECIFIC COND. (uMHOS)	WATER DENSITY	pH	ION%	CHLORIDE	SULFATE	TDS	Ca	Mg	TOTAL ALKALIN. (CaCO3)	K	Na	Fe	SILICA	Br	TOTAL HARDNESS (CaCO3)
07/03/91	238.5	FS@	FS	FS	NR	NS+	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/09/91	238.5	FS	FS	FS	NR	160.0	56.0	630.0	50.0	39.0	NS	4.5	90.5	NS	NS	NS	NS
07/10/91	278.5	FS	FS	FS	NR	140.0	66.0	637.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/10/91	318.5	FS	FS	FS	NR	97.0	180.0	694.0	77.0	41.0	204.5	3.7	64.0	NS	NS	NS	NS
07/11/91	358.5	FS	FS	FS	NR	93.0	200.0	707.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/11/91	378.5	FS	FS	FS	NR	42.0	280.0	718.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/15/91	378.5	FS	FS	FS	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/18/91	378.5	FS	FS	FS	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/22/91	398.5	FS	FS	FS	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/22/91	398.5	FS	FS	FS	NR	21.0	340.0	759.0	103.0	51.3	164.0	3.0	18.0	NS	NS	NS	NS
07/22/91	438.5	FS	FS	FS	NR	21.0	340.0	761.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/23/91	438.5	FS	FS	FS	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/23/91	458.5	FS	FS	FS	NR	22.0	350.0	759.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/23/91	498.5	FS	FS	FS	NR	21.0	350.0	753.0	113.0	51.4	166.0	3.2	17.0	NS	NS	NS	NS
07/24/91	498.5	FS	FS	FS	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/24/91	533.5	FS	FS	FS	NR	21.0	380.0	826.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/24/91	533.5	FS	FS	FS	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/30/91	573.5	FS	FS	FS	NR	20.0	400.0	851.0	123.0	57.0	160.0	2.6	16.0	NS	NS	.5	NS
07/30/91	613.5	FS	FS	FS	NR	20.0	450.0	944.0	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/31/91	633.5	FS	FS	FS	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
07/31/91	653.5	FS	FS	FS	NR	18.0	390.0	954.0	124.0	59.0	162.0	3.1	18.0	NS	NS	NS	NS
07/31/31	673.5	FS	FS	FS	NR	20.0	400.0	885.0	NS	NS	NS	NS	NS	NS	NS	NS	NS

* LOWER INTERMEDIATE OBSERVATION WELL

6-INCH DIAMETER CASING L.S.D.-60', DRILLED 6-INCH DIAMTER BOREHOLE TO 213' B.L.S.

SET 4-INCH HW STEEL CASING AT 213' B.L.S.

RESET 4-INCH HW STEEL CASING AT 361' B.L.S.

WIRELINE TO 375

NR+= NO READING TAKEN

FS@= FIELD SAMPLE

NS++= NO SAMPLE COLLECTED

**SAMPLES COLLECTED WITH A WIRE-LINE THIEF SAMPLER

Table 9. Results of Laboratory Analyses, Suwannee Pumped Well**

DATE (M/D/Y)	DEPTH (FT BLS)	SPECIFIC COND. (uMHOS)	WATER DENSITY	pH	ION%	CHLORIDE	SULFATE	TDS	Ca	Mg	TOTAL ALKALIN. (CaCO3)	K	Na	Fe	SILICA	Br	TOTAL HARDNESS (CaCO3)
08/26/91	654.5	NR	NR	NR	NR	22.0	460.0	925.0	NS	NS	NS	NS	NS	NS	NS	0.10	NS
08/26/91	674.0	NR	NR	NR	NR	21.0	460.0	906.0	NS	NS	NS	NS	NS	NS	NS	0.10	NS
08/27/91	674.0	NR	NR	NR	NR	NS++	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
08/27/91	714.0	NR	NR	NR	NR	21.0	470.0	947.0	130.0	NS	153.0	NS	20.0	NS	NS	0.01	NS
08/28/91	754.0	NR	NR	NR	NR	22.0	490.0	941.0	130.0	NS	152.0	NS	15.0	NS	NS	0.10	NS
08/28/91	794.0	NR	NR	NR	NR	22.0	490.0	949.0	NS	NS	NS	NS	NS	NS	NS	0.01	NS
09/03/91	794.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/04/91	814.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/04/91	834.0	NR	NR	NR	NR	21.0	550.0	1032.0	NS	NS	NS	NS	NS	NS	NS	0.10	NS
09/05/91	834.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/09/91	834.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/10/91	854.0	NR	NR	NR	NR	20.0	940.0	NS	230.0	100.0	141.0	3.6	18.0	0.5	NS	0.10	NS
09/11/91	874.0	NR	NR	NR	NR	20.0	920.0	1595.0	NS	NS	NS	NS	NS	NS	NS	0.12	NS
09/18/91	894.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/18/91	914.0	NR	NR	NR	NR	19.0	720.0	1300.0	180.0	79.0	137.0	NS	19.0	NS	NS	0.10	NS
09/19/91	914.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/19/91	954.0	NR	NR	NR	NR	21.0	760.0	NS	NS	NS	NS	NS	NS	NS	NS	0.30	NS
09/23/91	974.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/24/91	994.0	NR	NR	NR	NR	19.0	860.0	1487.0	200.0	NS	143.0	NS	16.0	NS	NS	NS	NS
09/24/91	1034.0	NR	NR	NR	NR	18.0	1060.0	1820.0	NS	NS	NS	NS	NS	NS	NS	0.20	NS
09/25/91	1064.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/25/91	1074.0	NR	NR	NR	NR	18.0	1110.0	1874.0	280.0	NS	136.0	NS	22.0	NS	NS	NS	NS
09/26/91	1104.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/27/91	1114.0	NR	NR	NR	NR	18.0	1330.0	2270.0	NS	NS	NS	NS	NS	NS	NS	0.10	NS
09/27/91	1134.0	NR	NR	NR	NR	21.0	1130.0	1907.0	315.0	112.0	143.0	3.0	17.0	6.2	NS	NS	NS
09/30/91	1134.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
09/30/91	1154.0	NR	NR	NR	NR	19.0	1240.0	2137.0	338.0	NS	135.0	NS	23.0	NS	NS	NS	NS
10/01/91	1164.0	NR	NR	NR	NR	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
10/01/91	1194.0	NR	NR	NR	NR	21.0	1220.0	2079.0	332.0	NS	144.0	NS	18.0	NS	NS	NS	NS
10/02/91	1204.0	NR	NR	NR	NR	20.0	1310.0	2244.0	359.0	199.0	141.0	3.6	22.0	3.5	NS	0.10	NS

*SUWANNEE PUMPED OBSERVATION WELL

WIRELINE 635'-874' SET 4-INCH HW-STEEL CASING 878' B.L.S. WIRELINE 878'-1204'

NR+= NO READING TAKEN NS++= NO SAMPLE COLLECTED FS@= FIELD SAMPLE

**SAMPLES COLLECTED WITH A WIRE-LINE THIEF SAMPLER

Table 10. Results of Laboratory Analysis, Avon Park Monitor**

DATE (M/D/Y)	DEPTH (FT BLS)	SPECIFIC COND. (uMHOS)	WATER DENSITY	pH	ION%	CHLORIDE	SULFATE	TDS	Ca	Mg	TOTAL ALKALIN. (CaCO3)	K	Na	Fe	SILICA	Br	TOTAL HARDNESS (CaCO3)
10/02/91	1204.0	FS@	FS	FS	NR+	20.0	1310.0	2244.0	359.0	199.0	141.0	3.6	22.0	3.5	NS	0.10	NS
10/03/91	1204.0	FS	FS	FS	NR	NS++	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
05/26/93	1200.0	FS	FS	FS	NR	23.0	894.0	1452.0	249.0	115.0	120.0	4.5	19.0	0.5	NS	0.00	1095.0
06/10/93	1220.0	2610	1.0023	7.8	3.72	24.0	1469.0	2465.0	456.0	155.0	128.0	3.8	19.0	0.7	9.2	0.00	1777.0
06/15/93	1260.0	2550	1.0023	7.4	1.39	22.0	1454.0	2460.0	426.0	148.0	123.0	3.7	17.0	0.7	9.2	0.00	1673.0
06/22/93	1280.0	2540	1.0024	7.5	2.61	22.0	1525.0	2482.0	457.0	157.0	125.0	4.6	21.0	0.6	9.0	0.00	1788.0
06/23/93	1300.0	2450	1.0022	7.4	2.42	23.0	1416.0	2386.0	420.0	150.0	125.0	4.1	20.0	1.0	8.7	0.00	1666.0
06/23/93	1320.0	2470	1.0023	7.4	1.82	22.0	1462.0	2389.0	431.0	154.0	142.0	4.0	20.0	1.5	8.7	0.00	1710.0
06/23/93	1340.0	FS	FS	FS	NR	18.0	1490.0	2449.0	NS	NS	NS	NS	NS	NS	NS	0.00	NS
06/23/93	1360.0	FS	FS	FS	NR	19.0	1500.0	2495.0	NS	NS	NS	NS	NS	NS	NS	0.00	NS
06/23/93	1380.0	FS	FS	FS	NR	19.0	1550.0	2621.0	NS	NS	NS	NS	NS	NS	NS	0.00	NS
06/24/93	1400.0	2528	1.0025	7.5	2.84	19.0	1590.0	2658.0	493.0	153.0	124.0	4.2	22.0	1.0	9.9	0.00	1861.0
06/24/93	1420.0	FS	FS	FS	NR	19.0	1587.0	2610.0	NS	NS	NS	NS	NS	NS	NS	0.00	NS
06/29/932	1440.0	FS	FS	FS	NR	19.0	1620.0	2709.0	NS	NS	NS	NS	NS	NS	NS	0.00	NS
07/13/93	1460.0	2760	1.0026	7.4	1.99	26.0	1742.0	2631.0	517.0	138.0	128.0	3.5	19.0	1.0	9.0	0.00	1857.0
07/13/93	1480.0	2750	1.0026	7.5	1.38	26.0	1733.0	2601.0	532.0	133.0	134.0	4.2	19.0	1.3	8.8	0.00	1878.0
07/13/93	1500.0	FS	FS	FS	NR	28.0	1829.0	2814.0	NS	NS	NS	NS	NS	NS	NS	0.08	NS
07/14/93	1520.0	2770	1.0027	7.4	3.56	28.0	1818.0	2722.0	531.0	120.0	137.0	3.7	19.0	5.7	8.0	0.07	1892.0
07/14/93	1540.0	FS	FS	FS	NR	35.0	1848.0	2887.0	NS	NS	NS	NS	NS	NS	NS	0.09	NS
07/14/93	1560.0	FS	FS	FS	NR	35.0	1853.0	3037.0	NS	NS	NS	NS	NS	NS	NS	0.09	NS
07/15/93	1580.0	2880	1.0028	7.2	3.6	29.0	1893.0	2824.0	555.0	132.0	108.0	3.3	19.0	11.6	6.4	0.08	1930.0
07/15/93	1600.0	FS	FS	FS	NR	29.0	1800.0	2866.0	NS	NS	NS	NS	NS	NS	NS	0.11	NS
07/15/93	1620.0	FS	FS	FS	NR	29.0	1823.0	2890.0	NS	NS	NS	NS	NS	NS	NS	0.11	NS
07/19/93	1640.0	3150	1.0028	7.2	0.39	26.0	1822.0	3040.0	592.0	118.0	134.0	2.6	16.0	6.4	6.8	0.11	2030.0
07/19/93	1660.0	3110	1.0027	7.6	2.36	26.0	1751.0	2874.0	587.0	126.0	140.0	2.9	17.0	1.1	8.8	0.10	2040.0

* AVON PARK MONITOR

6" SCH 80 PVC CASING TO 1220' B.L.S.

6" NOMINAL OPEN BOREHOLE TO 1660' B.L.S.

NR+= NO READING TAKEN

FS@= FIELD SAMPLE

NS++= NO SAMPLE COLLECTED

**SAMPLES COLLECTED WITH A WIRE-LINE SINGLE CHECK BAILER

Table 11. Results of Laboratory Analysis, Avon Park Production Well (deep exploratory)

DATE (M/D/Y)	DEPTH (FT BLS)	SPECIFIC COND. (uMHOS)	WATER DENSITY	pH	ION%	CHLORIDE	SULFATE	TDS	Ca	Mg	TOTAL ALKALIN. (CaCO3)	K	Na	Fe	SILICA	Br	TOTAL HARDNESS (CaCO3)
10/11/93	1680.0	2350	1.0024	7.8	2.3	24.0	1631.0	2359.0	438.0	146.0	88.0	4.9	17.0	895.0	7.0	0.30	1695.0
10/25/93	1695.0	2980	1.0029	7.9	0.85	38.0	1021.0	3116.0	615.0	135.0	121.0	4.0	22.0	469.0	7.6	0.08	2092.0
11/08/93	1705.0	4410	1.0036	7.5	0.85	510.0	1992.0	3937.0	621.0	161.0	123.0	14.0	294.0	135.0	10.8	1.72	2214.0
11/08/93	1725.0	7540	1.0052	7.5	4.9	1610.0	2370.0	5911.0	705.0	192.0	123.0	33.0	835.0	258.0	9.8	5.24	2551.0
11/08/93	1745.0	8380	1.0057	7.4	0.15	1909.0	2333.0	6751.0	775.0	212.0	94.0	43.0	1090.0	353.0	9.8	6.66	2803.0
11/08/93	1760.0	8740	1.0062	7.4	1.38	2087.0	2455.0	7300.0	807.0	223.0	123.0	48.0	1244.0	443.0	9.2	7.40	2933.0
11/10/93	1780.0	94300	NA*	7.2	2.29	29030.0	4845.0	54000.0	1650.0	1234.0	264.0	634.0	15524.0	2.3	10.4	78.00	9202.0
11/04/93	1790.0	88250	NA	7.2	0.52	28670.0	4469.0	55190.0	1840.0	1338.0	279.0	680.0	16035.0	752.0	8.6	102.00	10104.0

NA not analyzed

@ sampled collected with geophysical thief sampler

Table 12. Geophysical Log Summary

LOGGING PHASE	LOGGING EVENT	WELL LOCATION	WELL CONSTRUCTION STATUS	LOG TYPE
1	1	COREHOLE NO. 1	corehole 5.8'-123.4'	CALIPER
	2	COREHOLE NO. 2	corehole 0'-355'	CALIPER, GR, SP, RES
	3	CORE-SUW PUMPED WELL	corehole 355'-1204'	GR, SP, LSN, LAT, RES(FL), TEMP
2	1	AVON PARK MONITOR	exploratory section 1204'-1640'	GR, SP, LSN, LAT, RES(FL), TEMP SONIC
3	1	AVON PARK PRODUCTION WELL	deep exploratory 1640'-1795'	GR, SP, LSN, LAT, RES(FL), TEMP SONIC

Table 13. Summary of Permeameter Results

NUMBER[\2]	SAMPLE NAME (depth)[\3]	K-VALUE (ft/day)			AVERAGE K[\4]
		RUN 1	RUN 2	RUN 3	
1	88.5-89	3.32E-05	NA[\5]	NA	NA
2	641-641.5	4.66E-05	NA	NA	NA
3	818.5-819	4.92E-03	5.11E-03	5.55E-03	5.19E-03
4	909	1.33E-03	1.85E-03	2.04E-03	1.74E-03
5	1007	7.98E-02	8.46E-02	7.49E-02	7.98E-02
6	1118.5-1119	5.15E-03	4.52E-03	4.26E-03	4.64E-03
7	1182-1185.5	6.43E-03	6.35E-03	6.29E-03	6.36E-03

\1 Permeameter analyses conducted by the Florida Geologic Survey
\2 sample and test designation
\3 depth interval below LSD
\4 average conductivity
\5 Not Analyzed

Table 14. Results of Packer Tests Conducted In the Ocala Limestone

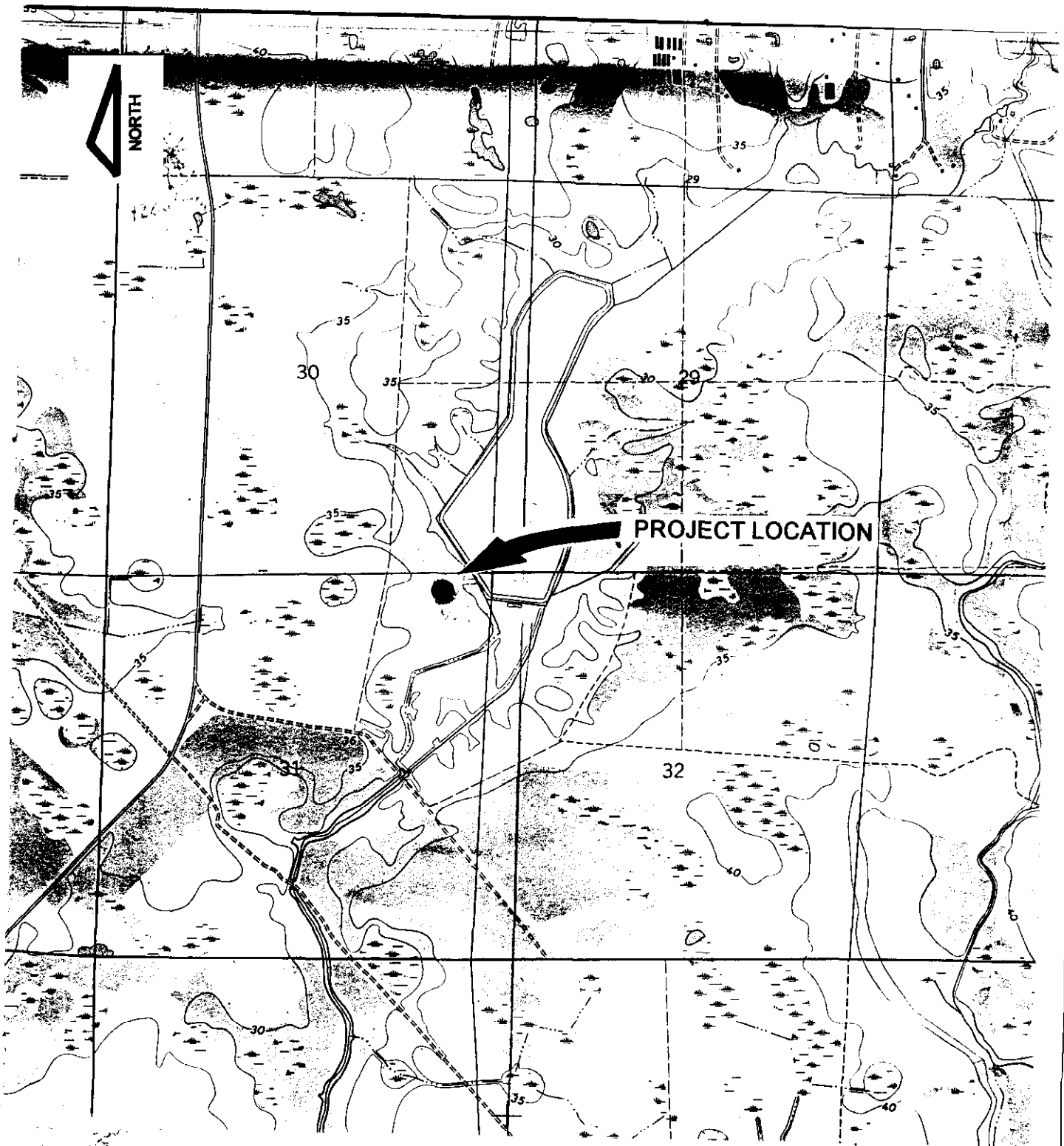
Transmissivity and Hydraulic Conductivity								
Test	Flow Rate (gpm)	Interval (ft)	Transmissivity (ft^2/day)		Hydraulic Conductivity (ft/day)		Average Transmissivity (ft^2/day)	Average Conductivity (ft/day)
			Drawdown	Recovery	Drawdown	Recovery		
1	13.4	104.0	4.70	3.80	0.0406	0.0308	4.25	0.0305
2	10.41	54.0	17.85	2.99	0.330	0.0554	10.42	0.1927
3	43.42	97.0	112.68	69.34	1.1616	0.7148	91.01	0.9832
4	16.82	42.0	11.85	5.71	0.28	0.13	8.78	0.205

Table 15. Results of Packer Tests Conducted in the Avon Park Formation

Transmissivity and Hydraulic Conductivity								
Test	Flow Rate (gpm)	Interval (ft)	Transmissivity (ft*ft/day)		Hydraulic Conductivity (ft/day)		Average Transmissivity (ft*ft/day)	Average Conductivity (ft/day)
			Drawdown	Recovery	Drawdown	Recovery		
5	NT	NA	NA	NA	NA	NA	NA	NA
6	1.7	1743-1795	3.16	0.89	.0608	.0172	2.025	0.039
7	2.13	1705-1795	4.69	1.17	.0522	.0131	2.93	.0327

NT = formation packer test not run
NA = Not Analyzed

FIGURES

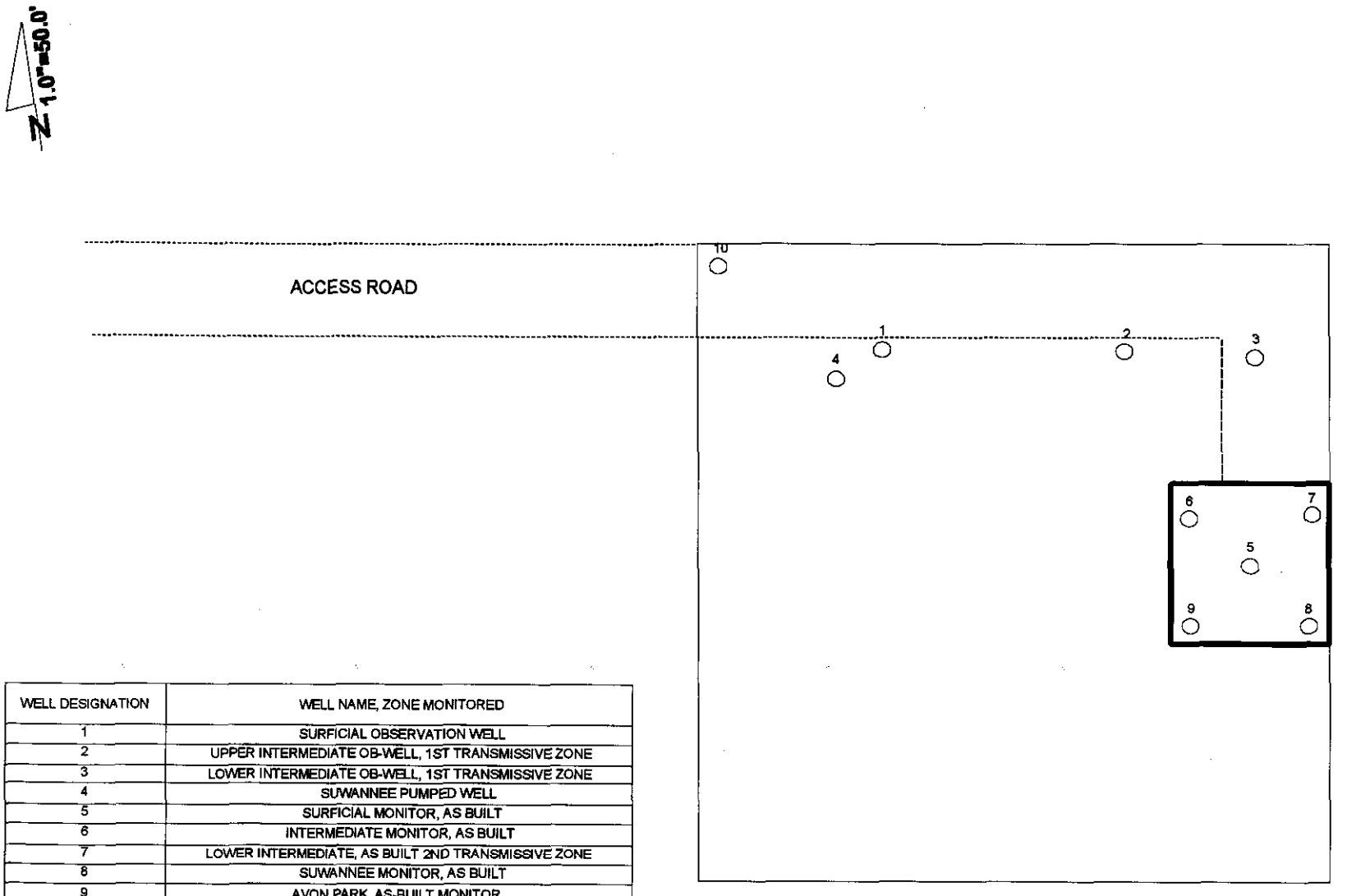


QUADRANGLE LOCATION

OLD MYAKKA, FLORIDA
27082-C3-TF-024
1973
PHOTREVISED 1987
DMA 4538 IV SE-SERIES V847

0 1000 2000 3000

FIGURE 1.
PROJECT LOCATION MAP



WELL DESIGNATION	WELL NAME, ZONE MONITORED
1	SURFICIAL OBSERVATION WELL
2	UPPER INTERMEDIATE OB-WELL, 1ST TRANSMISSIVE ZONE
3	LOWER INTERMEDIATE OB-WELL, 1ST TRANSMISSIVE ZONE
4	SUWANNEE PUMPED WELL
5	SURFICIAL MONITOR, AS BUILT
6	INTERMEDIATE MONITOR, AS BUILT
7	LOWER INTERMEDIATE, AS BUILT 2ND TRANSMISSIVE ZONE
8	SUWANNEE MONITOR, AS BUILT
9	AVON PARK, AS-BUILT MONITOR
10	LOWER UPPER FLORIDAN, PUMPED WELL

EXPLANATION

- ○ OBSERVATION/MONITOR-WELL LOCATION
- ..... EDGE OF ROADWAY
- ▬▬ BOUNDARY OF PERMANENT EASEMENT
- ——— BOUNDARY TEMPORARY CONSTRUCTION EASEMENT
- — — — POTENTIOMETRIC ISO-CONTOUR IN THE FLORIDAN AQUIFER FT NGVD

FIGURE 2

WELL LOCATION MAP-ROMP 22

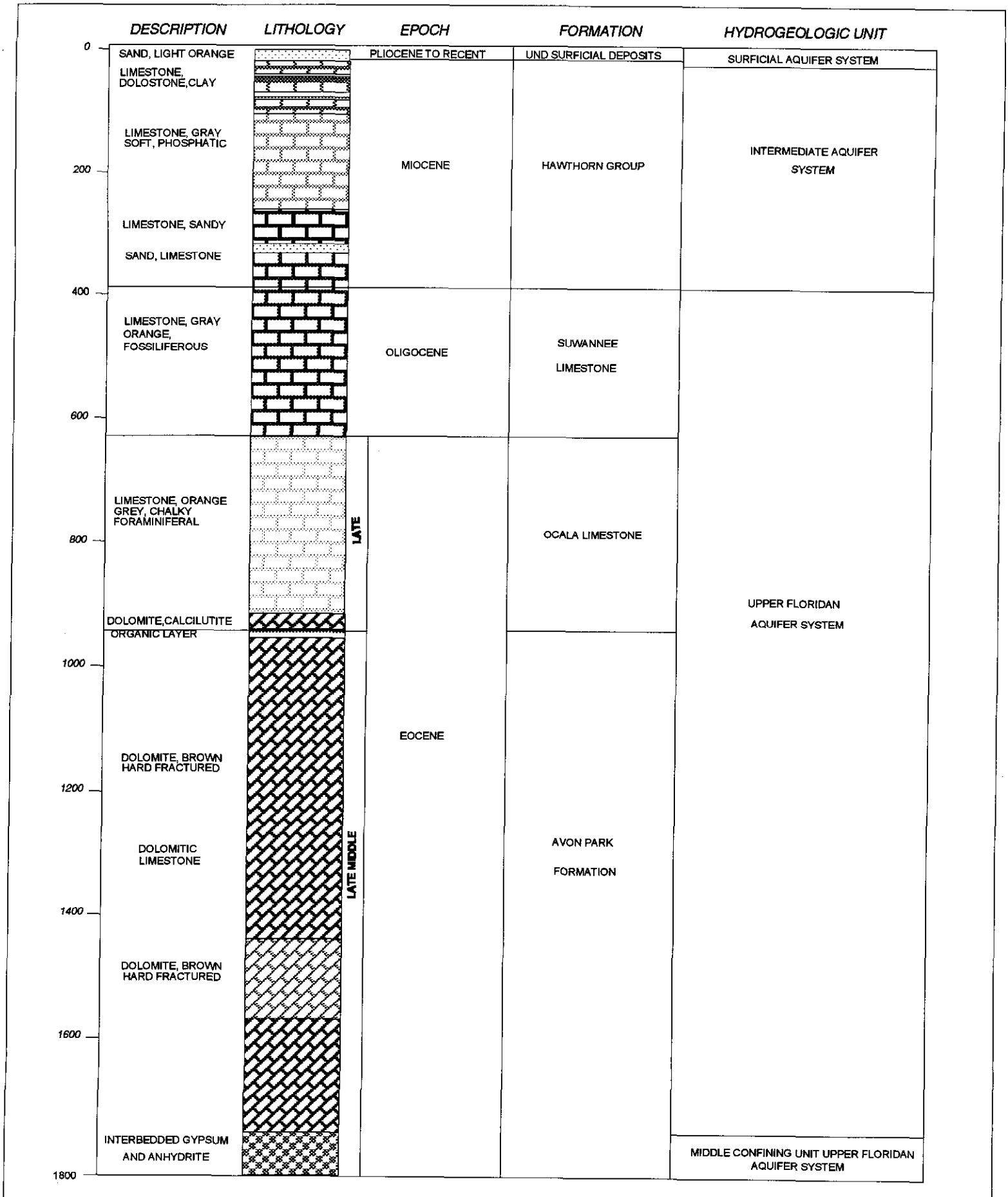
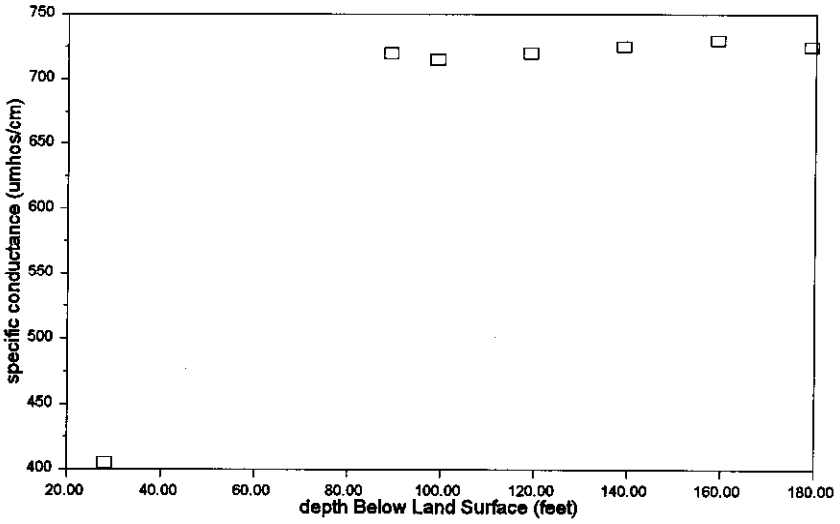


FIGURE 3

ROMP 22 WRAP NO. 7 Geology and Hydrogeologic Units

COREHOLE NO. 1, Upper Intermediate
Conductivity vs. Depth



COREHOLE NO. 1, Upper Intermediate
chloride, sulfate vs. Depth

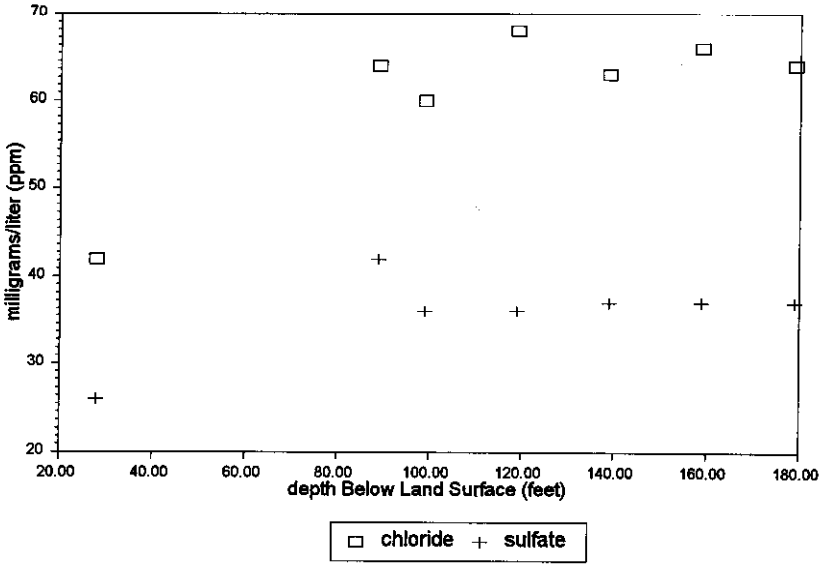
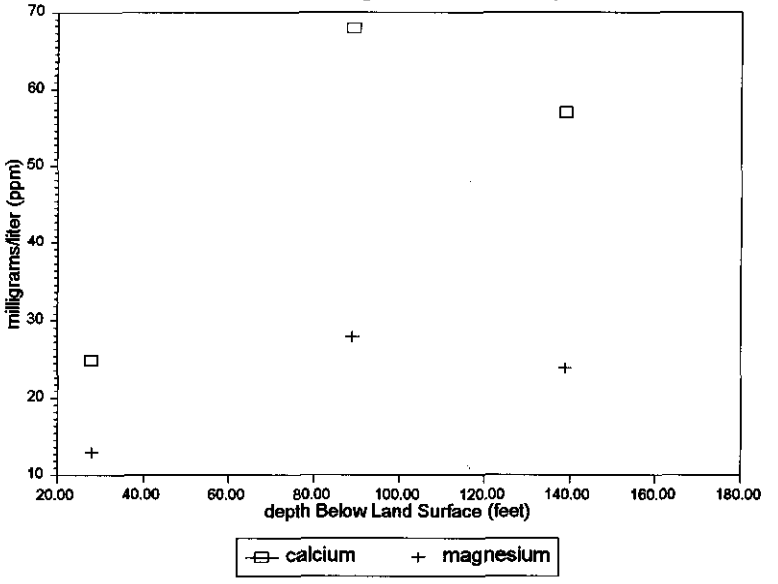


FIGURE 4
RESULTS OF LABORATORY ANALYSIS
COREHOLE NO. 1

COREHOLE NO. 1, Upper Intermediate
calcium, magnesium vs. Depth



COREHOLE NO. 1, Upper Intermediate
total alkalinity vs. Depth

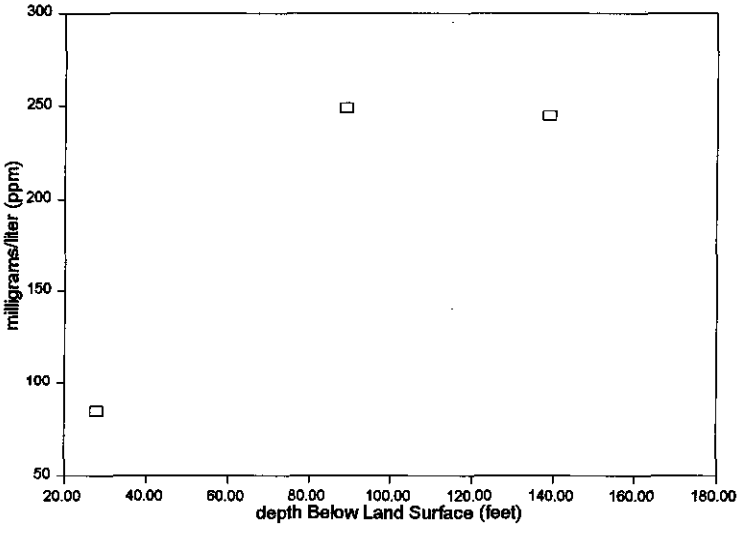
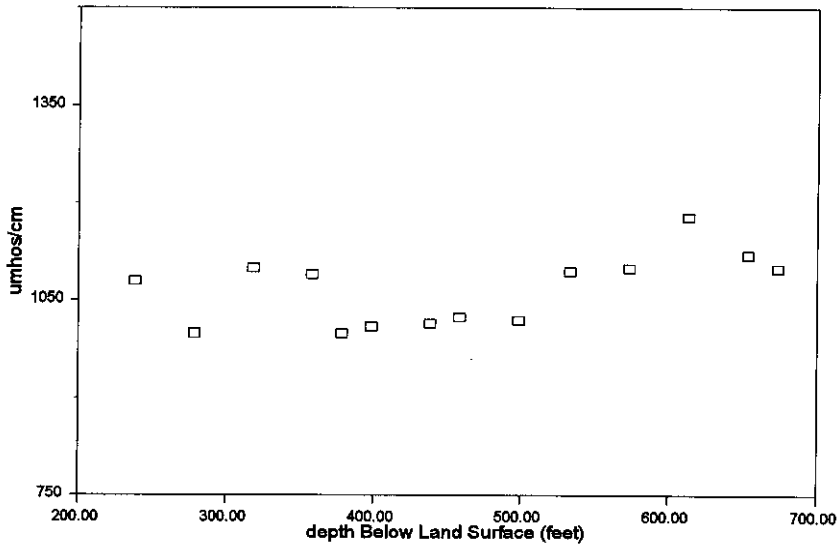


FIGURE 5
RESULTS OF LABORATORY ANALYSIS
COREHOLE NO. 1

COREHOLE NO. 2, Lower Intermediate
conductivity vs. Depth



COREHOLE NO. 2, Lower Intermediate
chloride, sulfate vs. Depth

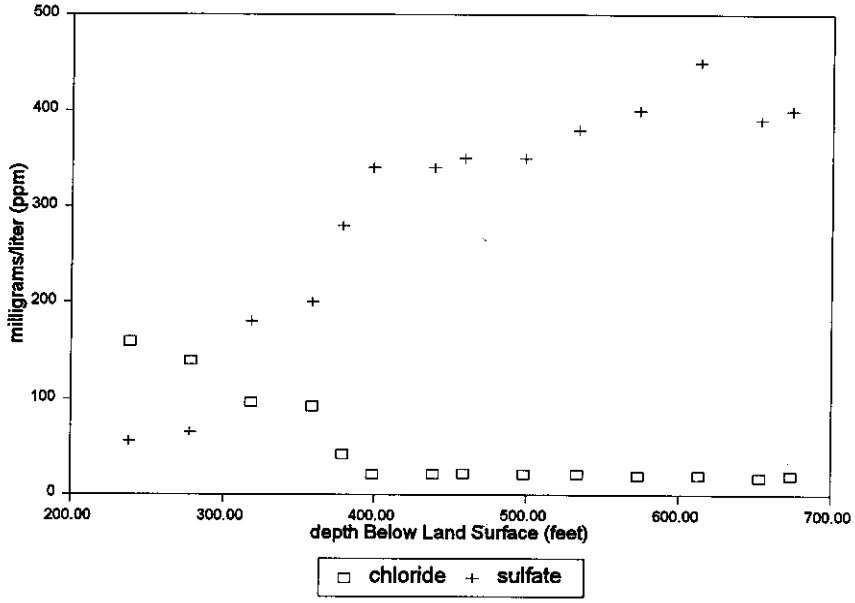
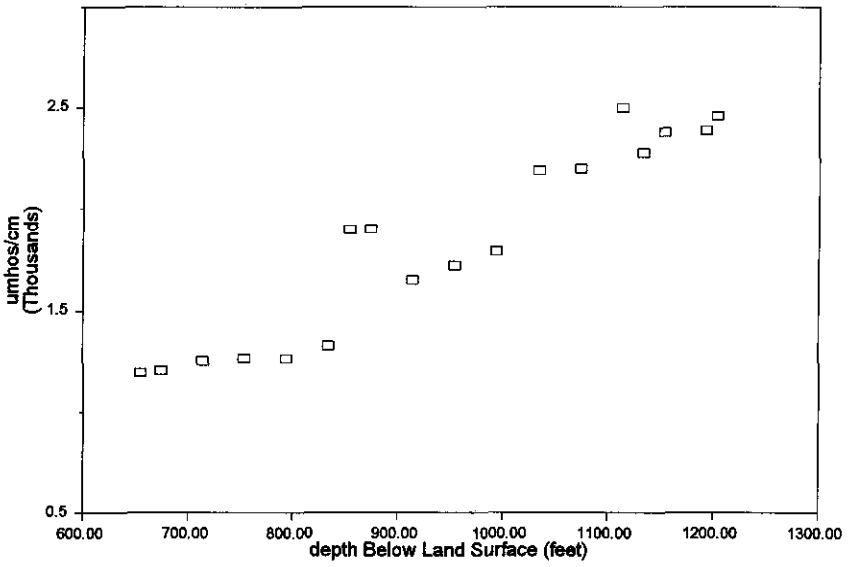


FIGURE 6
RESULTS OF LABORATORY ANALYSIS
COREHOLE NO. 2

SUWANNEE PUMPED WELL
conductivity vs. Depth



SUWANNEE PUMPED WELL
chloride vs. Depth

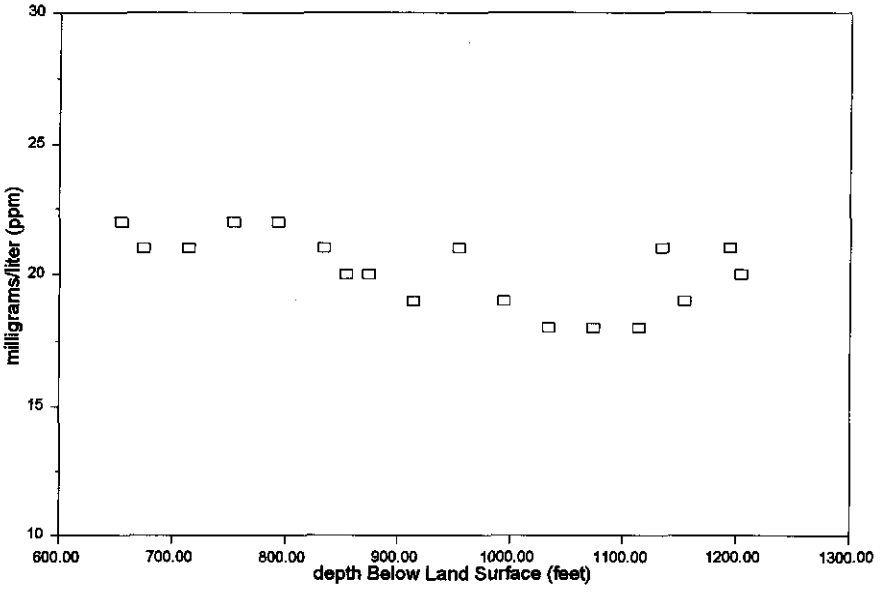
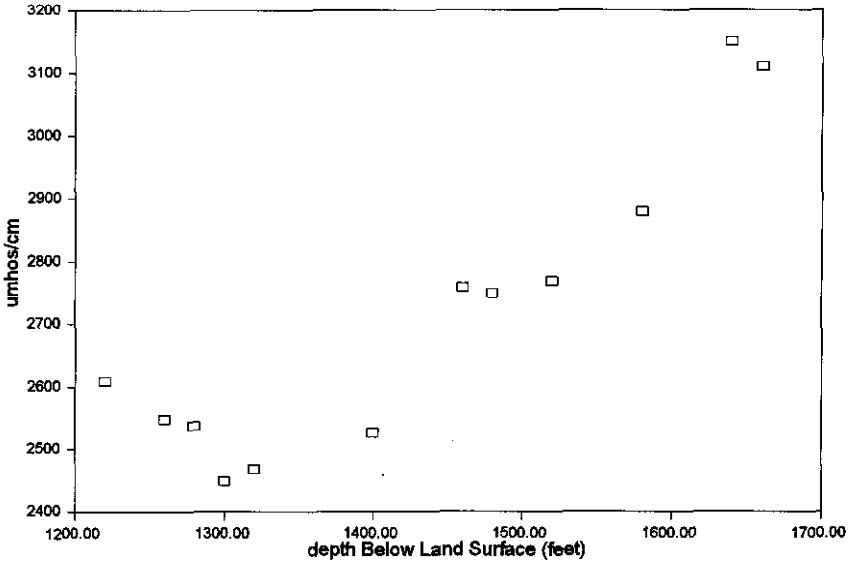


FIGURE 7
RESULTS OF LABORATORY ANALYSIS
SUWANNEE PUMPED WELL

AVON PARK MONITOR
conductivity vs. Depth



AVON PARK MONITOR
chloride vs. Depth

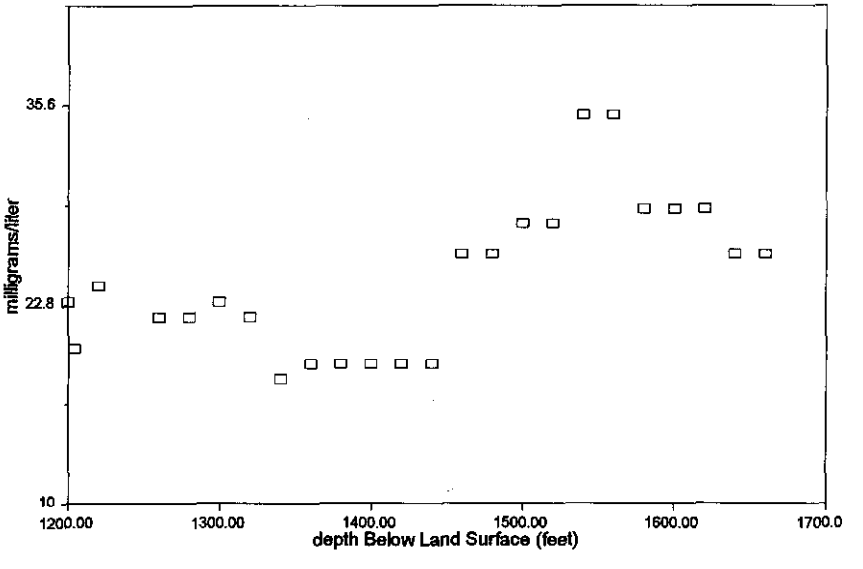


FIGURE 8
RESULTS OF LABORATORY ANALYSIS
AVON PARK MONITOR

AVON PARK MONITOR
sulfate vs. Depth

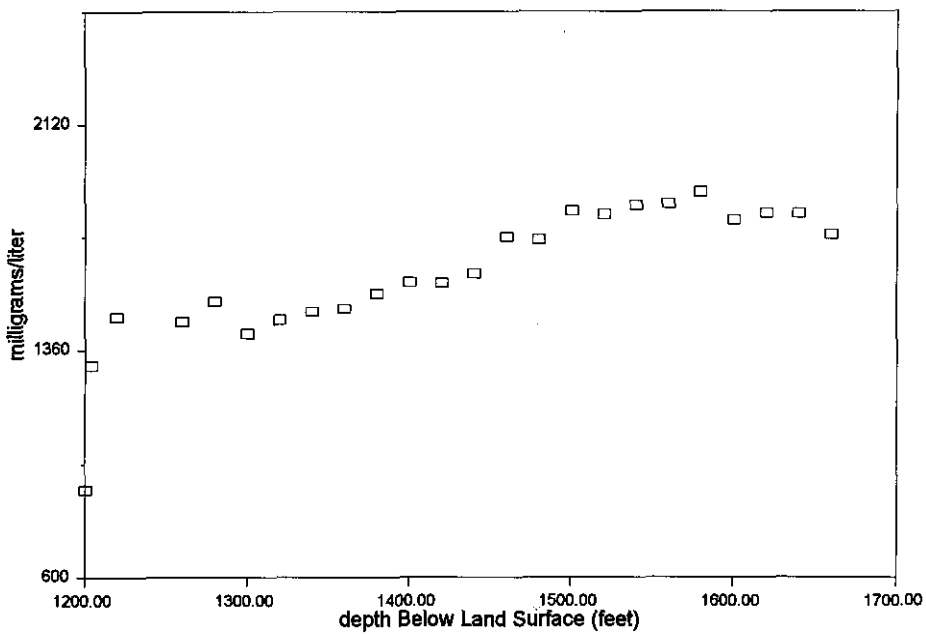
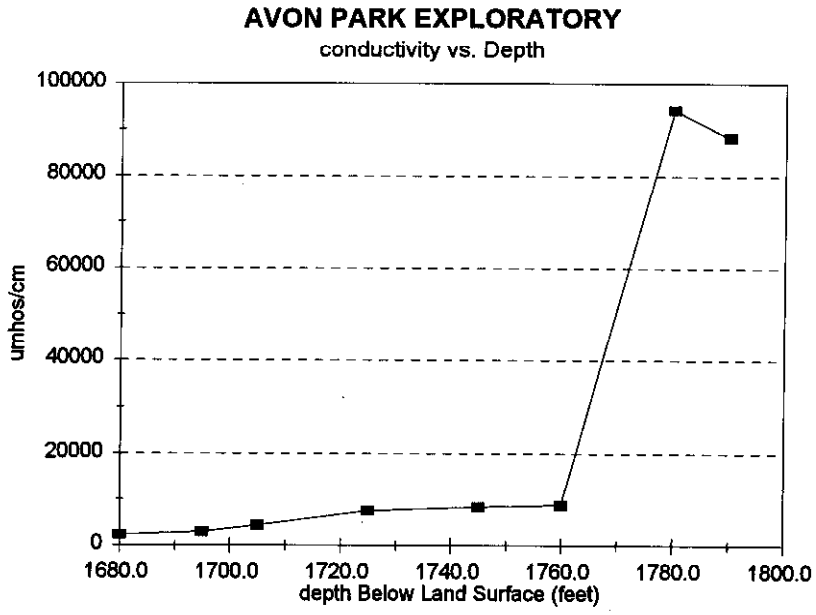


FIGURE 9
RESULTS OF LABORATORY ANALYSIS
AVON PARK MONITOR



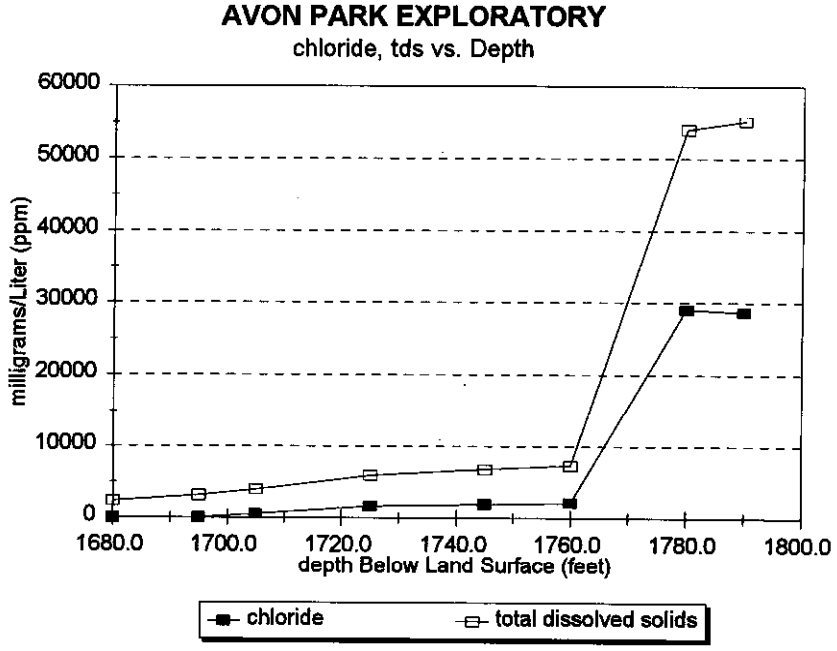


FIGURE 10

RESULTS OF LABORATORY ANALYSIS

AVON PARK EXPLORATORY

AVON PARK EXPLORATORY

sulfate vs. Depth

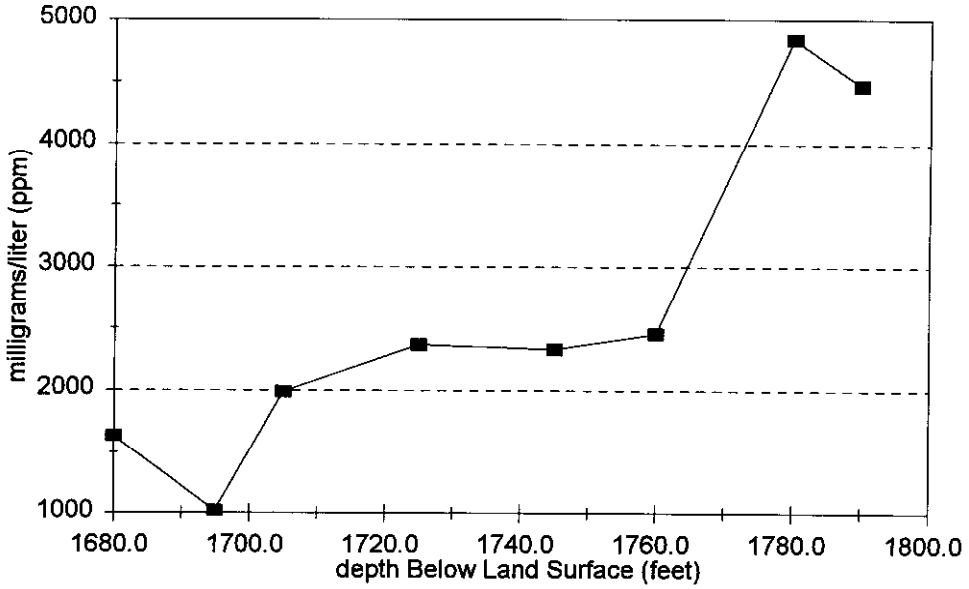


FIGURE 11

RESULTS OF LABORATORY ANALYSIS

AVON PARK EXPLORATORY

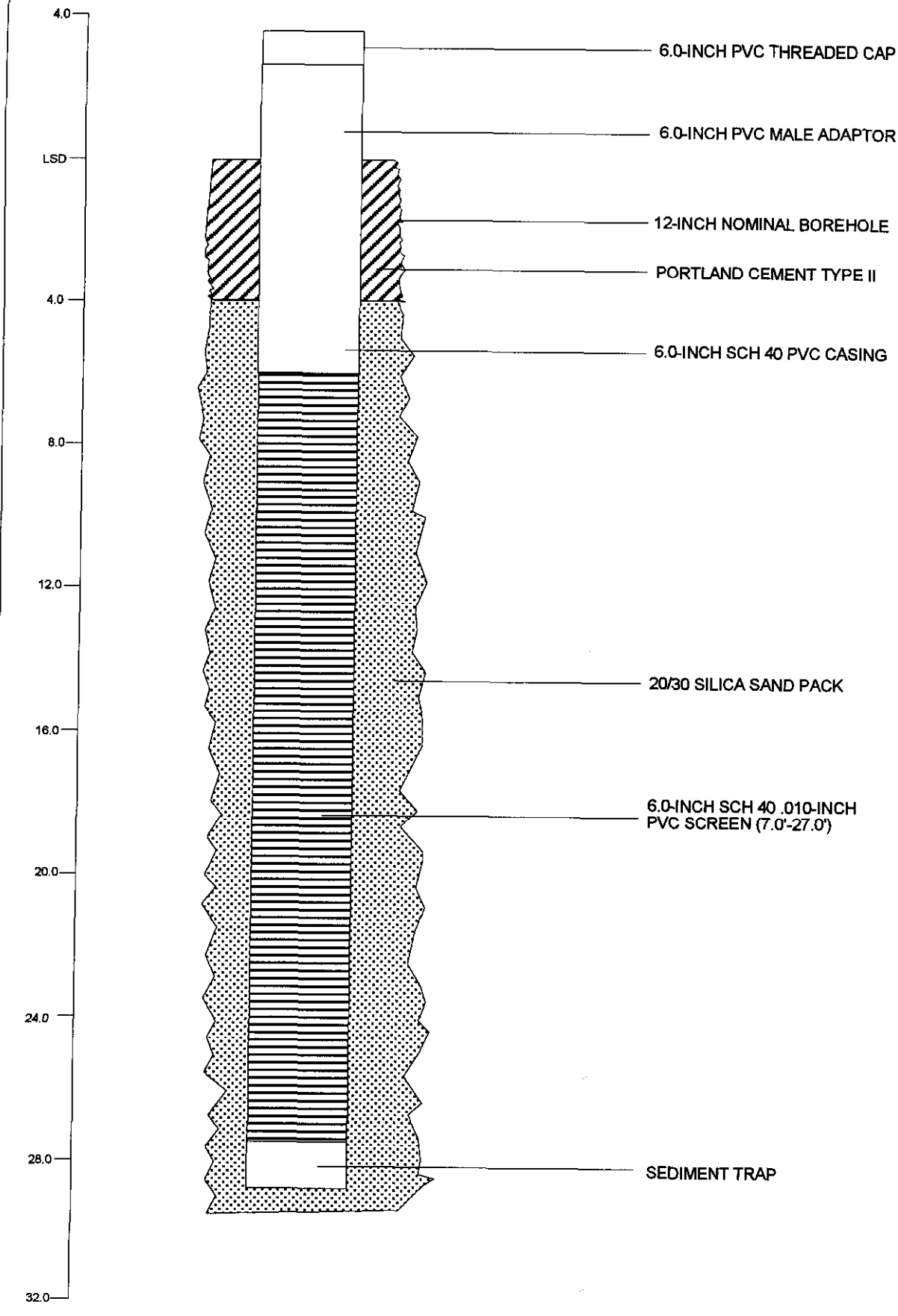


FIGURE 12	
ROMP 22	*SURFICIAL* OBSERVATION WELL

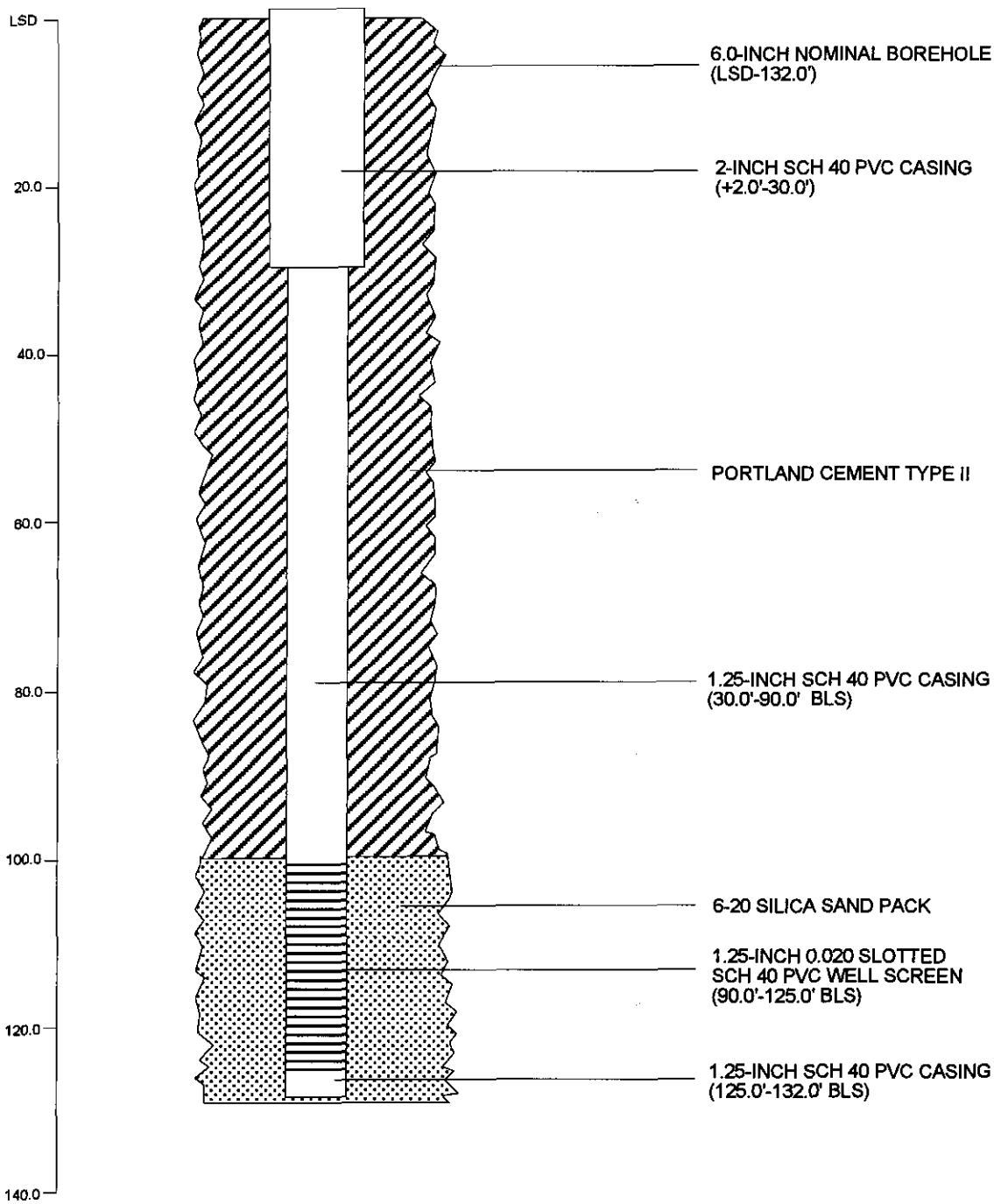


FIGURE 13	
ROMP 22	UPPER INTERMEDIATE OBSERVATION WELL 1ST TRANSMISSIVE ZONE

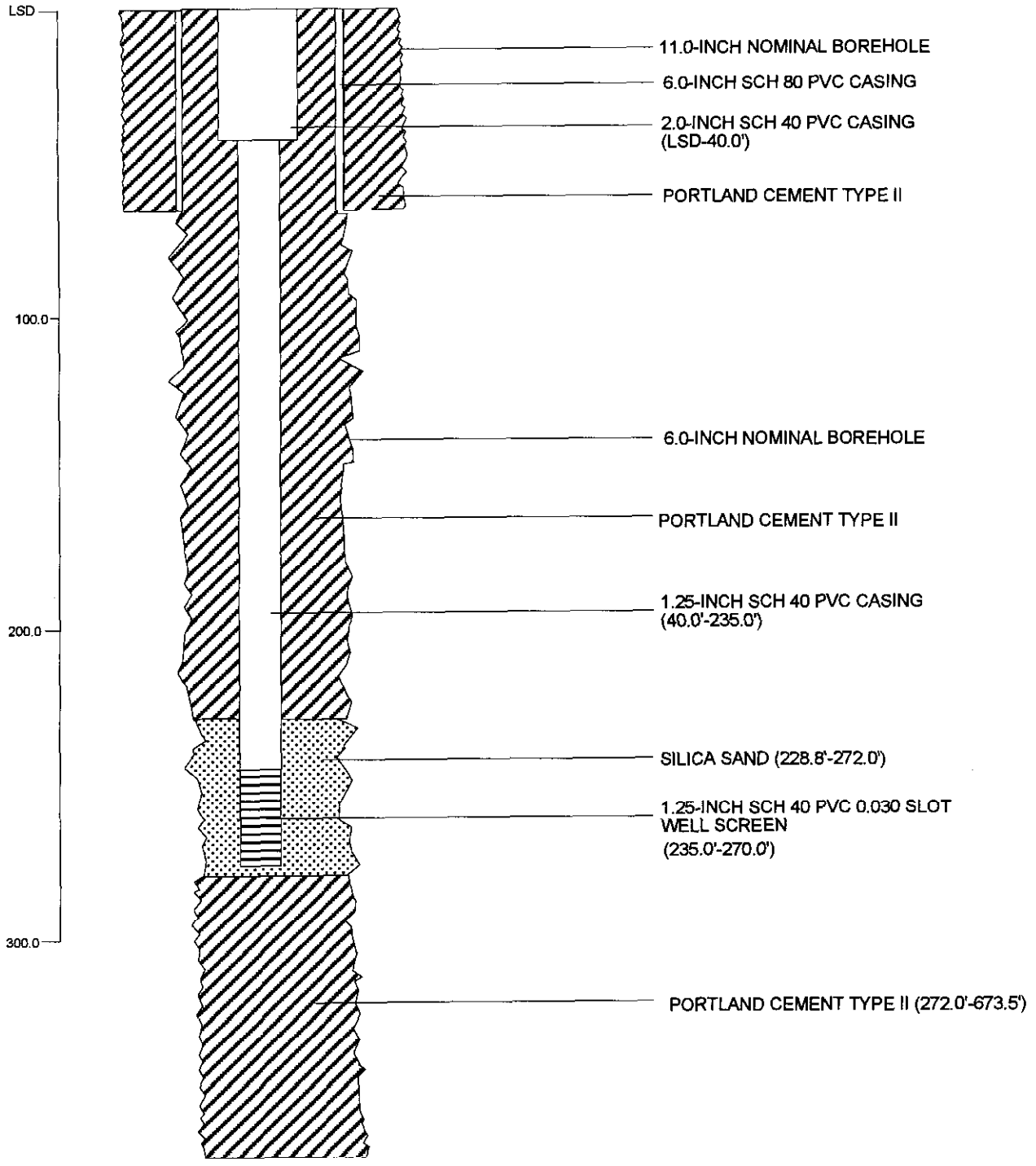


FIGURE 14	
ROMP 22	LOWER INTERMEDIATE OBSERVATION WELL 2ND TRANSMISSIVE ZONE

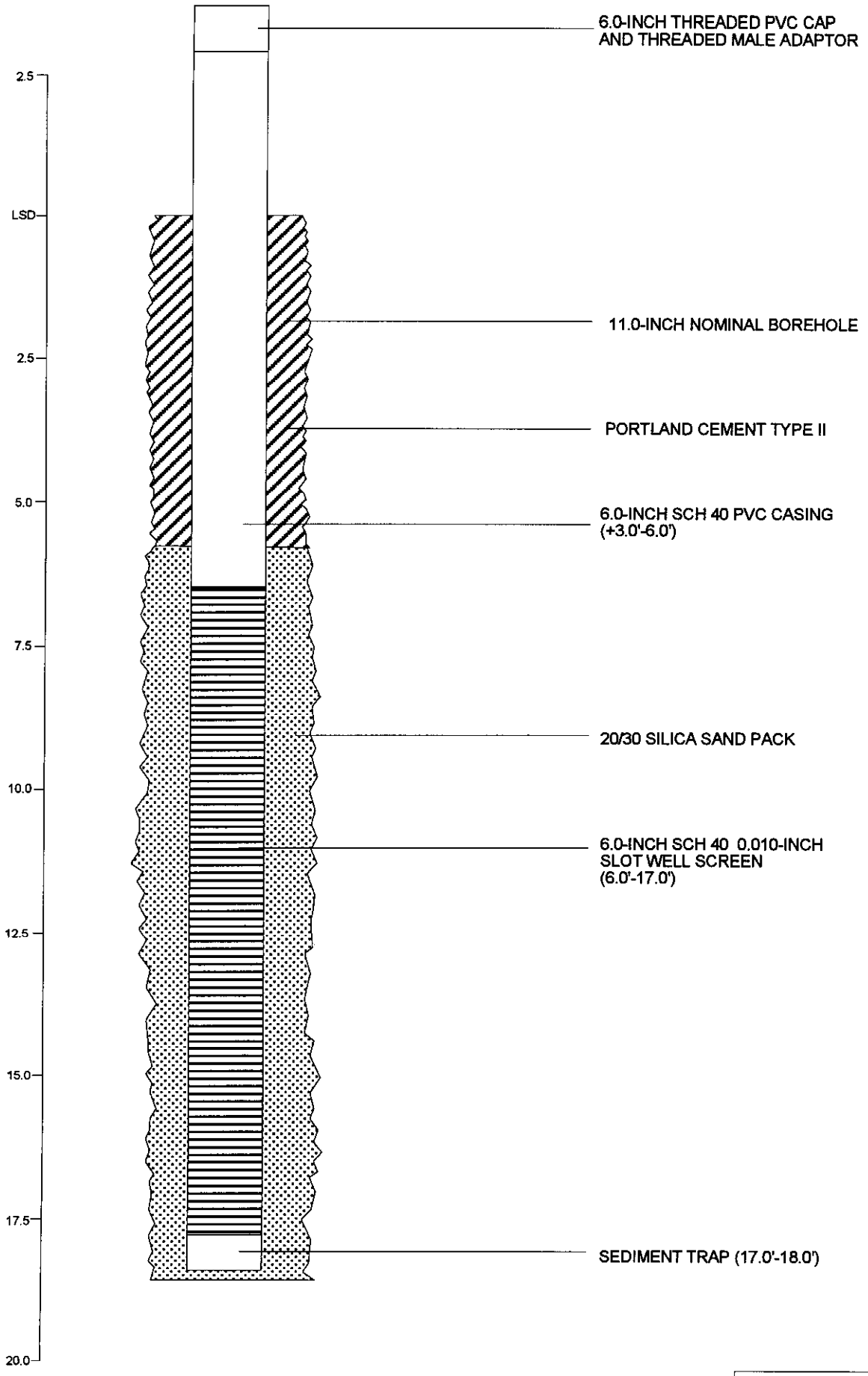


FIGURE 15	
ROMP 22	*SURFICIAL MONITOR* AS-BUILT

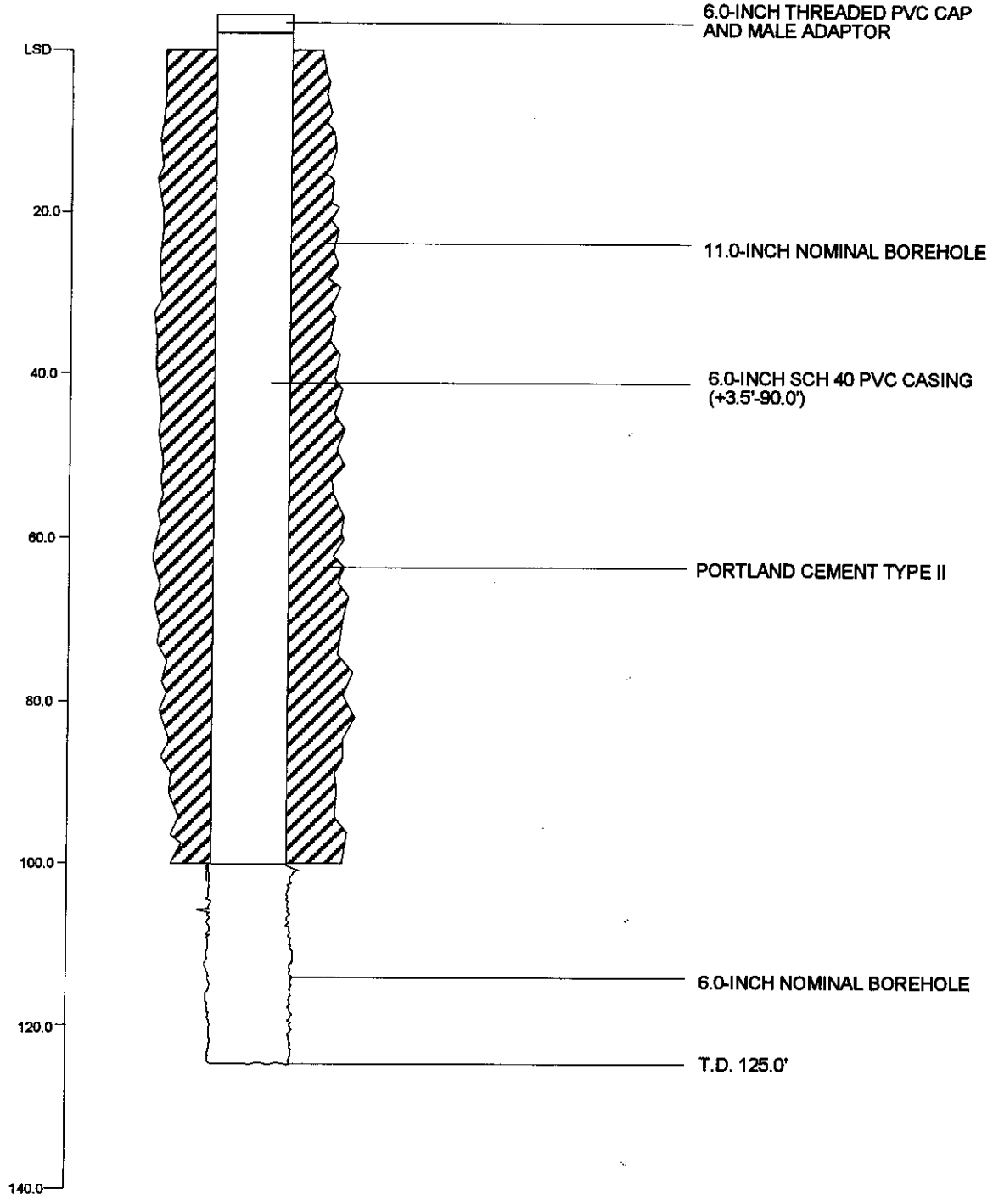


FIGURE 16	
ROMP 22	UPPER INTERMEDIATE MONITOR AS-BUILT 1ST TRANSMISSIVE ZONE

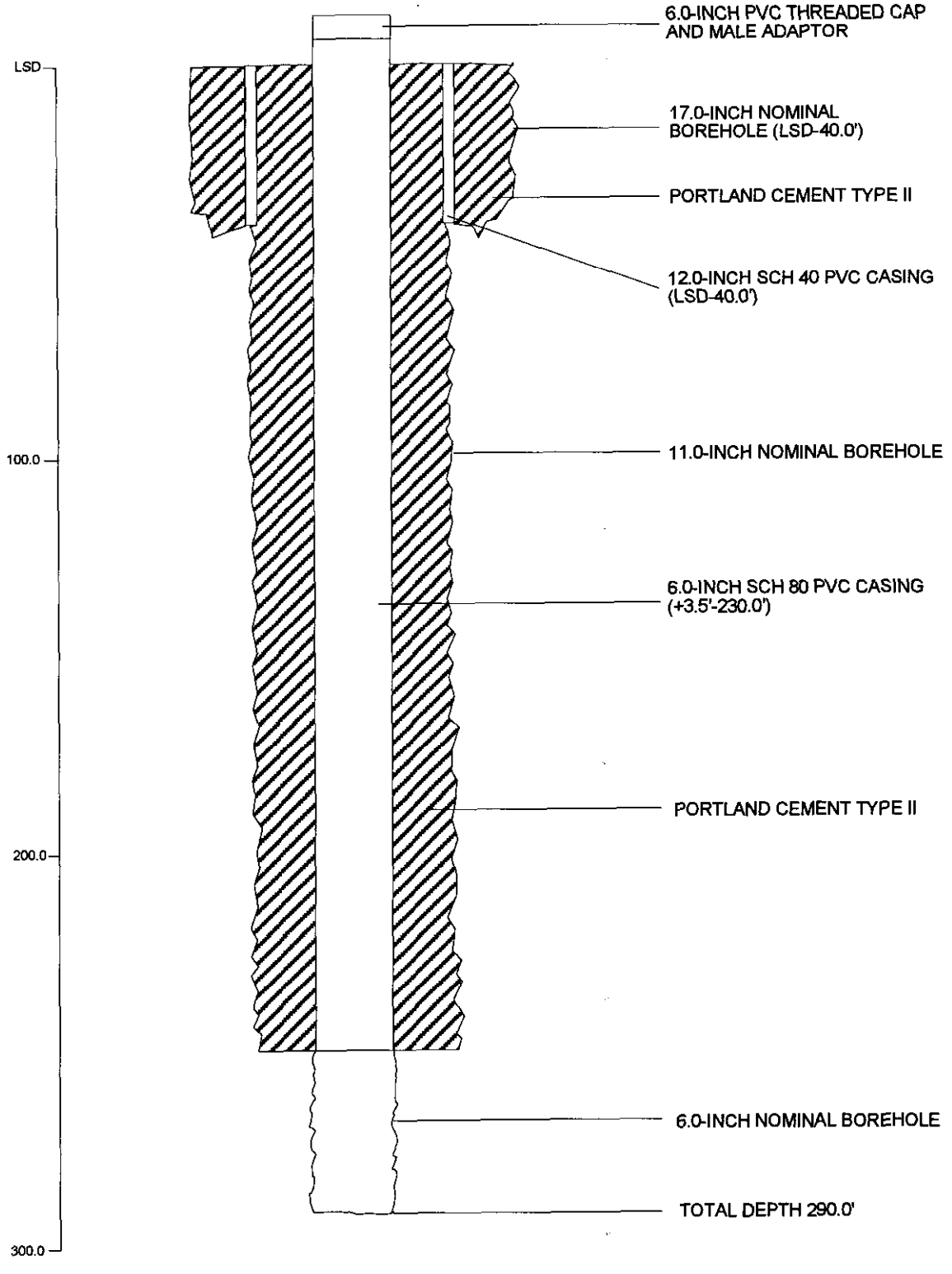


FIGURE 17	
ROMP 22	LOWER INTERMEDIATE MONITOR AS BUILT 2ND TRANSMISSIVE ZONE

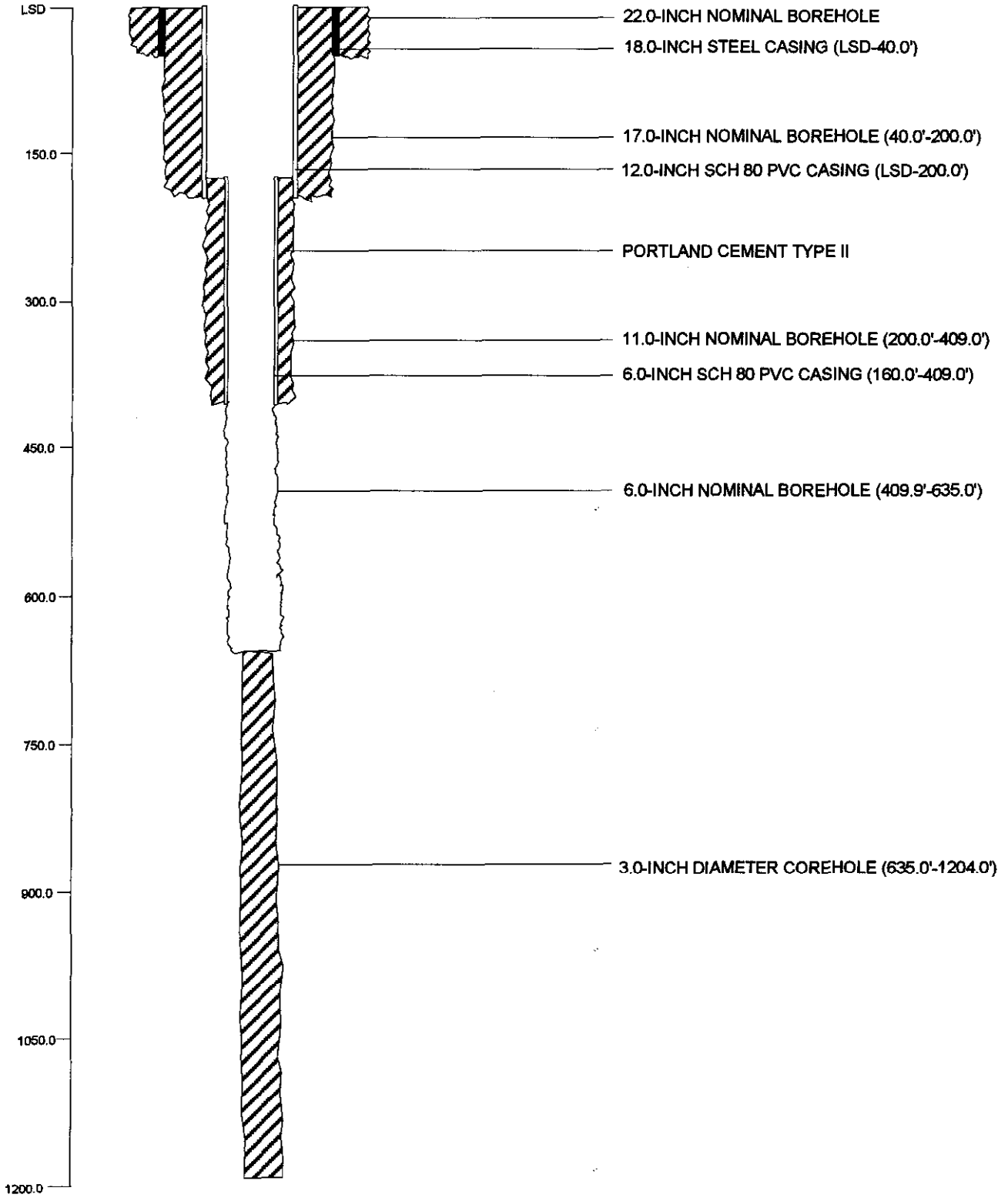


FIGURE 18	
ROMP 22	SUWANNEE LIMESTONE UPPER FLORIDAN PRODUCTION WELL

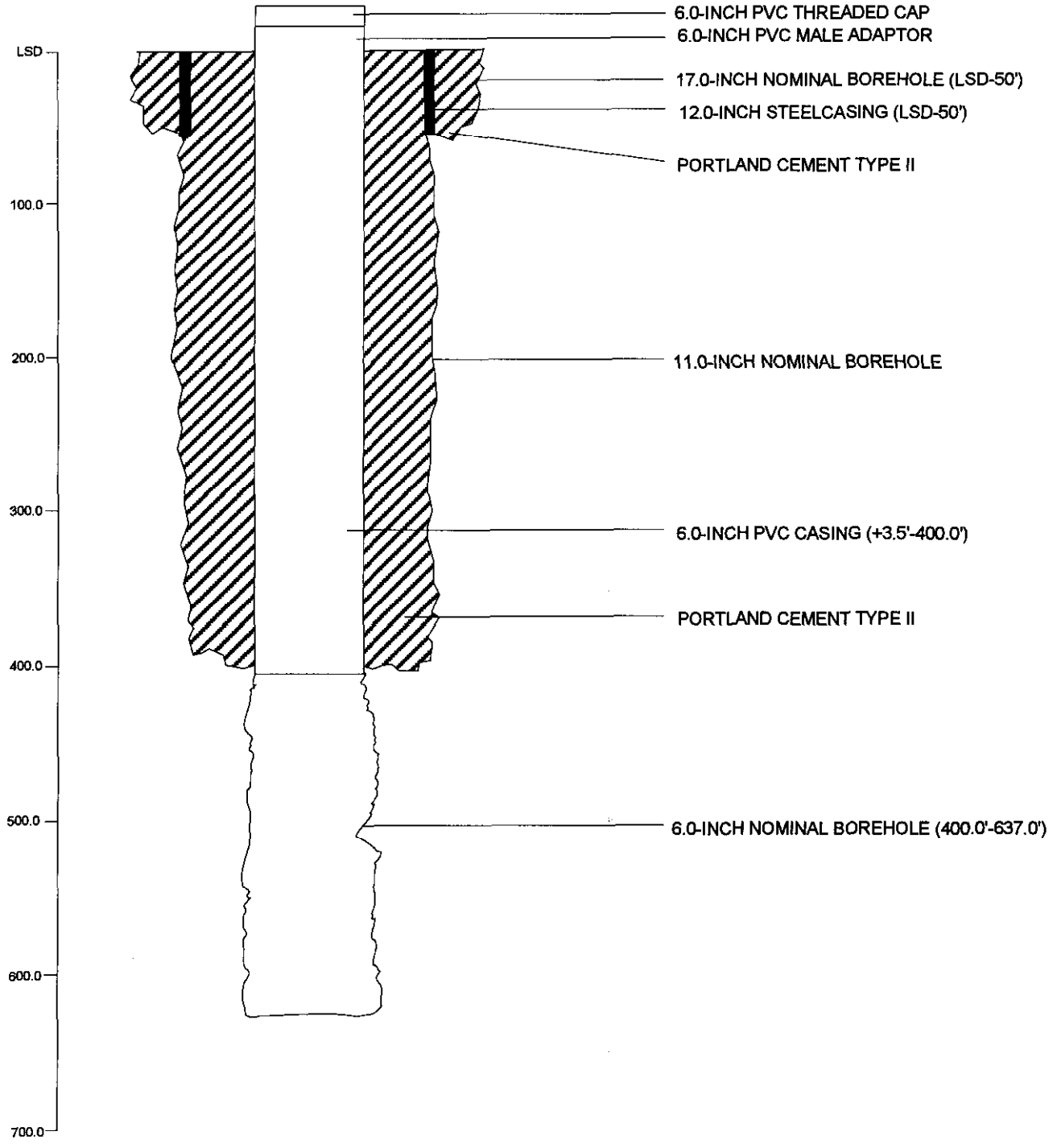


FIGURE 19	
ROMP 22	SUWANNEE MONITOR AS-BUILT

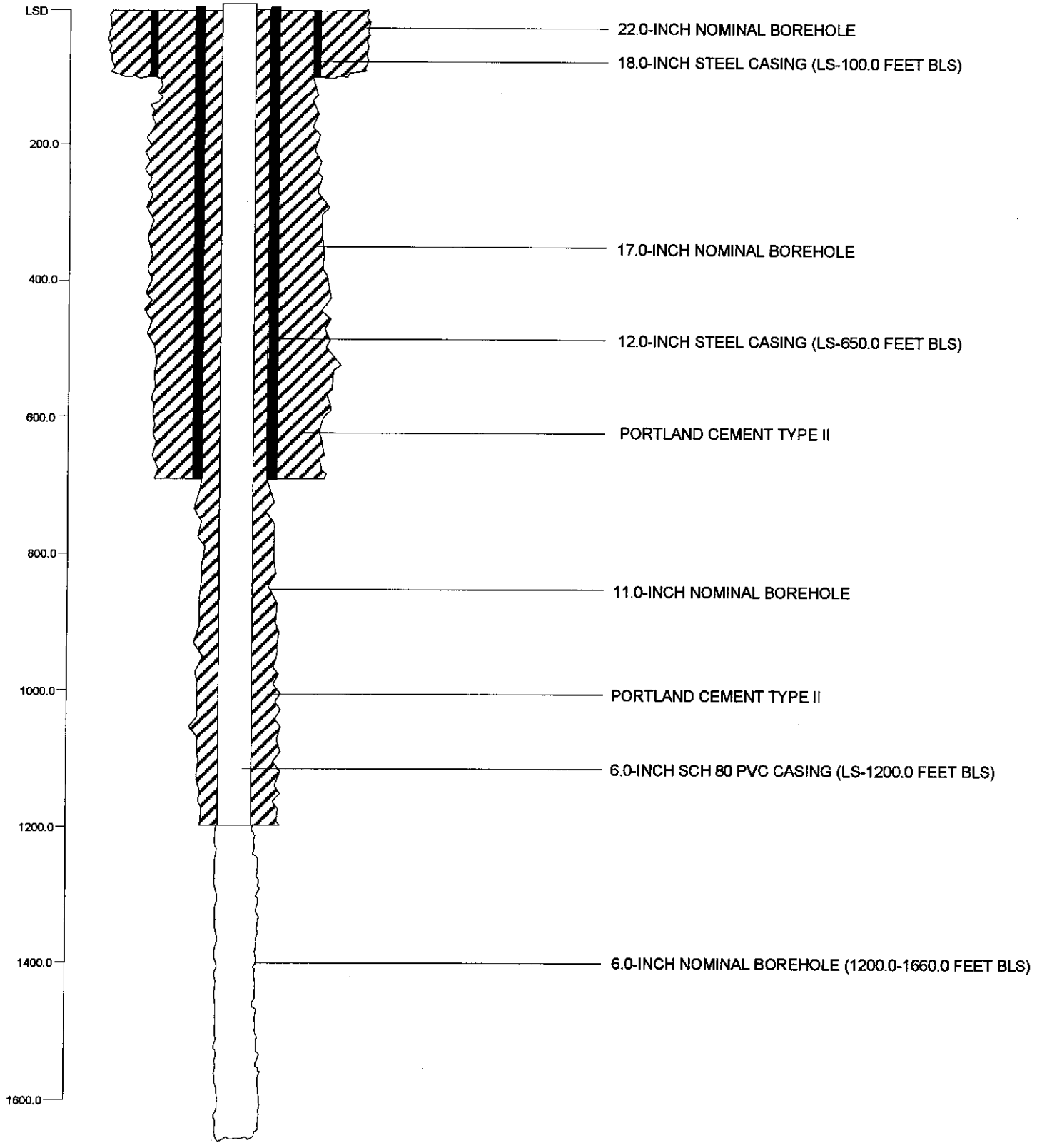


FIGURE 20	
ROMP 22	AVON PARK MONITOR AS-BUILT

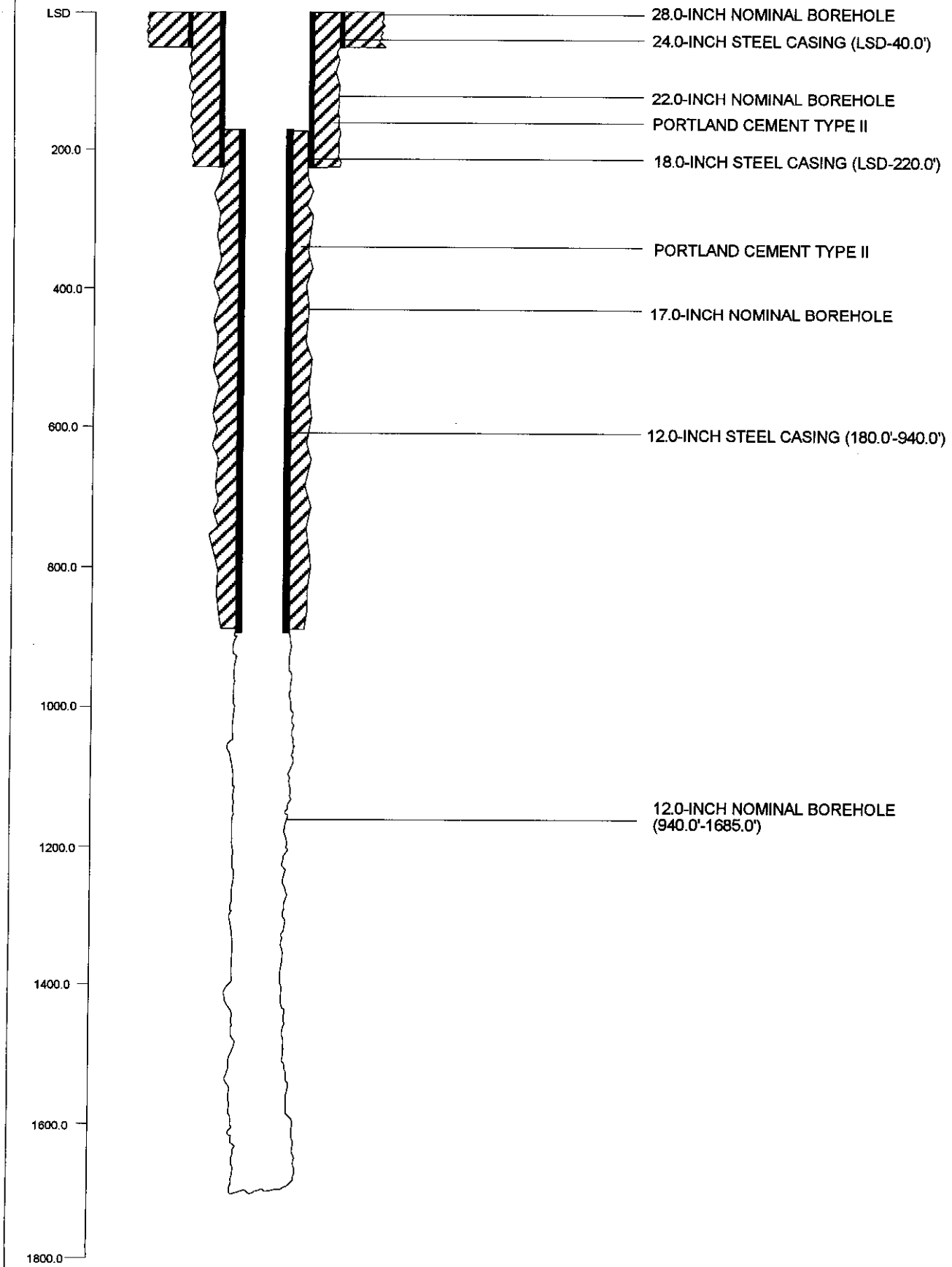


FIGURE 21

ROMP 22	AVON PARK FORMATION UPPER FLORIDAN PRODUCTION WELL

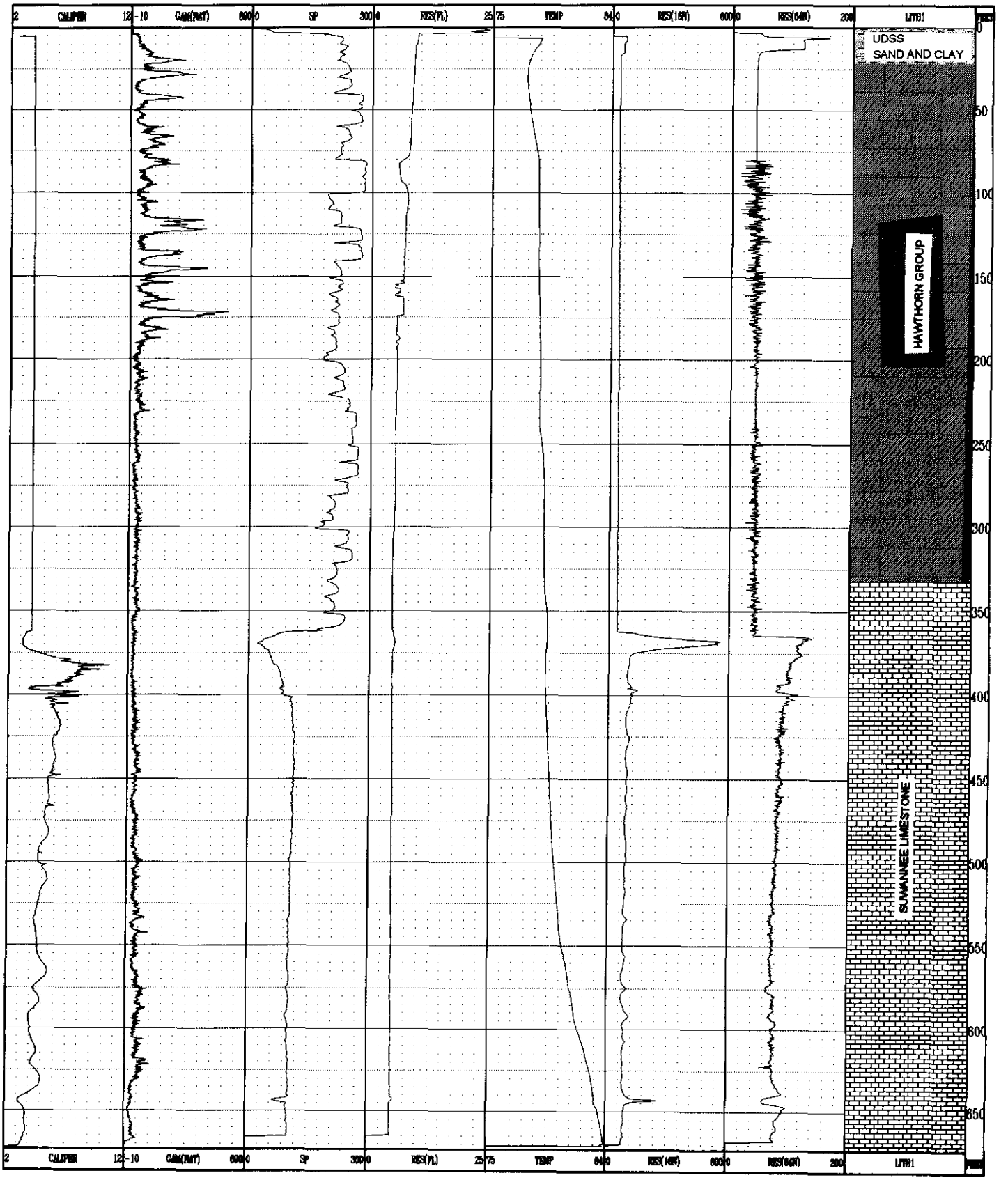


FIGURE 22

COMPOSITE GEOPHYSICAL LOG
SUWANNEE PUMPED WELL

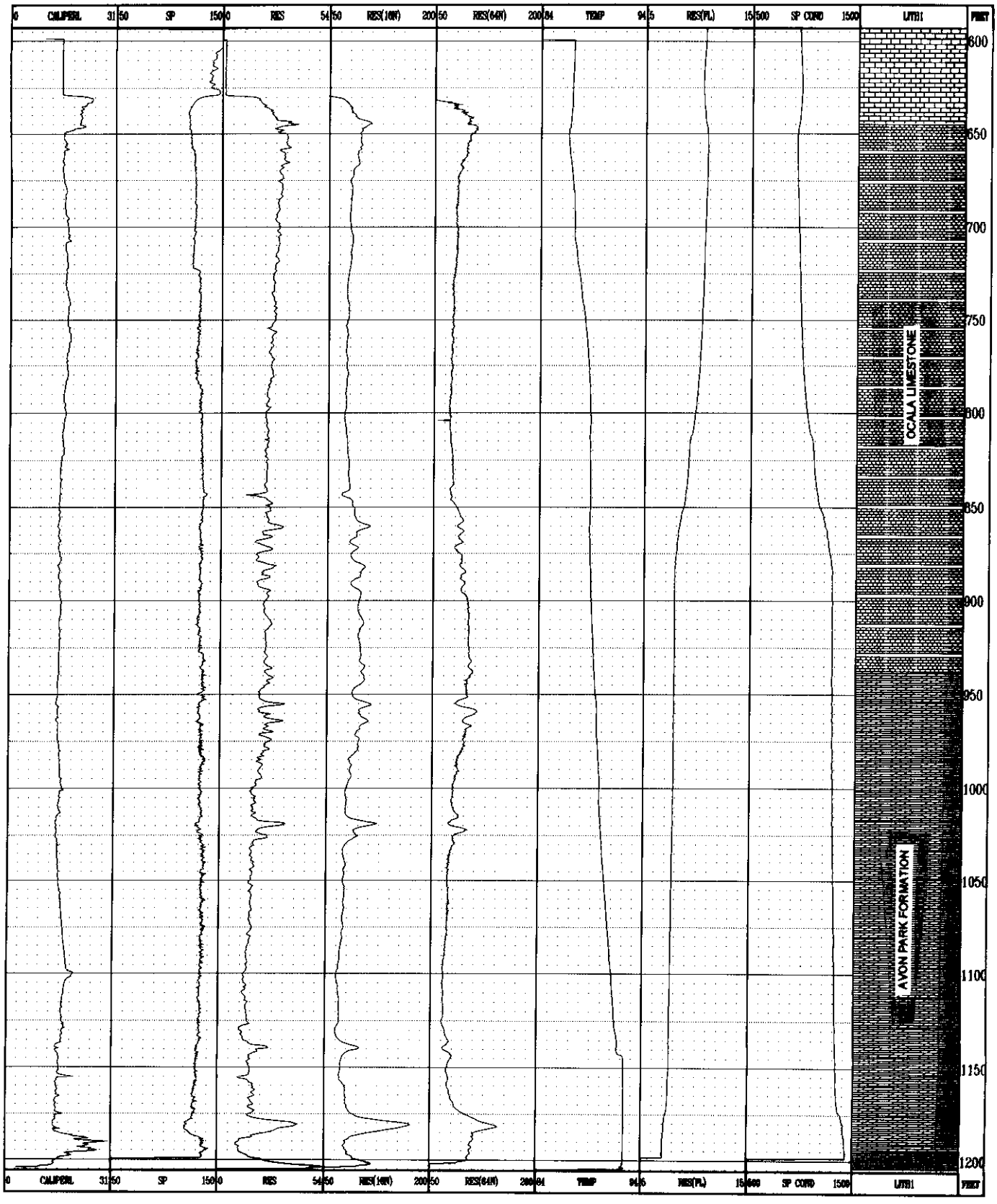


FIGURE 23

COMPOSITE GEOPHYSICAL LOG
AVON PARK MONITOR

FIGURE 24

COMPOSITE GEOPHYSICAL LOG
AVON PARK PRODUCTION WELL
EXPLORATORY SECTION

APPENDIX A

REGIONAL OBSERVATION AND MONITOR-WELL PROGRAM (ROMP)

WATER QUALITY SAMPLING PROTOCOL
QUALITY ASSURANCE/QUALITY CONTROL PROCEDURES

July , 1993

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I. INTRODUCTION

During core-drilling and well construction activities water quality has been an effective tool in aquifer delineation. Water quality data collected includes; temperature, pH, fluid conductivity, density, total chlorides, and sulfate. These data are recorded on ROMP field data sheets (see Figure 1).

II. FIELD EQUIPMENT

Measurement of field parameters (ie. temperature, pH, fluid conductivity, density) and field analyses for total chlorides, and sulfates is accomplished by utilizing the following equipment.

1. temperature, conductivity- YSI, SCT meter./1 probe stored in DI water
2. pH- Orion temperature compensated ph meter/calibrated daily
3. total chloride- Hach field test kits
4. sulfate- Hach field test Kits
5. density- non-graduated glass cylinder, density hydrometer

Filtration devices include:

1. Geo-tech filter chamber, equipped with a 0.45 micron filter membrane;
2. Geo-tech flow-through membrane (0.45 micron) utilizing a peristaltic pump.

Acquisition of water samples is accomplished by utilizing the following devices:

1. double check-valve wire-line bailer (core rig);
2. standard bailer;
3. Kemmerer-thief sampler;
4. geophysical thief sampler (electric dart valve);

III. COLLECTION OF WATER SAMPLES FOR LABORATORY ANALYSIS

Collection of water samples during active well construction is based on several criteria. These criteria include lithologic change (formation changes), potentiometric variations, variations in field analyzed water

chemistry (ie. temperature, pH, fluid conductivity, total chloride, and sulfate), and changes in formation porosity/permeability (Transmissivity). Based on these parameters, the site-hydrologist is responsible for the acquisition of water samples. The maximum depth interval drilled between water quality samples cannot exceed 40-feet for core drilling activities. The maximum depth interval drilled between water quality samples cannot exceed 60-feet for Reverse Air/Exploratory drilling activities.

Three types of samples are collected for analytical laboratory analysis:

- split samples (chloride, sulfate, and TDS)
- partial standard complete
- standard complete.

The following water sampling procedures will be utilized for ground-water investigations conducted by the Regional Observation and Monitor-Well Program (ROMP). Table 1 presents a complete listing of chemical parameters and associated holding times for the above referenced water quality sample sets.

IV. CORE DRILLING ACTIVITIES

The corehole potentiometric level is obtained at the beginning of the work day, after overnight recovery from the drilling process. As possible, reliable potentiometric levels are collected following a mid-day break, at the end of the day, etc. as allowed by the degree of recovery in the corehole. In certain regional potentiometric regimes, the potentiometric changes during the drilling process are obvious and signal for a sampling event.

Water quality monitoring.

A. Under flowing conditions, annular water quality is to be monitored. Variations in water quality should be noted.

B. Drilling.
   1. obtain drilling totalizing flowmeter reading before initiating core drilling activities;
   2. analyze drilling fluid, record results
   3. begin coring, collect retrieved core samples every 5-feet,
   4. record lithology, note variations;
      a. has permeability or porosity changed significantly?

b. record variations,

5. monitor discharge water quality during drilling;
   a. note variations in temp., pH, cond.,
   b. record measurements.
6. drill string advanced 20-feet
   a. were formations changes noted?
   b. significant variations in lithology?
   c. major porosity/permeability variations?
      (1). signifigant variations in the paramters listed above would indicate a possible shift in water quality or groundwater regime.
7. collection of ground-water sample for laboratory analysis.
   a. ending water meter reading-initial reading= total pumped volume
      (1). air-lift (develop) corehole at least one total volume, by: *
      total volume (gal)/air-lift purge rate (gpm)= total purge time.
      $t_v/Q_{out}= t_{min}$
      * whenever possible, a minimum of one volume should be purged.
   b. monitor air-lift discharge (ie. temp., ph, cond., rate)
      (1). record results, note variations.
   c. condition 1-gallon collection jug and bailer
      (1) rinse with discharge water
   d. cease air-lifting, pull drill string up 20-feet,
   e. lower bailer to total depth (TD) of borehole, retrieve (bailer extends 12-feet out of the end of the drill string)
      (1) measure, record;
      a.1. temperature, pH, conductivity
      (2) filter sample;
      a.1. collect split sample
      1. conduct field analysis;
      a.1.1 chloride, sulfate, and density
      2. collect chloride, sulfate, and TDS for laboratory analysis.
   f. compare field results for chloride, sulfate, and density, and refer to results from procedure I. B.
      (1) significant variations;

f.1. collect standard complete.

(2) slight variations;

f.1. collect partial standard complete.

(see Attachment A. for sample labeling and appropriate sample volumes)

(see Table 1. for sample handling and storage (preservation))

g. label appropriate sample containers, store samples in ice, submit samples, and chain of custody to SWFWMD Environmental Laboratory for analyses.

(see Attachment A., typical SWFWMD c-o-c)

V. REVERSE AIR/EXPLORATORY DRILLING

The potentiometric level in the exploratory section is obtained at the beginning of the work day, after overnight recovery from the drilling process. As possible, reliable potentiometric levels are collected following a mid-day break, at the end of the day, etc. as allowed by the degree of recovery in the exploratory section. In certain regional potentiometric regimes, the potentiometric changes during the drilling process are obvious and signal for a sampling event.

Water quality monitoring.

A. Under flowing conditions, annular water quality is to be monitored. Variations in water quality should be noted.

B. Drilling.

2. begin drilling, collect lithologic samples every 5-feet,

*cuttings are collected continuously and are separated by an interval of 5 to 10-feet.

3. record lithology, note variations;

a. has permeability orporositychanged significantly?

*variations in permeability can be detected in the relative reverse air discharge rate.

b. record variations,

4. monitor discharge water quality during drilling;

a. note variations in temp., pH, cond.,

b. record measurements.

5. drill string advanced 20 to 30-feet

   a. were formations changes noted?

   b. significant variations in lithology?

   c. major porosity/permeability variations?

   d. potentiometric fluctuations?

      (1). significant variations in the parameters listed above would indicate a possible shift in water quality.

6. collection of ground-water sample for laboratory analysis.

   a. calculate volume of drill pipe, by;

      total length-depth to water= column of water

      p_l-DTW= l_{wc}, where;

      p_l= length of drill pipe (ft)

      DTW= depth to water (ft)

      l_{wc}= length of water column (ft)

      and volume of drill pipe,

      $v=\pi r^2(l_{wc})$ expressed in ft^3, where;

      v= volume,(cubic ft)

      r= radius of the internal diameter of the drill pipe,(ft)

      l_{wc}= length of water column(ft)

      to express v (gallons);

      v * 7.4 gal/ft^3; to yield, total volume of drill pipe in gallons.

   b. reverse air lift (circulate cuttings), well development;

   c. determine gross purge rate (drum method)

   d. continue circulation,

   e. kelly-up drill string slowly (pull back 20-feet), continue circulating,

      (1). purge 1-volume, by;

      purge time (min)=volume(gal)/gross purge rate (gal), $p_t=v/p_{gr}$ where;

      p_t= purge time (min), v= volume of drill pipe from eq. 6(a.)(converted to gallons)

      p_{gr}= gross purge rate in gpm.

      (2) condition 1-gallon collection jug and bailer (rinse with discharge water),

   f. break down kelly rod, add 20-feet drill pipe and advance slowly, down hole;

   g. prepare wire-line thief sampler

   h. lower bailer within rods just above bit, which is slightly off-bottom, retrieve

i. measure, record:

(1) temperature, pH, conductivity

(2) filter sample;

i.1. collect split sample

1. conduct field analysis;

a.1.1 chloride, sulfate, and density

2. collect chloride, sulfate, and TDS for laboratory analysis.

j. compare field results for chloride, sulfate,and density, and refer to results from procedure I.B.

(1) significant variations;

j.1. collect standard complete.

(2) slight variations;

j.1. collect partial standard complete.

(see Attachment A. for sample labeling and appropriate sample volumes)

(see Table 1. for sample handling and storage (preservation)

k. label appropriate sample containers, store samples in ice, submit samples, and chain of custody to SWFWMD Environmental Laboratory for analyses.

(see Attachment A., typical SWFWMD c-o-c)

VI. FORMATION PACKER TESTING

Packer Test Sampling.

a. monitor field parameters throughout pumping phase,

b. sample collection

(1) collect sample from drill-pipe discharge line;

b.1. collect water same at the end of drawdown phase,

b.2. measure temp., pH, cond., record data,

b.3. filter sample,

b.4. obtain standard complete.

(see Attachment A. for sample labeling and appropriate sample volumes)

(see Table 1. for sample handling and storage (preservation))

c. label appropriate sample containers, store samples in ice, submit samples, and chain of custody to SWFWMD Environmental Laboratory for analyses.

(see Attachment A., typical SWFWMD c-o-c)

VII. AQUIFER PERFORMANCE TEST (APTs)

a. monitor field parameters throughout pumping phase (ten hour intervals),

b. sample collection

(1) collect sample from discharge line;

b.1. collect water sample every ten hours during drawdown phase and,termination of test,

b.2. measure temp., pH, cond., record data,

b.3. filter sample,

b.4. obtain standard complete.

(see Attachment A. for sample labeling and appropriate sample volumes)

(see Table 1. for sample handling and storage (preservation))

c. label appropriate sample containers, store samples in ice, submit samples, and chain of custody to SWFWMD Environmental Laboratory for analyses.

(see Attachment A., typical SWFWMD c-o-c)

Table 1. Chemical Parameters Included in the Standard Complete Analysis

OPERATION	COMPONENT	UNITS	PRESERVATIVE
BROMIDE (Br), HPLC STD. METHOD 429	BROMIDE	mg/L (ppm)	COOL, HNO_3
CALCIUM (Ca), HPLC, E.P.A.	CALCIUM	mg/L(ppm)	COOL, HNO_3
CHLORIDE (Cl),HPLC STD. METHOD 429	CHLORIDE	mg/L(ppm)	COOL, HNO_3
CONDUCTIVITY STD. METHOD 205	CONDUCTIVITY	umhos	COOL
DENSITY	DENSITY	g/mL @ 20° C	COOL
IRON AAS/FLAME STD. METHOD 303A	IRON	ug/L (ppb)	COOL, HNO_3
HYDROGEN ION E.P.A. 150.1	HYDROGEN ION	pH	COOL
POTASSIUM, HPLC E.P.A.	POTASSIUM	mg/L(ppm)	COOL, HNO_3
SILICA STD. METHOD 425E	SILICA	mg/L as Si	COOL, HNO_3
TOTAL DISSOLVED SOLIDS STD. METHOD 209B	TDS	mg/L	COOL
SULFATE, HPLC STD. METHOD 429	SULFATE	mg/L (ppm)	COOL
HARDNESS	HARDNESS	mg/L as $CaCO_3$	COOL
ION BALANCE	ION	PERCENT	NA
CARBONATE ALKALINITY	CARBONATE	mg/L as $CaCO_3$	COOL
BICARBONATE ALKALINITY	BICARBONATE	mg/L as $CaCO_3$	COOL
HYDROXIDE ALKALINITY	HYDROXIDE	mg/L as $CaCO_3$	COOL
MAGNESIUM, HPLC, E.P.A.	MAGNESIUM	mg/L	COOL, HNO_3

ROMP CORESITE FIELD DATA Page___of___ Date_____ Day_____

Drillsite_____ Well_____ Rig_____

Purge Record TD_____ 4" HW CD_____ Start@_____ End@_____ Duration_____ _____GPM: _____Gal container filled in _____Sec Purged Volume_____ Length 1/2" Blowline_____					Purge Record TD_____ 4" HW CD_____ Start@_____ End@_____ Duration_____ _____GPM: _____Gal container filled in _____Sec Purged Volume_____ Length 1/2" Blowline_____					Purge Record TD_____ 4" HW CD_____ Start@_____ End@_____ Duration_____ _____GPM: _____Gal container filled in _____Sec Purged Volume_____ Length 1/2" Blowline_____					Purge Record TD_____ 4" HW CD_____ Start@_____ End@_____ Duration_____ _____GPM: _____Gal container filled in _____Sec Purged Volume_____ Length 1/2" Blowline_____				
Elapsed Time	**Temp.**	**Cond.**	**(A)**	**(B)**	**Elapsed Time**	**Temp.**	**Cond.**	**(A)**	**(B)**	**Elapsed Time**	**Temp.**	**Cond.**	**(A)**	**(B)**	**Elapsed Time**	**Temp.**	**Cond.**	**(A)**	**(B)**
Drilling Water:Temp._____ Cond._____ Bailer #1: Temp._____ Cond._____ pH____ Bailer #2: Temp._____ Cond._____ pH____ Lab Sample: Temp._____ Cond._____ pH____					Drilling Water:Temp._____ Cond._____ Bailer #1: Temp._____ Cond._____ pH____ Bailer #2: Temp._____ Cond._____ pH____ Lab Sample: Temp._____ Cond._____ pH____					Drilling Water:Temp._____ Cond._____ Bailer #1: Temp._____ Cond._____ pH____ Bailer #2: Temp._____ Cond._____ pH____ Lab Sample: Temp._____ Cond._____ pH____					Drilling Water:Temp._____ Cond._____ Bailer #1: Temp._____ Cond._____ pH____ Bailer #2: Temp._____ Cond._____ pH____ Lab Sample: Temp._____ Cond._____ pH____				

Columns "A" and "B" can be used for other parameters such as drawdown measurements at specific time intervals, rods up/down, barrel test, etc.

FIGURE 1.
ROMP FIELD DATA SHEET

Southwest Florida Water Management District
Log-In\Chain of Custody Record

PROJECT CODES: _____
fund agency org. object activity

SUBMISSION NO. _____

PROJECT NAME: _____

SECTION NAME:						NUMBER OF CONTAINERS	ANALYSES REQUIRED									REMARKS
SAMPLERS NAME:																
SAMPLERS:(Signature)																
SAMPLE NAME	DATE	TIME	SAMPLE DEPTH	COMP.	GRAB		TOC	TDS	TSS	HARDNESS/IONS	METALS	NUTRIENTS	STD. COMPLETE	CHLORO AND/OR BIOLOGIC	OTHER	
							TOTAL NO. OF CONTAINERS									

Samples Relinquished by: _____ Date: M/D/Y

Samples Recieved by: _____ Date: M/D/Y

Samples Relinquished by: _____ Date: M/D/Y

Samples Recieved by: _____ Date: M/D/Y

Lab Samples Recieved by: _____ Date: M/D/Y

Send Results to: _____
Name Ext. Mail Code

White: originator Yellow: laboratory

APPENDIX B

PUMP TEST PROCEDURES
REGIONAL OBSERVATION AND MONITOR-WELL PROGRAM

GEOHYDROLOGIC DATA SECTION
RESOURCE DATA DEPARTMENT
ROMP
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT
2379 BROAD STREET
BROOKSVILLE, FLORIDA 33512-9712

JANUARY 12, 1994

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Hydrologist

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Hydrologist

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dt/mtg

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IX.	HYDROLOGIC UNITS MONITORED	7
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Figure 2. Typical ROMP site map.

Figure 3. Typical cross section presenting production and observation wells monitored during APTs.

Figure 4. Packer Test Assembly.

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Table 1. Time intervals for measuring drawdown in the pumping well.

Table 2. Flow rate through various orifice and discharge pipe combinations.

LIST OF ATTACHMENTS

Attachment A. Drawdown Calculations

Attachment B. Darcy-Weisbach Friction Loss Calculations.

Attachment C. Step Drawdown Graphs and Transmissivity Calculations for ROMP 22-Suwannee Pump Test.

Attachment D. ROMP 22-Suwannee Pump Test, Well Efficiency Calculations.

Attachment E. ROMP 22 Avon Park Production Well, Design Efficiency Calculations.

Attachment F. ROMP 22 Ocala Formation Packer Test 1., Transmissivity Calculations.

PUMPING TEST PROCEDURES

I. INTRODUCTION

Pumping tests are an integral part of data collection for ROMP/WRAP wellsites. Through pumping tests the performance characteristics of a well, and the hydraulic characteristics of the aquifer and/or production zones can be determined. For well-performance tests or specific capacity tests, yield and drawdown are recorded so specific capacity can be calculated. Specific capacity tests provide a measure of the productive capacity of the well during and after final completion. This information allows the hydrologist to design the final pumping test parameters.

In addition to well performance characteristics, pumping test data is utilized to determine aquifer performance characteristics such as horizontal and vertical hydraulic conductivity, transmissivity, storage and leakage coefficients. These characteristics are determined by analysis of the pumping test data.

II. ANALYTICAL MODELS

The use of analytical models to determine anticipated drawdowns in the pumping and observation wells is extremely useful. The model is based on the Jacob Straight Line Solution for non-steady state confined aquifers. The equation is as follows.

$$s=(264Q/T)\log(0.3Tt)/((r*r)S)$$

where;

s= anticipated drawdown (feet)
Q= pumping rate (gpm)
T= reported Transmissivity value (gpd/ft)
t= length of pumping test (days)
r= radius to observation well (feet)
S= reported Storativity value

Reported values for transmissivity (T) and storativity (S) are utilized as a baseline for the analytical solution. Once these values are noted the generation of an anticipated drawdown associated with a radius is simplified by utilizing a spreadsheet model. Attachment A presents calculated drawdowns utilizing the spreadsheet model. Figure 1 graphically presents the calculated drawdown iso-contours.

These calculated values assume laminar flow in a perfectly efficient well. The results of the series of analyses are then utilized in determining the efficiency of well designs, calculated or as-built.

In order to determine the validity of the calculated drawdowns, a sensitivity analysis is conducted. The analysis is conducted by entering a range of values for T and S, then drawdown values (s) are recalculated. Thus, yielding a range of drawdown values.

The utilization of the analytical model provides another means in designing pumping tests. The solution provided is somewhat simplified but variations in drawdown values can be predicted based on calculated (s) values.

III. WELL EFFICIENCY

The amount of drawdown to produce a specific yield are based on the hydraulic characteristics of the aquifer tested and the design parameters of the production well. Sound design practices minimalize head losses due to turbulence in the undisturbed zone around the borehole and friction losses attributable to the production casing.

These losses can be determined by analyzing the efficiency of the production well, using the following methods.

Method 1. (preliminary design calculations)

1. Graph the time-drawdown data (ie. drawdown values are obtained utilizing methods described in Section II.)
2. Determine "delta s" from calculations.
3. Calculate friction losses in the production well (ie. by the Darcy-Weisbach equation)

$$h(f) = (\Delta p/\gamma) = f(L/D)\ (V/2g)$$

"delta p"= change in pressure
"gamma"= specific weight of water
f= Fanning friction factor
L= length of the production casing
D= diameter of the pipe
V= average flow velocity (ft/sec)
g= acceleration of gravity

4. Based on a well whose efficiency is 100% (as determined by methods described in Section II), the drawdown just outside the undisturbed section should equal drawdown in the pumped well. It is more likely that the drawdown in the production well is greater than the undisturbed section. Therefore, the drawdown in the pumped well equals the result from Step 3 added to the result from Step 1 (for the corrected drawdown in the production well).

An example of the calculation is shown on Attachment B. Attachment A presents results from an analytical solution based on the modified Jacob Straight Line Solution for confined non-steady state aquifers. Attachment B presents results from a series of calculations, solving for h_f (head loss due to friction) based on the Darcy-Weisbach equation.

The previous methods were based on Mogg's (1968) definition of well efficiency. Which states that the actual well efficiency is the ratio of the actual specific capacity of the designed well yield after 24-hours of pumping, to the maximum specific capacity possible, calculated from the formation characteristics and the well geometry.

Method II. (step-drawdown test)

Well hydraulic theory assumes that laminar flow conditions exist during pumping of an aquifer. During laminar flow aquifer drawdown is directly proportional to the pumping rate. Frequently however, turbulent flow results when pumping a well at a high rate and the linear relationship of drawdown to pumping rate changes to an exponential relationship. As a result, during turbulent flow conditions, the specific capacity of a well decreases dramatically as the pumping rate is increased. The step drawdown test provides a method by which the turbulent and the laminar flow components can be computed so that the optimum pumping rate and pump-setting depth may be determined (Driscoll, 1986). Attachment B presents calculations for determining well efficiency based on time drawdown values collected during the step-drawdown test.

Both methods provide a simplified analytical solution to determine well efficiency. However, Method I is based on calculated drawdown values for a well with an assumed efficiency of 100%, plus friction losses due to the configuration of the well design. Method II is an actual measure of well efficiency based on step drawdown data. These methods yield an aproximate analytical solution.

IV. TYPES OF TEST

The step drawdown test are short duration tests conducted by pumping the well at successively greater pumping rates (evenly spaced) and measuring drawdown during each step. The test usually consists of five to eight pumping steps each lasting only 1 to 2 hours. However, tests on artesian aquifers are preformed without recovery periods. The same pumping duration should be used for each step in order to simplify calculations (Driscoll, 1986). The results of this type of test are utilized to design the final pump test.

The final pumping tests are long duration constant-rate tests. Both single well and multi-well tests are used. The tests are conducted by pumping the well at a constant rate for a period of 24 to 72-hours and measuring the drawdown in the pumping well and/or the network of completed observation wells. Single well tests, the drawdown is measured in the pumping well until near steady state drawdown is achieved. Recovery response is then recorded after pumping ceases. Multi-well pumping tests utilize a suite of observation wells at varying radial distances to measure drawdown in the pumped interval.

V. PRELIMINARY DATA COLLECTION

The step drawdown test is conducted several days prior to the constant rate test in order to determine the following parameters:

1. maximum anticipated drawdown,
2. volume of water produced at specific engine (pump) speeds,
3. best method to measure yield,
4. whether the discharge from the pump is far enough away to avoid recharge, and
5. are observation wells located so that they exhibit sufficient drawdown to produce usable data.

Integrity of the data collected is dependent on several factors. The pumping test should only be conducted when the water level has returned to static levels following preliminary testing (step-drawdown test). Other factors to consider are:

1. maintaining constant yield
2. careful measurements of drawdown/recovery
3. taking drawdown/recovery readings at appropriate intervals
4. barometric pressure, stream level, and tidal changes during test
5. other pumping or injection wells within the testing area
6. continuing the test until equilibrium is reached
7. regional water level trends

VI. OBSERVATION WELLS

Small diameter observation wells (2-in diameter) allow the most cost effective and rapid measurement of water levels. The observation well screens should be installed at the same depth as the zone pumped by the production well. Installation of observation wells into formations or zones other than those being pumped (partially penetrating wells) can be useful in determining the hydraulic interconnection between aquifers or zones.

Generally, observation wells should be located at a distance equal to or greater than the aquifer thickness from the pumped well. Partially penetrating wells should be located less than an aquifer thickness from the pumped well.

VII. MEASUREMENT INTERVALS

Whenever possible, pumping tests should be continued until the cone of depression stabilizes, or near equilibrium conditions are reached. In confined aquifers, the cone of depression spreads rapidly and 24 hours is usually sufficient to reach equilibrium. Unconfined aquifers generally require 72 hours for equilibrium to be reached.

Barometric, stream level and tidal changes may influence drawdown data. In addition, nearby production wells may effect the drawdown data of observation wells. Any changes in weather or other conditions that may affect the test should be recorded.

Recovery data should be collected at the same interval and frequency following termination of pumping. This data can be used for comparison purposes and also serves as backup data for the pumping portion of the test.

Drawdown data in the pumped well and observation wells is collected using pressure transducers and data logger recorders. The data logger allows rapid and accurate drawdown measurements to be recorded in numerous wells simultaneously. In addition, the data logger is able to collect drawdown (or recovery) measurements at smaller time intervals than could be collected by more labor intensive methods. Typical time intervals for measuring drawdown in the pumped well and in observation wells at ROMP sites is presented in Table 1.

VIII. DISCHARGE MEASUREMENT

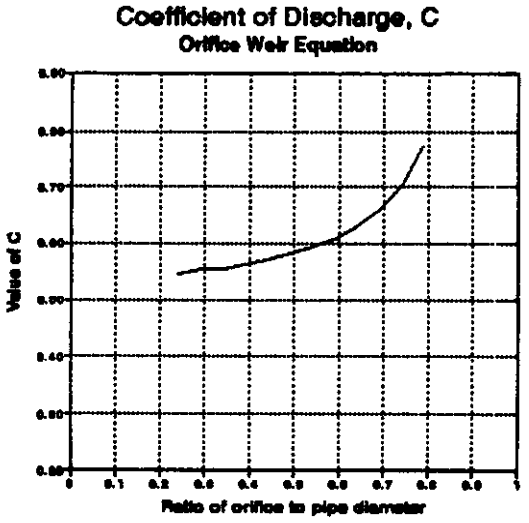
A circular orifice weir and a polysonic flow meter are used to measure the discharge rate during ROMP pumping tests. The circular orifice weir is a very accurate method of measuring the discharge from high volume pumps when pumping at a steady controlled rate. The orifice is a round hole in the center of a circular steel plate that is attached to the outer end of the discharge pipe. A manometer is fitted to the discharge pipe to measure the water head (pressure) in the manometer while pumping. The water level in the manometer represents the pressure in the discharge pipe when water is pumped through the orifice (Kruseman and De Ridder, 1983).

The flow through the orifice is calculated by:

$$Q=AVC$$

where:

Q= flow per unit time
A= area of the orifice
V= velocity of flow through the orifice
C= coefficient of discharge through the orifice



The velocity can be related to the head in the manometer by the equation:

$$V=\sqrt{2gh}$$

where:

V= is velocity in ft/sec
g= acceleration of gravity in ft^2/sec
h= height of the water in the manometer

and combining the equations:

$$Q=8.025CA\sqrt{h}$$

Table 2, taken from Driscoll, 1986 shows the flow rate for various orifice and discharge pipe combinations. It should be noted that the size relationship between the orifice diameter and the inside diameter of the discharge pipe is critical for accurately determining the discharge rate. The ratio of the pipe diameter to the orifice diameter should not exceed 0.7.

ROMP pumping tests normally use electric submersible pumps or diesel powered vertical turbine pumps to provide a uniform, controlled discharge. Discharge and orifice plate combinations are either 4 x 8 in or 7 x 10 in. The discharge water is piped away from the site to a natural drainage area so that infiltration does not influence the drawdown in observation wells.

IX. HYDROLOGIC UNITS MONITORED

The aquifers and zones to be tested are determined by lithologic, hydrologic, geophysical and water quality data and data collected from previous drilling and testing sites. Typical ROMP site pumping tests include testing of the surficial, intermediate, and the upper Floridan aquifer systems. Figures 2 and 3 present map and cross-section views of a typical ROMP site illustrating the production wells and observation wells.

X. PACKER TESTING

Typical ROMP site pumping tests include off-bottom packer testing. Packer tests are performed in order to collect water quality and hydraulic data on specific zones within an aquifer. The packer consists of an inflatable element attached to the end of the drill string. The packer is placed at a predetermined

(usually by geophysical logs) location within the borehole, then inflated so that the portion of the borehole located below the packer will be isolated.

Subsequent to the placement of the packer element, the packer is inflated. The drill string is then broken down at land surface. The pumped-zone transducer drop pipe, reverse air blow line are then suspended in the drill string. An airlifting head (tool union) is then installed on top of the drill string. Transducers are then installed in the drop pipe as well as the annulus created in the borehole by sealing the formation with the packer element. The test begins with the initiation of airlifting. Water level measurements including drawdown and recovery phases are collected utilizing a data logger. The data logger is pre-programmed to capture measurements at specific intervals. Figure 4 presents a schematic of a typical off-bottom drill-stem/packer mechanism used at ROMP sites.

XI. DATA ANALYSIS

During ROMP pumping tests the raw data recorded by the data logger is periodically transferred to a lap-top computer and stored in numerical files on a spreadsheet program. The data can be reviewed, plotted, and graphed periodically throughout the course of the pumping test.

Data analysis for packer testing are conducted utilizing the following methods. Flow rates are measured using methods described in Section VII. Drawdown and recovery versus the log of time are plotted and the coefficient of transmissivity are calculated using the modified equilibrium equation of Cooper and Jacob (1946).

where;

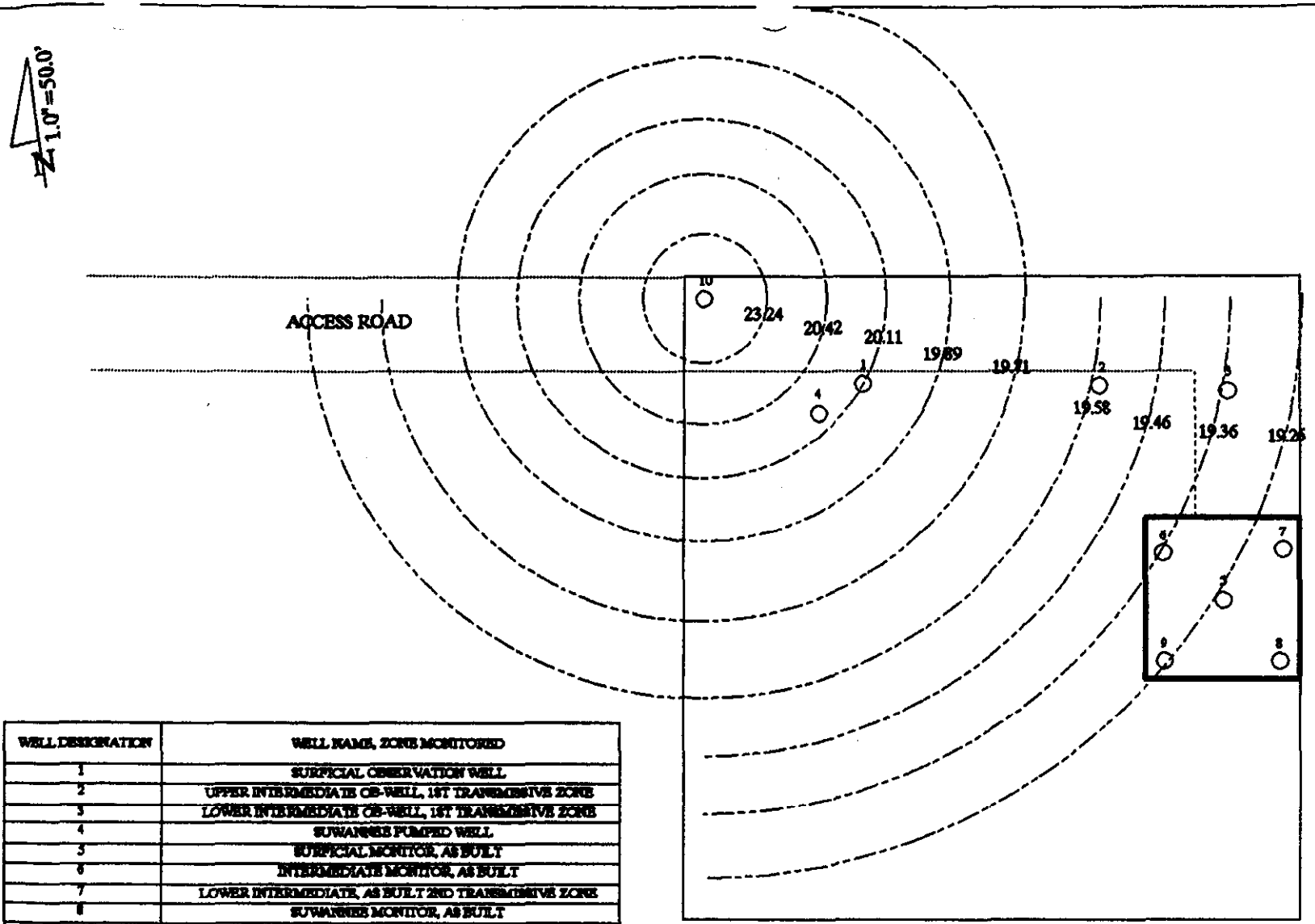
$$T=264Q/\Delta s$$

T= coefficient of transmissivity, in gpd/ft
Q= pumping rate, in gpm
delta s= slope of the time-drawdown graph expressed as the change in drawdown between any two times on the log scale whose ratio is 10 (one log cycle)

Following the completion of the pumping test all collected data is compiled and corrected for any weather, tidal or other features that may otherwise obscure the test results.

Aquifer characteristics based on data collected during APTs are calculated using various methods. Aquifer type and site conditions determine the method of analysis used.

FIGURES



WELL DESIGNATION	WELL NAME, ZONE MONITORED
1	SURFICIAL OBSERVATION WELL
2	UPPER INTERMEDIATE OB-WELL, 1ST TRANSMISSIVE ZONE
3	LOWER INTERMEDIATE OB-WELL, 1ST TRANSMISSIVE ZONE
4	SUWANNEE PUMPED WELL
5	SURFICIAL MONITOR, AS BUILT
6	INTERMEDIATE MONITOR, AS BUILT
7	LOWER INTERMEDIATE, AS BUILT 2ND TRANSMISSIVE ZONE
8	SUWANNEE MONITOR, AS BUILT
9	AVON PARK, AS-BUILT MONITOR
10	LOWER UPPER FLORIDAN, PUMPED WELL

EXPLANATION

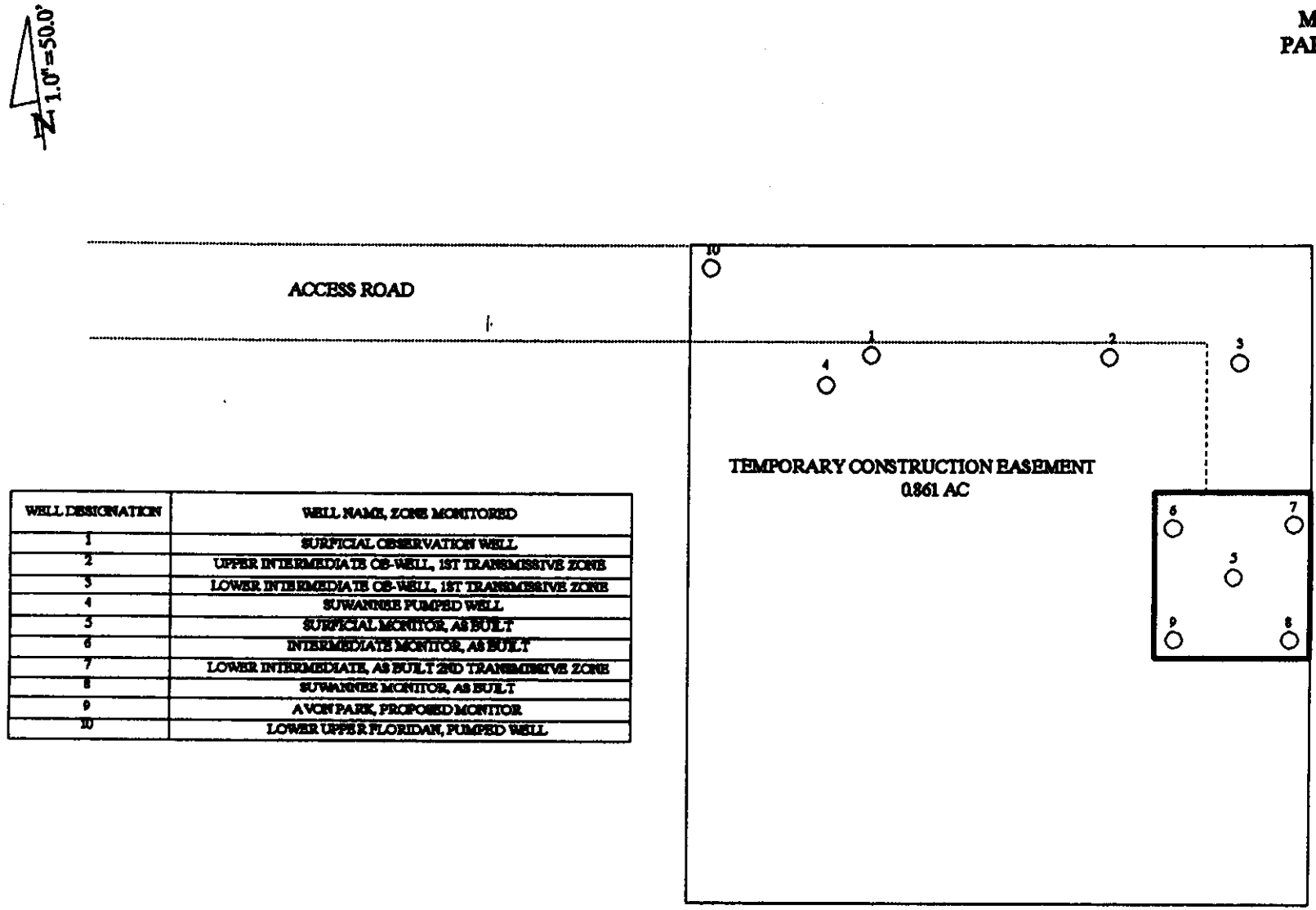
- OBSERVATION/MONITOR-WELL LOCATION
- EDGE OF ROADWAY
- BOUNDARY OF PERMANENT EASEMENT
- BOUNDARY TEMPORARY CONSTRUCTION EASEMENT
- POTENTIOMETRIC ISO-CONTOUR IN THE FLORIDAN AQUIFER FT NGVD

FIGURE 1.

WELL LOCATION MAP-ROMP 22

REGIONAL OBSERVATION AND MONITOR-WELL PROGRAM

MANASOTA BASIN
PARCEL N0. 21-020-030



WELL DESIGNATION	WELL NAME, ZONE MONITORED
1	SURFICIAL OBSERVATION WELL
2	UPPER INTERMEDIATE OB-WELL, 1ST TRANSMISSIVE ZONE
3	LOWER INTERMEDIATE OB-WELL, 1ST TRANSMISSIVE ZONE
4	SUWANNEE PUMPED WELL
5	SURFICIAL MONITOR, AS BUILT
6	INTERMEDIATE MONITOR, AS BUILT
7	LOWER INTERMEDIATE, AS BUILT 2ND TRANSMISSIVE ZONE
8	SUWANNEE MONITOR, AS BUILT
9	AVON PARK, PROPOSED MONITOR
10	LOWER UPPER FLORIDAN, PUMPED WELL

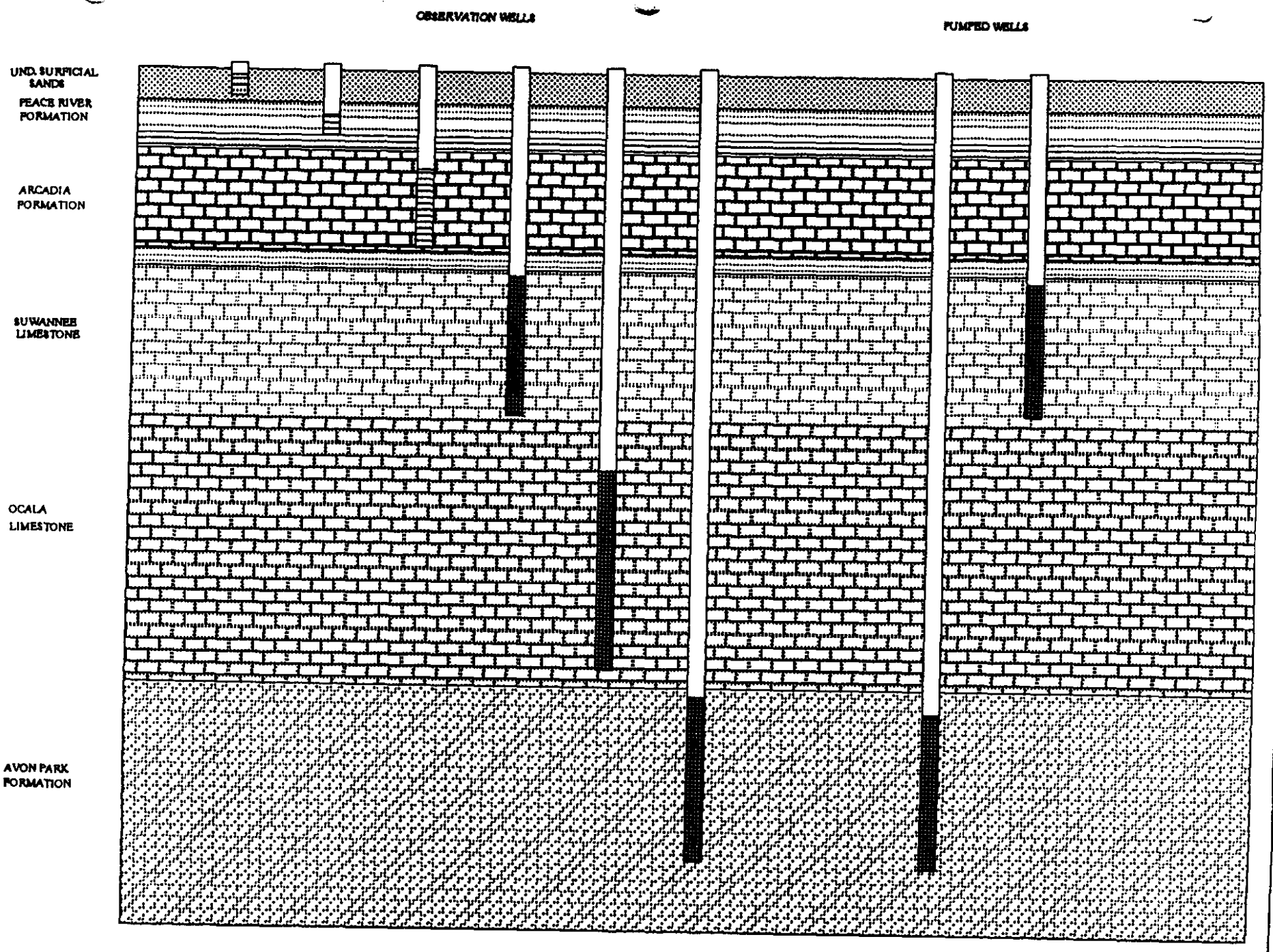
EXPLANATION

- ○ OBSERVATION/MONITOR-WELL LOCATION
- ..... EDGE OF ROADWAY
- ——— BOUNDARY OF PERMANENT EASEMENT
- ——— BOUNDARY TEMPORARY CONSTRUCTION EASEMENT

FIGURE 2.

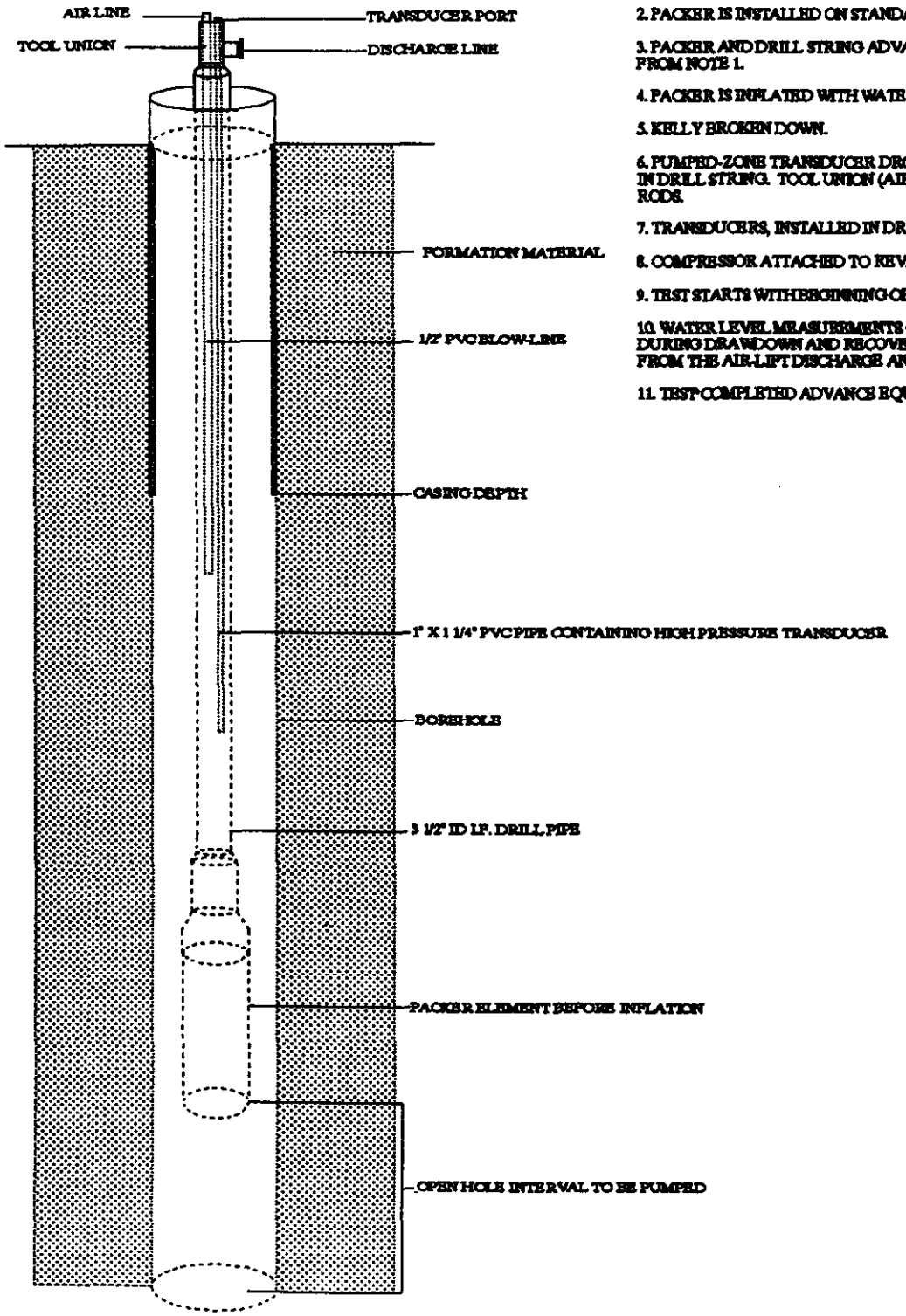
WELL LOCATION MAP

REGIONAL OBSERVATION AND MONITOR-WELL PROGRAM



SWFWMD GEOHYDROLOGIC DATA SECTION
HYDROLOGIC UNITS MONITORED DURING PUMP TESTS

FIGURE 3



PACKER INSTALLATION PROCEDURE;

1. PACKER PLACEMENT DETERMINED BY GEOPHYSICAL LOGGING.
2. PACKER IS INSTALLED ON STANDARD API DRILL PIPE.
3. PACKER AND DRILL STRING ADVANCED DOWNHOLE TO DEPTH DETERMINED FROM NOTE 1.
4. PACKER IS INFLATED WITH WATER AND ROTATED 1/4 TURN TO LOCK.
5. KELLY BROKEN DOWN.
6. PUMPED-ZONE TRANSDUCER DROP PIPE, REVERSE-AIR BLOWLINE SUSPENDED IN DRILL STRING. TOOL UNION (AIRLIFTING HEAD) INSTALLED ON TOP OF DRILL RODS.
7. TRANSDUCERS, INSTALLED IN DROP PIPE AND ANNULUS.
8. COMPRESSOR ATTACHED TO REVERSE AIR BLOWLINE.
9. TEST STARTS WITH BEGINNING OF AIR-LIFTING.
10. WATER LEVEL MEASUREMENTS COLLECTED VIA DATA LOGGER. DURING DRAWDOWN AND RECOVERY PHASES, WATER SAMPLES ARE COLLECTED FROM THE AIR-LIFT DISCHARGE AND ANALYZED AS NECESSARY.
11. TEST COMPLETED ADVANCE EQUIPMENT DOWNHOLE.

SWFWMD GEOHYDROLOGIC DATA SECTION
PACKER TEST PROCEDURES

FIGURE 4

TABLES

Table 1. Recommended Time Intervals for Measuring Drawdown in Pumping and Observation Wells

Time since Pumping Started (or Stopped) in minutes	Time Intervals Between Measurements
0-1.5	1 second
1.5 minutes	5 seconds
3 minutes	10 seconds
10 minutes	30 seconds
15 minutes	60 seconds
30 minutes	3 minutes
60 minutes	5 minutes
3 hours - end of test	15 minutes

Table 2. Flow Rates Through Circular Orifice Weirs

6-in Pipe		8-in Pipe			10-in Pipe			12-in Pipe		16-in Pipe		
3-in orifice gpm	4-in orifice gpm	4-in orifice gpm	5-in orifice gpm	6-in orifice gpm	6-in orifice gpm	7-in orifice gpm	8-in orifice gpm	6-in orifice gpm	8-in orifice gpm	8-in orifice gpm	10-in orifice gpm	12-in orifice gpm
76	145	131	220	355	310	460	690	300	580	630	980	1420
82	158	144	240	390	340	500	740	325	640	680	960	1560
88	171	156	260	420	370	540	830	350	690	620	1040	1680
94	182	166	275	450	395	580	880	375	730	670	1110	1800
100	193	176	295	475	420	610	940	400	780	710	1180	1910
106	204	186	310	500	440	640	990	420	820	750	1240	2010
115	223	205	340	550	480	700	1080	460	900	820	1360	2200
125	241	220	365	595	520	760	1170	500	970	880	1470	2380
132	258	235	390	635	555	810	1250	530	1040	940	1570	2540
140	273	250	415	675	590	860	1330	560	1100	1000	1670	2690
150	288	265	440	710	620	910	1400	590	1160	1050	1760	2840
158	302	275	460	745	650	950	1470	620	1220	1110	1840	2980
168	322	295	490	795	690	1020	1580	660	1300	1180	1960	3180
182	353	325	540	870	760	1120	1710	730	1420	1290	2150	3480
198	380	355	580	940	820	1210	1850	790	1530	1400	2320	3760
210	405	370	620	1000	880	1290	1980	840	1640	1490	2480	4020
223	430	395	660	1060	930	1370	2090	890	1740	1580	2630	4260
235	455	415	690	1120	980	1440	2140	940	1830	1670	2780	4490
260	500	455	760	1230	1080	1580	2340	1030	2010	1830	3040	4920
280	525	490	810	1290	1140	1710	2530	1110	2170	1970	3280	5310

Avon Park Production Well Tests

Analytical Methods Test APT Designs

Jacob Straight Line Solution For Non-Steady State Confined Aquifer

Q= 2600 gpm

Storativity (S)= 1.0e-04

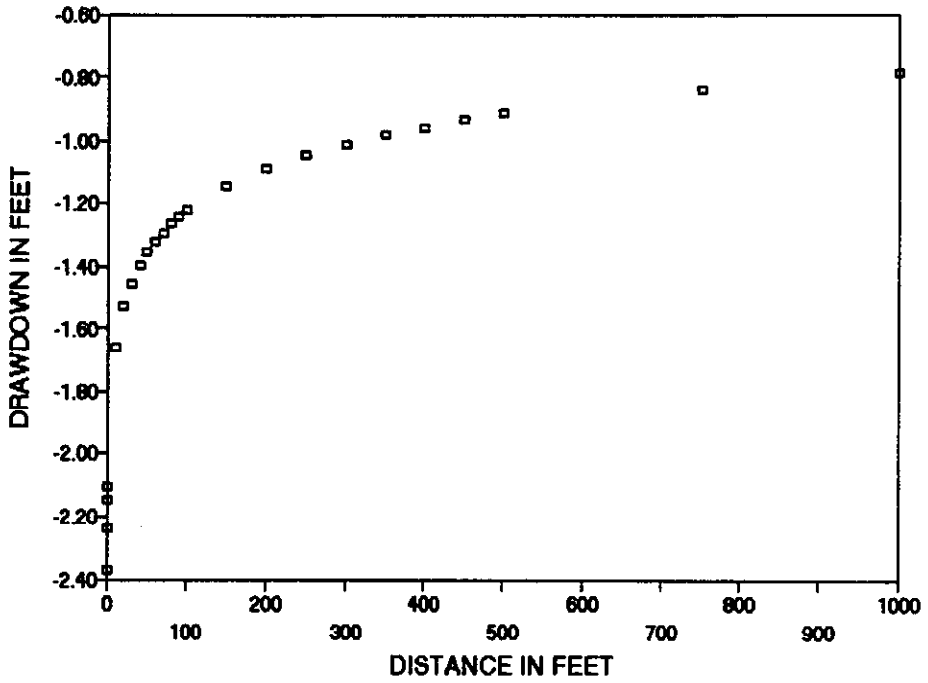
Transmissivity= 1,200,000 gpd/ft

s= (264Q/T)log(0.3Tt)/((r^r)s)

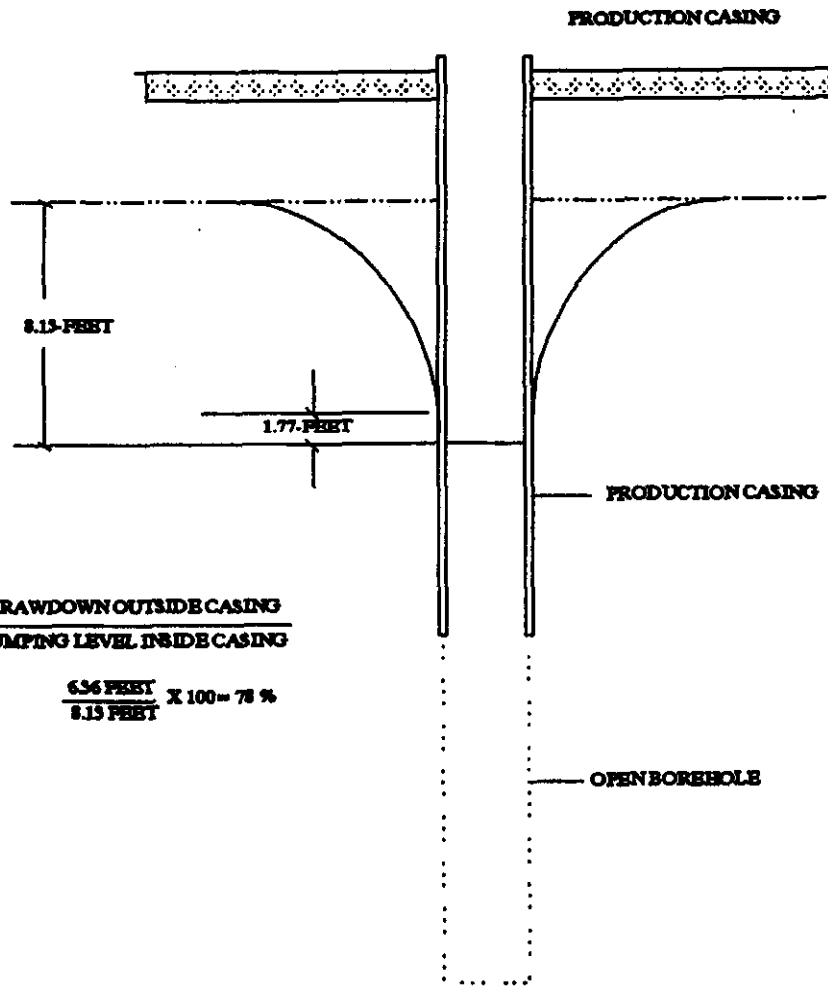
r	Q	S	T	t	s
0.05	1000.0	1.00E-04	1.20E+06	0.042	-2.37
0.5	1000.0	1.00E-04	1.20E+06	1	-2.23
0.5	1000.0	1.00E-04	1.20E+06	1	-2.15
1	1000.0	1.00E-04	1.20E+06	1	-2.10
10	1000.0	1.00E-04	1.20E+06	1	-1.66
20	1000.0	1.00E-04	1.20E+06	1	-1.53
30	1000.0	1.00E-04	1.20E+06	1	-1.45
40	1000.0	1.00E-04	1.20E+06	1	-1.40
50	1000.0	1.00E-04	1.20E+06	1	-1.35
60	1000.0	1.00E-04	1.20E+06	1	-1.32
70	1000.0	1.00E-04	1.20E+06	1	-1.29
80	1000.0	1.00E-04	1.20E+06	1	-1.27
90	1000.0	1.00E-04	1.20E+06	1	-1.24
100	1000.0	1.00E-04	1.20E+06	1	-1.22
150	1000.0	1.00E-04	1.20E+06	1	-1.14
200	1000.0	1.00E-04	1.20E+06	1	-1.09
250	1000.0	1.00E-04	1.20E+06	1	-1.05
300	1000.0	1.00E-04	1.20E+06	1	-1.01
350	1000.0	1.00E-04	1.20E+06	1	-0.98
400	1000.0	1.00E-04	1.20E+06	1	-0.96
450	1000.0	1.00E-04	1.20E+06	1	-0.93
500	1000.0	1.00E-04	1.20E+06	1	-0.91
750	1000.0	1.00E-04	1.20E+06	1	-0.84
1000	1000.0	1.00E-04	1.20E+06	1	-0.78

ROMP 22 AVON PARK APT DESIGN

JACOB ESTIMATED DRAWDOWN



Attachment A.



EFFICIENCY= $\frac{\text{DRAWDOWN OUTSIDE CASING}}{\text{PUMPING LEVEL INSIDE CASING}}$

$\frac{6.36 \text{ FEET}}{8.15 \text{ FEET}} \times 100 = 78\ \%$

Length of Casing* (feet)	Calculated Drawdown** (feet)	Formation Drawdown+ (feet)	f++	Velocity (V) ft/sec	Head Loss Due to Friction hf(●)	Corrected Drawdown (feet)
780	2.64	2.15	0.024	2.85	0.81	3.36
780	3.21	3.22	0.023	4.19	1.14	4.36
780	5.89	4.29	0.022	5.71	1.48	7.07
780	6.36	5.36	0.021	7.14	1.77	8.13
780	7.83	6.44	0.018	8.56	1.82	9.46

* Length of Production Casing

** Calculated results from the Jacob Straight Line Solution for confined Aquifers where s= calculated drawdown

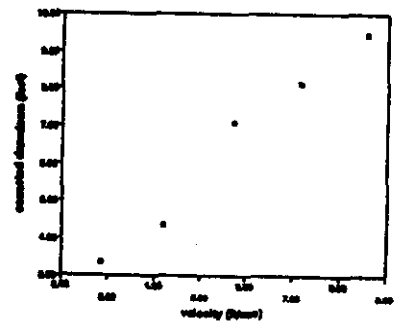
\+ Formation drawdown, calculated result for drawdown outside the open borehole. Where r (radius) = 0.5'

++ Fanning Friction Factor, Driscoll (1986) Appendix 17.a pg. 1027

● Head loss due to friction, calculated via the Darcy-Weisbach equation

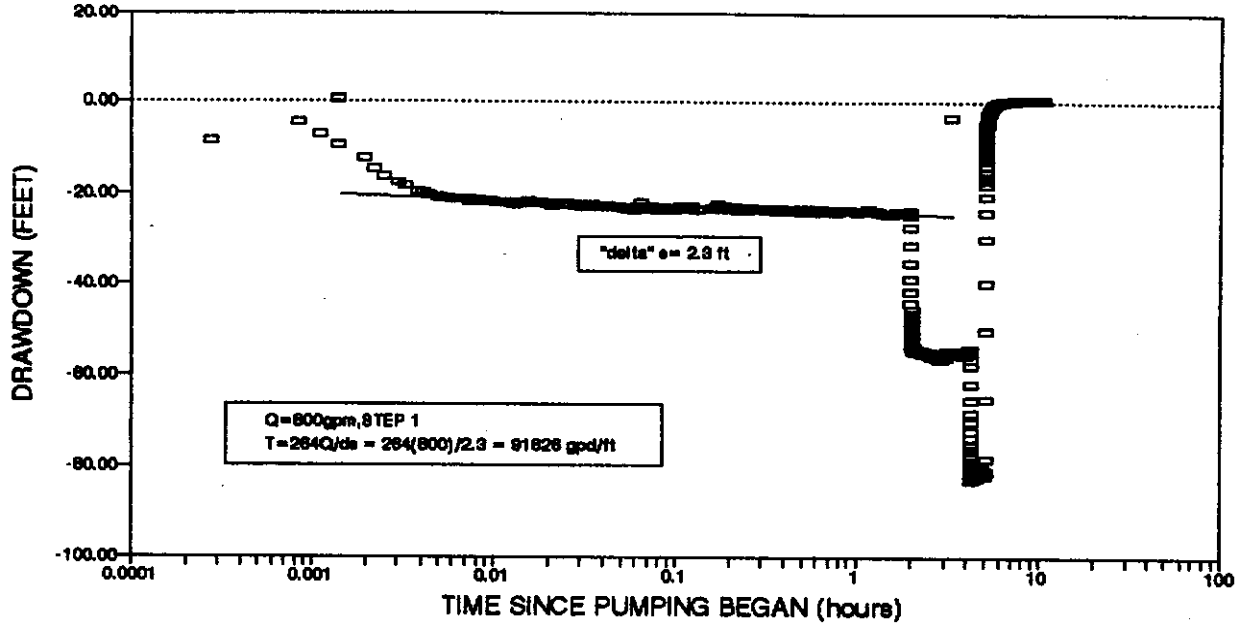
Head Loss Graph

velocity vs. corrected drawdown

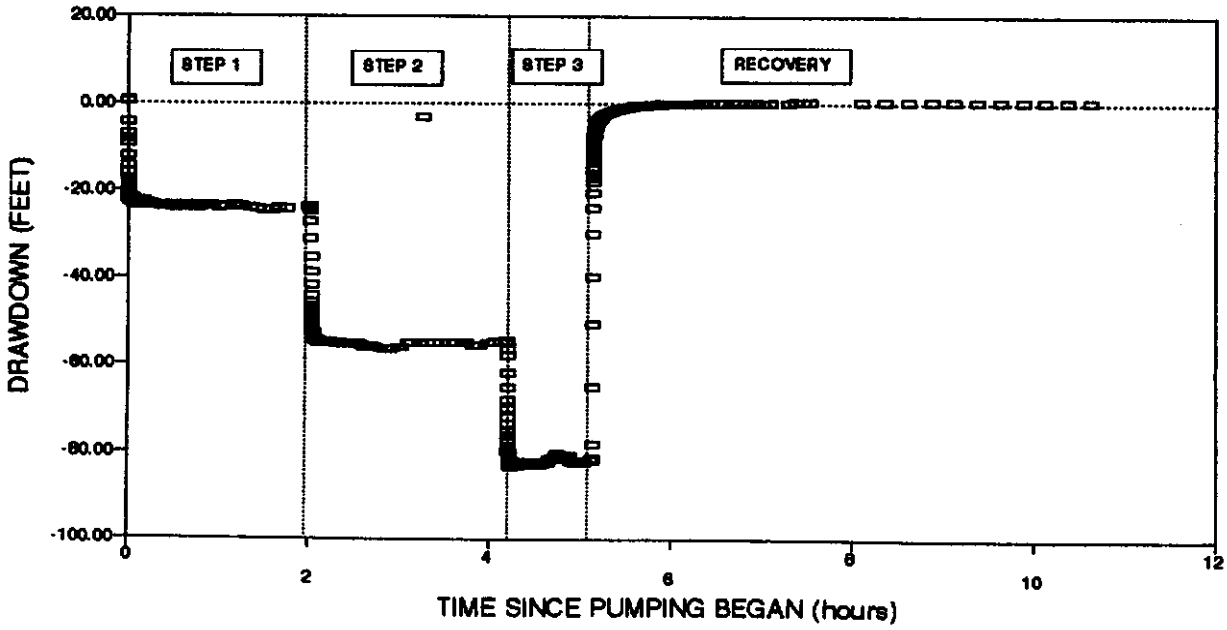


Attachment B.

ROMP 22, SUWANNEE STEP TEST
TIME-DRAWDOWN FOR VARIABLE DISCHARGE



ROMP 22, SUWANNEE STEP TEST
TIME-DRAWDOWN FOR VARIABLE DISCHARGE



Attachment C.

Table 1. Discharge and Drawdown Data from ROMP 22 Suwannee Step Drawdown Test

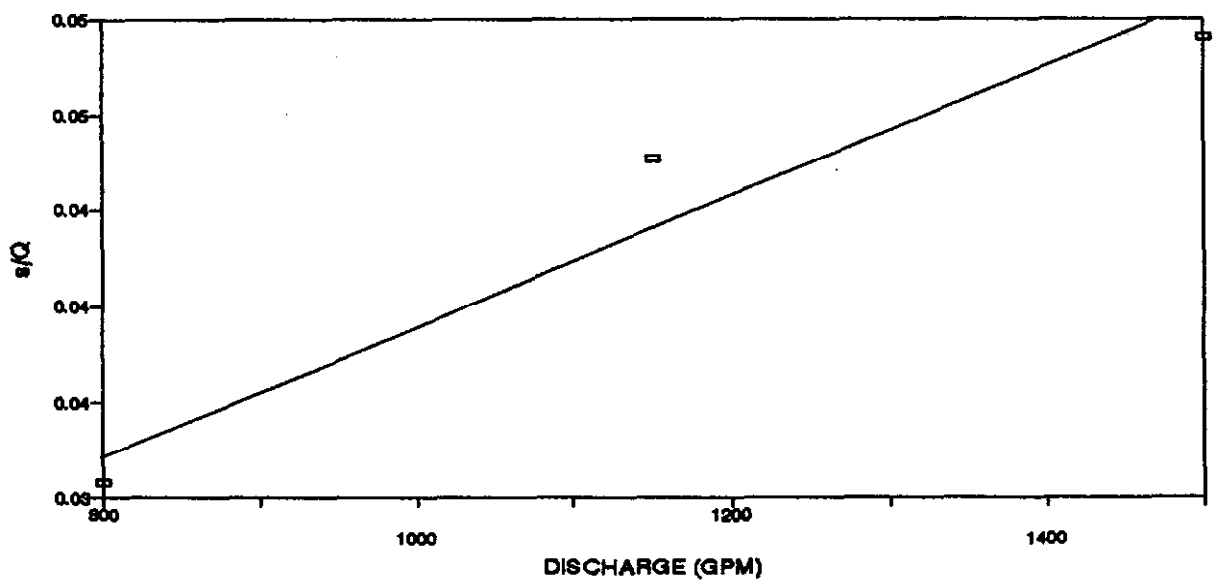
Yield (gpm)	Drawdown (ft)	s/Q
800	24.6	0.0308
1150	54.8	0.0477
1500	81.0	0.0540

s/Q= CQ + b; B= 0.004308
C= 3.6E-05
and Q/s= 1/[(3.6E-05)Q+0.004308]
where; Q/s for a discharge rate of 800gpm
Q/s= 30.20 gpm/ft
and; Lp= (BQ/[BQ+(CQ*CQ)])*100
Lp= 13.0120 % laminar flow

Q/s (calculated)= 45.91 gpm/ft
Q/s (actual)= 32.52 gpm/ft
E= 85.79 % efficiency

ROMP 22, SUWANNEE STEP TEST

s/Q plotted against Q



Regression Output:

Constant		0.005937629396859
Std Err of Y Est		0.004308794456861
R Squared		0.93572475302008
No. of Observations		3
Degrees of Freedom		1
X Coefficient(s)	3.321E-05	
Std Err of Coef.	9.705E-06	

Attachment D.

Table 2. Calculated Drawdowns to Determine Efficiency of Well Designs

Calculated Drawdown (pumping well) ft	Discharge (Q-out) gpm	Transmissivity * T gpd/ft	Storativity ** S	Corrected Drawdown @ ft	s/Q
2.37	1000	1200000	1.00E-04	3.98	0.00398
3.56	1500	1200000	1.00E-04	5.83	0.00389
4.74	2000	1200000	1.00E-04	7.7	0.00385
5.93	2500	1200000	1.00E-04	9.47	0.00379
7.12	3000	1200000	1.00E-04	10.76	0.00359

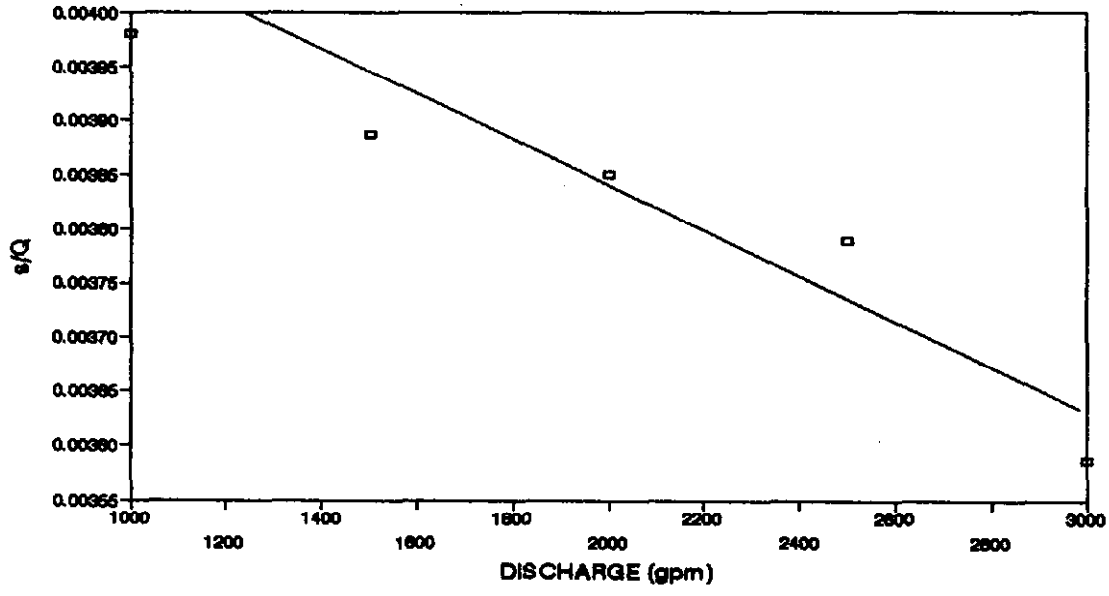
Q/s (theoretical)= 421.6 gpm/ft
where; Q/s= T/2000 for confined aquifers

Q/s (calculated)= 263.99 gpm/ft
where; Q/s= 2000gpm/10.29ft

E= Q/s (theoretical)/Q/s (calculated) E= 62.62

ROMP 22, Calculated Efficiency

s/Q plotted against Q



Regression Output:

Constant	0.00434
Std Err of Y Est	5.290103E-05
R Squared	0.9021902346
No. of Obeervations	5

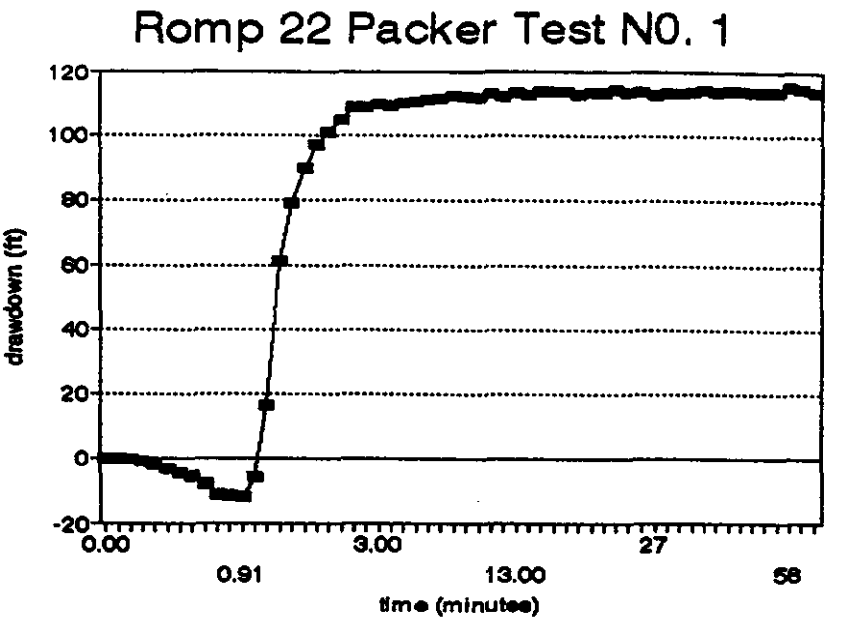
Attachment E.

Romp-22, Utopia

Pumping Rate(gpm):
13.4

ds:	119.1	
t(o):	1	
Thickness	104	
Transmissivity (T):		29.70277
Conductivity (K):		0.285604

Time(m)	Ch 1	drawdown(ft)
0.00	219.9	0
0.08	219.9	0
0.16	220.5	-0.6
0.25	221.1	-1.2
0.33	222.1	-2.2
0.42	223.2	-3.3
0.50	224.4	-4.5
0.58	225.5	-5.6
0.66	227.8	-7.9
0.75	231.1	-11.2
0.83	231.2	-11.3
0.91	231.9	-12
1.00	226	-6.1
1.16	203.5	16.4
1.33	158.6	61.3
1.50	140.9	79.1
1.66	130.1	89.8
1.83	122.8	97.1
2.00	118.7	101.2
2.25	114.9	105
2.50	111.8	109.1
2.75	110.8	109.1
3.00	110.2	109.7
3.25	110.7	109.2
3.75	109.8	110.1
4.00	109.5	110.4
5.00	108.8	111.1
6.00	108.5	111.4
7.00	107.3	112.6
8.00	108	111.9
9.00	108.3	111.6
10.00	106.9	113
11.00	107.7	112.2
13.00	106.6	113.3

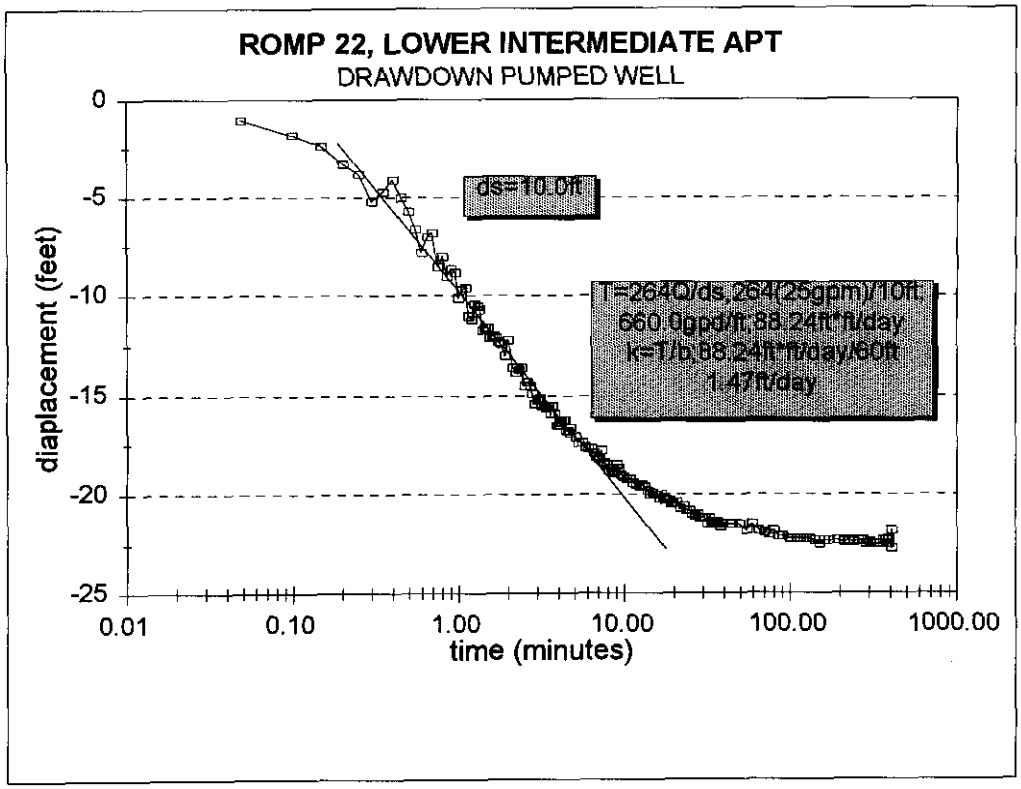


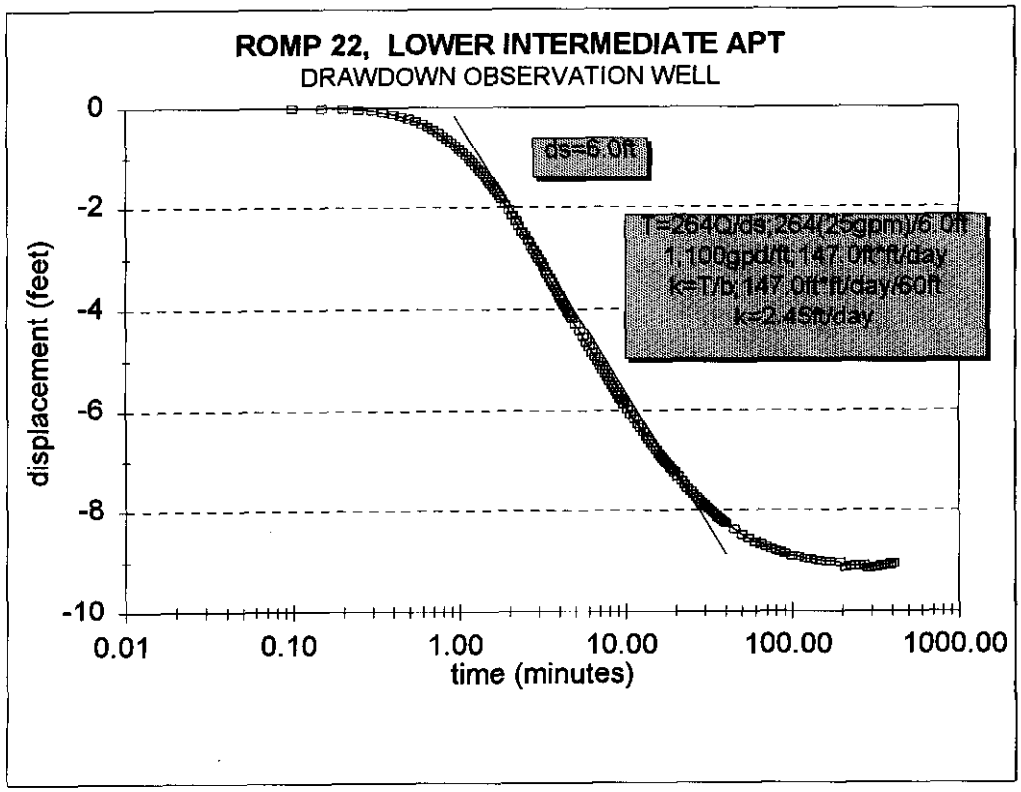
Regression Output:

Constant	88.9388833
Std Err of Y Est	28.8715103
R Squared	0.28284836
No. of Observations	20
Degrees of Freedom	18
X Coefficient(s)	6.41980697
Std Err of Coef.	2.4068461

Attachment F.

APPENDIX C


ROMP 22, LOWER INTERMEDIATE APT
DRAWDOWN PUMPED WELL
0
-5
-10
-15
-20
-25
diaplacement (feet)
ds=10.0ft
T=264Q/ds,264(25gpm)/10ft
660.0gpd/ft,88.24ft*ft/day
k=T/b,88.24ft*ft/day/60ft
1.47ft/day
0.01
0.10
1.00
10.00
100.00
1000.00
time (minutes)


ROMP 22, LOWER INTERMEDIATE APT
DRAWDOWN OBSERVATION WELL
0
-2
-4
-6
-8
-10
displacement (feet)
ds=6.0ft
T=264Q/ds,264(25gpm)/6.0ft
1,100gpd/ft,147.0ft*ft/day
k=T/b,147.0ft*ft/day/60ft
k=2.45ft/day
0.01
0.10
1.00
10.00
100.00
1000.00
time (minutes)

ROMP 22, LOWER INTERMEDIATE AQUIFER PERFORMANCE TEST (APT)

4/19/94

drawdown phase

Time	Time General	Elapsed Time	Chn. 1 (surficial)	Chn. 2 (l.int.)	Displacement	Chn. 3 (l.int.pmp.)	Displacement	Chn. 4 (u.int.)	Chn. 5 (av.pk.)	Chn. 6 (suw.)
09:20:12	0.39	0.00	7.08	24.18	0	66.4	0	26.16	18.89	12.29
09:20:15	0.39	0.05	7.08	24.18	0	65.4	-1	26.16	18.89	12.29
09:20:18	0.39	0.10	7.08	24.18	0	64.6	-1.8	26.16	18.89	12.29
09:20:21	0.39	0.15	7.08	24.17	-0.01	64	-2.4	26.16	18.89	12.29
09:20:24	0.39	0.20	7.08	24.17	-0.01	63.1	-3.3	26.16	18.89	12.29
09:20:27	0.39	0.25	7.08	24.14	-0.04	62.6	-3.8	26.16	18.89	12.29
09:20:30	0.39	0.30	7.08	24.13	-0.05	61.2	-5.2	26.16	18.89	12.29
09:20:33	0.39	0.35	7.08	24.09	-0.09	61.7	-4.7	26.16	18.89	12.29
09:20:36	0.39	0.40	7.08	24.06	-0.12	62.3	-4.1	26.16	18.89	12.29
09:20:39	0.39	0.45	7.08	24.01	-0.17	61.4	-5	26.16	18.89	12.29
09:20:42	0.39	0.50	7.08	23.96	-0.22	60.7	-5.7	26.16	18.89	12.29
09:20:45	0.39	0.55	7.08	23.91	-0.27	59.8	-6.6	26.16	18.89	12.29
09:20:48	0.39	0.60	7.08	23.86	-0.32	58.6	-7.8	26.16	18.89	12.29
09:20:51	0.39	0.65	7.08	23.8	-0.38	59.4	-7	26.16	18.89	12.29
09:20:54	0.39	0.70	7.08	23.74	-0.44	59.6	-6.8	26.16	18.89	12.29
09:20:57	0.39	0.75	7.08	23.68	-0.5	57.9	-8.5	26.16	18.89	12.29
09:21:00	0.39	0.80	7.08	23.61	-0.57	58.4	-8	26.16	18.89	12.29
09:21:03	0.39	0.85	7.08	23.55	-0.63	57.4	-9	26.16	18.89	12.29
09:21:06	0.39	0.90	7.08	23.49	-0.69	57.8	-8.6	26.16	18.89	12.29
09:21:09	0.39	0.95	7.08	23.42	-0.76	57.6	-8.8	26.16	18.89	12.29
09:21:12	0.39	1.00	7.08	23.36	-0.82	56.3	-10.1	26.16	18.89	12.29
09:21:15	0.39	1.05	7.08	23.29	-0.89	56.7	-9.7	26.16	18.89	12.29
09:21:18	0.39	1.10	7.08	23.23	-0.95	56.8	-9.6	26.16	18.89	12.29
09:21:21	0.39	1.15	7.08	23.16	-1.02	55.4	-11	26.15	18.89	12.29
09:21:24	0.39	1.20	7.08	23.1	-1.08	55.2	-11.2	26.16	18.89	12.29
09:21:27	0.39	1.25	7.08	23.03	-1.15	56	-10.4	26.15	18.88	12.29
09:21:30	0.39	1.30	7.08	22.97	-1.21	55.9	-10.5	26.15	18.89	12.29
09:21:33	0.39	1.35	7.08	22.91	-1.27	55.7	-10.7	26.15	18.89	12.29
09:21:36	0.39	1.40	7.08	22.84	-1.34	54.7	-11.7	26.15	18.89	12.29
09:21:39	0.39	1.45	7.08	22.78	-1.4	54.8	-11.6	26.15	18.89	12.29
09:21:42	0.39	1.50	7.08	22.71	-1.47	54.8	-11.6	26.15	18.88	12.29
09:21:45	0.39	1.55	7.08	22.65	-1.53	54.3	-12.1	26.16	18.89	12.29
09:21:48	0.39	1.60	7.08	22.59	-1.59	54.4	-12	26.15	18.89	12.29
09:21:51	0.39	1.65	7.08	22.53	-1.65	54.4	-12	26.15	18.89	12.29
09:21:54	0.39	1.70	7.08	22.47	-1.71	54.3	-12.1	26.15	18.88	12.29
09:21:57	0.39	1.75	7.08	22.41	-1.77	54.1	-12.3	26.15	18.88	12.29
09:22:00	0.39	1.80	7.08	22.35	-1.83	54	-12.4	26.15	18.88	12.29
09:22:06	0.39	1.90	7.08	22.24	-1.94	53.4	-13	26.15	18.88	12.29
09:22:12	0.39	2.00	7.08	22.13	-2.05	54.2	-12.2	26.15	18.88	12.29
09:22:18	0.39	2.10	7.08	22.02	-2.16	52.8	-13.6	26.15	18.88	12.29
09:22:24	0.39	2.20	7.08	21.92	-2.26	52.6	-13.8	26.15	18.88	12.29
09:22:30	0.39	2.30	7.08	21.82	-2.36	52.7	-13.7	26.15	18.88	12.29
09:22:36	0.39	2.40	7.08	21.71	-2.47	52.8	-13.6	26.15	18.88	12.29
09:22:42	0.39	2.50	7.08	21.63	-2.55	51.9	-14.5	26.15	18.88	12.29
09:22:48	0.39	2.60	7.08	21.53	-2.65	52.1	-14.3	26.15	18.88	12.29
09:22:54	0.39	2.70	7.08	21.43	-2.75	51.9	-14.5	26.15	18.88	12.29
09:23:00	0.39	2.80	7.08	21.35	-2.83	51.5	-14.9	26.15	18.88	12.29
09:23:06	0.39	2.90	7.08	21.26	-2.92	51	-15.4	26.15	18.88	12.29
09:23:12	0.39	3.00	7.08	21.18	-3	51.2	-15.2	26.15	18.88	12.29
09:23:18	0.39	3.10	7.08	21.11	-3.07	51.3	-15.1	26.15	18.88	12.29
09:23:24	0.39	3.20	7.08	21.02	-3.16	50.9	-15.5	26.15	18.88	12.29

ROMP 22, LOWER INTERMEDIATE AQUIFER PERFORMANCE TEST (APT)

4/19/94

drawdown phase

Time	Time General	Elapsed Time	Chn. 1 (surficial)	Chn. 2 (l.int.)	Displacement	Chn. 3 (l.int.pmp.)	Displacement	Chn. 4 (u.int.)	Chn. 5 (av.pk.)	Chn. 6 (suw.)
09:23:30	0.39	3.30	7.08	20.94	-3.24	50.9	-15.5	26.15	18.88	12.29
09:23:36	0.39	3.40	7.08	20.87	-3.31	50.8	-15.6	26.15	18.88	12.29
09:23:42	0.39	3.50	7.08	20.8	-3.38	50.9	-15.5	26.15	18.88	12.29
09:23:48	0.39	3.60	7.08	20.73	-3.45	50.5	-15.9	26.15	18.88	12.29
09:23:54	0.39	3.70	7.08	20.66	-3.52	50.9	-15.5	26.15	18.88	12.29
09:24:00	0.39	3.80	7.08	20.6	-3.58	50.5	-15.9	26.15	18.88	12.29
09:24:06	0.39	3.90	7.08	20.53	-3.65	49.9	-16.5	26.15	18.88	12.29
09:24:12	0.39	4.00	7.08	20.47	-3.71	49.9	-16.5	26.15	18.88	12.29
09:24:18	0.39	4.10	7.08	20.4	-3.78	49.9	-16.5	26.15	18.88	12.29
09:24:24	0.39	4.20	7.08	20.34	-3.84	50.1	-16.3	26.15	18.88	12.29
09:24:30	0.39	4.30	7.08	20.28	-3.9	50.2	-16.2	26.15	18.88	12.29
09:24:36	0.39	4.40	7.08	20.22	-3.96	50.2	-16.2	26.15	18.88	12.29
09:24:42	0.39	4.50	7.08	20.16	-4.02	49.6	-16.8	26.15	18.88	12.29
09:24:48	0.39	4.60	7.08	20.11	-4.07	49.6	-16.8	26.15	18.88	12.29
09:24:54	0.39	4.70	7.08	20.06	-4.12	49.5	-16.9	26.15	18.88	12.29
09:25:00	0.39	4.80	7.08	20	-4.18	49.8	-16.6	26.15	18.88	12.29
09:25:15	0.39	5.05	7.08	19.88	-4.3	49.3	-17.1	26.15	18.88	12.29
09:25:30	0.39	5.30	7.08	19.76	-4.42	49	-17.4	26.15	18.88	12.29
09:25:45	0.39	5.55	7.08	19.64	-4.54	49	-17.4	26.15	18.88	12.29
09:26:00	0.39	5.80	7.08	19.53	-4.65	48.8	-17.6	26.15	18.88	12.29
09:26:15	0.39	6.05	7.08	19.44	-4.74	48.7	-17.7	26.15	18.88	12.29
09:26:30	0.39	6.30	7.08	19.33	-4.85	48.7	-17.7	26.15	18.88	12.29
09:26:45	0.39	6.55	7.08	19.24	-4.94	48.5	-17.9	26.15	18.87	12.28
09:27:00	0.39	6.80	7.08	19.15	-5.03	48.3	-18.1	26.15	18.87	12.28
09:27:15	0.39	7.05	7.08	19.06	-5.12	48.2	-18.2	26.16	18.88	12.29
09:27:30	0.39	7.30	7.08	18.99	-5.19	48.6	-17.8	26.16	18.88	12.29
09:27:45	0.39	7.55	7.08	18.91	-5.27	48	-18.4	26.16	18.88	12.29
09:28:00	0.39	7.80	7.08	18.83	-5.35	47.9	-18.5	26.16	18.88	12.29
09:28:15	0.39	8.05	7.08	18.75	-5.43	47.6	-18.8	26.15	18.87	12.28
09:28:30	0.39	8.30	7.08	18.68	-5.5	47.7	-18.7	26.16	18.88	12.29
09:28:45	0.39	8.55	7.08	18.62	-5.56	47.5	-18.9	26.15	18.87	12.28
09:29:00	0.40	8.80	7.08	18.55	-5.63	47.6	-18.8	26.15	18.87	12.28
09:29:15	0.40	9.05	7.08	18.49	-5.69	47.9	-18.5	26.16	18.87	12.28
09:29:30	0.40	9.30	7.08	18.42	-5.76	47.7	-18.7	26.15	18.87	12.28
09:29:45	0.40	9.55	7.08	18.37	-5.81	47.4	-19	26.16	18.87	12.28
09:30:00	0.40	9.80	7.08	18.31	-5.87	47.3	-19.1	26.16	18.87	12.28
09:30:30	0.40	10.30	7.08	18.2	-5.98	47.2	-19.2	26.16	18.87	12.28
09:31:00	0.40	10.80	7.08	18.1	-6.08	47.2	-19.2	26.16	18.87	12.28
09:31:30	0.40	11.30	7.08	18.01	-6.17	47	-19.4	26.16	18.87	12.28
09:32:00	0.40	11.80	7.08	17.91	-6.27	46.9	-19.5	26.16	18.87	12.28
09:32:30	0.40	12.30	7.08	17.84	-6.34	46.8	-19.6	26.16	18.87	12.28
09:33:00	0.40	12.80	7.08	17.75	-6.43	46.9	-19.5	26.16	18.87	12.28
09:33:30	0.40	13.30	7.08	17.67	-6.51	46.8	-19.6	26.16	18.87	12.28
09:34:00	0.40	13.80	7.08	17.6	-6.58	46.6	-19.8	26.16	18.87	12.28
09:34:30	0.40	14.30	7.08	17.53	-6.65	46.4	-20	26.16	18.87	12.28
09:35:00	0.40	14.80	7.08	17.46	-6.72	46.5	-19.9	26.16	18.87	12.28
09:35:30	0.40	15.30	7.08	17.4	-6.78	46.4	-20	26.16	18.87	12.28
09:36:00	0.40	15.80	7.08	17.33	-6.85	46.4	-20	26.16	18.87	12.28
09:36:30	0.40	16.30	7.08	17.27	-6.91	46.2	-20.2	26.16	18.87	12.27
09:37:00	0.40	16.80	7.08	17.22	-6.96	46.4	-20	26.16	18.87	12.27
09:37:30	0.40	17.30	7.08	17.17	-7.01	46.2	-20.2	26.16	18.87	12.27

ROMP 22, LOWER INTERMEDIATE AQUIFER PERFORMANCE TEST (APT)

4/19/94

drawdown phase

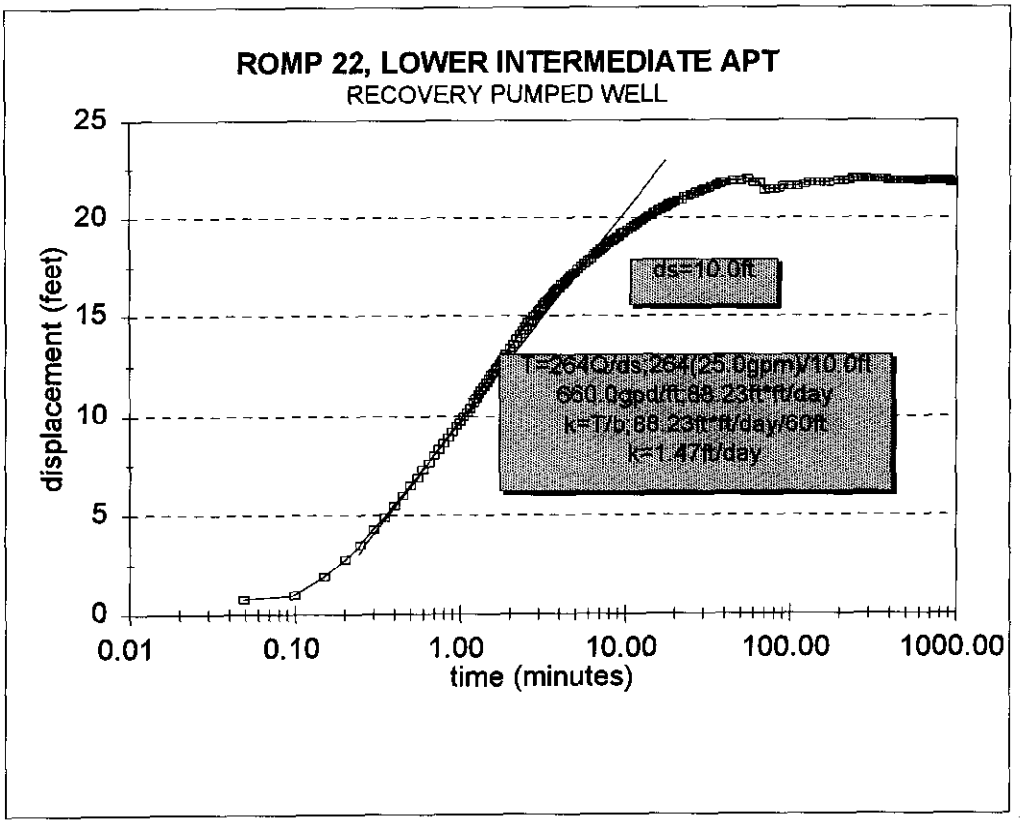
Time	Time General	Elapsed Time	Chn. 1 (surficial)	Chn. 2 (l.int.)	Displacement	Chn. 3 (l.int.pmp.)	Displacement	Chn. 4 (u.int.)	Chn. 5 (av.pk.)	Chn. 6 (suw.)
09:38:00	0.40	17.80	7.08	17.12	-7.06	46.1	-20.3	26.16	18.87	12.27
09:38:30	0.40	18.30	7.08	17.08	-7.1	46.1	-20.3	26.16	18.87	12.27
09:39:00	0.40	18.80	7.08	17.02	-7.16	46.1	-20.3	26.16	18.87	12.27
09:39:30	0.40	19.30	7.08	16.98	-7.2	45.9	-20.5	26.16	18.87	12.27
09:40:00	0.40	19.80	7.08	16.94	-7.24	46	-20.4	26.16	18.87	12.27
09:41:00	0.40	20.80	7.08	16.85	-7.33	46	-20.4	26.16	18.87	12.27
09:42:00	0.40	21.80	7.08	16.77	-7.41	45.7	-20.7	26.16	18.87	12.27
09:43:00	0.40	22.80	7.08	16.69	-7.49	45.8	-20.6	26.16	18.87	12.27
09:44:00	0.41	23.80	7.08	16.62	-7.56	45.6	-20.8	26.16	18.87	12.27
09:45:00	0.41	24.80	7.08	16.56	-7.62	45.6	-20.8	26.16	18.87	12.27
09:46:00	0.41	25.80	7.08	16.5	-7.68	45.4	-21	26.17	18.87	12.27
09:47:00	0.41	26.80	7.08	16.44	-7.74	45.3	-21.1	26.16	18.87	12.27
09:48:00	0.41	27.80	7.08	16.39	-7.79	45.4	-21	26.17	18.87	12.27
09:49:00	0.41	28.80	7.08	16.34	-7.84	45.2	-21.2	26.17	18.87	12.27
09:50:00	0.41	29.80	7.08	16.3	-7.88	45.2	-21.2	26.17	18.86	12.26
09:51:00	0.41	30.80	7.08	16.25	-7.93	45.2	-21.2	26.16	18.86	12.26
09:52:00	0.41	31.80	7.08	16.21	-7.97	44.9	-21.5	26.16	18.86	12.26
09:53:00	0.41	32.80	7.08	16.17	-8.01	45.2	-21.2	26.16	18.86	12.26
09:54:00	0.41	33.80	7.08	16.13	-8.05	45	-21.4	26.16	18.86	12.26
09:55:00	0.41	34.80	7.08	16.09	-8.09	44.9	-21.5	26.16	18.86	12.26
09:56:00	0.41	35.80	7.08	16.05	-8.13	45	-21.4	26.17	18.86	12.25
09:57:00	0.41	36.80	7.08	16.03	-8.15	45	-21.4	26.17	18.86	12.25
09:58:00	0.42	37.80	7.08	15.99	-8.19	44.8	-21.6	26.16	18.86	12.25
09:59:00	0.42	38.80	7.08	15.96	-8.22	44.9	-21.5	26.15	18.86	12.25
10:00:00	0.42	39.80	7.07	15.93	-8.25	44.9	-21.5	26.16	18.86	12.25
10:05:00	0.42	44.80	7.07	15.81	-8.37	44.9	-21.5	26.17	18.85	12.24
10:10:00	0.42	49.80	7.07	15.71	-8.47	44.9	-21.5	26.15	18.85	12.23
10:15:00	0.43	54.80	7.08	15.64	-8.54	44.6	-21.8	26.17	18.85	12.23
10:20:00	0.43	59.80	7.08	15.57	-8.61	44.9	-21.5	26.17	18.84	12.22
10:25:00	0.43	64.80	7.08	15.52	-8.66	44.6	-21.8	26.16	18.84	12.22
10:30:00	0.44	69.80	7.08	15.48	-8.7	44.5	-21.9	26.18	18.84	12.21
10:35:00	0.44	74.80	7.08	15.43	-8.75	44.4	-22	26.17	18.83	12.21
10:40:00	0.44	79.80	7.08	15.4	-8.78	44.6	-21.8	26.16	18.83	12.21
10:45:00	0.45	84.80	7.08	15.37	-8.81	44.3	-22.1	26.17	18.83	12.2
10:50:00	0.45	89.80	7.08	15.34	-8.84	44.3	-22.1	26.18	18.83	12.2
11:00:00	0.46	99.80	7.09	15.29	-8.89	44.2	-22.2	26.17	18.82	12.19
11:10:00	0.47	109.80	7.09	15.27	-8.91	44.2	-22.2	26.17	18.82	12.19
11:20:00	0.47	119.80	7.1	15.23	-8.95	44.2	-22.2	26.18	18.82	12.18
11:30:00	0.48	129.80	7.1	15.22	-8.96	44.2	-22.2	26.18	18.81	12.17
11:40:00	0.49	139.80	7.1	15.2	-8.98	44.1	-22.3	26.17	18.81	12.17
11:50:00	0.49	149.80	7.11	15.18	-9	43.9	-22.5	26.18	18.81	12.16
12:00:00	0.50	159.80	7.11	15.17	-9.01	44.1	-22.3	26.19	18.81	12.16
12:10:00	0.51	169.80	7.12	15.17	-9.01	44.1	-22.3	26.18	18.82	12.16
12:35:00	0.52	194.80	7.13	15.15	-9.03	44.1	-22.3	26.16	18.85	12.13
12:50:00	0.53	209.80	7.14	15.06	-9.12	44	-22.4	26.14	18.86	12.07
13:05:00	0.55	224.80	7.14	15.08	-9.1	44.1	-22.3	26.18	18.87	12.09
13:20:00	0.56	239.80	7.14	15.09	-9.09	44	-22.4	26.19	18.87	12.11
13:35:00	0.57	254.80	7.15	15.09	-9.09	44.1	-22.3	26.17	18.88	12.12
13:50:00	0.58	269.80	7.15	15.1	-9.08	44.1	-22.3	26.15	18.89	12.1
14:05:00	0.59	284.80	7.16	15.04	-9.14	43.9	-22.5	26.16	18.9	12.1
14:20:00	0.60	299.80	7.17	15.04	-9.14	44	-22.4	26.18	18.9	12.14

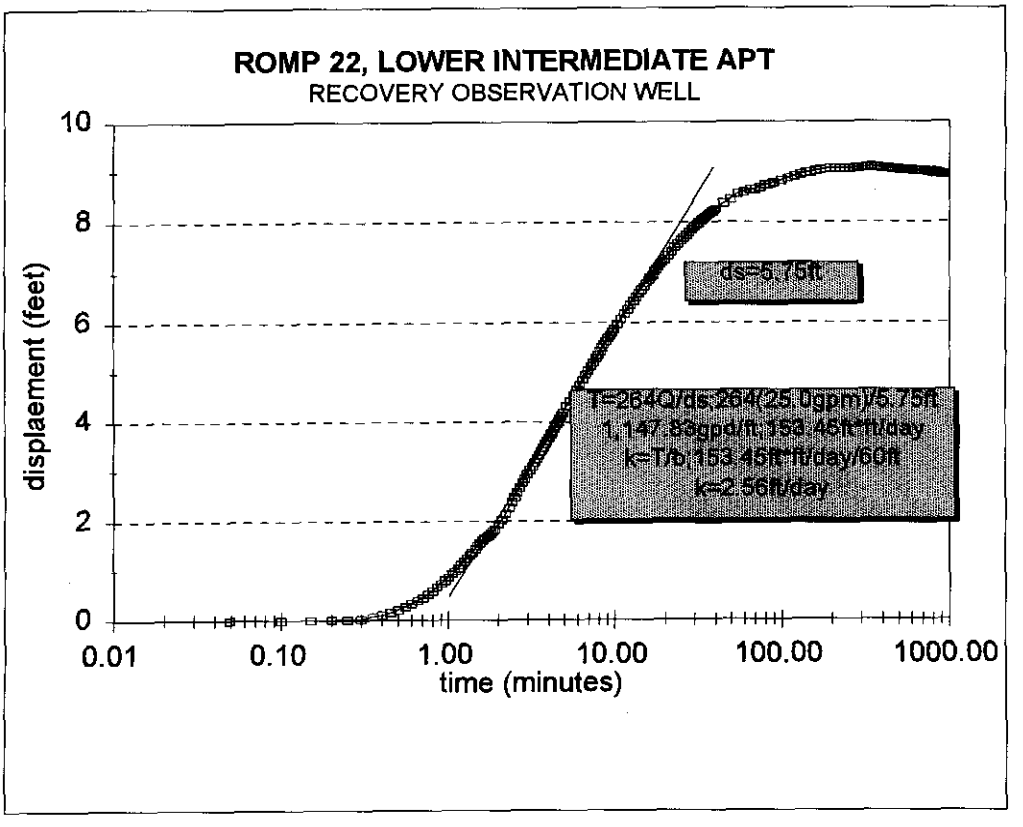
ROMP 22, LOWER INTERMEDIATE AQUIFER PERFORMANCE TEST (APT)

4/19/94

drawdown phase

Time	Time General	Elapsed Time	Chn. 1 (surficial)	Chn. 2 (l.int.)	Displacement	Chn. 3 (l.int.pmp.)	Displacement	Chn. 4 (u.int.)	Chn. 5 (av.pk.)	Chn. 6 (suw.)
14:35:00	0.61	314.80	7.17	15.06	-9.12	43.9	-22.5	26.23	18.92	12.14
14:50:00	0.62	329.80	7.17	15.07	-9.11	43.9	-22.5	26.24	18.92	12.16
15:05:00	0.63	344.80	7.18	15.09	-9.09	43.9	-22.5	26.25	18.93	12.17
15:20:00	0.64	359.80	7.18	15.1	-9.08	44.1	-22.3	26.27	18.94	12.18
15:35:00	0.65	374.80	7.19	15.11	-9.07	44.1	-22.3	26.28	18.94	12.21
15:50:00	0.66	389.80	7.19	15.11	-9.07	43.9	-22.5	26.28	18.94	12.22
16:05:00	0.66	389.80	7.19	15.13	-9.05	44.2	-22.2	26.29	18.94	12.23
16:06:01	0.67	405.82	7.19	15.13	-9.05	43.7	-22.7	26.29	18.94	12.23
16:06:03	0.67	405.85	7.19	15.13	-9.05	44.6	-21.8	26.29	18.94	12.23


ROMP 22, LOWER INTERMEDIATE APT
RECOVERY PUMPED WELL
displacement (feet)
time (minutes)
0
5
10
15
20
25
0.01
0.10
1.00
10.00
100.00
1000.00
ds=10.0ft
T=264Q/ds;264(25.0gpm)/10.0ft
660.0gpd/ft;88.23ft²ft/day
k=T/b;88.23ft²ft/day/60ft
k=1.47ft/day


ROMP 22, LOWER INTERMEDIATE APT
RECOVERY OBSERVATION WELL
displaement (feet)
time (minutes)
0
2
4
6
8
10
0.01
0.10
1.00
10.00
100.00
1000.00
ds=5.75ft
T=264Q/ds;264(25.0gpm)/5.75ft
1,147.83gpd/ft;153.45ft²ft/day
k=T/b;153.45ft²ft/day/60ft
k=2.56ft/day

ROMP 22, LOWER INTERMEDIATE AQUIFER PERFORMANCE TEST (APT)

4/19/94

recovery phase

Time	Time General	Elapsed Time	Chn. 1 (surficial)	Chn. 2 (l.int.)	Displacement	Chn. 3 (l.int.pmp.)	Diaplacement	Chn. 4 (u.int.)	Chn. 5 (av.pk.)	Chn. 6 (suw.)
16:06:06	0.67	0.00	7.19	15.13	0.00	43.70	0.00	26.29	18.94	12.23
16:06:09	0.67	0.05	7.19	15.13	0.00	44.50	0.80	26.29	18.94	12.23
16:06:12	0.67	0.10	7.19	15.13	0.00	44.70	1.00	26.29	18.94	12.23
16:06:15	0.67	0.15	7.19	15.13	0.00	45.60	1.90	26.29	18.94	12.23
16:06:18	0.67	0.20	7.19	15.14	0.01	46.50	2.80	26.29	18.94	12.23
16:06:21	0.67	0.25	7.19	15.15	0.02	47.20	3.50	26.29	18.94	12.23
16:06:24	0.67	0.30	7.19	15.16	0.03	48.00	4.30	26.29	18.94	12.23
16:06:27	0.67	0.35	7.19	15.20	0.07	48.60	4.90	26.29	18.94	12.23
16:06:30	0.67	0.40	7.19	15.23	0.10	49.20	5.50	26.29	18.94	12.23
16:06:33	0.67	0.45	7.19	15.28	0.15	49.70	6.00	26.29	18.94	12.23
16:06:36	0.67	0.50	7.19	15.34	0.21	50.20	6.50	26.29	18.94	12.23
16:06:39	0.67	0.55	7.19	15.40	0.27	50.60	6.90	26.29	18.94	12.23
16:06:42	0.67	0.60	7.19	15.46	0.33	51.00	7.30	26.29	18.94	12.23
16:06:45	0.67	0.65	7.19	15.53	0.40	51.30	7.60	26.29	18.94	12.23
16:06:48	0.67	0.70	7.19	15.59	0.46	51.70	8.00	26.29	18.94	12.23
16:06:51	0.67	0.75	7.19	15.66	0.53	52.00	8.30	26.30	18.94	12.23
16:06:54	0.67	0.80	7.19	15.73	0.60	52.30	8.60	26.30	18.94	12.23
16:06:57	0.67	0.85	7.19	15.80	0.67	52.60	8.90	26.30	18.94	12.23
16:07:00	0.67	0.90	7.19	15.86	0.73	52.90	9.20	26.30	18.94	12.23
16:07:03	0.67	0.95	7.19	15.92	0.79	53.20	9.50	26.30	18.94	12.23
16:07:06	0.67	1.00	7.19	15.99	0.86	53.40	9.70	26.30	18.94	12.23
16:07:09	0.67	1.05	7.19	16.06	0.93	53.70	10.00	26.30	18.94	12.23
16:07:12	0.67	1.10	7.19	16.12	0.99	53.90	10.20	26.30	18.94	12.23
16:07:15	0.67	1.15	7.19	16.19	1.06	54.10	10.40	26.30	18.94	12.23
16:07:18	0.67	1.20	7.19	16.26	1.13	54.40	10.70	26.30	18.94	12.23
16:07:21	0.67	1.25	7.19	16.32	1.19	54.60	10.90	26.30	18.94	12.23
16:07:24	0.67	1.30	7.19	16.39	1.26	54.80	11.10	26.30	18.94	12.23
16:07:27	0.67	1.35	7.19	16.45	1.32	55.00	11.30	26.30	18.94	12.23
16:07:30	0.67	1.40	7.19	16.51	1.38	55.20	11.50	26.30	18.94	12.23
16:07:33	0.67	1.45	7.19	16.58	1.45	55.40	11.70	26.30	18.94	12.23
16:07:36	0.67	1.50	7.19	16.64	1.51	55.60	11.90	26.30	18.94	12.23
16:07:39	0.67	1.55	7.19	16.70	1.57	55.80	12.10	26.30	18.94	12.23
16:07:42	0.67	1.60	7.19	16.76	1.63	55.90	12.20	26.30	18.94	12.23
16:07:45	0.67	1.65	7.19	16.80	1.67	56.10	12.40	26.30	18.94	12.23
16:07:48	0.67	1.70	7.19	16.82	1.69	56.20	12.50	26.30	18.94	12.23
16:07:51	0.67	1.75	7.19	16.85	1.72	56.40	12.70	26.30	18.94	12.23
16:07:54	0.67	1.80	7.19	16.89	1.76	56.50	12.80	26.30	18.94	12.23
16:07:57	0.67	1.85	7.19	16.94	1.81	56.70	13.00	26.30	18.94	12.23
16:08:00	0.67	1.90	7.19	16.98	1.85	56.80	13.10	26.30	18.94	12.23
16:08:06	0.67	2.00	7.19	17.08	1.95	57.10	13.40	26.30	18.94	12.23
16:08:12	0.67	2.10	7.19	17.17	2.04	57.30	13.60	26.30	18.94	12.23
16:08:18	0.67	2.20	7.19	17.28	2.15	57.60	13.90	26.30	18.94	12.23
16:08:24	0.67	2.30	7.19	17.40	2.27	57.80	14.10	26.30	18.94	12.23
16:08:30	0.67	2.40	7.19	17.51	2.38	58.00	14.30	26.30	18.94	12.22
16:08:36	0.67	2.50	7.19	17.61	2.48	58.20	14.50	26.30	18.94	12.23
16:08:42	0.67	2.60	7.19	17.71	2.58	58.40	14.70	26.30	18.94	12.23
16:08:48	0.67	2.70	7.19	17.80	2.67	58.50	14.80	26.30	18.94	12.23
16:08:54	0.67	2.80	7.19	17.90	2.77	58.70	15.00	26.30	18.94	12.23
16:09:00	0.67	2.90	7.19	17.98	2.85	58.80	15.10	26.30	18.94	12.23
16:09:06	0.67	3.00	7.19	18.06	2.93	59.00	15.30	26.30	18.94	12.23
16:09:12	0.67	3.10	7.19	18.15	3.02	59.10	15.40	26.30	18.94	12.23

ROMP 22, LOWER INTERMEDIATE AQUIFER PERFORMANCE TEST (APT)

4/19/94

recovery phase

Time	Time General	Elapsed Time	Chn. 1 (surficial)	Chn. 2 (l.int.)	Displacement	Chn. 3 (l.int.pmp.)	Diaplacement	Chn. 4 (u.int.)	Chn. 5 (av.pk.)	Chn. 6 (suw.)
16:09:18	0.67	3.20	7.19	18.23	3.10	59.30	15.60	26.30	18.94	12.23
16:09:24	0.67	3.30	7.19	18.30	3.17	59.40	15.70	26.30	18.94	12.23
16:09:30	0.67	3.40	7.19	18.38	3.25	59.50	15.80	26.30	18.94	12.22
16:09:36	0.67	3.50	7.19	18.45	3.32	59.60	15.90	26.30	18.94	12.23
16:09:42	0.67	3.60	7.19	18.53	3.40	59.70	16.00	26.30	18.94	12.23
16:09:48	0.67	3.70	7.19	18.60	3.47	59.90	16.20	26.31	18.94	12.23
16:09:54	0.67	3.80	7.19	18.67	3.54	60.00	16.30	26.31	18.94	12.23
16:10:00	0.67	3.90	7.19	18.74	3.61	60.10	16.40	26.30	18.94	12.22
16:10:06	0.67	4.00	7.19	18.80	3.67	60.10	16.40	26.30	18.94	12.23
16:10:12	0.67	4.10	7.19	18.86	3.73	60.30	16.60	26.30	18.94	12.23
16:10:18	0.67	4.20	7.19	18.92	3.79	60.30	16.60	26.30	18.94	12.23
16:10:24	0.67	4.30	7.19	18.98	3.85	60.40	16.70	26.30	18.94	12.23
16:10:30	0.67	4.40	7.19	19.04	3.91	60.50	16.80	26.30	18.94	12.23
16:10:36	0.67	4.50	7.19	19.10	3.97	60.60	16.90	26.30	18.94	12.23
16:10:42	0.67	4.60	7.19	19.15	4.02	60.70	17.00	26.30	18.94	12.23
16:10:48	0.67	4.70	7.19	19.21	4.08	60.80	17.10	26.30	18.94	12.23
16:10:54	0.67	4.80	7.19	19.26	4.13	60.80	17.10	26.31	18.94	12.23
16:11:00	0.67	4.90	7.19	19.32	4.19	60.90	17.20	26.30	18.94	12.23
16:11:15	0.67	5.15	7.19	19.45	4.32	61.10	17.40	26.31	18.94	12.23
16:11:30	0.67	5.40	7.19	19.56	4.43	61.20	17.50	26.30	18.94	12.23
16:11:45	0.67	5.65	7.19	19.67	4.54	61.40	17.70	26.30	18.94	12.23
16:12:00	0.68	5.90	7.19	19.78	4.65	61.50	17.80	26.30	18.94	12.23
16:12:15	0.68	6.15	7.19	19.89	4.76	61.60	17.90	26.30	18.94	12.23
16:12:30	0.68	6.40	7.19	19.98	4.85	61.80	18.10	26.30	18.94	12.23
16:12:45	0.68	6.65	7.19	20.08	4.95	61.90	18.20	26.30	18.94	12.23
16:13:00	0.68	6.90	7.19	20.16	5.03	62.00	18.30	26.30	18.94	12.23
16:13:15	0.68	7.15	7.19	20.25	5.12	62.10	18.40	26.30	18.94	12.23
16:13:30	0.68	7.40	7.19	20.33	5.20	62.20	18.50	26.30	18.94	12.23
16:13:45	0.68	7.65	7.19	20.41	5.28	62.30	18.60	26.30	18.94	12.23
16:14:00	0.68	7.90	7.19	20.48	5.35	62.40	18.70	26.30	18.94	12.23
16:14:15	0.68	8.15	7.19	20.56	5.43	62.50	18.80	26.30	18.94	12.23
16:14:30	0.68	8.40	7.19	20.63	5.50	62.50	18.80	26.30	18.94	12.23
16:14:45	0.68	8.65	7.19	20.70	5.57	62.60	18.90	26.30	18.94	12.23
16:15:00	0.68	8.90	7.19	20.76	5.63	62.70	19.00	26.30	18.94	12.23
16:15:15	0.68	9.15	7.19	20.82	5.69	62.70	19.00	26.30	18.94	12.23
16:15:30	0.68	9.40	7.19	20.88	5.75	62.90	19.20	26.29	18.94	12.23
16:15:45	0.68	9.65	7.19	20.94	5.81	62.90	19.20	26.29	18.94	12.23
16:16:00	0.68	9.90	7.19	21.00	5.87	63.00	19.30	26.28	18.94	12.23
16:16:30	0.68	10.40	7.19	21.11	5.98	63.10	19.40	26.28	18.94	12.23
16:17:00	0.68	10.90	7.19	21.21	6.08	63.20	19.50	26.29	18.94	12.23
16:17:30	0.68	11.40	7.19	21.31	6.18	63.30	19.60	26.29	18.94	12.23
16:18:00	0.68	11.90	7.19	21.40	6.27	63.40	19.70	26.29	18.94	12.23
16:18:30	0.68	12.40	7.19	21.49	6.36	63.50	19.80	26.29	18.94	12.23
16:19:00	0.68	12.90	7.19	21.57	6.44	63.60	19.90	26.29	18.95	12.23
16:19:30	0.68	13.40	7.19	21.64	6.51	63.70	20.00	26.29	18.94	12.23
16:20:00	0.68	13.90	7.19	21.72	6.59	63.80	20.10	26.29	18.94	12.23
16:20:30	0.68	14.40	7.19	21.79	6.66	63.80	20.10	26.29	18.95	12.24
16:21:00	0.68	14.90	7.19	21.86	6.73	64.00	20.30	26.29	18.95	12.24
16:21:30	0.68	15.40	7.19	21.93	6.80	64.00	20.30	26.29	18.95	12.24
16:22:00	0.68	15.90	7.19	21.99	6.86	64.10	20.40	26.29	18.95	12.24
16:22:30	0.68	16.40	7.20	22.05	6.92	64.10	20.40	26.29	18.95	12.24

ROMP 22, LOWER INTERMEDIATE AQUIFER PERFORMANCE TEST (APT)

4/19/94

recovery phase

Time	Time General	Elapsed Time	Chn. 1 (surficial)	Chn. 2 (l.int.)	Displacement	Chn. 3 (l.int.pmp.)	Diaplacement	Chn. 4 (u.int.)	Chn. 5 (av.pk.)	Chn. 6 (suw.)
16:23:00	0.68	16.90	7.19	22.10	6.97	64.20	20.50	26.29	18.95	12.24
16:23:30	0.68	17.40	7.19	22.15	7.02	64.20	20.50	26.29	18.95	12.24
16:24:00	0.68	17.90	7.19	22.20	7.07	64.30	20.60	26.29	18.95	12.24
16:24:30	0.68	18.40	7.20	22.26	7.13	64.40	20.70	26.29	18.95	12.24
16:25:00	0.68	18.90	7.20	22.31	7.18	64.40	20.70	26.29	18.95	12.24
16:25:30	0.68	19.40	7.20	22.35	7.22	64.50	20.80	26.29	18.95	12.24
16:26:00	0.68	19.90	7.20	22.40	7.27	64.50	20.80	26.29	18.95	12.24
16:27:00	0.69	20.90	7.20	22.48	7.35	64.60	20.90	26.29	18.95	12.24
16:28:00	0.69	21.90	7.20	22.56	7.43	64.60	20.90	26.29	18.95	12.24
16:29:00	0.69	22.90	7.20	22.64	7.51	64.80	21.10	26.29	18.94	12.24
16:30:00	0.69	23.90	7.20	22.71	7.58	64.80	21.10	26.29	18.95	12.24
16:31:00	0.69	24.90	7.20	22.77	7.64	64.90	21.20	26.30	18.95	12.24
16:32:00	0.69	25.90	7.20	22.83	7.70	64.90	21.20	26.30	18.95	12.25
16:33:00	0.69	26.90	7.20	22.88	7.75	65.00	21.30	26.30	18.95	12.25
16:34:00	0.69	27.90	7.20	22.94	7.81	65.00	21.30	26.30	18.95	12.25
16:35:00	0.69	28.90	7.20	22.99	7.86	65.10	21.40	26.30	18.95	12.25
16:36:00	0.69	29.90	7.20	23.04	7.91	65.20	21.50	26.30	18.95	12.25
16:37:00	0.69	30.90	7.20	23.08	7.95	65.20	21.50	26.29	18.95	12.25
16:38:00	0.69	31.90	7.20	23.12	7.99	65.20	21.50	26.29	18.95	12.25
16:39:00	0.69	32.90	7.20	23.17	8.04	65.30	21.60	26.29	18.94	12.25
16:40:00	0.69	33.90	7.20	23.20	8.07	65.30	21.60	26.28	18.94	12.25
16:41:00	0.70	34.90	7.20	23.23	8.10	65.30	21.60	26.29	18.94	12.25
16:42:00	0.70	35.90	7.20	23.27	8.14	65.40	21.70	26.29	18.95	12.26
16:43:00	0.70	36.90	7.20	23.30	8.17	65.40	21.70	26.29	18.95	12.26
16:44:00	0.70	37.90	7.20	23.34	8.21	65.50	21.80	26.30	18.95	12.26
16:45:00	0.70	38.90	7.20	23.36	8.23	65.50	21.80	26.29	18.95	12.26
16:46:00	0.70	39.90	7.20	23.39	8.26	65.50	21.80	26.30	18.95	12.26
16:51:00	0.70	44.90	7.20	23.50	8.37	65.60	21.90	26.28		10.94
16:56:00	0.71	49.90	7.19	23.59	8.46	65.60	21.90	26.27		
17:01:00	0.71	54.90	7.21	23.69	8.56	65.70	22.00	26.28		
17:06:00	0.71	59.90		23.72	8.59	65.50	21.80	26.23		
17:11:00	0.72	64.90		23.77	8.64	65.50	21.80	26.24		
17:16:00	0.72	69.90		23.77	8.64	65.10	21.40			
17:21:00	0.72	74.90		23.81	8.68	65.20	21.50			
17:26:00	0.73	79.90		23.86	8.73	65.20	21.50			
17:31:00	0.73	84.90		23.88	8.75	65.20	21.50			
17:36:00	0.73	89.90		23.91	8.78	65.30	21.60			
17:46:00	0.74	99.90		23.95	8.82	65.30	21.60			
17:56:00	0.75	109.90		23.99	8.86	65.30	21.60			
18:06:00	0.75	119.90		24.03	8.90	65.40	21.70			
18:16:00	0.76	129.90		24.07	8.94	65.50	21.80			
18:26:00	0.77	139.90		24.10	8.97	65.50	21.80			
18:36:00	0.78	149.90		24.11	8.98	65.50	21.80			
18:46:00	0.78	159.90		24.13	9.00	65.50	21.80			
18:56:00	0.79	169.90		24.15	9.02	65.50	21.80			
19:20:00	0.81	193.90		24.18	9.05	65.60	21.90			
19:35:00	0.82	208.90		24.19	9.06	65.60	21.90			
19:50:00	0.83	223.90		24.19	9.06	65.60	21.90			
20:05:00	0.84	238.90		24.19	9.06	65.70	22.00			
20:20:00	0.85	253.90		24.19	9.06	65.70	22.00			
20:35:00	0.86	268.90		24.20	9.07	65.70	22.00			

ROMP 22, LOWER INTERMEDIATE AQUIFER PERFORMANCE TEST (APT)

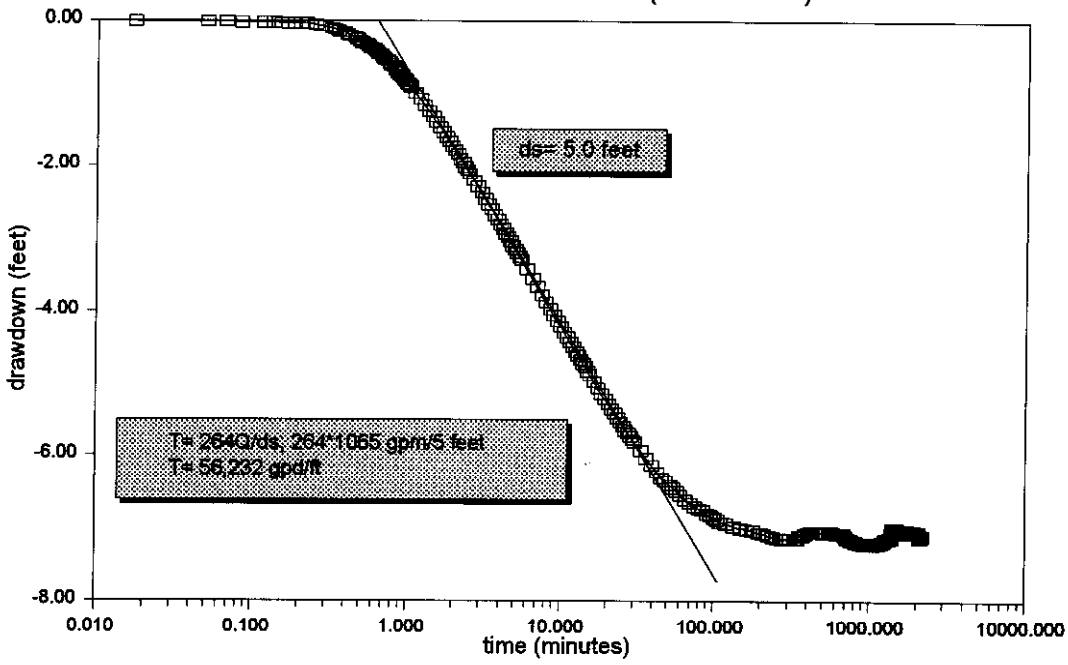
4/19/94

recovery phase

Time	Time General	Elapsed Time	Chn. 1 (surficial)	Chn. 2 (l.int.)	Displacement	Chn. 3 (l.int.pmp.)	Diaplacement	Chn. 4 (u.int.)	Chn. 5 (av.pk.)	Chn. 6 (suw.)
20:50:00	0.87	283.90		24.19	9.06	65.70	22.00			
21:05:00	0.88	298.90		24.20	9.07	65.70	22.00			
21:20:00	0.89	313.90		24.20	9.07	65.70	22.00			
21:35:00	0.90	328.90		24.21	9.08	65.70	22.00			
21:50:00	0.91	343.90		24.22	9.09	65.70	22.00			
22:05:00	0.92	358.90		24.21	9.08	65.70	22.00			
22:20:00	0.93	373.90		24.21	9.08	65.70	22.00			
22:35:00	0.94	388.90		24.20	9.07	65.60	21.90			
22:50:00	0.95	403.90		24.19	9.06	65.60	21.90			
23:05:00	0.96	418.90		24.18	9.05	65.60	21.90			
23:20:00	0.97	433.90		24.18	9.05	65.60	21.90			
23:35:00	0.98	448.90		24.18	9.05	65.60	21.90			
23:50:00	0.99	463.90		24.17	9.04	65.60	21.90			
00:05:00	0.00	478.90		24.17	9.04	65.60	21.90			
00:20:00	0.01	493.90		24.17	9.04	65.60	21.90			
00:35:00	0.02	508.90		24.16	9.03	65.60	21.90			
00:50:00	0.03	523.90		24.16	9.03	65.60	21.90			
01:05:00	0.05	538.90		24.16	9.03	65.60	21.90			
01:20:00	0.06	553.90		24.16	9.03	65.60	21.90			
01:35:00	0.07	568.90		24.15	9.02	65.60	21.90			
01:50:00	0.08	583.90		24.15	9.02	65.60	21.90			
02:05:00	0.09	598.90		24.15	9.02	65.60	21.90			
02:20:00	0.10	613.90		24.14	9.01	65.60	21.90			
02:35:00	0.11	628.90		24.14	9.01	65.60	21.90			
02:50:00	0.12	643.90		24.14	9.01	65.60	21.90			
03:05:00	0.13	658.90		24.13	9.00	65.60	21.90			
03:20:00	0.14	673.90		24.13	9.00	65.60	21.90			
03:35:00	0.15	688.90		24.14	9.01	65.60	21.90			
03:50:00	0.16	703.90		24.13	9.00	65.60	21.90			
04:05:00	0.17	718.90		24.13	9.00	65.60	21.90			
04:20:00	0.18	733.90		24.13	9.00	65.60	21.90			
04:35:00	0.19	748.90		24.13	9.00	65.60	21.90			
04:50:00	0.20	763.90		24.12	8.99	65.60	21.90			
05:05:00	0.21	778.90		24.12	8.99	65.60	21.90			
05:20:00	0.22	793.90		24.11	8.98	65.60	21.90			
05:35:00	0.23	808.90		24.10	8.97	65.60	21.90			
05:50:00	0.24	823.90		24.10	8.97	65.60	21.90			
06:05:00	0.25	838.90		24.09	8.96	65.60	21.90			
06:20:00	0.26	853.90		24.09	8.96	65.60	21.90			
06:35:00	0.27	868.90		24.08	8.95	65.60	21.90			
06:50:00	0.28	883.90		24.07	8.94	65.60	21.90			
07:05:00	0.30	898.90		24.06	8.93	65.60	21.90			
07:20:00	0.31	913.90		24.06	8.93	65.50	21.80			

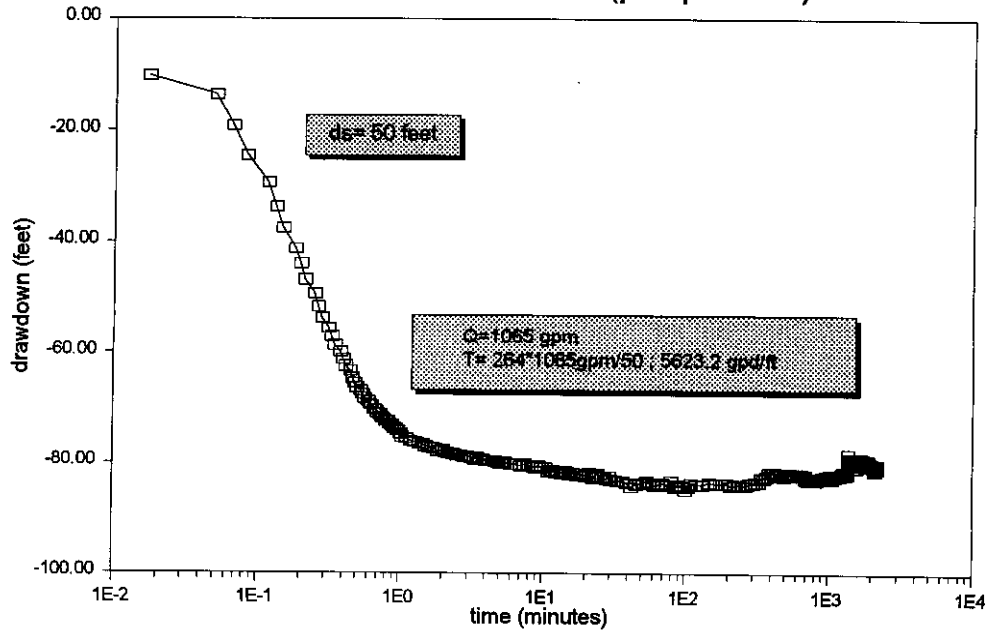
ROMP 22 SUWANNEE PUMP TEST

Drawdown vs. Time (OB-WELL)



ROMP 22 SUWANNEE PUMP TEST

Drawdown vs. Time(pumped well)



DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ. MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPER FL. AQ. MONITOR	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL PUMPED WELL	PUMPED W	OB- WELL	PERMANENT DEEP UPPER FL. AQ. MONITOR	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	DRAWDOW	DRAWDOW	CHANNEL 7	CHANNEL 8
14-Dec-93	07:19:59 AM	0.3055	0.0000	5.64	14.96	25.00	23.04	29.99	100.30	-0.00	0.00	19.89	18.09
14-Dec-93	07:20:00 AM	0.3056	0.0173	5.64	14.96	25.00	23.04	29.98	99.30	-1.00	-0.01	19.89	18.09
14-Dec-93	07:20:02 AM	0.3056	0.0504	5.64	14.96	25.00	23.04	29.98	90.10	-10.20	-0.01	19.88	18.08
14-Dec-93	07:20:03 AM	0.3056	0.0662	5.64	14.96	25.00	23.04	29.98	86.70	-13.60	-0.01	19.88	18.08
14-Dec-93	07:20:04 AM	0.3056	0.0835	5.64	14.96	25.00	23.04	29.97	81.10	-19.20	-0.02	19.88	18.08
14-Dec-93	07:20:06 AM	0.3056	0.1166	5.64	14.96	25.00	23.04	29.97	75.80	-24.50	-0.02	19.88	18.07
14-Dec-93	07:20:07 AM	0.3056	0.1339	5.64	14.96	25.00	23.04	29.97	71.00	-29.30	-0.02	19.88	18.07
14-Dec-93	07:20:08 AM	0.3056	0.1498	5.64	14.96	25.00	23.04	29.96	66.60	-33.70	-0.03	19.87	18.07
14-Dec-93	07:20:10 AM	0.3057	0.1829	5.64	14.96	25.00	23.04	29.96	62.80	-37.50	-0.03	19.87	18.07
14-Dec-93	07:20:11 AM	0.3057	0.2002	5.64	14.96	25.00	23.04	29.96	59.10	-41.20	-0.03	19.87	18.06
14-Dec-93	07:20:12 AM	0.3057	0.2160	5.64	14.96	25.00	23.04	29.95	56.30	-44.00	-0.04	19.87	18.06
14-Dec-93	07:20:14 AM	0.3057	0.2506	5.64	14.96	25.00	23.04	29.94	53.40	-46.90	-0.05	19.87	18.06
14-Dec-93	07:20:15 AM	0.3057	0.2664	5.64	14.96	25.00	23.04	29.92	50.90	-49.40	-0.07	19.87	18.06
14-Dec-93	07:20:16 AM	0.3057	0.2837	5.64	14.96	25.00	23.04	29.91	48.60	-51.70	-0.08	19.86	18.06
14-Dec-93	07:20:18 AM	0.3058	0.3168	5.64	14.96	25.00	23.04	29.89	46.70	-53.60	-0.10	19.86	18.06
14-Dec-93	07:20:19 AM	0.3058	0.3326	5.64	14.96	25.00	23.04	29.87	44.90	-55.40	-0.12	19.86	18.05
14-Dec-93	07:20:20 AM	0.3058	0.3499	5.64	14.96	25.00	23.04	29.85	43.30	-57.00	-0.14	19.86	18.06
14-Dec-93	07:20:22 AM	0.3058	0.3830	5.64	14.96	25.00	23.04	29.83	41.70	-58.60	-0.16	19.86	18.05
14-Dec-93	07:20:23 AM	0.3058	0.4003	5.64	14.96	25.00	23.05	29.80	40.50	-59.80	-0.19	19.86	18.05
14-Dec-93	07:20:24 AM	0.3058	0.4162	5.64	14.96	25.00	23.05	29.78	39.20	-61.10	-0.21	19.86	18.05
14-Dec-93	07:20:26 AM	0.3059	0.4493	5.64	14.96	25.00	23.05	29.76	38.00	-62.30	-0.23	19.86	18.05
14-Dec-93	07:20:27 AM	0.3059	0.4666	5.64	14.96	25.00	23.05	29.73	37.10	-63.20	-0.26	19.86	18.05
14-Dec-93	07:20:28 AM	0.3059	0.4838	5.64	14.96	25.00	23.05	29.70	35.80	-64.50	-0.29	19.86	18.05
14-Dec-93	07:20:29 AM	0.3059	0.4997	5.64	14.96	25.00	23.06	29.68	35.00	-65.30	-0.31	19.86	18.05
14-Dec-93	07:20:31 AM	0.3059	0.5328	5.64	14.96	25.00	23.06	29.66	34.20	-66.10	-0.33	19.86	18.05
14-Dec-93	07:20:32 AM	0.3059	0.5501	5.64	14.96	25.00	23.06	29.64	33.60	-66.70	-0.35	19.86	18.05
14-Dec-93	07:20:33 AM	0.3059	0.5659	5.64	14.96	25.00	23.06	29.61	33.00	-67.30	-0.38	19.85	18.05
14-Dec-93	07:20:35 AM	0.3060	0.6005	5.64	14.96	25.00	23.07	29.59	32.20	-68.10	-0.40	19.86	18.05
14-Dec-93	07:20:36 AM	0.3060	0.6163	5.64	14.96	25.00	23.07	29.57	31.70	-68.60	-0.42	19.86	18.05
14-Dec-93	07:20:37 AM	0.3060	0.6336	5.64	14.96	25.00	23.07	29.54	31.20	-69.10	-0.45	19.85	18.05
14-Dec-93	07:20:39 AM	0.3060	0.6667	5.64	14.96	25.00	23.07	29.51	30.90	-69.40	-0.48	19.86	18.05
14-Dec-93	07:20:40 AM	0.3060	0.6840	5.64	14.96	25.00	23.08	29.49	30.20	-70.10	-0.50	19.85	18.05
14-Dec-93	07:20:41 AM	0.3060	0.6998	5.64	14.96	25.00	23.08	29.46	30.00	-70.30	-0.53	19.86	18.05
14-Dec-93	07:20:43 AM	0.3061	0.7330	5.64	14.96	25.00	23.08	29.44	29.40	-70.90	-0.55	19.86	18.05
14-Dec-93	07:20:44 AM	0.3061	0.7502	5.64	14.96	25.00	23.08	29.41	29.10	-71.20	-0.58	19.85	18.05
14-Dec-93	07:20:45 AM	0.3061	0.7661	5.64	14.96	25.00	23.08	29.38	28.80	-71.50	-0.61	19.85	18.04
14-Dec-93	07:20:47 AM	0.3061	0.8006	5.64	14.96	25.00	23.09	29.36	28.50	-71.80	-0.63	19.85	18.05
14-Dec-93	07:20:48 AM	0.3061	0.8165	5.64	14.96	25.00	23.09	29.33	28.00	-72.30	-0.66	19.85	18.05
14-Dec-93	07:20:49 AM	0.3061	0.8338	5.64	14.96	25.00	23.09	29.31	27.90	-72.40	-0.68	19.85	18.04
14-Dec-93	07:20:50 AM	0.3061	0.8496	5.64	14.96	25.00	23.09	29.28	27.90	-72.40	-0.71	19.85	18.04
14-Dec-93	07:20:52 AM	0.3062	0.8827	5.64	14.96	25.00	23.09	29.25	27.50	-72.80	-0.74	19.85	18.04
14-Dec-93	07:20:53 AM	0.3062	0.9000	5.64	14.96	25.00	23.09	29.23	27.20	-73.10	-0.76	19.85	18.05
14-Dec-93	07:20:54 AM	0.3062	0.9173	5.64	14.96	25.00	23.10	29.20	27.00	-73.30	-0.79	19.85	18.05
14-Dec-93	07:20:56 AM	0.3062	0.9504	5.64	14.96	25.00	23.10	29.18	26.70	-73.60	-0.81	19.85	18.05
14-Dec-93	07:20:57 AM	0.3062	0.9662	5.64	14.96	25.00	23.10	29.16	26.60	-73.70	-0.83	19.85	18.05
14-Dec-93	07:20:58 AM	0.3062	0.9835	5.64	14.96	25.00	23.10	29.13	26.20	-74.10	-0.86	19.85	18.04
14-Dec-93	07:21:00 AM	0.3063	1.0166	5.64	14.96	25.00	23.10	29.11	26.20	-74.10	-0.88	19.85	18.04

DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ. MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPER FL. AQ. MONITOR	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL			PERMANENT DEEP UPPER FL. AQ. MONITOR	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	PUMPED WELL CHANNEL 6	PUMPED W DRAWDOW	OB- WELL DRAWDOW	CHANNEL 7	CHANNEL 8
14-Dec-93	07:21:01 AM	0.3063	1.0339	5.64	14.96	25.00	23.10	29.08	25.70	-74.60	-0.91	19.85	18.04
14-Dec-93	07:21:06 AM	0.3063	1.1160	5.64	14.96	25.00	23.10	29.00	25.10	-75.20	-0.99	19.85	18.05
14-Dec-93	07:21:11 AM	0.3064	1.1995	5.64	14.96	25.00	23.11	28.92	24.80	-75.50	-1.07	19.85	18.05
14-Dec-93	07:21:16 AM	0.3064	1.2830	5.64	14.96	25.00	23.11	28.83	24.40	-75.90	-1.16	19.85	18.05
14-Dec-93	07:21:21 AM	0.3065	1.3666	5.64	14.96	25.00	23.12	28.75	24.10	-76.20	-1.24	19.85	18.05
14-Dec-93	07:21:26 AM	0.3066	1.4501	5.64	14.96	25.00	23.13	28.68	23.90	-76.40	-1.31	19.85	18.05
14-Dec-93	07:21:31 AM	0.3066	1.5336	5.64	14.96	25.00	23.13	28.60	23.80	-76.50	-1.39	19.85	18.05
14-Dec-93	07:21:36 AM	0.3067	1.6171	5.64	14.96	25.00	23.14	28.53	23.40	-76.90	-1.46	19.86	18.05
14-Dec-93	07:21:41 AM	0.3067	1.7006	5.64	14.96	25.00	23.14	28.46	23.20	-77.10	-1.53	19.85	18.04
14-Dec-93	07:21:46 AM	0.3068	1.7827	5.64	14.96	25.00	23.14	28.39	23.10	-77.20	-1.60	19.85	18.04
14-Dec-93	07:21:51 AM	0.3068	1.8662	5.64	14.96	25.10	23.15	28.33	23.00	-77.30	-1.66	19.85	18.04
14-Dec-93	07:21:56 AM	0.3069	1.9498	5.64	14.96	25.10	23.15	28.26	22.60	-77.70	-1.73	19.85	18.04
14-Dec-93	07:22:01 AM	0.3070	2.0333	5.65	14.96	25.10	23.16	28.21	22.50	-77.80	-1.78	19.85	18.04
14-Dec-93	07:22:06 AM	0.3070	2.1168	5.65	14.96	25.10	23.16	28.15	22.80	-77.50	-1.84	19.85	18.05
14-Dec-93	07:22:11 AM	0.3071	2.2003	5.65	14.96	25.10	23.17	28.09	22.30	-78.00	-1.90	19.85	18.05
14-Dec-93	07:22:16 AM	0.3071	2.2838	5.65	14.96	25.10	23.17	28.04	22.10	-78.20	-1.95	19.85	18.05
14-Dec-93	07:22:21 AM	0.3072	2.3659	5.65	14.96	25.10	23.17	27.97	22.20	-78.10	-2.02	19.85	18.05
14-Dec-93	07:22:26 AM	0.3072	2.4494	5.65	14.96	25.10	23.17	27.93	22.10	-78.20	-2.06	19.85	18.05
14-Dec-93	07:22:31 AM	0.3073	2.5330	5.65	14.96	25.10	23.17	27.88	21.90	-78.40	-2.11	19.85	18.05
14-Dec-93	07:22:41 AM	0.3074	2.7000	5.65	14.96	25.10	23.18	27.78	21.70	-78.60	-2.21	19.86	18.05
14-Dec-93	07:22:51 AM	0.3075	2.8670	5.65	14.96	25.10	23.18	27.70	21.70	-78.60	-2.29	19.86	18.05
14-Dec-93	07:23:01 AM	0.3077	3.0326	5.65	14.96	25.10	23.19	27.61	21.50	-78.80	-2.38	19.85	18.05
14-Dec-93	07:23:11 AM	0.3078	3.1997	5.65	14.96	25.10	23.19	27.52	21.60	-78.70	-2.47	19.86	18.05
14-Dec-93	07:23:21 AM	0.3079	3.3667	5.65	14.97	25.10	23.20	27.45	21.30	-79.00	-2.54	19.85	18.05
14-Dec-93	07:23:31 AM	0.3080	3.5338	5.65	14.97	25.10	23.20	27.38	21.10	-79.20	-2.61	19.86	18.05
14-Dec-93	07:23:41 AM	0.3081	3.6994	5.65	14.97	25.10	23.21	27.30	21.40	-78.90	-2.69	19.85	18.05
14-Dec-93	07:23:51 AM	0.3082	3.8664	5.65	14.97	25.10	23.21	27.24	21.00	-79.30	-2.75	19.85	18.05
14-Dec-93	07:24:01 AM	0.3083	4.0334	5.65	14.97	25.10	23.22	27.17	21.00	-79.30	-2.82	19.85	18.05
14-Dec-93	07:24:11 AM	0.3085	4.2005	5.65	14.97	25.10	23.22	27.11	20.80	-79.50	-2.88	19.85	18.05
14-Dec-93	07:24:21 AM	0.3086	4.3661	5.65	14.97	25.10	23.23	27.05	20.80	-79.50	-2.94	19.86	18.05
14-Dec-93	07:24:31 AM	0.3087	4.5331	5.65	14.98	25.10	23.23	27.00	20.80	-79.50	-2.99	19.85	18.05
14-Dec-93	07:24:41 AM	0.3088	4.7002	5.65	14.97	25.10	23.23	26.94	20.80	-79.50	-3.05	19.85	18.05
14-Dec-93	07:24:51 AM	0.3089	4.8672	5.65	14.98	25.10	23.23	26.88	20.70	-79.60	-3.11	19.85	18.05
14-Dec-93	07:25:01 AM	0.3090	5.0328	5.65	14.98	25.10	23.23	26.83	20.50	-79.80	-3.16	19.85	18.05
14-Dec-93	07:25:11 AM	0.3092	5.1998	5.65	14.98	25.10	23.23	26.78	20.40	-79.90	-3.21	19.85	18.05
14-Dec-93	07:25:21 AM	0.3093	5.3669	5.65	14.98	25.10	23.23	26.73	20.50	-79.80	-3.26	19.85	18.05
14-Dec-93	07:25:31 AM	0.3094	5.5339	5.65	14.98	25.10	23.24	26.69	20.50	-79.80	-3.30	19.85	18.05
14-Dec-93	07:26:01 AM	0.3097	6.0336	5.65	14.99	25.20	23.25	26.56	20.50	-79.80	-3.43	19.85	18.05
14-Dec-93	07:26:31 AM	0.3101	6.5333	5.65	14.99	25.20	23.25	26.43	20.20	-80.10	-3.56	19.85	18.05
14-Dec-93	07:27:01 AM	0.3104	7.0330	5.65	14.99	25.20	23.25	26.32	20.20	-80.10	-3.67	19.85	18.05
14-Dec-93	07:27:31 AM	0.3108	7.5326	5.65	14.99	25.20	23.25	26.21	19.90	-80.40	-3.78	19.85	18.05
14-Dec-93	07:28:01 AM	0.3111	8.0338	5.65	15.00	25.20	23.26	26.11	20.20	-80.10	-3.88	19.86	18.05
14-Dec-93	07:28:31 AM	0.3115	8.5334	5.65	15.00	25.20	23.25	26.02	19.80	-80.50	-3.97	19.86	18.05
14-Dec-93	07:29:01 AM	0.3118	9.0331	5.65	15.01	25.20	23.25	25.93	19.90	-80.40	-4.06	19.85	18.05
14-Dec-93	07:29:31 AM	0.3122	9.5328	5.65	15.01	25.20	23.25	25.85	19.60	-80.70	-4.14	19.85	18.05
14-Dec-93	07:30:01 AM	0.3125	10.0339	5.65	15.01	25.20	23.24	25.77	19.90	-80.40	-4.22	19.85	18.05
14-Dec-93	07:30:31 AM	0.3129	10.5336	5.65	15.02	25.10	23.23	25.69	19.50	-80.80	-4.30	19.85	18.05

DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ. MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPER FL. AQ. MONITOR	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL			PERMANENT DEEP UPPER FL. AQ. MONITOR	TEMPORARY DEEP UPPER FL. AQ. MONITOR
									PUMPED WELL	PUMPED W	OB- WELL		
d-m-y	(long Int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	DRAWDOW	DRAWDOW	CHANNEL 7	CHANNEL 8
14-Dec-93	07:31:01 AM	0.3132	11.0333	5.65	15.02	25.10	23.23	25.62	19.50	-80.80	-4.37	19.85	18.05
14-Dec-93	07:31:31 AM	0.3136	11.5330	5.65	15.02	25.10	23.23	25.55	18.80	-81.50	-4.44	19.85	18.05
14-Dec-93	07:32:01 AM	0.3139	12.0326	5.65	15.03	25.10	23.22	25.49	19.10	-81.20	-4.50	19.85	18.05
14-Dec-93	07:32:31 AM	0.3142	12.5338	5.65	15.03	25.10	23.21	25.42	19.10	-81.20	-4.57	19.85	18.05
14-Dec-93	07:33:01 AM	0.3146	13.0334	5.65	15.03	25.10	23.20	25.37	18.60	-81.70	-4.62	19.85	18.05
14-Dec-93	07:33:31 AM	0.3149	13.5331	5.65	15.03	25.10	23.19	25.31	19.00	-81.30	-4.68	19.85	18.05
14-Dec-93	07:34:01 AM	0.3153	14.0328	5.65	15.03	25.10	23.17	25.25	18.50	-81.80	-4.74	19.85	18.05
14-Dec-93	07:34:31 AM	0.3156	14.5339	5.65	15.03	25.10	23.17	25.21	18.70	-81.60	-4.78	19.85	18.05
14-Dec-93	07:35:01 AM	0.3160	15.0335	5.65	15.03	25.10	23.16	25.15	18.90	-81.40	-4.84	19.85	18.05
14-Dec-93	07:35:31 AM	0.3163	15.5333	5.65	15.04	25.10	23.15	25.10	18.40	-81.90	-4.89	19.85	18.05
14-Dec-93	07:36:31 AM	0.3170	16.5326	5.65	15.04	25.10	23.12	25.01	18.70	-81.60	-4.98	19.85	18.05
14-Dec-93	07:37:31 AM	0.3177	17.5334	5.65	15.05	25.00	23.10	24.92	18.60	-81.70	-5.07	19.85	18.05
14-Dec-93	07:38:31 AM	0.3184	18.5328	5.65	15.05	25.00	23.07	24.84	18.20	-82.10	-5.15	19.85	18.05
14-Dec-93	07:39:31 AM	0.3191	19.5336	5.65	15.06	25.00	23.04	24.77	18.50	-81.80	-5.22	19.85	18.05
14-Dec-93	07:40:31 AM	0.3198	20.5330	5.65	15.06	24.90	23.01	24.70	18.10	-82.20	-5.29	19.85	18.05
14-Dec-93	07:41:31 AM	0.3205	21.5338	5.65	15.06	24.90	22.98	24.63	18.40	-81.90	-5.36	19.85	18.05
14-Dec-93	07:42:31 AM	0.3212	22.5331	5.65	15.07	24.90	22.95	24.57	18.60	-81.70	-5.42	19.85	18.05
14-Dec-93	07:43:31 AM	0.3219	23.5339	5.65	15.07	24.90	22.92	24.51	17.80	-82.50	-5.48	19.85	18.05
14-Dec-93	07:44:31 AM	0.3226	24.5333	5.65	15.08	24.80	22.89	24.45	18.10	-82.20	-5.54	19.84	18.05
14-Dec-93	07:45:31 AM	0.3233	25.5326	5.65	15.08	24.80	22.86	24.40	18.50	-81.80	-5.59	19.84	18.05
14-Dec-93	07:46:31 AM	0.3240	26.5334	5.65	15.09	24.80	22.83	24.34	17.90	-82.40	-5.65	19.84	18.05
14-Dec-93	07:47:31 AM	0.3247	27.5328	5.65	15.09	24.70	22.79	24.30	18.00	-82.30	-5.69	19.84	18.05
14-Dec-93	07:48:31 AM	0.3254	28.5336	5.65	15.09	24.70	22.76	24.25	17.80	-82.50	-5.74	19.84	18.05
14-Dec-93	07:49:31 AM	0.3261	29.5330	5.65	15.09	24.70	22.73	24.21	17.50	-82.80	-5.78	19.84	18.05
14-Dec-93	07:50:31 AM	0.3267	30.5338	5.65	15.09	24.70	22.70	24.17	18.00	-82.30	-5.82	19.84	18.05
14-Dec-93	07:53:31 AM	0.3288	33.5333	5.65	15.12		22.62	24.06	17.40	-82.90	-5.93	19.84	18.05
14-Dec-93	07:56:31 AM	0.3309	36.5328	5.65	15.12		22.52	23.95	17.20	-83.10	-6.04	19.83	18.04
14-Dec-93	07:59:31 AM	0.3330	39.5338	5.65	15.13		22.43	23.85	17.10	-83.20	-6.14	19.83	18.04
14-Dec-93	08:02:31 AM	0.3351	42.5333	5.65	15.13		22.33	23.76	16.80	-83.50	-6.23	19.83	18.04
14-Dec-93	08:05:31 AM	0.3372	45.5328	5.65	15.13		22.25	23.68	16.10	-84.20	-6.31	19.83	18.04
14-Dec-93	08:08:31 AM	0.3392	48.5338	5.65	15.14		22.16	23.63	16.60	-83.70	-6.36	19.83	18.04
14-Dec-93	08:11:31 AM	0.3413	51.5333	5.65	15.14		22.08	23.58	16.70	-83.60	-6.41	19.83	18.04
14-Dec-93	08:14:31 AM	0.3434	54.5328	5.65	15.14		22.00	23.54	16.90	-83.40	-6.45	19.83	17.98
14-Dec-93	08:17:31 AM	0.3456	57.5338	5.66	15.15		21.92	23.49	17.10	-83.20	-6.50	19.82	18.02
14-Dec-93	08:20:31 AM	0.3476	60.5333	5.65	15.14		21.84	23.44	16.80	-83.50	-6.55	19.82	18.02
14-Dec-93	08:25:31 AM	0.3511	65.5330	5.65	15.15		21.73	23.37	16.40	-83.90	-6.62	19.82	18.02
14-Dec-93	08:30:31 AM	0.3545	70.5326	5.66	15.15		21.63	23.33	16.40	-83.90	-6.66	19.81	18.02
14-Dec-93	08:35:31 AM	0.3580	75.5338	5.66	15.15		21.51	23.28	16.80	-83.50	-6.71	19.80	18.01
14-Dec-93	08:40:31 AM	0.3615	80.5334	5.66	15.15		21.43	23.25	16.40	-83.90	-6.74	19.81	18.02
14-Dec-93	08:45:31 AM	0.3649	85.5331	5.67	15.15		21.34	23.23	17.30	-83.00	-6.76	19.80	18.02
14-Dec-93	08:50:31 AM	0.3684	90.5328	5.67	15.15		21.25	23.18	16.10	-84.20	-6.81	19.79	18.01
14-Dec-93	08:55:31 AM	0.3719	95.5339	5.67	15.15		21.18	23.16	16.50	-83.80	-6.83	19.79	18.01
14-Dec-93	09:00:31 AM	0.3754	100.5336	5.67	15.15		21.11	23.13	16.30	-84.00	-6.86	19.79	18.02
14-Dec-93	09:05:31 AM	0.3788	105.5333	5.67	15.14		21.05	23.10	15.60	-84.70	-6.89	19.78	18.01
14-Dec-93	09:10:31 AM	0.3823	110.5330	5.67	15.14		20.99	23.06	16.10	-84.20	-6.93	19.77	18.00
14-Dec-93	09:20:00 AM	0.3889	120.0168	5.66	15.14		20.92	23.05	16.80	-83.50	-6.94	19.77	18.00
14-Dec-93	09:35:00 AM	0.3993	135.0173	5.67	15.13		20.75	23.01	16.50	-83.80	-6.98	19.76	18.00

DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ. MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPER FL. AQ. MONITOR	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL PUMPED WELL	PUMPED W	OB- WELL	PERMANENT DEEP UPPER FL. AQ. MONITOR	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	DRAWDOW	DRAWDOW	CHANNEL 7	CHANNEL 8
14-Dec-93	09:50:00 AM	0.4097	150.0163	5.69	15.03		20.55	22.98	16.60	-83.70	-7.01	19.67	17.79
14-Dec-93	10:05:00 AM	0.4201	165.0168	5.69	15.03	22.50	20.43	22.97	16.90	-83.40	-7.02	19.67	17.86
14-Dec-93	10:20:00 AM	0.4306	180.0173	5.70	15.07		20.41	22.95	16.70	-83.60	-7.04	19.71	17.87
14-Dec-93	10:35:00 AM	0.4410	195.0163	5.70	15.08		20.38	22.92	16.70	-83.60	-7.07	19.71	17.90
14-Dec-93	10:50:00 AM	0.4514	210.0168	5.70	15.08		20.35	22.91	16.80	-83.50	-7.08	19.70	17.91
14-Dec-93	11:05:00 AM	0.4618	225.0173	5.71	15.09		20.31	22.89	16.30	-84.00	-7.10	19.70	17.91
14-Dec-93	11:20:00 AM	0.4722	240.0163	5.71	15.08		20.28	22.87	16.40	-83.90	-7.12	19.70	17.91
14-Dec-93	11:35:00 AM	0.4826	255.0168	5.72	15.09		20.26	22.85	16.60	-83.70	-7.14	19.70	17.92
14-Dec-93	11:50:00 AM	0.4931	270.0173	5.73	15.08		20.24	22.84	16.30	-84.00	-7.15	19.70	17.93
14-Dec-93	12:05:00 PM	0.5035	285.0163	5.74	15.09		20.23	22.84	16.30	-84.00	-7.15	19.70	17.94
14-Dec-93	12:20:00 PM	0.5139	300.0168	5.74	15.08		20.22	22.84	16.70	-83.60	-7.15	19.70	17.94
14-Dec-93	12:35:00 PM	0.5243	315.0173	5.75	14.97	22.20	20.09	22.85	16.80	-83.50	-7.14	19.61	17.83
14-Dec-93	12:50:00 PM	0.5347	330.0163	5.76	14.98	22.20	20.09	22.84	17.00	-83.30	-7.15	19.63	17.88
14-Dec-93	01:05:00 PM	0.5451	345.0168	5.76	14.98	22.20	20.07	22.84	17.00	-83.30	-7.15	19.64	17.91
14-Dec-93	01:20:00 PM	0.5556	360.0173	5.77	15.01		20.57	22.88	17.80	-82.50	-7.11	19.67	17.90
14-Dec-93	01:35:00 PM	0.5660	375.0163	5.78	15.03		20.53	22.89	17.70	-82.60	-7.10	19.69	17.91
14-Dec-93	01:50:00 PM	0.5764	390.0168	5.79	15.03		20.47	22.91	18.10	-82.20	-7.08	19.70	17.92
14-Dec-93	02:05:00 PM	0.5868	405.0173	5.79	15.03		20.42	22.93	18.70	-81.60	-7.06	19.70	17.93
14-Dec-93	02:20:00 PM	0.5972	420.0163	5.80	15.03		20.44	22.93	18.70	-81.60	-7.06	19.70	17.94
14-Dec-93	02:35:00 PM	0.6076	435.0168	5.81	15.03		20.40	22.94	18.80	-81.50	-7.05	19.70	17.95
14-Dec-93	02:50:00 PM	0.6181	450.0173	5.82	15.03		20.41	22.94	18.30	-82.00	-7.05	19.70	17.96
14-Dec-93	03:05:00 PM	0.6285	465.0163	5.82	15.03		20.41	22.93	18.60	-81.70	-7.06	19.70	17.96
14-Dec-93	03:20:00 PM	0.6389	480.0168	5.83	15.03		20.29	22.94	18.50	-81.80	-7.05	19.70	17.97
14-Dec-93	03:35:00 PM	0.6493	495.0173	5.84	15.03		20.33	22.93	18.30	-82.00	-7.06	19.70	17.97
14-Dec-93	03:50:00 PM	0.6597	510.0163	5.84	15.03		20.41	22.92	18.10	-82.20	-7.07	19.70	17.97
14-Dec-93	04:06:00 PM	0.6701	525.0168	5.85	15.03		20.33	22.92	18.50	-81.80	-7.07	19.70	17.98
14-Dec-93	04:20:00 PM	0.6806	540.0173	5.86	15.03		20.43	22.94	18.50	-81.80	-7.05	19.70	17.99
14-Dec-93	04:35:00 PM	0.6910	555.0163	5.87	15.03		20.42	22.93	18.30	-82.00	-7.06	19.71	18.00
14-Dec-93	04:50:00 PM	0.7014	570.0168	5.88	15.03		20.30	22.94	18.60	-81.70	-7.05	19.71	18.01
14-Dec-93	05:05:00 PM	0.7118	585.0173	5.88	15.02		20.35	22.93	18.60	-81.70	-7.06	19.70	18.01
14-Dec-93	05:20:00 PM	0.7222	600.0163	5.88	15.02		20.41	22.92	18.40	-81.90	-7.07	19.70	18.01
14-Dec-93	05:35:00 PM	0.7326	615.0168	5.89	14.93	22.20	21.11	22.91	18.30	-82.00	-7.08	19.62	17.85
14-Dec-93	05:50:00 PM	0.7431	630.0173	5.90	14.90	22.20	21.31	22.91	18.60	-81.70	-7.08	19.61	17.87
14-Dec-93	06:05:00 PM	0.7535	645.0163	5.90	14.91	22.20	21.12	22.91	18.20	-82.10	-7.08	19.62	17.90
14-Dec-93	06:20:00 PM	0.7639	660.0168	5.91	14.92	22.20	20.88	22.91	18.60	-81.70	-7.08	19.63	17.92
14-Dec-93	06:35:00 PM	0.7743	675.0173	5.91	14.95		20.21	22.91	18.50	-81.80	-7.08	19.66	17.92
14-Dec-93	06:50:00 PM	0.7847	690.0163	5.91	14.92	22.20	20.64	22.91	18.30	-82.00	-7.08	19.63	17.92
14-Dec-93	07:05:00 PM	0.7951	705.0168	5.92	14.94		20.39	22.89	18.30	-82.00	-7.10	19.64	17.92
14-Dec-93	07:20:00 PM	0.8056	720.0173	5.92	14.92	22.20	20.31	22.85	17.60	-82.70	-7.14	19.62	17.93
14-Dec-93	07:35:00 PM	0.8160	735.0163	5.93	14.92	22.10	20.24	22.84	17.50	-82.80	-7.15	19.61	17.93
14-Dec-93	07:50:00 PM	0.8264	750.0168	5.93	14.93		20.28	22.84	17.40	-82.90	-7.15	19.63	17.92
14-Dec-93	08:05:00 PM	0.8368	765.0173	5.93	14.91	22.10	20.29	22.83	17.70	-82.60	-7.16	19.59	17.91
14-Dec-93	08:20:00 PM	0.8472	780.0163	5.94	14.91	22.10	20.27	22.82	17.60	-82.70	-7.17	19.58	17.92
14-Dec-93	08:35:00 PM	0.8576	795.0168	5.95	14.91	22.10	20.27	22.82	17.80	-82.50	-7.17	19.58	17.93
14-Dec-93	08:50:00 PM	0.8681	810.0173	5.95	14.93		20.15	22.82	17.60	-82.70	-7.17	19.59	17.91
14-Dec-93	09:05:00 PM	0.8785	825.0163	5.96	14.91		20.10	22.80	17.40	-82.90	-7.19	19.56	17.91
14-Dec-93	09:20:00 PM	0.8889	840.0168	5.96	14.90	22.10	20.24	22.79	17.40	-82.90	-7.20	19.55	17.92

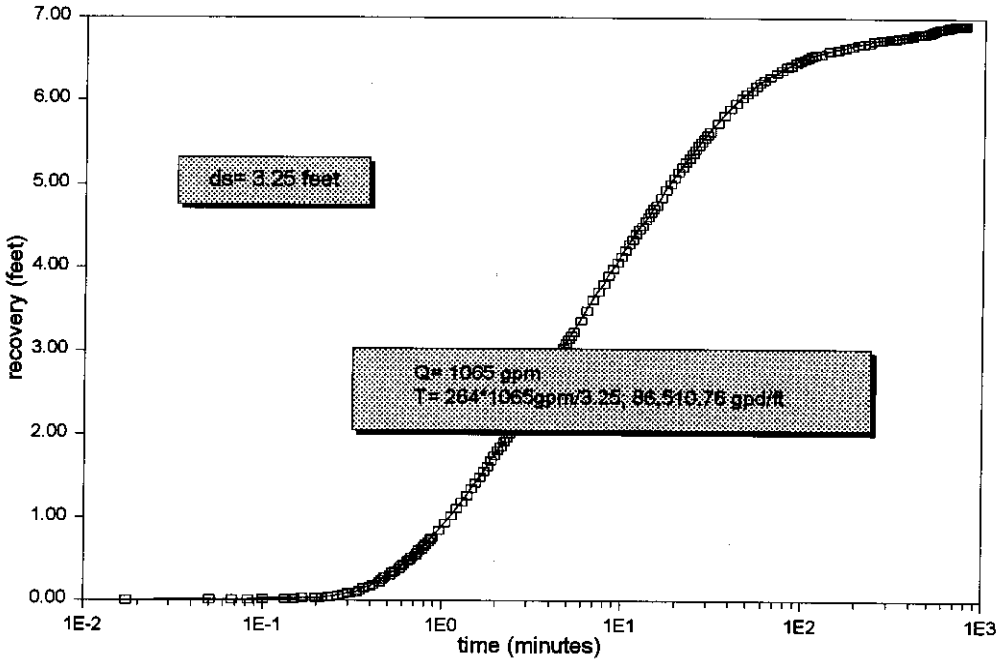
DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ. MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPER FL. AQ. MONITOR	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL			PERMANENT DEEP UPPER FL. AQ. MONITOR	TEMPORARY DEEP UPPER FL. AQ. MONITOR
									PUMPED WELL	PUMPED W	OB- WELL		
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	DRAWDOW	DRAWDOW	CHANNEL 7	CHANNEL 8
14-Dec-93	09:35:00 PM	0.8993	855.0173	5.97	14.90	22.10	20.21	22.79	17.80	-82.50	-7.20	19.55	17.92
14-Dec-93	09:50:00 PM	0.9097	870.0163	5.97	14.90	22.10	20.18	22.79	17.70	-82.60	-7.20	19.54	17.92
14-Dec-93	10:05:00 PM	0.9201	885.0168	5.97	14.90	22.10	20.22	22.78	17.70	-82.60	-7.21	19.53	17.91
14-Dec-93	10:20:00 PM	0.9306	900.0173	5.98	14.90	22.00	20.22	22.78	17.70	-82.60	-7.21	19.52	17.91
14-Dec-93	10:35:00 PM	0.9410	915.0163	5.96	14.89	22.00	20.20	22.77	17.70	-82.60	-7.22	19.51	17.90
14-Dec-93	10:50:00 PM	0.9514	930.0168	5.99	14.91		20.12	22.78	18.00	-82.30	-7.21	19.54	17.89
14-Dec-93	11:05:00 PM	0.9618	945.0173	5.99	14.88	22.00	20.20	22.77	17.80	-82.50	-7.22	19.49	17.90
14-Dec-93	11:20:00 PM	0.9722	960.0163	6.00	14.88	22.00	20.22	22.78	18.10	-82.20	-7.21	19.49	17.90
14-Dec-93	11:35:00 PM	0.9826	975.0168	6.00	14.88	22.00	20.18	22.78	18.00	-82.30	-7.21	19.49	17.90
14-Dec-93	11:50:00 PM	0.9931	990.0173	6.00	14.89	22.00	20.21	22.78	18.00	-82.30	-7.21	19.51	17.88
15-Dec-93	12:05:00 AM	0.6980	1005.0797	6.01	14.87	22.00	20.25	22.77	18.20	-82.10	-7.22	19.47	17.89
15-Dec-93	12:20:00 AM	0.7084	1020.0802	6.01	14.88	22.00	20.22	22.76	18.00	-82.30	-7.23	19.47	17.89
15-Dec-93	12:35:00 AM	0.7188	1035.0806	6.02	14.88	22.00	20.23	22.77	18.10	-82.20	-7.22	19.47	17.90
15-Dec-93	12:50:00 AM	0.7292	1050.0797	6.02	14.88	22.00	20.23	22.78	18.30	-82.00	-7.21	19.48	17.90
15-Dec-93	01:05:00 AM	0.7396	1065.0802	6.03	14.88	22.00	20.24	22.79	18.40	-81.90	-7.20	19.48	17.91
15-Dec-93	01:20:00 AM	0.7501	1080.0806	6.03	14.88	22.00	20.25	22.77	17.70	-82.60	-7.22	19.48	17.91
15-Dec-93	01:35:00 AM	0.7605	1095.0797	6.03	14.88	22.00	20.23	22.76	18.00	-82.30	-7.23	19.48	17.90
15-Dec-93	01:50:00 AM	0.7709	1110.0802	6.03	14.88	22.00	20.24	22.77	18.40	-81.90	-7.22	19.48	17.91
15-Dec-93	02:05:00 AM	0.7813	1125.0806	6.04	14.88	22.00	20.24	22.77	18.00	-82.30	-7.22	19.49	17.91
15-Dec-93	02:20:00 AM	0.7917	1140.0797	6.04	14.88	22.00	20.26	22.77	18.20	-82.10	-7.22	19.49	17.91
15-Dec-93	02:35:00 AM	0.8021	1155.0802	6.05	14.89	22.00	20.26	22.78	18.30	-82.00	-7.21	19.50	17.92
15-Dec-93	02:50:00 AM	0.8125	1170.0806	6.05	14.89	22.00	20.28	22.78	18.40	-81.90	-7.21	19.51	17.93
15-Dec-93	03:05:00 AM	0.8230	1185.0797	6.05	14.89	22.00	20.32	22.78	18.20	-82.10	-7.21	19.51	17.92
15-Dec-93	03:20:00 AM	0.8334	1200.0802	6.05	14.90	22.00	20.29	22.79	18.40	-81.90	-7.20	19.54	17.92
15-Dec-93	03:35:00 AM	0.8438	1215.0806	6.06	14.89	22.00	20.43	22.80	18.30	-82.00	-7.19	19.51	17.94
15-Dec-93	03:50:00 AM	0.8542	1230.0797	6.06	14.90	22.00	20.43	22.80	18.20	-82.10	-7.19	19.52	17.95
15-Dec-93	04:05:00 AM	0.8646	1245.0802	6.06	14.90	22.00	20.42	22.80	18.30	-82.00	-7.19	19.53	17.96
15-Dec-93	04:20:00 AM	0.8751	1260.0806	6.06	14.90	22.00	20.44	22.82	18.60	-81.70	-7.17	19.57	17.95
15-Dec-93	04:35:00 AM	0.8855	1275.0797	6.06	14.90	22.00	20.35	22.83	18.40	-81.90	-7.16	19.57	17.96
15-Dec-93	04:50:00 AM	0.8959	1290.0802	6.06	14.90	22.00	20.34	22.84	18.80	-81.50	-7.15	19.56	17.97
15-Dec-93	05:05:00 AM	0.9063	1305.0806	6.06	14.90	22.00	20.29	22.85	18.90	-81.40	-7.14	19.58	17.97
15-Dec-93	05:20:00 AM	0.9167	1320.0797	6.06	14.92		20.21	22.85	18.50	-81.80	-7.14	19.60	17.97
15-Dec-93	05:35:00 AM	0.9271	1335.0802	6.06	14.93		20.25	22.85	18.40	-81.90	-7.14	19.60	17.97
15-Dec-93	05:50:00 AM	0.9376	1350.0806	6.05	14.93		20.29	22.84	18.60	-81.70	-7.15	19.60	17.98
15-Dec-93	06:05:00 AM	0.9480	1365.0797	6.05	14.94		20.31	22.84	18.60	-81.70	-7.15	19.61	17.98
15-Dec-93	06:20:00 AM	0.9584	1380.0802	6.04	14.94		20.34	22.85	18.50	-81.80	-7.14	19.62	17.99
15-Dec-93	06:35:00 AM	0.9688	1395.0806	6.04	14.94		20.35	22.90	22.20	-78.10	-7.09	19.62	17.99
15-Dec-93	06:50:00 AM	0.9792	1410.0797	6.03	14.94		20.36	22.97	20.80	-79.50	-7.02	19.61	17.98
15-Dec-93	07:05:00 AM	0.9896	1425.0802	6.03	14.94		20.35	22.99	21.20	-79.10	-7.00	19.62	17.99
15-Dec-93	07:20:00 AM	1.0001	1440.0806	6.02	14.94		20.33	22.99	21.40	-78.90	-7.00	19.61	17.99
15-Dec-93	07:35:00 AM	1.0105	1455.0797	6.02	14.94		20.43	22.99	20.80	-79.50	-7.00	19.62	17.99
15-Dec-93	07:50:00 AM	1.0209	1470.0802	6.02	14.94		20.37	22.97	20.40	-79.90	-7.02	19.61	17.99
15-Dec-93	08:05:00 AM	1.0313	1485.0806	6.02	14.94		20.18	22.98	20.90	-79.40	-7.01	19.61	17.99
15-Dec-93	08:20:00 AM	1.0417	1500.0797	6.01	14.94		20.18	22.99	21.00	-79.30	-7.00	19.61	17.99
15-Dec-93	08:35:00 AM	1.0521	1515.0802	6.01	14.93		20.15	22.97	20.70	-79.60	-7.02	19.60	17.97
15-Dec-93	08:50:00 AM	1.0626	1530.0806	6.01	14.93		20.13	22.98	21.00	-79.30	-7.01	19.59	17.97
15-Dec-93	09:05:00 AM	1.0730	1545.0797	6.00	14.93		20.21	22.97	20.70	-79.60	-7.02	19.59	17.97

DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ. MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPER FL. AQ. MONITOR	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL			PERMANENT DEEP UPPER FL. AQ. MONITOR	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	PUMPED WELL CHANNEL 6	PUMPED W DRAWDOW	OB- WELL DRAWDOW	CHANNEL 7	CHANNEL 8
15-Dec-93	09:20:00 AM	1.0834	1560.0802	6.00	14.93		20.29	22.97	21.00	-79.30	-7.02	19.58	17.97
15-Dec-93	09:35:00 AM	1.0938	1575.0806	5.99	14.92		20.31	22.94	20.20	-80.10	-7.05	19.58	17.97
15-Dec-93	09:50:00 AM	1.1042	1590.0797	5.99	14.92		20.35	22.91	19.70	-80.60	-7.08	19.58	17.97
15-Dec-93	10:05:00 AM	1.1146	1605.0802	5.99	14.91		20.41	22.93	20.40	-79.90	-7.06	19.57	17.96
15-Dec-93	10:20:00 AM	1.1251	1620.0806	5.99	14.91		20.45	22.92	20.30	-80.00	-7.07	19.57	17.96
15-Dec-93	10:35:00 AM	1.1355	1635.0797	6.00	14.91		20.41	22.97	21.50	-78.80	-7.02	19.58	17.97
15-Dec-93	10:50:00 AM	1.1459	1650.0802		14.90		20.33	22.97	21.40	-78.90	-7.02	19.56	17.96
15-Dec-93	11:05:00 AM	1.1563	1665.0806		14.90		20.33	22.97	21.30	-79.00	-7.02	19.56	17.96
15-Dec-93	11:20:00 AM	1.1667	1680.0797		14.89		20.25	22.96	20.90	-79.40	-7.03	19.55	17.95
15-Dec-93	11:35:00 AM	1.1771	1695.0802		14.90		20.19	22.97	21.30	-79.00	-7.02	19.55	17.95
15-Dec-93	11:50:00 AM	1.1876	1710.0806		14.90		20.15	22.97	21.40	-78.90	-7.02	19.55	17.96
15-Dec-93	12:05:00 PM	1.1980	1725.0797		14.90		20.15	22.96	20.80	-79.50	-7.03	19.55	17.97
15-Dec-93	12:20:00 PM	1.2084	1740.0802		14.78	22.00	20.06	22.93	21.40	-78.90	-7.06	19.45	
15-Dec-93	12:35:00 PM	1.2188	1755.0806		14.83		20.09	22.94	20.80	-79.50	-7.05	19.50	
15-Dec-93	12:50:00 PM	1.2292	1770.0797		14.84		20.07	22.96	21.10	-79.20	-7.03	19.54	17.81
15-Dec-93	01:05:00 PM	1.2396	1785.0802		14.86		20.09	22.96	20.70	-79.60	-7.03	19.55	17.84
15-Dec-93	01:20:00 PM	1.2501	1800.0806		14.86		20.07	22.94	20.40	-79.90	-7.05	19.56	17.85
15-Dec-93	01:35:00 PM	1.2605	1815.0797		14.87		20.09	22.91	20.00	-80.30	-7.08	19.57	17.86
15-Dec-93	01:50:00 PM	1.2709	1830.0802		14.87		20.09	22.91	20.40	-79.90	-7.08	19.57	17.87
15-Dec-93	02:05:00 PM	1.2813	1845.0806		14.88		20.10	22.93	20.70	-79.60	-7.06	19.57	17.89
15-Dec-93	02:20:00 PM	1.2917	1860.0797		14.88		20.11	22.93	20.60	-79.70	-7.06	19.58	17.90
15-Dec-93	02:35:00 PM	1.3021	1875.0802		14.88		20.13	22.96	20.80	-79.50	-7.03	19.58	17.91
15-Dec-93	02:50:00 PM	1.3126	1890.0806		14.89		20.17	22.95	20.60	-79.70	-7.04	19.58	17.91
15-Dec-93	03:05:00 PM	1.3230	1905.0797		14.89		20.15	22.95	20.50	-79.80	-7.04	19.59	17.92
15-Dec-93	03:20:00 PM	1.3334	1920.0802		14.82		20.11	22.94	21.00	-79.30	-7.05	19.52	17.78
15-Dec-93	03:35:00 PM	1.3438	1935.0806		14.77	22.10	20.05	22.94	20.60	-79.70	-7.05	19.52	17.81
15-Dec-93	03:50:00 PM	1.3542	1950.0797		14.82		20.02	22.95	20.60	-79.70	-7.04	19.58	17.85
15-Dec-93	04:05:00 PM	1.3646	1965.0802		14.83		20.04	22.93	20.60	-79.70	-7.06	19.59	17.86
15-Dec-93	04:20:00 PM	1.3751	1980.0806		14.84		20.04	22.94	20.50	-79.80	-7.05	19.60	17.88
15-Dec-93	04:35:00 PM	1.3855	1995.0797		14.79	22.10	20.02	22.92	20.40	-79.90	-7.07	19.55	17.84
15-Dec-93	04:50:00 PM	1.3959	2010.0802		14.79	22.10	20.02	22.92	20.10	-80.20	-7.07	19.55	17.88
15-Dec-93	05:05:00 PM	1.4063	2025.0806		14.83		19.98	22.92	19.90	-80.40	-7.07	19.59	17.89
15-Dec-93	05:20:00 PM	1.4167	2040.0797		14.83		19.99	22.93	20.40	-79.90	-7.06	19.61	17.90
15-Dec-93	05:35:00 PM	1.4271	2055.0802		14.84		20.00	22.93	20.20	-80.10	-7.06	19.62	17.91
15-Dec-93	05:50:00 PM	1.4376	2070.0806		14.85		20.01	22.94	20.30	-80.00	-7.05	19.62	17.91
15-Dec-93	06:05:00 PM	1.4480	2085.0797		14.85		20.02	22.94	20.20	-80.10	-7.05	19.63	17.92
15-Dec-93	06:20:00 PM	1.4584	2100.0802		14.84		20.03	22.91	19.70	-80.60	-7.08	19.58	17.89
15-Dec-93	06:35:00 PM	1.4688	2115.0806		14.77	22.10	19.98	22.89	19.50	-80.80	-7.10	19.55	17.88
15-Dec-93	06:50:00 PM	1.4792	2130.0797		14.77	22.10	19.98	22.88	19.60	-80.70	-7.11	19.55	17.89
15-Dec-93	07:05:00 PM	1.4896	2145.0802		14.78	22.10	19.97	22.85	19.10	-81.20	-7.14	19.55	17.90
15-Dec-93	07:20:00 PM	1.5001	2160.0806		14.78	22.10	19.97	22.86	19.30	-81.00	-7.13	19.55	17.90
15-Dec-93	07:35:00 PM	1.5105	2175.0797		14.80		19.92	22.87	19.80	-80.50	-7.12	19.57	17.88
15-Dec-93	07:50:00 PM	1.5209	2190.0802		14.82		19.94	22.89	19.90	-80.40	-7.10	19.58	17.88
15-Dec-93	08:00:01 PM	1.5278	2200.0968		14.82		19.95	22.89	20.00	-80.30	-7.10	19.58	17.88
15-Dec-93	08:00:02 PM	1.5279	2200.1126		14.82		19.94	22.88	20.00	-80.30	-7.11	19.58	17.88
15-Dec-93	08:00:03 PM	1.5279	2200.1299		14.82		19.94	22.88	20.00	-80.30	-7.11	19.58	17.88
15-Dec-93	08:00:05 PM	1.5279	2200.1630		14.82		19.95	22.89	19.70	-80.60	-7.10	19.58	17.88

DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ. MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPER FL. AQ. MONITOR	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL PUMPED WELL	PUMPED W	OB- WELL	PERMANENT DEEP UPPER FL. AQ. MONITOR	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	DRAWDOW	DRAWDOW	CHANNEL 7	CHANNEL 8
15-Dec-93	08:00:06 PM	1.5279	2200.1803		14.82		19.95	22.89	19.80	-80.50	-7.10	19.58	17.88
15-Dec-93	08:00:07 PM	1.5279	2200.1962		14.82		19.94	22.88	19.80	-80.50	-7.11	19.58	17.88
15-Dec-93	08:00:09 PM	1.5279	2200.2307		14.82		19.95	22.89	20.20	-80.10	-7.10	19.58	17.88
15-Dec-93	08:00:10 PM	1.5279	2200.2466		14.82		19.95	22.89	19.90	-80.40	-7.10	19.58	17.88
15-Dec-93	08:00:11 PM	1.5280	2200.2638		14.82		19.94	22.88	20.00	-80.30	-7.11	19.58	17.88
15-Dec-93	08:00:13 PM	1.5280	2200.2970		14.82		19.95	22.89	19.90	-80.40	-7.10	19.58	17.88
15-Dec-93	08:00:14 PM	1.5280	2200.3128		14.82		19.95	22.89	19.80	-80.50	-7.10	19.58	17.88
15-Dec-93	08:00:15 PM	1.5280	2200.3301		14.82		19.95	22.89	19.80	-80.50	-7.10	19.58	17.88
15-Dec-93	08:00:16 PM	1.5280	2200.3474		14.82		19.95	22.88	20.10	-80.20	-7.11	19.58	17.88
15-Dec-93	08:00:18 PM	1.5280	2200.3805		14.82		19.95	22.88	19.70	-80.60	-7.11	19.58	17.88
15-Dec-93	08:00:19 PM	1.5281	2200.3963		14.82		19.95	22.88	19.80	-80.50	-7.11	19.58	17.88
15-Dec-93	08:00:20 PM	1.5281	2200.4136		14.82		19.95	22.88	19.70	-80.60	-7.11	19.58	17.88
15-Dec-93	08:00:22 PM	1.5281	2200.4467		14.82		19.95	22.88	19.90	-80.40	-7.11	19.58	17.88
15-Dec-93	08:00:23 PM	1.5281	2200.4640		14.82		19.95	22.88	19.80	-80.50	-7.11	19.58	17.88
15-Dec-93	08:00:24 PM	1.5281	2200.4798		14.82		19.95	22.89	19.70	-80.60	-7.10	19.58	17.88
15-Dec-93	08:00:26 PM	1.5281	2200.5130		14.82		19.95	22.88	19.70	-80.60	-7.11	19.58	17.88
15-Dec-93	08:00:27 PM	1.5281	2200.5302		14.82		19.95	22.89	20.00	-80.30	-7.10	19.58	17.88
15-Dec-93	08:00:28 PM	1.5282	2200.5461		14.82		19.95	22.88	19.80	-80.50	-7.11	19.58	17.88
15-Dec-93	08:00:29 PM	1.5282	2200.5634		14.82		19.95	22.88	19.80	-80.50	-7.11	19.58	17.88
15-Dec-93	08:00:31 PM	1.5282	2200.5965		14.82		19.95	22.89	19.80	-80.50	-7.10	19.58	17.88
15-Dec-93	08:00:32 PM	1.5282	2200.6138		14.82		19.95	22.89	19.70	-80.60	-7.10	19.58	17.88
15-Dec-93	08:00:33 PM	1.5282	2200.6296		14.82		19.95	22.88	19.90	-80.40	-7.11	19.58	17.88
15-Dec-93	08:00:35 PM	1.5282	2200.6627		14.82		19.94	22.88	19.80	-80.50	-7.11	19.58	17.88
15-Dec-93	08:00:36 PM	1.5283	2200.6800		14.82		19.95	22.89	19.80	-80.50	-7.10	19.58	17.88
15-Dec-93	08:00:37 PM	1.5283	2200.6973		14.82		19.94	22.88	19.80	-80.50	-7.11	19.58	17.88
15-Dec-93	08:00:39 PM	1.5283	2200.7304		14.82		19.94	22.88	19.70	-80.60	-7.11	19.58	17.88
15-Dec-93	08:00:40 PM	1.5283	2200.7462		14.82		19.94	22.88	19.80	-80.50	-7.11	19.58	17.88
15-Dec-93	08:00:41 PM	1.5283	2200.7635		14.82		19.94	22.88	20.00	-80.30	-7.11	19.58	17.88
15-Dec-93	08:00:42 PM	1.5283	2200.7794		14.82		19.94	22.88	19.90	-80.40	-7.11	19.58	17.88
15-Dec-93	08:00:44 PM	1.5283	2200.8139		14.82		19.94	22.88	19.60	-80.70	-7.11	19.58	17.88
15-Dec-93	08:00:45 PM	1.5284	2200.8298		14.82		19.94	22.88	19.70	-80.60	-7.11	19.58	17.88
15-Dec-93	08:00:46 PM	1.5284	2200.8470		14.82		19.95	22.89	19.80	-80.50	-7.10	19.58	17.88
15-Dec-93	08:00:48 PM	1.5284	2200.8802		14.82		19.95	22.89	20.00	-80.30	-7.10	19.58	17.88
15-Dec-93	08:00:49 PM	1.5284	2200.8960		14.82		19.95	22.89	19.80	-80.50	-7.10	19.58	17.88
15-Dec-93	08:00:50 PM	1.5284	2200.9133		14.82		19.94	22.88	20.00	-80.30	-7.11	19.58	17.88
15-Dec-93	08:00:52 PM	1.5284	2200.9464		14.82		19.95	22.89	19.80	-80.50	-7.10	19.58	17.88
15-Dec-93	08:00:53 PM	1.5284	2200.9637		14.82		19.94	22.88	19.60	-80.70	-7.11	19.58	17.88
15-Dec-93	08:00:54 PM	1.5285	2200.9795		14.82		19.94	22.88	19.60	-80.70	-7.11	19.58	17.88
15-Dec-93	08:00:56 PM	1.5285	2201.0126		14.82		19.94	22.88	19.70	-80.60	-7.11	19.58	17.88
15-Dec-93	08:00:57 PM	1.5285	2201.0299		14.82		19.94	22.88	19.70	-80.60	-7.11	19.58	17.88
15-Dec-93	08:00:58 PM	1.5285	2201.0472		14.82		19.94	22.88	19.50	-80.80	-7.11	19.58	17.88
15-Dec-93	08:00:59 PM	1.5285	2201.0630		14.82		19.94	22.88	19.50	-80.80	-7.11	19.58	17.88
15-Dec-93	08:01:01 PM	1.5285	2201.0962		14.82		19.94	22.88	19.50	-80.80	-7.11	19.58	17.88
15-Dec-93	08:01:02 PM	1.5286	2201.1134		14.82		19.94	22.88	19.90	-80.40	-7.11	19.58	17.88
15-Dec-93	08:01:03 PM	1.5286	2201.1307		14.82		19.94	22.88	19.60	-80.70	-7.11	19.58	17.88

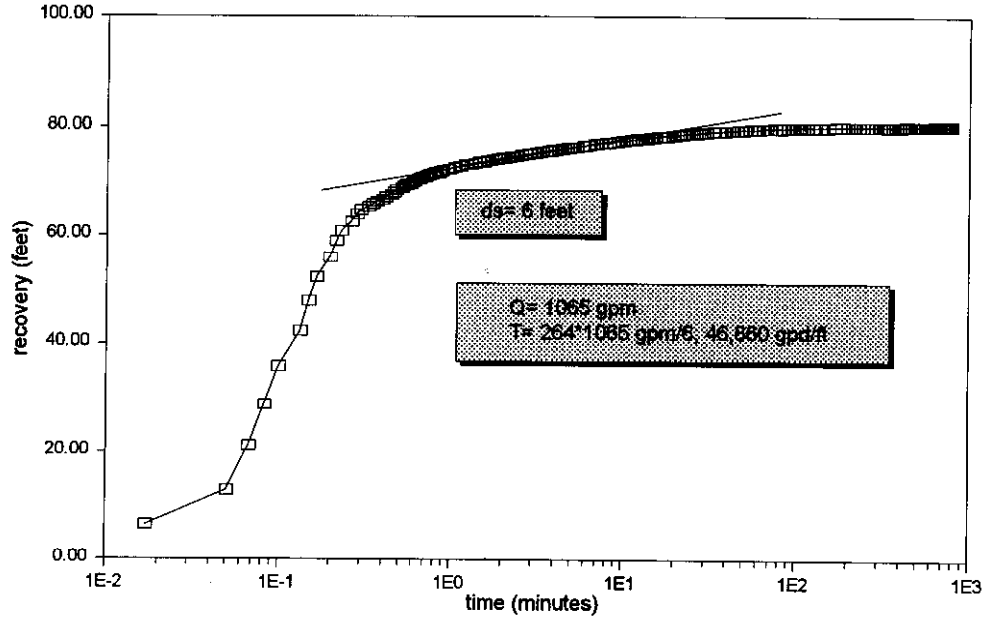
ROMP 22 SUWANNEE PUMP TEST

Recovery vs. Time (OB-Well)



ROMP 22 SUWANNEE PUMP TEST

Recovery vs. Time



DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPE FL. AQ. MONITO	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL			PERMANENT DEEP UPPER FL. AQ. MONITO	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	PUMPED WELL CHANNEL 6	PUMPED W DRAWDOW	OB- WELL DRAWDOW	CHANNEL 7	CHANNEL 8
15-Dec-93	08:01:06 PM	0.8341	0		14.82		19.94	22.88	20.3	0.5	0	19.58	17.88
15-Dec-93	08:01:07 PM	0.8341	0.01728		14.82		19.94	22.88	26.4	6.6	0	19.58	17.89
15-Dec-93	08:01:09 PM	0.8341	0.0504		14.82		19.95	22.89	32.7	12.9	0.01	19.58	17.89
15-Dec-93	08:01:10 PM	0.8341	0.06768		14.82		19.95	22.89	40.9	21.1	0.01	19.59	17.89
15-Dec-93	08:01:11 PM	0.8342	0.08352		14.82		19.95	22.89	48.6	28.8	0.01	19.59	17.9
15-Dec-93	08:01:12 PM	0.8342	0.1008		14.82		19.95	22.9	55.7	35.9	0.02	19.59	17.9
15-Dec-93	08:01:14 PM	0.8342	0.13392		14.83		19.95	22.9	62.2	42.4	0.02	19.6	17.91
15-Dec-93	08:01:15 PM	0.8342	0.14976		14.82		19.94	22.9	67.7	47.9	0.02	19.6	17.91
15-Dec-93	08:01:16 PM	0.8342	0.16704		14.83		19.95	22.91	72.1	52.3	0.03	19.6	17.91
15-Dec-93	08:01:18 PM	0.8342	0.20016		14.83		19.94	22.91	75.7	55.9	0.03	19.6	17.91
15-Dec-93	08:01:19 PM	0.8342	0.21744		14.83		19.94	22.91	78.7	58.9	0.03	19.61	17.91
15-Dec-93	08:01:20 PM	0.8343	0.23328		14.83		19.94	22.92	80.6	60.8	0.04	19.61	17.91
15-Dec-93	08:01:22 PM	0.8343	0.2664		14.83		19.94	22.94	82.4	62.6	0.06	19.61	17.91
15-Dec-93	08:01:23 PM	0.8343	0.28368		14.83		19.94	22.95	83.7	63.9	0.07	19.61	17.91
15-Dec-93	08:01:24 PM	0.8343	0.30096		14.83		19.94	22.97	84.5	64.7	0.09	19.61	17.91
15-Dec-93	08:01:26 PM	0.8343	0.33408		14.83		19.94	22.98	85.1	65.3	0.1	19.61	17.91
15-Dec-93	08:01:27 PM	0.8343	0.34992		14.83		19.93	23	85.5	65.7	0.12	19.61	17.91
15-Dec-93	08:01:28 PM	0.8344	0.3672		14.83		19.93	23.03	86	66.2	0.15	19.61	17.91
15-Dec-93	08:01:30 PM	0.8344	0.40032		14.83		19.93	23.04	86.4	66.6	0.16	19.61	17.91
15-Dec-93	08:01:31 PM	0.8344	0.4176		14.83		19.92	23.07	86.9	67.1	0.19	19.61	17.91
15-Dec-93	08:01:33 PM	0.8344	0.45072		14.83		19.93	23.1	87.3	67.5	0.22	19.61	17.91
15-Dec-93	08:01:34 PM	0.8344	0.46656		14.83		19.92	23.13	87.8	68	0.25	19.61	17.91
15-Dec-93	08:01:35 PM	0.8344	0.48384		14.83		19.92	23.16	88.2	68.4	0.28	19.61	17.91
15-Dec-93	08:01:37 PM	0.8345	0.51696		14.83		19.92	23.18	88.6	68.8	0.3	19.61	17.91
15-Dec-93	08:01:38 PM	0.8345	0.53424		14.83		19.91	23.21	89	69.2	0.33	19.61	17.91
15-Dec-93	08:01:39 PM	0.8345	0.55008		14.83		19.91	23.23	89.2	69.4	0.35	19.61	17.91
15-Dec-93	08:01:41 PM	0.8345	0.5832		14.83		19.91	23.26	89.4	69.6	0.38	19.61	17.91
15-Dec-93	08:01:42 PM	0.8345	0.60048		14.83		19.91	23.29	89.7	69.9	0.41	19.61	17.91
15-Dec-93	08:01:43 PM	0.8345	0.61632		14.83		19.91	23.31	89.9	70.1	0.43	19.61	17.91
15-Dec-93	08:01:45 PM	0.8345	0.65088		14.83		19.91	23.35	90.2	70.4	0.47	19.61	17.91
15-Dec-93	08:01:46 PM	0.8346	0.66672		14.83		19.9	23.37	90.4	70.6	0.49	19.61	17.91
15-Dec-93	08:01:47 PM	0.8346	0.684		14.83		19.9	23.4	90.6	70.8	0.52	19.61	17.91
15-Dec-93	08:01:49 PM	0.8346	0.71712		14.83		19.9	23.42	90.8	71	0.54	19.61	17.91
15-Dec-93	08:01:50 PM	0.8346	0.73296		14.83		19.9	23.45	90.9	71.1	0.57	19.61	17.91
15-Dec-93	08:01:51 PM	0.8346	0.75024		14.83		19.9	23.48	91.1	71.3	0.6	19.61	17.91
15-Dec-93	08:01:53 PM	0.8346	0.78336		14.83		19.9	23.5	91.2	71.4	0.62	19.61	17.91
15-Dec-93	08:01:54 PM	0.8347	0.80064		14.83		19.9	23.53	91.3	71.5	0.65	19.61	17.91
15-Dec-93	08:01:55 PM	0.8347	0.81648		14.83		19.9	23.55	91.4	71.6	0.67	19.61	17.91
15-Dec-93	08:01:57 PM	0.8347	0.85104		14.83		19.89	23.58	91.5	71.7	0.7	19.61	17.91
15-Dec-93	08:01:58 PM	0.8347	0.86688		14.83		19.89	23.61	91.7	71.9	0.73	19.61	17.91

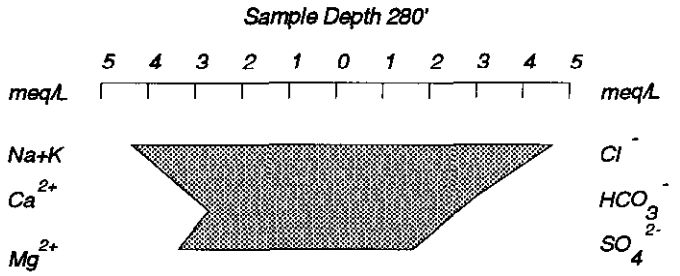
DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPE FL. AQ. MONITO	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL			PERMANENT DEEP UPPER FL. AQ. MONITO	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	PUMPED WELL CHANNEL 6	PUMPED W DRAWDOW	OB- WELL DRAWDOW	CHANNEL 7	CHANNEL 8
15-Dec-93	08:01:59 PM	0.8347	0.88416		14.83		19.89	23.63	91.8	72	0.75	19.61	17.91
15-Dec-93	08:02:04 PM	0.8348	0.96768		14.83		19.88	23.72	92.1	72.3	0.84	19.61	17.91
15-Dec-93	08:02:09 PM	0.8348	1.04976		14.83		19.88	23.81	92.4	72.6	0.93	19.61	17.91
15-Dec-93	08:02:14 PM	0.8349	1.13328		14.83		19.87	23.9	92.6	72.8	1.02	19.62	17.92
15-Dec-93	08:02:19 PM	0.8349	1.2168		14.83		19.87	23.99	92.9	73.1	1.11	19.62	17.92
15-Dec-93	08:02:24 PM	0.8350	1.30032		14.83		19.86	24.07	93	73.2	1.19	19.61	17.91
15-Dec-93	08:02:29 PM	0.8351	1.38384		14.83		19.86	24.15	93.2	73.4	1.27	19.62	17.92
15-Dec-93	08:02:34 PM	0.8351	1.46736		14.83		19.85	24.23	93.4	73.6	1.35	19.62	17.91
15-Dec-93	08:02:39 PM	0.8352	1.55088		14.83		19.85	24.3	93.5	73.7	1.42	19.61	17.91
15-Dec-93	08:02:44 PM	0.8352	1.63296		14.82		19.84	24.37	93.7	73.9	1.49	19.62	17.91
15-Dec-93	08:02:49 PM	0.8353	1.71648		14.83		19.84	24.44	93.8	74	1.56	19.62	17.92
15-Dec-93	08:02:54 PM	0.8353	1.8		14.83		19.83	24.5	93.9	74.1	1.62	19.62	17.92
15-Dec-93	08:02:59 PM	0.8354	1.88352		14.82		19.83	24.57	94	74.2	1.69	19.62	17.92
15-Dec-93	08:03:04 PM	0.8355	1.96704		14.82		19.83	24.63	94.1	74.3	1.75	19.62	17.92
15-Dec-93	08:03:09 PM	0.8355	2.05056		14.82		19.83	24.69	94.2	74.4	1.81	19.62	17.92
15-Dec-93	08:03:14 PM	0.8356	2.13408		14.83		19.83	24.74	94.3	74.5	1.86	19.62	17.92
15-Dec-93	08:03:19 PM	0.8356	2.2176		14.83		19.83	24.8	94.4	74.6	1.92	19.62	17.92
15-Dec-93	08:03:24 PM	0.8357	2.29968		14.82		19.82	24.84	94.5	74.7	1.96	19.62	17.92
15-Dec-93	08:03:29 PM	0.8358	2.3832		14.83		19.82	24.9	94.5	74.7	2.02	19.62	17.92
15-Dec-93	08:03:39 PM	0.8359	2.55024		14.82		19.81	25	94.7	74.9	2.12	19.62	17.92
15-Dec-93	08:03:49 PM	0.8360	2.71728		14.82		19.8	25.09	94.8	75	2.21	19.62	17.92
15-Dec-93	08:03:59 PM	0.8361	2.88432		14.82		19.8	25.18	95	75.2	2.3	19.62	17.92
15-Dec-93	08:04:09 PM	0.8362	3.04992		14.82		19.79	25.27	95.1	75.3	2.39	19.62	17.92
15-Dec-93	08:04:19 PM	0.8363	3.21696		14.82		19.79	25.34	95.2	75.4	2.46	19.62	17.92
15-Dec-93	08:04:29 PM	0.8364	3.384		14.82		19.79	25.42	95.3	75.5	2.54	19.62	17.92
15-Dec-93	08:04:39 PM	0.8366	3.55104		14.82		19.78	25.49	95.4	75.6	2.61	19.62	17.92
15-Dec-93	08:04:49 PM	0.8367	3.71664		14.82		19.77	25.56	95.5	75.7	2.68	19.62	17.92
15-Dec-93	08:04:59 PM	0.8368	3.88368		14.82		19.77	25.63	95.6	75.8	2.75	19.62	17.92
15-Dec-93	08:05:09 PM	0.8369	4.05072		14.82		19.77	25.69	95.6	75.8	2.81	19.62	17.92
15-Dec-93	08:05:19 PM	0.8370	4.21632		14.82		19.77	25.75	95.8	76	2.87	19.62	17.92
15-Dec-93	08:05:29 PM	0.8371	4.38336		14.82		19.77	25.81	95.8	76	2.93	19.62	17.92
15-Dec-93	08:05:39 PM	0.8373	4.5504		14.82		19.77	25.86	95.9	76.1	2.98	19.62	17.92
15-Dec-93	08:05:49 PM	0.8374	4.71744		14.82		19.76	25.92	96	76.2	3.04	19.62	17.92
15-Dec-93	08:05:59 PM	0.8375	4.88304		14.81		19.76	25.98	96	76.2	3.1	19.62	17.92
15-Dec-93	08:06:09 PM	0.8376	5.05008		14.81		19.76	26.03	96.1	76.3	3.15	19.62	17.92
15-Dec-93	08:06:19 PM	0.8377	5.21712		14.81		19.75	26.07	96.2	76.4	3.19	19.62	17.92
15-Dec-93	08:06:29 PM	0.8378	5.38416		14.81		19.75	26.12	96.2	76.4	3.24	19.62	17.92
15-Dec-93	08:06:59 PM	0.8382	5.88384		14.81		19.75	26.25	96.4	76.6	3.37	19.62	17.92
15-Dec-93	08:07:29 PM	0.8385	6.38352		14.8		19.74	26.37	96.5	76.7	3.49	19.62	17.92
15-Dec-93	08:07:59 PM	0.8389	6.8832		14.8		19.74	26.5	96.7	76.9	3.62	19.62	17.92

DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPE FL. AQ. MONITO	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL			PERMANENT DEEP UPPER FL. AQ. MONITO	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	PUMPED WELL CHANNEL 6	PUMPED W DRAWDOW	OB- WELL DRAWDOW	CHANNEL 7	CHANNEL 8
15-Dec-93	08:08:29 PM	0.8392	7.38432		14.8		19.74	26.6	96.8	77	3.72	19.62	17.92
15-Dec-93	08:08:59 PM	0.8396	7.884		14.8		19.74	26.69	96.9	77.1	3.81	19.62	17.92
15-Dec-93	08:09:29 PM	0.8399	8.38368		14.79		19.74	26.79	97	77.2	3.91	19.62	17.92
15-Dec-93	08:09:59 PM	0.8403	8.88336		14.79		19.74	26.87	97.1	77.3	3.99	19.62	17.92
15-Dec-93	08:10:29 PM	0.8406	9.38304		14.79		19.75	26.95	97.2	77.4	4.07	19.62	17.92
15-Dec-93	08:10:59 PM	0.8410	9.88416		14.79		19.75	27.02	97.3	77.5	4.14	19.62	17.92
15-Dec-93	08:11:29 PM	0.8413	10.38384		14.78		19.76	27.1	97.4	77.6	4.22	19.62	17.92
15-Dec-93	08:11:59 PM	0.8417	10.88352		14.78		19.77	27.17	97.4	77.6	4.29	19.62	17.92
15-Dec-93	08:12:29 PM	0.8420	11.3832		14.78		19.77	27.23	97.5	77.7	4.35	19.62	17.92
15-Dec-93	08:12:59 PM	0.8424	11.88432		14.77		19.77	27.29	97.6	77.8	4.41	19.62	17.92
15-Dec-93	08:13:29 PM	0.8427	12.384		14.77		19.78	27.35	97.7	77.9	4.47	19.63	17.93
15-Dec-93	08:13:59 PM	0.8430	12.88368		14.77		19.79	27.4	97.7	77.9	4.52	19.62	17.92
15-Dec-93	08:14:29 PM	0.8434	13.38336		14.77		19.81	27.46	97.7	77.9	4.58	19.62	17.93
15-Dec-93	08:14:59 PM	0.8437	13.88304		14.77		19.81	27.51	97.8	78	4.63	19.62	17.93
15-Dec-93	08:15:29 PM	0.8441	14.38416		14.77		19.83	27.56	97.9	78.1	4.68	19.62	17.93
15-Dec-93	08:15:59 PM	0.8444	14.88384		14.77		19.83	27.61	97.9	78.1	4.73	19.62	17.93
15-Dec-93	08:16:29 PM	0.8448	15.38352		14.77		19.85	27.65	98	78.2	4.77	19.62	17.93
15-Dec-93	08:17:29 PM	0.8455	16.38432		14.76		19.88	27.74	98.1	78.3	4.86	19.63	17.93
15-Dec-93	08:18:29 PM	0.8462	17.38368		14.76		19.91	27.83	98.2	78.4	4.95	19.63	17.93
15-Dec-93	08:19:29 PM	0.8469	18.38304		14.75		19.94	27.9	98.2	78.4	5.02	19.63	17.94
15-Dec-93	08:20:29 PM	0.8476	19.38384		14.75		19.96	27.97	98.3	78.5	5.09	19.63	17.94
15-Dec-93	08:21:29 PM	0.8483	20.3832		14.75		20	28.04	98.4	78.6	5.16	19.63	17.94
15-Dec-93	08:22:29 PM	0.8489	21.384		14.74		20.03	28.1	98.4	78.6	5.22	19.63	17.94
15-Dec-93	08:23:29 PM	0.8496	22.38336		14.74		20.06	28.16	98.5	78.7	5.28	19.63	17.94
15-Dec-93	08:24:29 PM	0.8503	23.38416		14.74		20.09	28.21	98.6	78.8	5.33	19.63	17.94
15-Dec-93	08:25:29 PM	0.8510	24.38352		14.73		20.12	28.26	98.6	78.8	5.38	19.64	17.94
15-Dec-93	08:26:29 PM	0.8517	25.38432		14.73		20.15	28.31	98.6	78.8	5.43	19.64	17.94
15-Dec-93	08:27:29 PM	0.8524	26.38368		14.73		20.19	28.36	98.7	78.9	5.48	19.64	17.94
15-Dec-93	08:28:29 PM	0.8531	27.38304		14.72		20.22	28.4	98.7	78.9	5.52	19.64	17.95
15-Dec-93	08:29:29 PM	0.8538	28.38384		14.72		20.25	28.44	98.8	79	5.56	19.64	17.95
15-Dec-93	08:30:29 PM	0.8545	29.3832		14.72		20.28	28.48	98.8	79	5.6	19.64	17.95
15-Dec-93	08:31:29 PM	0.8552	30.384		14.72		20.32	28.52	98.9	79.1	5.64	19.64	17.95
15-Dec-93	08:34:29 PM	0.8573	33.38352		14.71		20.41	28.62	99	79.2	5.74	19.64	17.95
15-Dec-93	08:37:29 PM	0.8594	36.38304		14.71		20.52	28.71	99	79.2	5.83	19.64	17.96
15-Dec-93	08:40:29 PM	0.8614	39.384		14.71		20.61	28.79	99.1	79.3	5.91	19.65	17.97
15-Dec-93	08:43:29 PM	0.8635	42.38352		14.71		20.7	28.86	99.2	79.4	5.98	19.65	17.97
15-Dec-93	08:46:29 PM	0.8656	45.38304		14.71		20.79	28.92	99.2	79.4	6.04	19.66	17.97
15-Dec-93	08:49:29 PM	0.8677	48.384		14.71		20.87	28.97	99.3	79.5	6.09	19.65	17.97
15-Dec-93	08:52:29 PM	0.8698	51.38352		14.71		20.95	29.01	99.3	79.5	6.13	19.65	17.97
15-Dec-93	08:55:29 PM	0.8719	54.38304		14.71		21.03	29.06	99.4	79.6	6.18	19.66	17.97

DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPE FL. AQ. MONITO	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL PUMPED WELL	PUMPED W	OB- WELL	PERMANENT DEEP UPPER FL. AQ. MONITO	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	CHANNEL 6	DRAWDOW	DRAWDOW	CHANNEL 7	CHANNEL 8
15-Dec-93	08:58:29 PM	0.8739	57.384		14.71		21.11	29.1	99.4	79.6	6.22	19.66	17.97
15-Dec-93	09:01:29 PM	0.8760	60.38352		14.71		21.18	29.13	99.4	79.6	6.25	19.67	17.98
15-Dec-93	09:06:29 PM	0.8795	65.3832		14.71		21.29	29.18	99.5	79.7	6.3	19.67	17.98
15-Dec-93	09:11:29 PM	0.8830	70.38432		14.71		21.4	29.22	99.5	79.7	6.34	19.67	17.98
15-Dec-93	09:16:29 PM	0.8864	75.384		14.71		21.5	29.26	99.6	79.8	6.38	19.67	17.99
15-Dec-93	09:21:29 PM	0.8899	80.38368		14.71		21.59	29.3	99.6	79.8	6.42	19.68	17.99
15-Dec-93	09:26:29 PM	0.8934	85.38336		14.71		21.67	29.32	99.6	79.8	6.44	19.68	18
15-Dec-93	09:31:29 PM	0.8969	90.38304		14.71		21.75	29.35	99.7	79.9	6.47	19.68	18
15-Dec-93	09:36:29 PM	0.9003	95.38416		14.71		21.82	29.38	99.7	79.9	6.5	19.68	18
15-Dec-93	09:41:29 PM	0.9038	100.38384		14.72		21.88	29.39	99.7	79.9	6.51	19.68	18
15-Dec-93	09:46:29 PM	0.9073	105.38352		14.72		21.95	29.41	99.7	79.9	6.53	19.68	18.01
15-Dec-93	09:51:29 PM	0.9108	110.3832		14.72		22	29.43	99.8	80	6.55	19.69	18.01
15-Dec-93	09:56:29 PM	0.9142	115.38432		14.73		22.06	29.45	99.8	80	6.57	19.68	18.01
15-Dec-93	10:05:00 PM	0.9201	123.90048		14.69	24.2	22.12	29.46	99.8	80	6.58	19.64	17.95
15-Dec-93	10:20:00 PM	0.9306	138.90096		14.62	24.3	22.18	29.49	99.8	80	6.61	19.58	17.91
15-Dec-93	10:35:00 PM	0.9410	153.9		14.64	24.4	22.27	29.51	99.8	80	6.63	19.6	17.96
15-Dec-93	10:50:00 PM	0.9514	168.90048		14.65	24.5	22.34	29.53	99.9	80.1	6.65	19.61	17.97
15-Dec-93	11:05:00 PM	0.9618	183.90096		14.66	24.5	22.4	29.55	99.9	80.1	6.67	19.61	17.97
15-Dec-93	11:20:00 PM	0.9722	198.9		14.66	24.6	22.45	29.57	99.9	80.1	6.69	19.61	17.98
15-Dec-93	11:35:00 PM	0.9826	213.90048		14.67	24.6	22.49	29.58	99.9	80.1	6.7	19.61	17.98
15-Dec-93	11:50:00 PM	0.9931	228.90096		14.67	24.6	22.52	29.59	99.9	80.1	6.71	19.61	17.99
16-Dec-93	12:05:00 AM	1.0035	243.9		14.67	24.7	22.55	29.61	99.9	80.1	6.73	19.61	18
16-Dec-93	12:20:00 AM	1.0139	258.90048		14.68	24.7	22.57	29.62	99.9	80.1	6.74	19.61	18
16-Dec-93	12:35:00 AM	1.0243	273.90096		14.68	24.7	22.59	29.63	99.9	80.1	6.75	19.61	18
16-Dec-93	12:50:00 AM	1.0347	288.9		14.68	24.7	22.6	29.63	99.9	80.1	6.75	19.61	18
16-Dec-93	01:05:00 AM	1.0451	303.90048		14.68	24.7	22.62	29.64	99.9	80.1	6.76	19.61	18.01
16-Dec-93	01:20:00 AM	1.0556	318.90096		14.68	24.7	22.64	29.64	99.9	80.1	6.76	19.61	18.01
16-Dec-93	01:35:00 AM	1.0660	333.9		14.68	24.7	22.65	29.65	99.9	80.1	6.77	19.61	18.02
16-Dec-93	01:50:00 AM	1.0764	348.90048		14.69	24.8	22.66	29.65	99.9	80.1	6.77	19.62	18.02
16-Dec-93	02:05:00 AM	1.0868	363.90096		14.69	24.8	22.68	29.66	99.9	80.1	6.78	19.62	18.03
16-Dec-93	02:20:00 AM	1.0972	378.9		14.69	24.8	22.69	29.67	99.9	80.1	6.79	19.63	18.03
16-Dec-93	02:35:00 AM	1.1076	393.90048		14.69	24.8	22.7	29.67	99.9	80.1	6.79	19.63	18.04
16-Dec-93	02:50:00 AM	1.1181	408.90096		14.7	24.8	22.72	29.69	99.9	80.1	6.81	19.63	18.04
16-Dec-93	03:05:00 AM	1.1285	423.9		14.7	24.8	22.72	29.69	100	80.2	6.81	19.64	18.04
16-Dec-93	03:20:00 AM	1.1389	438.90048		14.7	24.8	22.73	29.7	100	80.2	6.82	19.64	18.04
16-Dec-93	03:35:00 AM	1.1493	453.90096		14.7	24.8	22.74	29.7	100	80.2	6.82	19.64	18.05
16-Dec-93	03:50:00 AM	1.1597	468.9		14.71	24.8	22.75	29.7	100	80.2	6.82	19.65	18.05
16-Dec-93	04:05:00 AM	1.1701	483.90048		14.71	24.8	22.76	29.71	100	80.2	6.83	19.65	18.06
16-Dec-93	04:20:00 AM	1.1806	498.90096		14.71	24.8	22.77	29.72	100	80.2	6.84	19.66	18.07
16-Dec-93	04:35:00 AM	1.1910	513.9		14.71	24.8	22.78	29.73	100	80.2	6.85	19.67	18.08

DATE	TIME	TIME	ELAPSED	PERMANENT SURFICIAL AQ MONITOR	PERMANENT UP. INTERMED AQ. MONITOR	PERMANENT LOW. INTERM AQ. MONITOR	TEMPORARY LOW. INTERM AQ. MONITOR	PERMANENT SHALLOW UPPE FL. AQ. MONITO	TEMPORARY SHALLOW UPPER FLORIDAN AQ. WELL			PERMANENT DEEP UPPER FL. AQ. MONITO	TEMPORARY DEEP UPPER FL. AQ. MONITOR
d-m-y	(long int'l)	GENERAL	TIME(MIN)	CHANNEL 1	CHANNEL 2	CHANNEL 3	CHANNEL 4	CHANNEL 5	PUMPED WELL CHANNEL 6	PUMPED W DRAWDOW	OB- WELL DRAWDOW	CHANNEL 7	CHANNEL 8
16-Dec-93	04:50:00 AM	1.2014	528.90048		14.71	24.8	22.78	29.74	100	80.2	6.86	19.68	18.09
16-Dec-93	05:05:00 AM	1.2118	543.90096		14.71	24.9	22.79	29.75	100	80.2	6.87	19.69	18.09
16-Dec-93	05:20:00 AM	1.2222	558.9		14.71	24.9	22.8	29.75	100	80.2	6.87	19.69	18.1
16-Dec-93	05:35:00 AM	1.2326	573.90048		14.71	24.9	22.81	29.76	100	80.2	6.88	19.7	18.1
16-Dec-93	05:50:00 AM	1.2431	588.90096		14.72	24.9	22.82	29.77	100	80.2	6.89	19.7	18.1
16-Dec-93	06:05:00 AM	1.2535	603.9		14.72	24.9	22.82	29.77	100	80.2	6.89	19.7	18.1
16-Dec-93	06:20:00 AM	1.2639	618.90048		14.72	24.9	22.83	29.77	100	80.2	6.89	19.7	18.11
16-Dec-93	06:35:00 AM	1.2743	633.90096		14.72	24.9	22.84	29.78	100	80.2	6.9	19.71	18.11
16-Dec-93	06:50:00 AM	1.2847	648.9		14.72	24.9	22.84	29.78	100.1	80.3	6.9	19.72	18.12
16-Dec-93	07:05:00 AM	1.2951	663.90048		14.72	24.9	22.84	29.79	100	80.2	6.91	19.72	18.12
16-Dec-93	07:20:00 AM	1.3056	678.90096		14.73	24.9	22.85	29.79	100	80.2	6.91	19.72	18.12
16-Dec-93	07:35:00 AM	1.3160	693.9		14.74		22.84	29.8	100.1	80.3	6.92	19.75	18.1
16-Dec-93	07:50:00 AM	1.3264	708.90048		14.72	24.9	22.89	29.79	100	80.2	6.91	19.71	18.1
16-Dec-93	08:05:00 AM	1.3368	723.90096		14.72	24.9	22.9	29.79	100	80.2	6.91	19.71	18.1
16-Dec-93	08:20:00 AM	1.3472	738.9		14.72	24.9	22.91	29.79	100	80.2	6.91	19.71	18.1
16-Dec-93	08:35:00 AM	1.3576	753.90048		14.72	24.9	22.9	29.79	100	80.2	6.91	19.71	18.1
16-Dec-93	08:50:00 AM	1.3681	768.90096		14.73		22.84	29.79	100	80.2	6.91	19.74	18.1
16-Dec-93	09:05:00 AM	1.3785	783.9		14.73		22.88	29.8	100.1	80.3	6.92	19.74	18.1
16-Dec-93	09:20:00 AM	1.3889	798.89904		14.59			29.7					17.95

APPENDIX D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meq/L
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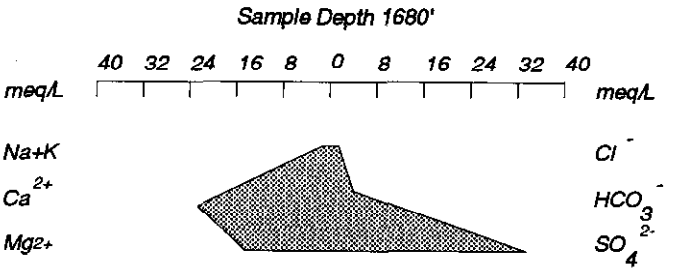
Ca 2+
Mg 2+
Cl -
HCO3 -
SO4 2-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meq/L
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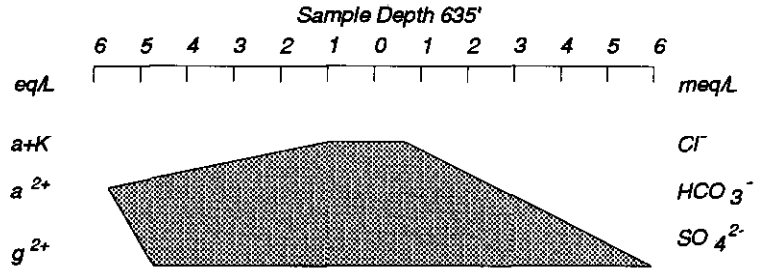
Cl -
HCO3 -
SO4 2-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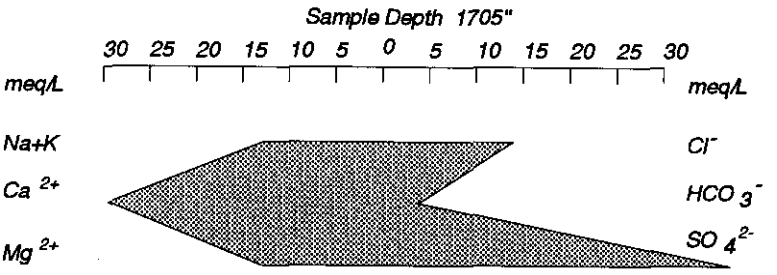
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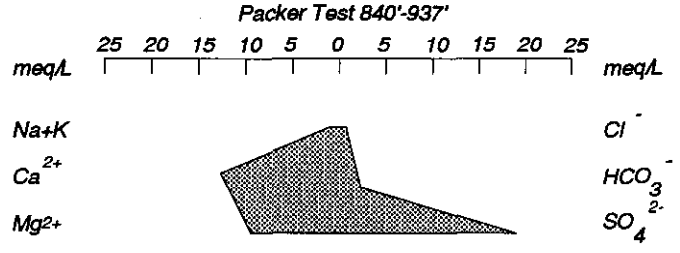
Mg 2+
Cl-
HCO 3-
SO 4 2-


Packer Test 840'-937'
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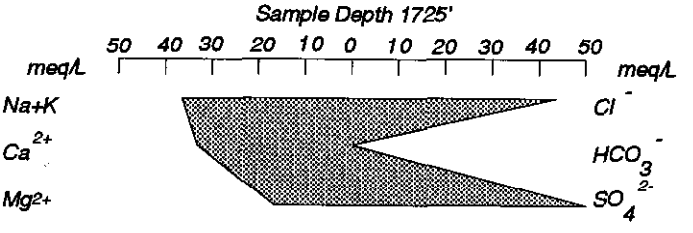
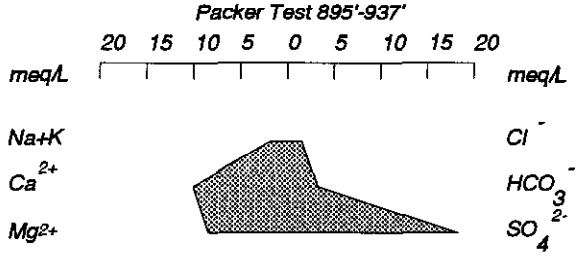
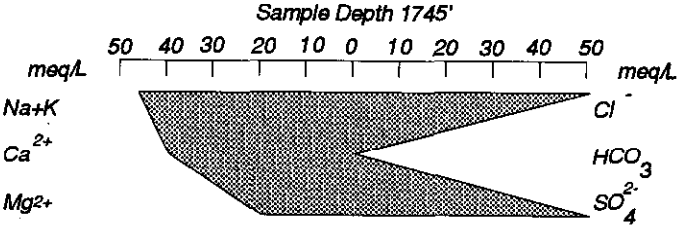
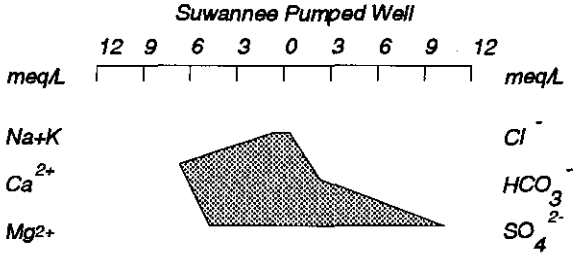
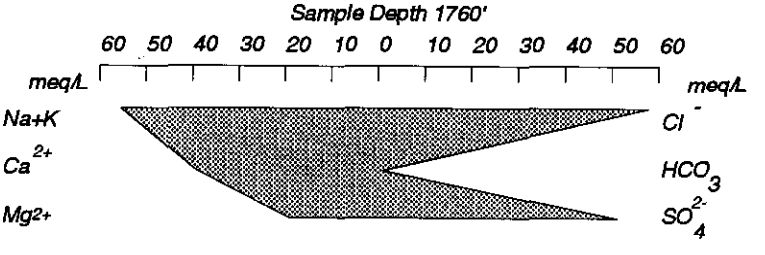
meq/L
Na+K
Ca 2+
Mg2+
Cl -
HCO3 -
SO4 2-


Sample Depth 1725'
50 40 30 20 10 0 10 20 30 40 50
meq/L
meq/L
Na+K
Ca 2+
Mg2+
Cl -
HCO3 -
SO4 2-


Packer Test 895'-937'
20 15 10 5 0 5 10 15 20
meq/L
meq/L
Na+K
Ca 2+
Mg2+
Cl -
HCO3 -
SO4 2-


Sample Depth 1745'
50 40 30 20 10 0 10 20 30 40 50
meq/L
meq/L
Na+K
Ca 2+
Mg2+
Cl -
HCO3
SO4 2-


Suwannee Pumped Well
12 9 6 3 0 3 6 9 12
meq/L
meq/L
Na+K
Ca 2+
Mg2+
Cl -
HCO3 -
SO4 2-


Sample Depth 1760'
60 50 40 30 20 10 0 10 20 30 40 50 60
meq/L
meq/L
Na+K
Ca 2+
Mg2+
Cl -
HCO3
SO4 2-

Sample 280

TempC =	20.0	pH =	8.1
TDS =	594.0	COND =	869.0
HARD =	305.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	90.0	3.9146	3.9146	38.2
K +	9.0	0.2302	0.2302	2.2
Ca++	53.0	1.3224	2.6447	25.8
Mg++	42.0	1.7275	3.4551	33.7
Cl-	173.0	4.8797	4.8797	49.9
SO4--	87.0	0.9057	1.8114	18.5
HCO3-	189.0	3.0975	3.0975	31.6
CO3--	0.0	0.0000	0.0000	0.0
SiO2	19.6	0.3262	0.0000	0.0

IONIC VOLUME = 0.11 CCM IONIC STRENGTH= 0.0140
TDS calc = 663 mg/l

Analytical checks and comparisons

Sum cations =	10.2445		Sum anions =	9.7886	
			BALANCE =	2.28 %	
TDS measured =	594	mg/l	%TDS(180) diff=	4.6 %	
TDS(180) calc =	567	mg/l			
TDS/Cond ratio=	0.68		Usual range	= 0.55 to 0.75	
Cond/Sum-cat =	85		Usual range	= 90 - 110	
Meas. Density =	1.0006		Calc. Density =	1.0006	
Meas. hardness=	305.00	mg/l CaCO3			
Calc. hardness=	305.26	mg/l CaCO3			
Na - Cl =	-0.965	meq/l	Usually positive		
Na - SO4 =	0.833	meq/l	Usually positive		
K/(Na + K) =	5.55	%	Usually < 20%		
Mg/(Mg+Ca) =	56.64	%	Usually < 40%		
Meas HCO3 =	189.0	mg/l	Meas CO3 =	0.0	mg/l
Calc HCO3 =	187.0	mg/l	Calc CO3 =	1.0	mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl =	0.0000	
SIO2/(Na+K-Cl)=	0.0000	
Mg-6*K =	2.0741	
SiO2/HCO3 =	0.1053	

Cl > Na EVAPORITE SOLUTION LIKELY; TDS>500
Ca > SO4
HCO3 < 10*SiO2
SiO2 > (Na+K-Cl)
SiO2 > 2*(Na+K-Cl) FERROMAGNESIAN MINERALS WEATHERED, CA FROM FELDSPAR

Sample 635

TempC =	20.0	pH =	7.8
TDS =	751.0	COND =	873.0
HARD =	524.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	23.0	1.0004	1.0004	8.6
K +	4.0	0.1023	0.1023	0.9
Ca++	116.0	2.8942	5.7884	50.0
Mg++	57.0	2.3445	4.6890	40.5
Cl-	23.0	0.6487	0.6487	7.0
SO4--	297.0	3.0918	6.1836	66.3
HCO3-	152.0	2.4911	2.4911	26.7
CO3--	0.0	0.0000	0.0000	0.0
SiO2	12.0	0.2000	0.0000	0.0

IONIC VOLUME = 0.02 CCM IONIC STRENGTH= 0.0188
TDS calc = 684 mg/l

Analytical checks and comparisons

Sum cations =	11.5802		Sum anions =	9.3235	
			BALANCE =	10.80 %	
TDS measured =	751	mg/l	%TDS(180) diff=	19.2 %	
TDS(180) calc =	607	mg/l			
TDS/Cond ratio=	0.86		Usual range =	0.55 to 0.75	
Cond/Sum-cat =	75		Usual range =	90 - 110	
Meas. Density =	1.0007		Calc. Density =	1.0007	
Meas. hardness=	524.00	mg/l CaCO3			
Calc. hardness=	524.33	mg/l CaCO3			
Na - Cl =	0.352	meq/l	Usually positive		
Na - SO4 =	-0.395	meq/l	Usually positive		
K/(Na + K) =	9.28	%	Usually < 20%		
Mg/(Mg+Ca) =	44.75	%	Usually < 40%		
Meas HCO3 =	152.0	mg/l	Meas CO3 =	0.0	mg/l
Calc HCO3 =	151.2	mg/l	Calc CO3 =	0.4	mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl =	0.4539
SIO2/(Na+K-Cl)=	0.4407
Mg-6*K =	4.0753
SiO2/HCO3 =	0.0803

ANION-CATION BALANCE ERROR >10%

Na > Cl
Ca > SO4
HCO3 > 10*SiO2 CARBONATE WEATHERING

Sample Packer Test 840'-937'

TempC =	20.0	pH =	8.0
TDS =	1580.0	COND =	1822.0
HARD =	1140.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	16.0	0.6959	0.6959	3.0
K +	3.2	0.0818	0.0818	0.3
Ca++	259.0	6.4621	12.9242	54.8
Mg++	120.0	4.9358	9.8717	41.9
Cl-	20.0	0.5641	0.5641	2.5
SO4--	940.0	9.7856	19.5711	87.3
HCO3-	139.0	2.2781	2.2781	10.2
CO3--	0.0	0.0000	0.0000	0.0
SiO2	9.8	0.1631	0.0000	0.0

IONIC VOLUME = -0.01 CCM IONIC STRENGTH= 0.0442
TDS calc = 1507 mg/l

Analytical checks and comparisons

Sum cations	=	23.5736		Sum anions	= 22.4133
				BALANCE	= 2.52 %
TDS measured	=	1580	mg/l	%TDS(180) diff	= 9.1 %
TDS(180) calc	=	1436	mg/l		
TDS/Cond ratio	=	0.87		Usual range	= 0.55 to 0.75
Cond/Sum-cat	=	77		Usual range	= 90 - 110
Meas. Density	=	1.0015		Calc. Density	= 1.0015
Meas. hardness	=	1140.00	mg/l CaCO3		
Calc. hardness	=	1140.79	mg/l CaCO3		
Na - Cl	=	0.132	meq/l	Usually positive	
Na - SO4	=	-6.647	meq/l	Usually positive	
K/(Na + K)	=	10.52	%	Usually < 20%	
Mg/(Mg+Ca)	=	43.30	%	Usually < 40%	
Meas HCO3	=	139.0	mg/l	Meas CO3	= 0.0 mg/l
Calc HCO3	=	137.9	mg/l	Calc CO3	= 0.6 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.2136
SIO2/(Na+K-Cl)	=	0.7634
Mg-6*K	=	9.3806
SiO2/HCO3	=	0.0716

Na	> Cl	
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHANG
HCO3	> 10*SiO2	CARBONATE WEATHERING

Sample Packer Test 895'-937'

TempC =	20.0	pH =	8.1
TDS =	171.0	COND =	1692.0
HARD =	1028.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	16.0	0.6959	0.6959	3.3
K +	3.3	0.0844	0.0844	0.4
Ca++	232.0	5.7884	11.5768	54.3
Mg++	109.0	4.4834	8.9668	42.1
Cl-	20.0	0.5641	0.5641	2.8
SO4--	846.0	8.8070	17.6140	86.8
HCO3-	129.0	2.1142	2.1142	10.4
CO3--	0.0	0.0000	0.0000	0.0
SiO2	9.9	0.1648	0.0000	0.0

IONIC VOLUME = -0.01 CCM IONIC STRENGTH= 0.0399
TDS calc = 1365 mg/l

Analytical checks and comparisons

Sum cations	=	21.3239		Sum anions	= 20.2923
				BALANCE	= 2.48 %
TDS measured	=	171	mg/l	%TDS(180) diff=	%-660.0 %
TDS(180) calc	=	1300	mg/l		
TDS/Cond ratio	=	0.10		Usual range	= 0.55 to 0.75
Cond/Sum-cat	=	79		Usual range	= 90 - 110
Meas. Density	=	1.0014		Calc. Density	= 1.0014
Meas. hardness	=	1028.00	mg/l CaCO3		
Calc. hardness	=	1028.08	mg/l CaCO3		
Na - Cl	=	0.132	meq/l	Usually positive	
Na - SO4	=	-6.037	meq/l	Usually positive	
K/(Na + K)	=	10.82	%	Usually < 20%	
Mg/(Mg+Ca)	=	43.65	%	Usually < 40%	
Meas HCO3	=	129.0	mg/l	Meas CO3	= 0.0 mg/l
Calc HCO3	=	127.7	mg/l	Calc CO3	= 0.7 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.2162
SIO2/(Na+K-Cl)	=	0.7621
Mg-6*K	=	8.4604
SiO2/HCO3	=	0.0779

Na	> Cl	
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHAN(
HCO3	> 10*SiO2	CARBONATE WEATHERING

Sample Suwannee Pumped Well

TempC =	20.0	pH =	7.8
TDS =	968.0	COND =	1196.0
HARD =	652.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	21.0	0.9134	0.9134	6.5
K +	3.3	0.0844	0.0844	0.6
Ca++	149.0	3.7176	7.4351	53.0
Mg++	68.0	2.7970	5.5939	39.9
Cl-	20.0	0.5641	0.5641	4.1
SO4--	514.0	5.3508	10.7016	78.1
HCO3-	149.0	2.4420	2.4420	17.8
CO3--	0.0	0.0000	0.0000	0.0
SiO2	10.6	0.1764	0.0000	0.0

IONIC VOLUME = 0.02 CCM IONIC STRENGTH= 0.0257
TDS calc = 935 mg/l

Analytical checks and comparisons

Sum cations	=	14.0269		Sum anions	= 13.7078
				BALANCE	= 1.15 %
TDS measured	=	968	mg/l	%TDS(180) diff	= 11.2 %
TDS(180) calc	=	859	mg/l		
TDS/Cond ratio	=	0.81		Usual range	= 0.55 to 0.75
Cond/Sum-cat	=	85		Usual range	= 90 - 110
Meas. Density	=	1.0009		Calc. Density	= 1.0009
Meas. hardness	=	652.00	mg/l CaCO3		
Calc. hardness	=	652.03	mg/l CaCO3		
Na - Cl	=	0.349	meq/l	Usually positive	
Na - SO4	=	-3.267	meq/l	Usually positive	
K/(Na + K)	=	8.46	%	Usually < 20%	
Mg/(Mg+Ca)	=	42.93	%	Usually < 40%	
Meas HCO3	=	149.0	mg/l	Meas CO3	= 0.0 mg/l
Calc HCO3	=	148.2	mg/l	Calc CO3	= 0.4 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.4337
SIO2/(Na+K-Cl)	=	0.4068
Mg-6*K	=	5.0876
SiO2/HCO3	=	0.0722

Na	> Cl	
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHAN
HCO3	> 10*SiO2	CARBONATE WEATHERING

Sample 1680

TempC =	20.0	pH =	7.8
TDS =	2359.0	COND =	2350.0
HARD =	1695.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	17.0	0.7394	0.7394	2.1
K +	4.9	0.1253	0.1253	0.4
Ca++	438.0	10.9281	21.8563	62.9
Mg++	146.0	6.0053	12.0105	34.6
Cl-	24.0	0.6770	0.6770	1.8
SO4--	1631.0	16.9790	33.9579	90.4
HCO3-	0.0	0.0000	0.0000	0.0
CO3--	88.0	1.4665	2.9329	7.8
SiO2	7.0	0.1165	0.0000	0.0

IONIC VOLUME = -0.07 CCM IONIC STRENGTH= 0.0715
TDS calc = 2356 mg/l

Analytical checks and comparisons

Sum cations	=	34.7315		Sum anions	= 37.5678
				BALANCE	= -3.92 %
TDS measured	=	2359	mg/l	%TDS(180) diff=	0.1 %
TDS(180) calc	=	2356	mg/l		
TDS/Cond ratio	=	1.00		Usual range	= 0.55 to 0.75
Cond/Sum-cat	=	68		Usual range	= 90 - 110
Meas. Density	=	1.0024		Calc. Density	= 1.0024
Meas. hardness	=	1695.00	mg/l CaCO3		
Calc. hardness	=	1694.83	mg/l CaCO3		
Na - Cl	=	0.062	meq/l	Usually positive	
Ca - SO4	=	%-12.102	meq/l	Usually positive	
K/(Na + K)	=	14.49	%	Usually < 20%	
Mg/(Mg+Ca)	=	35.46	%	Usually < 40%	
Meas HCO3	=	0.0	mg/l	Meas CO3	= 88.0 mg/l
Calc HCO3	=	178.0	mg/l	Calc CO3	= 0.5 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.1878
SIO2/(Na+K-Cl)	=	0.6204
Mg-6*K	=	11.2586
SiO2/HCO3	=	0.0000

Na	> Cl	
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHAN(
HCO3	< 10*SiO2	
SiO2	> (Na+K-Cl)	
SiO2	< 2*(Na+K-Cl)	and
SiO2	> (Na+K-Cl)	GRANITIC WEATHERING
		MG FROM BIOTITE
		CA FROM PLAGIOCLASE

Sample 1695

TempC =	20.0	pH =	7.9
TDS =	3116.0	COND =	2980.0
HARD =	2092.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	22.0	0.9569	0.9569	2.2
K +	4.0	0.1023	0.1023	0.2
Ca++	615.0	15.3443	30.6886	71.6
Mg++	135.0	5.5528	11.1056	25.9
Cl-	38.0	1.0718	1.0718	4.4
SO4--	1021.0	10.6288	21.2575	87.4
HCO3-	121.0	1.9831	1.9831	8.2
CO3--	0.0	0.0000	0.0000	0.0
SiO2	7.6	0.1265	0.0000	0.0

IONIC VOLUME = -0.17 CCM IONIC STRENGTH= 0.0651
TDS calc = 1964 mg/l

Analytical checks and comparisons

Sum cations	=	42.8534		Sum anions	= 24.3125
				BALANCE	= 27.60 %
TDS measured	=	3116	mg/l	%TDS(180) diff	= 39.0 %
TDS(180) calc	=	1902	mg/l		
TDS/Cond ratio	=	1.05		Usual range	= 0.55 to 0.75
Cond/Sum-cat	=	70		Usual range	= 90 - 110
Meas. Density	=	1.0029		Calc. Density	= 1.0021
Meas. hardness	=	2092.00	mg/l CaCO3		
Calc. hardness	=	2091.55	mg/l CaCO3		
Na - Cl	=	-0.115	meq/l	Usually positive	
a - SO4	=	9.431	meq/l	Usually positive	
K/(Na + K)	=	9.66	%	Usually < 20%	
Mg/(Mg+Ca)	=	26.57	%	Usually < 40%	
Meas HCO3	=	121.0	mg/l	Meas CO3	= 0.0 mg/l
Calc HCO3	=	120.2	mg/l	Calc CO3	= 0.4 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.0000
SIO2/(Na+K-Cl)	=	0.0000
Mg-6*K	=	10.4918
SiO2/HCO3	=	0.0638

ANION-CATION BALANCE ERROR >10%

Cl	> Na	EVAPORITE SOLUTION LIKELY; TDS>500
Ca	> SO4	
HCO3	> 10*SiO2	CARBONATE WEATHERING

Sample 1705

TempC =	20.0	pH =	7.5
TDS =	3937.0	COND =	4410.0
HARD =	2214.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	294.0	12.7876	12.7876	22.3
K +	14.0	0.3580	0.3580	0.6
Ca++	621.0	15.4940	30.9880	54.0
Mg++	161.0	6.6222	13.2445	23.1
Cl-	510.0	14.3852	14.3852	24.9
SO4--	1992.0	20.7370	41.4741	71.7
HCO3-	123.0	2.0159	2.0159	3.5
CO3--	0.0	0.0000	0.0000	0.0
SiO2	10.8	0.1797	0.0000	0.0

IONIC VOLUME = 0.18 CCM IONIC STRENGTH= 0.1005
TDS calc = 3726 mg/l

Analytical checks and comparisons

Sum cations	=	57.3782		Sum anions	= 57.8752
				BALANCE	= -0.43 %
TDS measured	=	3937	mg/l	%TDS(180) diff=	7.0 %
TDS(180) calc	=	3663	mg/l		
TDS/Cond ratio	=	0.89		Usual range	= 0.55 to 0.75
Cond/Sum-cat	=	77		Usual range	= 90 - 110
Meas. Density	=	1.0036		Calc. Density	= 1.0035
Meas. hardness	=	2214.00	mg/l CaCO3		
Calc. hardness	=	2213.57	mg/l CaCO3		
Na - Cl	=	-1.598	meq/l	Usually positive	
a - SO4	=	%-10.486	meq/l	Usually positive	
K/(Na + K)	=	2.72	%	Usually < 20%	
Mg/(Mg+Ca)	=	29.94	%	Usually < 40%	
Meas HCO3	=	123.0	mg/l	Meas CO3	= 0.0 mg/l
Calc HCO3	=	122.7	mg/l	Calc CO3	= 0.2 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.0000
SIO2/(Na+K-Cl)	=	0.0000
Mg-6*K	=	11.0963
SiO2/HCO3	=	0.0892

Cl	> Na	EVAPORITE SOLUTION LIKELY; TDS>500
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHAN(
HCO3	> 10*SiO2	CARBONATE WEATHERING

Sample 1725

TempC =	20.0	pH =	7.5
TDS =	5911.0	COND =	7540.0
HARD =	2551.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	835.0	36.3186	36.3186	41.2
K +	33.0	0.8439	0.8439	1.0
Ca++	705.0	17.5898	35.1796	39.9
Mg++	192.0	7.8973	15.7947	17.9
Cl-	1610.0	45.4122	45.4122	46.9
SO4--	2370.0	24.6721	49.3442	51.0
HCO3-	123.0	2.0159	2.0159	2.1
CO3--	0.0	0.0000	0.0000	0.0
SiO2	9.8	0.1631	0.0000	0.0

IONIC VOLUME = 0.70 CCM IONIC STRENGTH= 0.1426
TDS calc = 5878 mg/l

Analytical checks and comparisons

Sum cations =	88.1368	Sum anions =	96.7723
		BALANCE =	-4.67 %
TDS measured =	5911 mg/l	%TDS(180) diff=	1.6 %
TDS(180) calc =	5815 mg/l		
TDS/Cond ratio=	0.78	Usual range	= 0.55 to 0.75
Cond/Sum-cat =	86	Usual range	= 90 - 110
Meas. Density =	1.0052	Calc. Density =	1.0052
Meas. hardness=	2551.00 mg/l CaCO3		
Calc. hardness=	2550.96 mg/l CaCO3		
Na - Cl =	-9.094 meq/l	Usually positive	
a - SO4 =	%-14.165 meq/l	Usually positive	
K/(Na + K) =	2.27 %	Usually < 20%	
Mg/(Mg+Ca) =	30.99 %	Usually < 40%	
Meas HCO3 =	123.0 mg/l	Meas CO3 =	0.0 mg/l
Calc HCO3 =	122.7 mg/l	Calc CO3 =	0.2 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl =	0.0000
SIO2/(Na+K-Cl)=	0.0000
Mg-6*K =	10.7310
SiO2/HCO3 =	0.0809

Cl	> Na	EVAPORITE SOLUTION LIKELY; TDS>500
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHAN(
HCO3	> 10*SiO2	CARBONATE WEATHERING

Sample 1745

TempC =	20.0	pH =	7.4
TDS =	6751.0	COND =	8380.0
HARD =	2803.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	1090.0	47.4099	47.4099	45.3
K +	43.0	1.0997	1.0997	1.1
Ca++	775.0	19.3363	38.6727	37.0
Mg++	212.0	8.7200	17.4399	16.7
Cl-	1909.0	53.8459	53.8459	51.8
SO4--	2333.0	24.2869	48.5738	46.7
HCO3-	94.0	1.5406	1.5406	1.5
CO3--	0.0	0.0000	0.0000	0.0
SiO2	9.8	0.1631	0.0000	0.0

IONIC VOLUME = 0.78 CCM IONIC STRENGTH= 0.1566
TDS calc = 6466 mg/l

Analytical checks and comparisons

Sum cations	=	104.6222	Sum anions	=	103.9603
			BALANCE	=	0.32 %
TDS measured	=	6751 mg/l	%TDS(180) diff	=	4.9 %
TDS(180) calc	=	6418 mg/l			
TDS/Cond ratio	=	0.81	Usual range	=	0.55 to 0.75
Cond/Sum-cat	=	80	Usual range	=	90 - 110
Meas. Density	=	1.0057	Calc. Density	=	1.0057
Meas. hardness	=	2803.00 mg/l CaCO3			
Calc. hardness	=	2808.10 mg/l CaCO3			
Na - Cl	=	-6.436 meq/l	Usually positive		
a - SO4	=	-9.901 meq/l	Usually positive		
K/(Na + K)	=	2.27 %	Usually < 20%		
Mg/(Mg+Ca)	=	31.08 %	Usually < 40%		
Meas HCO3	=	94.0 mg/l	Meas CO3	=	0.0 mg/l
Calc HCO3	=	93.8 mg/l	Calc CO3	=	0.1 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.0000
SIO2/(Na+K-Cl)	=	0.0000
Mg-6*K	=	10.8418
SiO2/HCO3	=	0.1059

Cl	> Na	EVAPORITE SOLUTION LIKELY; TDS>500
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHAN(
HCO3	< 10*SiO2	
SiO2	> (Na+K-Cl)	
SiO2	> 2*(Na+K-Cl)	FERROMAGNESIAN MINERALS WEATHERED, CA FROM FELDSPAR

Sample 1760

TempC =	20.0	pH =	7.4
TDS =	7300.0	COND =	8740.0
HARD =	2933.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	1244.0	54.1081	54.1081	47.5
K +	48.0	1.2276	1.2276	1.1
Ca++	807.0	20.1347	40.2695	35.3
Mg++	223.0	9.1724	18.3449	16.1
Cl-	2087.0	58.8667	58.8667	52.6
SO4--	2455.0	25.5569	51.1139	45.6
HCO3-	123.0	2.0159	2.0159	1.8
CO3--	0.0	0.0000	0.0000	0.0
SiO2	9.2	0.1531	0.0000	0.0

IONIC VOLUME = 0.87 CCM IONIC STRENGTH= 0.1678
TDS calc = 6996 mg/l

Analytical checks and comparisons

Sum cations	=	113.9500	Sum anions	=	111.9964
			BALANCE	=	0.86 %
TDS measured	=	7300 mg/l	%TDS(180) diff	=	5.0 %
TDS(180) calc	=	6934 mg/l			
TDS/Cond ratio	=	0.84	Usual range	=	0.55 to 0.75
Cond/Sum-cat	=	77	Usual range	=	90 - 110
Meas. Density	=	1.0062	Calc. Density	=	1.0061
Meas. hardness	=	2933.00 mg/l CaCO3			
Calc. hardness	=	2933.29 mg/l CaCO3			
Na - Cl	=	-4.759 meq/l	Usually positive		
Na - SO4	=	%-10.844 meq/l	Usually positive		
K/(Na + K)	=	2.22 %	Usually < 20%		
Mg/(Mg+Ca)	=	31.30 %	Usually < 40%		
Meas HCO3	=	123.0 mg/l	Meas CO3	=	0.0 mg/l
Calc HCO3	=	122.7 mg/l	Calc CO3	=	0.1 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.0000
SIO2/(Na+K-Cl)	=	0.0000
Mg-6*K	=	10.9795
SiO2/HCO3	=	0.0759

Na	> Cl	
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHAN(
HCO3	> 10*SiO2	CARBONATE WEATHERING

Sample 1780

TempC =	20.0	pH =	7.2
TDS =	54000.0	COND =	94300.0
HARD =	9202.0	DENS =	0.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	15524.0	675.2208	675.2208	77.1
K +	634.0	16.2140	16.2140	1.9
Ca++	1650.0	41.1677	82.3353	9.4
Mg++	1234.0	50.7568	101.5137	11.6
Cl-	29030.0	818.8306	818.8306	88.6
SO4--	4845.0	50.4372	100.8745	10.9
HCO3-	264.0	4.3267	4.3267	0.5
CO3--	0.0	0.0000	0.0000	0.0
SiO2	10.4	0.1731	0.0000	0.0

IONIC VOLUME = 12.99 CCM IONIC STRENGTH= 1.0420
TDS calc = 53191 mg/l

Analytical checks and comparisons

Sum cations =	875.2838	Sum anions =	924.0317
		BALANCE =	-2.71 %
TDS measured =	54000 mg/l	%TDS(180) diff=	1.7 %
TDS(180) calc =	53057 mg/l		
TDS/Cond ratio=	0.57	Usual range	= 0.55 to 0.75
Cond/Sum-cat =	108	Usual range	= 90 - 110
Meas. Density =	0.0000	Calc. Density =	1.0402
Meas. hardness=	9202.00 mg/l CaCO3		
Calc. hardness=	9200.54 mg/l CaCO3		
Na - Cl =	%-143.610 meq/l	Usually positive	
a - SO4 =	%-18.539 meq/l	Usually positive	
K/(Na + K) =	2.34 %	Usually < 20%	
Mg/(Mg+Ca) =	55.22 %	Usually < 40%	
Meas HCO3 =	264.0 mg/l	Meas CO3 =	0.0 mg/l
Calc HCO3 =	263.7 mg/l	Calc CO3 =	0.2 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl =	0.0000
SIO2/(Na+K-Cl)=	0.0000
Mg-6*K =	4.2296
SiO2/HCO3 =	0.0400

Cl	> Na	EVAPORITE SOLUTION LIKELY; TDS>500
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHAN
HCO3	> 10*SiO2	CARBONATE WEATHERING

Sample 1790

TempC =	20.0	pH =	7.2
TDS =	55190.0	COND =	88250.0
HARD =	10104.0	DENS =	0.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	16035.0	697.4468	697.4468	76.1
K +	680.0	17.3904	17.3904	1.9
Ca++	1840.0	45.9082	91.8164	10.0
Mg++	1338.0	55.0345	110.0691	12.0
Cl-	28670.0	808.6763	808.6763	89.2
SO4--	4469.0	46.5230	93.0460	10.3
HCO3-	279.0	4.5726	4.5726	0.5
CO3--	0.0	0.0000	0.0000	0.0
SiO2	8.6	0.1431	0.0000	0.0

IONIC VOLUME = 12.56 CCM IONIC STRENGTH= 1.0590
TDS calc = 53320 mg/l

Analytical checks and comparisons

Sum cations	=	916.7227		Sum anions	= 906.2949
				BALANCE	= 0.57 %
TDS measured	=	55190	mg/l	%TDS(180) diff	= 3.6 %
TDS(180) calc	=	53178	mg/l		
TDS/Cond ratio	=	0.63		Usual range	= 0.55 to 0.75
Cond/Sum-cat	=	96		Usual range	= 90 - 110
Meas. Density	=	0.0000		Calc. Density	= 1.0408
Meas. hardness	=	%10104.00	mg/l CaCO3		
Calc. hardness	=	%10103.16	mg/l CaCO3		
Na - Cl	=	%-111.229	meq/l	Usually positive	
Na - SO4	=	-1.230	meq/l	Usually positive	
K/(Na + K)	=	2.43	%	Usually < 20%	
Mg/(Mg+Ca)	=	54.52	%	Usually < 40%	
Meas HCO3	=	279.0	mg/l	Meas CO3	= 0.0 mg/l
Calc HCO3	=	278.6	mg/l	Calc CO3	= 0.2 mg/l

SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.0000
SIO2/(Na+K-Cl)	=	0.0000
Mg-6*K	=	5.7266
SiO2/HCO3	=	0.0313

Cl	> Na	EVAPORITE SOLUTION LIKELY; TDS>500
Ca	> SO4	
HCO3	> 10*SiO2	CARBONATE WEATHERING

Sample 1795 packer test

TempC =	20.0	pH =	7.2
TDS =	11530.0	COND =	22280.0
HARD =	3349.0	DENS =	1.0

	mg/l	mmole/l	meq/l	% meq/l
Na+	3670.0	159.6277	159.6277	69.2
K +	163.0	4.1686	4.1686	1.8
Ca++	716.0	17.8643	35.7285	15.5
Mg++	379.0	15.5890	31.1780	13.5
Cl-	6532.0	184.2439	184.2439	81.2
SO4--	1965.0	20.4560	40.9119	18.0
HCO3-	98.0	1.6061	1.6061	0.7
CO3--	0.0	0.0000	0.0000	0.0
SiO2	4.1	0.0682	0.0000	0.0

IONIC VOLUME = 2.82 CCM IONIC STRENGTH= 0.2826
TDS calc = 13527 mg/l

Analytical checks and comparisons

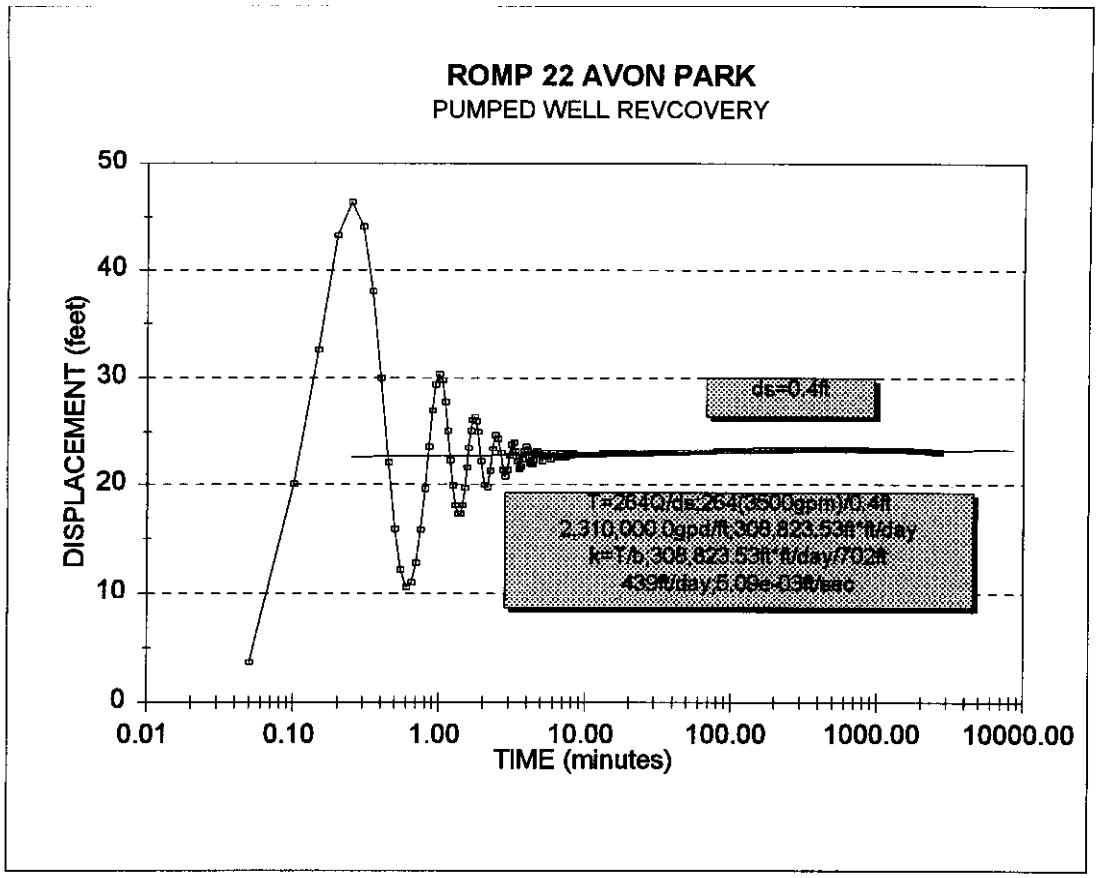
Sum cations	=	230.7028		Sum anions	= 226.7620
				BALANCE	= 0.86 %
TDS measured	=	11530	mg/l	%TDS(180) diff=	-16.9 %
TDS(180) calc	=	13477	mg/l		
TDS/Cond ratio	=	0.52		Usual range	= 0.55 to 0.75
Cond/Sum-cat	=	97		Usual range	= 90 - 110
Meas. Density	=	1.0109		Calc. Density	= 1.0107
Meas. hardness	=	3349.00	mg/l CaCO3		
Calc. hardness	=	3348.27	mg/l CaCO3		
Na - Cl	=	%-24.616	meq/l	Usually positive	
a - SO4	=	-5.183	meq/l	Usually positive	
K/(Na + K)	=	2.54	%	Usually < 20%	
Mg/(Mg+Ca)	=	46.60	%	Usually < 40%	
Meas HCO3	=	98.0	mg/l	Meas CO3	= 0.0 mg/l
Calc HCO3	=	97.9	mg/l	Calc CO3	= 0.1 mg/l

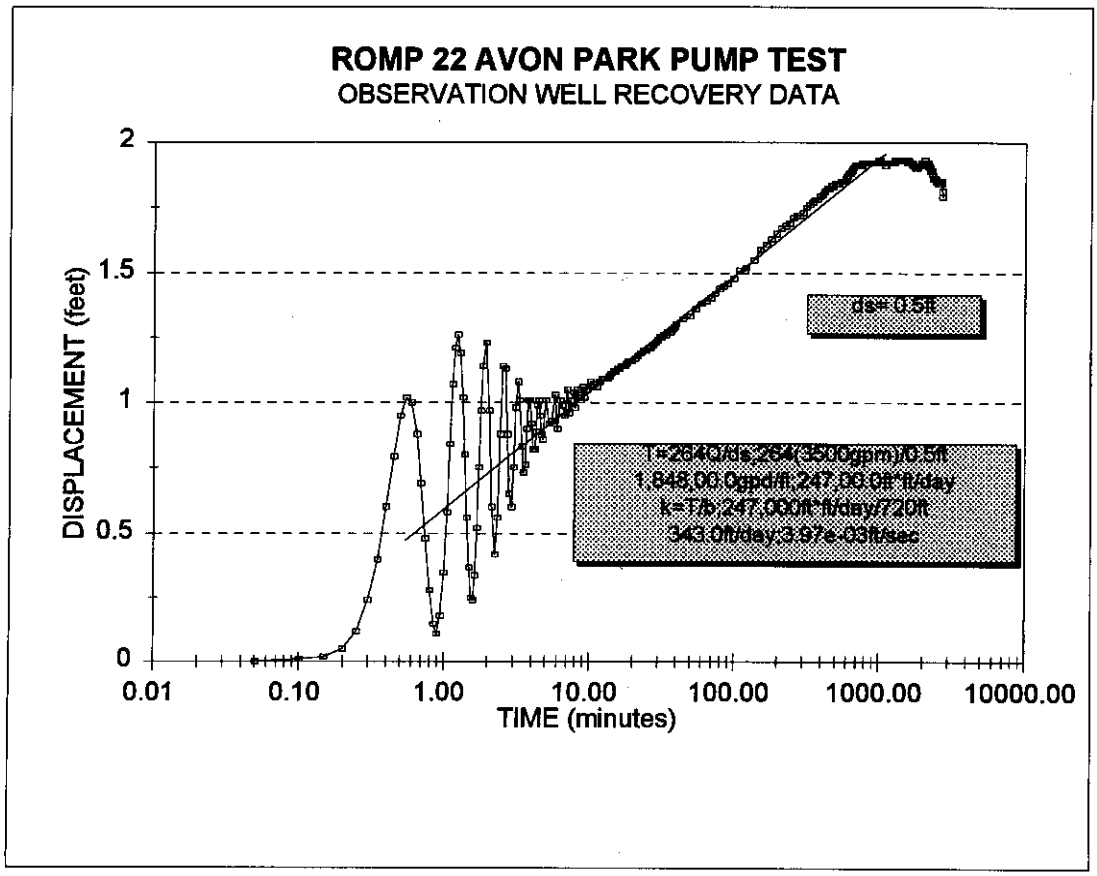
SOURCE ROCK ESTIMATE

Na+K-Cl	=	0.0000
SIO2/(Na+K-Cl)	=	0.0000
Mg-6*K	=	6.1665
SiO2/HCO3	=	0.0425

Cl	> Na	EVAPORITE SOLUTION LIKELY; TDS>500
SO4	> Ca	CA REMOVAL LIKELY, EITHER CALCITE PPTN OR ION EXCHAN(
HCO3	> 10*SiO2	CARBONATE WEATHERING

APPENDIX E


ROMP 22 AVON PARK
PUMPED WELL REVCOVERY
DISPLACEMENT (feet)
50
40
30
20
10
0
0.01
0.10
1.00
10.00
100.00
1000.00
10000.00
TIME (minutes)
ds=0.4ft
T=264Q/ds;264(3500gpm)/0.4ft
2,310,000.0gpd/ft;308,823.53ft²/day
k=T/b;308,823.53ft²/day/702ft
439ft/day;5.08e-03ft/sec


ROMP 22 AVON PARK PUMP TEST
OBSERVATION WELL RECOVERY DATA
DISPLACEMENT (feet)
2
1.5
1
0.5
0
0.01
0.10
1.00
10.00
100.00
1000.00
10000.00
TIME (minutes)
ds= 0.5ft
T=264Q/ds;264(3500gpm)/0.5ft
1,848,00.0gpd/ft;247,00.0ft²/day
k=T/b;247,000ft²/day/720ft
343.0ft/day;3.97e-03ft/sec

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
04-13-94	07:28:00	0.311										0
	07:33:01	0.315		0.00	31.31	14.91	22.77	21.02		89.40		0.00
	07:33:04	0.315	0.00	0.00	31.31	14.91	22.77	21.03	0.00	89.40	0.00	0.00
	07:33:07	0.315	0.05	0.00	31.31	14.91	22.77	21.03	0.00	71.20	-18.20	0.00
	07:33:10	0.315	0.10	0.00	31.31	14.91	22.77	21.02	-0.01	72.50	-16.90	0.00
	07:33:13	0.315	0.15	0.00	31.31	14.91	22.77	21.00	-0.03	61.20	-28.20	0.00
	07:33:16	0.315	0.20	0.00	31.30	14.90	22.77	20.97	-0.06	51.90	-37.50	0.00
	07:33:19	0.315	0.25	0.00	31.31	14.91	22.77	20.89	-0.14	48.40	-41.00	0.00
	07:33:22	0.315	0.30	0.00	31.30	14.90	22.77	20.77	-0.26	50.10	-39.30	0.00
	07:33:25	0.315	0.35	0.00	31.31	14.91	22.78	20.63	-0.40	55.30	-34.10	0.00
	07:33:28	0.315	0.40	0.00	31.31	14.91	22.78	20.47	-0.56	60.80	-28.60	0.00
	07:33:31	0.315	0.45	0.00	31.31	14.91	22.78	20.34	-0.69	64.50	-24.90	0.00
	07:33:34	0.315	0.50	0.00	31.31	14.91	22.78	20.24	-0.79	67.50	-21.90	0.00
	07:33:37	0.315	0.55	0.00	31.31	14.91	22.78	20.21	-0.82	68.40	-21.00	0.00
	07:33:40	0.315	0.60	0.00	31.31	14.91	22.78	20.22	-0.81	69.20	-20.20	0.00
	07:33:43	0.315	0.65	0.00	31.31	14.91	22.78	20.29	-0.74	70.00	-19.40	0.00
	07:33:46	0.315	0.70	0.00	31.30	14.91	22.78	20.40	-0.63	69.80	-19.60	0.00
	07:33:49	0.315	0.75	0.00	31.31	14.91	22.78	20.50	-0.53	69.30	-20.10	0.00
	07:33:52	0.315	0.80	0.00	31.30	14.91	22.78	20.58	-0.45	68.40	-21.00	0.00
	07:33:55	0.315	0.85	0.00	31.30	14.91	22.78	20.61	-0.42	67.80	-21.60	0.00
	07:33:58	0.315	0.90	0.00	31.30	14.91	22.78	20.60	-0.43	67.30	-22.10	0.00
	07:34:01	0.315	0.95	0.00	31.30	14.91	22.78	20.54	-0.49	67.00	-22.40	0.00
	07:34:04	0.315	1.00	0.00	31.30	14.91	22.78	20.44	-0.59	67.00	-22.40	0.00
	07:34:07	0.315	1.05	0.00	31.30	14.91	22.78	20.32	-0.71	67.10	-22.30	0.00
	07:34:10	0.315	1.10	0.00	31.31	14.91	22.78	20.22	-0.81	67.40	-22.00	0.00
	07:34:13	0.315	1.15	0.00	31.30	14.91	22.78	20.14	-0.89	67.50	-21.90	0.00
	07:34:16	0.315	1.20	0.00	31.30	14.91	22.78	20.10	-0.93	67.70	-21.70	0.00
	07:34:19	0.315	1.25	0.00	31.30	14.91	22.78	20.12	-0.91	67.60	-21.80	0.00
	07:34:22	0.316	1.30	0.00	31.30	14.91	22.78	20.17	-0.86	67.40	-22.00	0.00
	07:34:25	0.316	1.35	0.00	31.30	14.91	22.78	20.25	-0.78	67.60	-21.80	0.00
	07:34:28	0.316	1.40	0.00	31.31	14.92	22.78	20.35	-0.68	67.70	-21.70	0.00
	07:34:31	0.316	1.45	0.00	31.30	14.91	22.78	20.41	-0.62	67.60	-21.80	0.00
	07:34:34	0.316	1.50	0.00	31.30	14.91	22.78	20.45	-0.58	67.60	-21.80	0.00
	07:34:37	0.316	1.55	0.00	31.31	14.92	22.78	20.44	-0.59	67.40	-22.00	0.00
	07:34:40	0.316	1.60	0.00	31.31	14.92	22.78	20.40	-0.63	67.40	-22.00	0.00
	07:34:43	0.316	1.65	0.00	31.31	14.92	22.78	20.33	-0.70	67.40	-22.00	0.00
	07:34:46	0.316	1.70	0.00	31.31	14.92	22.78	20.24	-0.79	67.40	-22.00	0.00
	07:34:49	0.316	1.75	0.00	31.31	14.92	22.78	20.15	-0.88	67.40	-22.00	0.00
	07:34:52	0.316	1.80	0.00	31.31	14.92	22.78	20.09	-0.94	67.20	-22.20	0.00
	07:34:55	0.316	1.85	0.00	31.31	14.92	22.78	20.07	-0.96	67.40	-22.00	0.00
	07:34:58	0.316	1.90	0.00	31.31	14.92	22.78	20.08	-0.95	67.40	-22.00	0.00
	07:35:01	0.316	1.95	0.00	31.31	14.92	22.78	20.12	-0.91	67.30	-22.10	0.00
	07:35:07	0.316	2.05	0.00	31.30	14.92	22.78	20.25	-0.78	67.20	-22.20	0.00

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	07:35:13	0.316	2.15	0.00	31.31	14.92	22.78	20.34	-0.69	67.00	-22.40	0.00
	07:35:19	0.316	2.25	0.00	31.30	14.92	22.78	20.30	-0.73	67.00	-22.40	0.00
	07:35:25	0.316	2.35	0.00	31.30	14.92	22.78	20.18	-0.85	67.00	-22.40	0.00
	07:35:31	0.316	2.45	0.00	31.30	14.92	22.78	20.07	-0.96	67.10	-22.30	0.00
	07:35:37	0.316	2.55	0.00	31.30	14.92	22.78	20.06	-0.97	67.00	-22.40	0.00
	07:35:43	0.316	2.65	0.00	31.31	14.92	22.78	20.14	-0.89	67.10	-22.30	0.00
	07:35:49	0.317	2.75	0.00	31.31	14.93	22.78	20.23	-0.80	66.80	-22.60	0.00
	07:35:55	0.317	2.85	0.00	31.30	14.92	22.78	20.26	-0.77	67.10	-22.30	0.00
	07:36:01	0.317	2.95	0.00	31.31	14.93	22.78	20.19	-0.84	67.10	-22.30	0.00
	07:36:07	0.317	3.05	0.00	31.31	14.93	22.78	20.09	-0.94	67.10	-22.30	0.00
	07:36:13	0.317	3.15	0.00	31.31	14.93	22.78	20.04	-0.99	67.00	-22.40	0.00
	07:36:19	0.317	3.25	0.00	31.31	14.93	22.78	20.07	-0.96	67.00	-22.40	0.00
	07:36:25	0.317	3.35	0.00	31.31	14.93	22.78	20.15	-0.88	67.00	-22.40	0.00
	07:36:31	0.317	3.45	0.00	31.31	14.93	22.78	20.20	-0.83	67.10	-22.30	0.00
	07:36:37	0.317	3.55	0.00	31.31	14.93	22.78	20.18	-0.85	67.00	-22.40	0.00
	07:36:43	0.317	3.65	0.00	31.31	14.93	22.78	20.11	-0.92	67.00	-22.40	0.00
	07:36:49	0.317	3.75	0.00	31.31	14.93	22.78	20.04	-0.99	66.80	-22.60	0.00
	07:36:55	0.317	3.85	0.00	31.31	14.93	22.78	20.03	-1.00	67.10	-22.30	0.00
	07:37:01	0.317	3.95	0.00	31.31	14.93	22.78	20.08	-0.95	67.00	-22.40	0.00
	07:37:07	0.317	4.05	0.00	31.31	14.93	22.78	20.14	-0.89	67.10	-22.30	0.00
	07:37:13	0.318	4.15	0.00	31.31	14.93	22.78	20.15	-0.88	67.00	-22.40	0.00
	07:37:19	0.318	4.25	0.00	31.31	14.93	22.78	20.11	-0.92	67.00	-22.40	0.00
	07:37:25	0.318	4.35	0.00	31.31	14.93	22.78	20.05	-0.98	67.10	-22.30	0.00
	07:37:31	0.318	4.45	0.00	31.31	14.93	22.78	20.02	-1.01	67.10	-22.30	0.00
	07:37:37	0.318	4.55	0.00	31.31	14.93	22.78	20.03	-1.00	67.00	-22.40	0.00
	07:37:43	0.318	4.65	0.00	31.31	14.93	22.78	20.08	-0.95	67.00	-22.40	0.00
	07:37:49	0.318	4.75	0.00	31.31	14.93	22.78	20.11	-0.92	66.90	-22.50	0.00
	07:37:55	0.318	4.85	0.00	31.31	14.93	22.78	20.10	-0.93	67.00	-22.40	0.00
	07:38:01	0.318	4.95	0.00	31.31	14.93	22.78	20.06	-0.97	67.20	-22.20	0.00
	07:38:16	0.318	5.20	0.00	31.31	14.93	22.78	20.02	-1.01	67.10	-22.30	0.00
	07:38:31	0.318	5.45	0.00	31.31	14.94	22.78	20.08	-0.95	67.10	-22.30	0.00
	07:38:46	0.319	5.70	0.00	31.31	14.94	22.78	20.01	-1.02	67.20	-22.20	0.00
	07:39:01	0.319	5.95	0.00	31.31	14.94	22.78	20.03	-1.00	67.00	-22.40	0.00
	07:39:16	0.319	6.20	0.00	31.31	14.94	22.78	20.03	-1.00	67.20	-22.20	0.00
	07:39:31	0.319	6.45	0.00	31.31	14.94	22.78	19.99	-1.04	67.20	-22.20	0.00
	07:39:46	0.319	6.70	0.00	31.31	14.94	22.78	20.03	-1.00	67.10	-22.30	0.00
	07:40:01	0.319	6.95	0.00	31.31	14.94	22.78	19.99	-1.04	67.10	-22.30	0.00
	07:40:16	0.320	7.20	0.00	31.31	14.94	22.78	19.99	-1.04	67.00	-22.40	0.00
	07:40:31	0.320	7.45	0.00	31.31	14.94	22.78	20.00	-1.03	67.10	-22.30	0.00
	07:40:46	0.320	7.70	0.00	31.31	14.94	22.78	19.96	-1.07	67.20	-22.20	0.00
	07:41:01	0.320	7.95	0.00	31.31	14.94	22.78	19.98	-1.05	67.10	-22.30	0.00
	07:41:16	0.320	8.20	0.00	31.31	14.94	22.78	19.97	-1.06	67.10	-22.30	0.00
	07:41:31	0.320	8.45	0.00	31.31	14.94	22.78	19.96	-1.07	67.20	-22.20	0.00

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	07:41:46	0.321	8.70	0.00	31.31	14.94	22.78	19.97	-1.06	67.10	-22.30	0.00
	07:42:01	0.321	8.95	0.00	31.31	14.94	22.78	19.95	-1.08	67.00	-22.40	0.00
	07:42:16	0.321	9.20	0.00	31.31	14.94	22.78	19.96	-1.07	67.10	-22.30	0.00
	07:42:31	0.321	9.45	0.00	31.31	14.94	22.78	19.95	-1.08	67.10	-22.30	0.00
	07:42:46	0.321	9.70	0.00	31.32	14.95	22.78	19.94	-1.09	67.20	-22.20	0.00
	07:43:01	0.322	9.95	0.00	31.31	14.94	22.78	19.94	-1.09	66.90	-22.50	0.00
	07:43:31	0.322	10.45	0.00	31.32	14.95	22.78	19.93	-1.10	67.10	-22.30	0.00
	07:44:01	0.322	10.95	0.00	31.32	14.95	22.78	19.92	-1.11	67.10	-22.30	0.00
	07:44:31	0.323	11.45	0.00	31.31	14.95	22.78	19.91	-1.12	67.20	-22.20	0.00
	07:45:01	0.323	11.95	0.00	31.31	14.95	22.78	19.91	-1.12	67.20	-22.20	0.00
	07:45:31	0.323	12.45	0.00	31.32	14.95	22.78	19.90	-1.13	67.10	-22.30	0.00
	07:46:01	0.324	12.95	0.00	31.31	14.95	22.78	19.89	-1.14	67.20	-22.20	0.00
	07:46:31	0.324	13.45	0.00	31.31	14.95	22.78	19.89	-1.14	66.90	-22.50	0.00
	07:47:01	0.324	13.95	0.00	31.32	14.95	22.78	19.88	-1.15	67.10	-22.30	0.00
	07:47:31	0.325	14.45	0.00	31.32	14.95	22.78	19.87	-1.16	67.10	-22.30	0.00
	07:48:01	0.325	14.95	0.00	31.32	14.95	22.77	19.86	-1.17	66.90	-22.50	0.00
	07:48:31	0.325	15.45	0.00	31.32	14.95	22.77	19.86	-1.17	67.10	-22.30	0.00
	07:49:01	0.326	15.95	0.00	31.31	14.95	22.77	19.85	-1.18	67.10	-22.30	0.00
	07:49:31	0.326	16.45	0.00	31.32	14.95	22.77	19.85	-1.18	67.20	-22.20	0.00
	07:50:01	0.326	16.95	0.00	31.32	14.95	22.77	19.84	-1.19	67.20	-22.20	0.00
	07:50:31	0.327	17.45	0.00	31.32	14.95	22.77	19.83	-1.20	67.20	-22.20	0.00
	07:51:01	0.327	17.95	0.00	31.32	14.95	22.77	19.83	-1.20	67.10	-22.30	0.00
	07:51:31	0.327	18.45	0.00	31.32	14.95	22.76	19.83	-1.20	66.80	-22.60	0.00
	07:52:01	0.328	18.95	0.00	31.32	14.95	22.76	19.82	-1.21	67.00	-22.40	0.00
	07:52:31	0.328	19.45	0.00	31.32	14.95	22.76	19.82	-1.21	67.20	-22.20	0.00
	07:53:01	0.328	19.95	0.00	31.32	14.95	22.76	19.81	-1.22	67.10	-22.30	0.00
	07:54:01	0.329	20.95	0.00	31.32	14.95	22.76	19.80	-1.23	66.90	-22.50	0.00
	07:55:01	0.330	21.95	0.00	31.32	14.95	22.75	19.79	-1.24	67.10	-22.30	0.00
	07:56:01	0.331	22.95	0.00	31.32	14.95	22.75	19.78	-1.25	67.00	-22.40	0.00
	07:57:01	0.331	23.95	0.00	31.32	14.95	22.75	19.77	-1.26	67.10	-22.30	0.00
	07:58:01	0.332	24.95	0.00	31.32	14.95	22.74	19.77	-1.26	67.10	-22.30	0.00
	07:59:01	0.333	25.95	0.00	31.32	14.95	22.74	19.76	-1.27	67.10	-22.30	0.00
	08:00:01	0.333	26.95	0.00	31.32	14.95	22.74	19.76	-1.27	67.00	-22.40	0.00
	08:01:01	0.334	27.95	0.00	31.32	14.95	22.73	19.75	-1.28	67.00	-22.40	0.00
	08:02:01	0.335	28.95	0.00	31.32	14.95	22.73	19.74	-1.29	67.00	-22.40	0.00
	08:03:01	0.335	29.95	0.00	31.32	14.95	22.73	19.73	-1.30	67.00	-22.40	0.00
	08:04:01	0.336	30.95	0.00	31.32	14.95	22.73	19.73	-1.30	67.10	-22.30	0.00
	08:05:01	0.337	31.95	0.00	31.32	14.95	22.72	19.71	-1.32	67.00	-22.40	0.00
	08:06:01	0.338	32.95	0.00	31.32	14.95	22.72	19.71	-1.32	67.00	-22.40	0.00
	08:07:01	0.338	33.95	0.00	31.32	14.95	22.72	19.70	-1.33	67.00	-22.40	0.00
	08:08:01	0.339	34.95	0.00	31.32	14.95	22.72	19.70	-1.33	67.10	-22.30	0.00
	08:09:01	0.340	35.95	0.00	31.32	14.95	22.71	19.70	-1.33	66.90	-22.50	0.00
	08:10:01	0.340	36.95	0.00	31.32	14.95	22.71	19.69	-1.34	67.10	-22.30	0.00

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	08:11:01	0.341	37.95	0.00	31.32	14.95	22.71	19.68	-1.35	67.10	-22.30	0.00
	08:12:01	0.342	38.95	0.00	31.32	14.94	22.70	19.68	-1.35	67.10	-22.30	0.00
	08:13:01	0.342	39.95	0.00	31.33	14.95	22.70	19.67	-1.36	67.10	-22.30	0.00
	09:03:01	0.377	89.95	0.00	31.33	14.85	22.54	19.48	-1.55	67.00	-22.40	0.00
	10:07:00	0.422	153.93	0.00	31.25	14.67	22.36	19.32	-1.71	67.10	-22.30	0.00
	10:22:00	0.432	168.93	0.00	31.24	14.63	22.33	19.29	-1.74	67.10	-22.30	0.00
	10:37:00	0.442	183.93	0.00	31.23	14.58	22.27	19.26	-1.77	66.90	-22.50	0.00
	10:52:00	0.453	198.93	0.00	31.23	14.57	22.25	19.23	-1.80	67.10	-22.30	0.00
	11:07:00	0.463	213.93	0.00	31.20	14.52	22.21	19.21	-1.82	67.10	-22.30	0.00
	11:22:00	0.474	228.93	0.00	31.20	14.51	22.19	19.19	-1.84	67.10	-22.30	0.00
	11:37:00	0.484	243.93	0.00	31.18	14.48	22.20	19.16	-1.87	67.00	-22.40	0.00
	11:52:00	0.494	258.93	0.00	31.18	14.45	22.14	19.14	-1.89	67.20	-22.20	0.00
	12:07:00	0.505	273.93	0.00	31.18	14.43	22.12	19.13	-1.90	67.10	-22.30	0.00
	12:22:00	0.515	288.93	0.00	31.16	14.40	22.09	19.10	-1.93	67.10	-22.30	0.00
	12:37:00	0.526	303.93	0.00	31.14	14.38	22.10	19.08	-1.95	67.00	-22.40	0.00
	12:52:00	0.536	318.93	0.00	31.13	14.35	22.04	19.06	-1.97	67.00	-22.40	0.00
	13:07:00	0.547	333.93	0.00	31.12	14.33	22.02	19.05	-1.98	67.00	-22.40	0.00
	13:22:00	0.557	348.93	0.00	31.11	14.31	22.01	19.03	-2.00	67.10	-22.30	0.00
	13:37:00	0.567	363.93	0.00	31.11	14.29	22.00	19.00	-2.03	67.00	-22.40	0.00
	13:52:00	0.578	378.93	0.00	31.08	14.26	21.98	19.00	-2.03	66.90	-22.50	0.00
	14:07:00	0.588	393.93	0.00	31.08	14.24	21.95	18.98	-2.05	66.80	-22.60	0.00
	14:22:00	0.599	408.93	0.00	31.07	14.22	21.94	18.96	-2.07	67.00	-22.40	0.00
	14:37:00	0.609	423.93	0.00	31.05	14.19	21.94	18.95	-2.08	67.00	-22.40	0.00
	14:52:00	0.619	438.93	0.00	31.05	14.19	21.89	18.94	-2.09	67.00	-22.40	0.00
	15:07:00	0.630	453.93	0.00	31.05	14.17	21.88	18.93	-2.10	67.10	-22.30	0.00
	15:22:00	0.640	468.93	0.00	31.03	14.16	21.88	18.92	-2.11	66.80	-22.60	0.00
	15:37:00	0.651	483.93	0.00	31.02	14.14	21.88	18.92	-2.11	66.90	-22.50	0.00
	15:52:00	0.661	498.93	0.00	31.01	14.13	21.86	18.91	-2.12	67.00	-22.40	0.00
	16:07:00	0.672	513.93	0.00	31.01	14.12	21.84	18.91	-2.12	66.80	-22.60	0.00
	16:22:00	0.682	528.93	0.00	31.00	14.11	21.86	18.90	-2.13	67.00	-22.40	0.00
	16:37:00	0.692	543.93	0.00	31.01	14.10	21.82	18.89	-2.14	66.70	-22.70	0.00
	16:52:00	0.703	558.93	0.00	31.00	14.09	21.82	18.89	-2.14	66.80	-22.60	0.00
	17:07:00	0.713	573.93	0.00	31.00	14.08	21.82	18.88	-2.15	66.80	-22.60	0.00
	17:22:00	0.724	588.93	0.00	30.99	14.08	21.81	18.88	-2.15	66.90	-22.50	0.00
	17:37:00	0.734	603.93	0.00	30.98	14.07	21.79	18.87	-2.16	66.70	-22.70	0.00
	17:52:00	0.744	618.93	0.00	30.98	14.06	21.78	18.87	-2.16	66.70	-22.70	0.00
	18:07:00	0.755	633.93	0.00	30.97	14.05	21.77	18.86	-2.17	66.70	-22.70	0.00
	18:22:00	0.765	648.93	0.00	30.94	14.03	21.78	18.85	-2.18	66.70	-22.70	0.00
	18:37:00	0.776	663.93	0.00	30.94	14.01	21.75	18.84	-2.19	66.70	-22.70	0.00
	18:52:00	0.786	678.93	0.00	30.93	14.00	21.76	18.84	-2.19	66.80	-22.60	0.00
	19:07:00	0.797	693.93	0.00	30.93	14.00	21.73	18.83	-2.20	66.70	-22.70	0.00
	19:22:00	0.807	708.93	0.00	30.92	13.99	21.72	18.81	-2.22	66.80	-22.60	0.00
	19:37:00	0.817	723.93	0.00	30.92	13.99	21.71	18.81	-2.22	66.60	-22.80	0.00

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	19:52:00	0.828	738.93	0.00	30.91	13.98	21.70	18.80	-2.23	66.50	-22.90	0.00
	20:07:00	0.838	753.93	0.00	30.91	13.97	21.69	18.80	-2.23	66.50	-22.90	0.00
	20:22:00	0.849	768.93	0.00	30.86	13.95	21.71	18.78	-2.25	66.40	-23.00	0.00
	20:37:00	0.859	783.93	0.00	30.85	13.93	21.69	18.76	-2.27	66.40	-23.00	0.00
	20:52:00	0.869	798.93	0.00	30.85	13.92	21.68	18.75	-2.28	66.50	-22.90	0.00
	21:07:00	0.880	813.93	0.00	30.85	13.91	21.64	18.74	-2.29	66.40	-23.00	0.00
	21:22:00	0.890	828.93	0.00	30.85	13.90	21.63	18.73	-2.30	66.40	-23.00	0.00
	21:37:00	0.901	843.93	0.00	30.83	13.88	21.63	18.72	-2.31	66.40	-23.00	0.00
	21:52:00	0.911	858.93	0.00	30.82	13.87	21.61	18.70	-2.33	66.40	-23.00	0.00
	22:07:00	0.922	873.93	0.00	30.82	13.87	21.59	18.68	-2.35	66.20	-23.20	0.00
	22:22:00	0.932	888.93	0.00	30.80	13.85	21.58	18.67	-2.36	66.20	-23.20	0.00
	22:37:00	0.942	903.93	0.00	30.79	13.84	21.59	18.66	-2.37	66.30	-23.10	0.00
	22:52:00	0.953	918.93	0.00	30.79	13.82	21.55	18.64	-2.39	66.30	-23.10	0.00
	23:07:00	0.963	933.93	0.00	30.78	13.81	21.54	18.62	-2.41	66.20	-23.20	0.00
	23:22:00	0.974	948.93	0.00	30.77	13.80	21.53	18.62	-2.41	66.10	-23.30	0.00
	23:37:00	0.984	963.93	0.00	30.75	13.79	21.53	18.60	-2.43	66.20	-23.20	0.00
	23:52:00	0.994	978.93	0.00	30.73	13.76	21.50	18.59	-2.44	66.10	-23.30	
04-14-94	00:07:00	0.005	993.93	0.00	30.73	13.75	21.49	18.57	-2.46	66.10	-23.30	0.00
	00:22:00	0.015	1008.93	0.00	30.73	13.75	21.47	18.56	-2.47	66.10	-23.30	0.00
	00:37:00	0.026	1023.93	0.00	30.70	13.73	21.47	18.55	-2.48	66.10	-23.30	0.00
	00:52:00	0.036	1038.93	0.00	30.70	13.71	21.44	18.54	-2.49	66.10	-23.30	0.00
	01:07:00	0.047	1053.93	0.00	30.69	13.70	21.43	18.53	-2.50	66.20	-23.20	0.00
	01:22:00	0.057	1068.93	0.00	30.68	13.69	21.43	18.52	-2.51	66.00	-23.40	0.00
	01:37:00	0.067	1083.93	0.00	30.67	13.68	21.41	18.51	-2.52	66.00	-23.40	0.00
	01:52:00	0.078	1098.93	0.00	30.66	13.67	21.40	18.50	-2.53	66.10	-23.30	0.00
	02:07:00	0.088	1113.93	0.00	30.66	13.66	21.39	18.49	-2.54	66.10	-23.30	0.00
	02:22:00	0.099	1128.93	0.00	30.65	13.65	21.38	18.49	-2.54	66.10	-23.30	0.00
	02:37:00	0.109	1143.93	0.00	30.64	13.64	21.37	18.48	-2.55	66.00	-23.40	0.00
	02:52:00	0.119	1158.93	0.00	30.61	13.63	21.38	18.48	-2.55	66.10	-23.30	0.00
	03:07:00	0.130	1173.93	0.00	30.60	13.61	21.35	18.48	-2.55	65.90	-23.50	0.00
	03:22:00	0.140	1188.93	0.00	30.60	13.61	21.35	18.47	-2.56	65.90	-23.50	0.00
	03:37:00	0.151	1203.93	0.00	30.60	13.60	21.34	18.47	-2.56	66.00	-23.40	0.00
	03:52:00	0.161	1218.93	0.00	30.60	13.59	21.33	18.46	-2.57	66.10	-23.30	0.00
	04:07:00	0.172	1233.93	0.00	30.59	13.59	21.33	18.46	-2.57	66.00	-23.40	0.00
	04:22:00	0.182	1248.93	0.00	30.58	13.58	21.33	18.46	-2.57	66.00	-23.40	0.00
	04:37:00	0.192	1263.93	0.00	30.56	13.57	21.33	18.46	-2.57	66.00	-23.40	0.00
	04:52:00	0.203	1278.93	0.00	30.56	13.56	21.31	18.45	-2.58	66.00	-23.40	0.00
	05:07:00	0.213	1293.93	0.00	30.55	13.55	21.31	18.45	-2.58	66.00	-23.40	0.00
	05:22:00	0.224	1308.93	0.00	30.54	13.55	21.31	18.45	-2.58	66.00	-23.40	0.00
	05:37:00	0.234	1323.93	0.00	30.54	13.54	21.30	18.45	-2.58	66.10	-23.30	0.00
	05:52:00	0.244	1338.93	0.00	30.53	13.54	21.30	18.44	-2.59	66.00	-23.40	0.00
	06:07:00	0.255	1353.93	0.00	30.53	13.53	21.29	18.44	-2.59	66.10	-23.30	0.00
	06:22:00	0.265	1368.93	0.00	30.52	13.52	21.28	18.43	-2.60	66.00	-23.40	0.00

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	06:37:00	0.276	1383.93	0.00	30.49	13.51	21.30	18.42	-2.61	65.90	-23.50	0.00
	06:52:00	0.286	1398.93	0.00	30.49	13.49	21.26	18.42	-2.61	65.90	-23.50	0.00
	07:07:00	0.297	1413.93	0.00	30.49	13.49	21.26	18.42	-2.61	66.00	-23.40	0.00
	07:22:00	0.307	1428.93	0.00	30.48	13.49	21.25	18.42	-2.61	65.90	-23.50	0.00
	07:37:00	0.317	1443.93	0.00	30.45	13.48	21.27	18.41	-2.62	65.90	-23.50	0.00
	07:52:00	0.328	1458.93	0.00	30.46	13.46	21.24	18.40	-2.63	65.90	-23.50	0.00
	08:07:00	0.338	1473.93	0.00	30.45	13.45	21.23	18.39	-2.64	66.00	-23.40	0.00
	08:22:00	0.349	1488.93	0.00	30.45	13.44	21.22	18.38	-2.65	66.00	-23.40	0.00
	08:37:00	0.359	1503.93	0.00	30.44	13.44	21.21	18.38	-2.65	66.10	-23.30	0.00
	08:52:00	0.369	1518.93	0.00	30.41	13.42	21.21	18.37	-2.66	66.00	-23.40	0.00
	09:07:00	0.380	1533.93	0.00	30.42	13.42	21.19	18.36	-2.67	65.90	-23.50	0.00
	09:22:00	0.390	1548.93	0.00	30.41	13.42	21.19	18.36	-2.67	66.00	-23.40	0.00
	09:37:00	0.401	1563.93	0.00	30.40	13.41	21.21	18.35	-2.68	66.00	-23.40	0.00
	09:52:00	0.411	1578.93	0.00	30.37	13.39	21.20	18.34	-2.69	66.00	-23.40	0.00
	10:07:00	0.422	1593.93	0.00	30.36	13.38	21.19	18.32	-2.71	66.00	-23.40	0.00
	10:22:00	0.432	1608.93	0.00	30.36	13.37	21.18	18.32	-2.71	66.00	-23.40	0.00
	10:37:00	0.442	1623.93	0.00	30.35	13.34	21.14	18.30	-2.73	66.00	-23.40	0.00
	10:52:00	0.453	1638.93	0.00	30.35	13.34	21.14	18.30	-2.73	66.00	-23.40	0.00
	11:07:00	0.463	1653.93	0.00	30.36	13.34	21.13	18.30	-2.73	66.10	-23.30	0.00
	11:22:00	0.474	1668.93	0.00	30.35	13.33	21.12	18.28	-2.75	66.00	-23.40	0.00
	11:37:00	0.484	1683.93	0.00	30.34	13.32	21.12	18.28	-2.75	66.10	-23.30	0.00
	11:52:00	0.494	1698.93	0.00	30.34	13.31	21.11	18.26	-2.77	66.00	-23.40	0.00
	12:07:00	0.505	1713.93	0.00	30.33	13.30	21.10	18.25	-2.78	66.10	-23.30	0.00
	12:22:00	0.515	1728.93	0.00	30.31	13.30	21.10	18.23	-2.80	66.00	-23.40	0.00
	12:37:00	0.526	1743.93	0.00	30.29	13.29	21.11	18.24	-2.79	66.00	-23.40	0.00
	12:52:00	0.536	1758.93	0.00	30.28	13.28	21.11	18.23	-2.80	66.00	-23.40	0.00
	13:07:00	0.547	1773.93	4.39	30.31	13.30	21.13	18.23	-2.80	66.10	-23.30	0.00
	13:22:00	0.557	1788.93	4.38	30.31	13.30	21.13	18.23	-2.80	66.30	-23.10	0.00
	13:37:00	0.567	1803.93	4.37	30.32	13.30	21.12	18.22	-2.81	66.20	-23.20	0.00
	13:52:00	0.578	1818.93	4.37	30.32	13.29	21.11	18.21	-2.82	66.10	-23.30	0.00
	14:07:00	0.588	1833.93	4.36	30.31	13.24	21.06	18.21	-2.82	65.90	-23.50	0.00
	14:22:00	0.599	1848.93	4.37	30.29	13.24	21.06	18.20	-2.83	66.00	-23.40	0.00
	14:37:00	0.609	1863.93	4.37	30.28	13.24	21.08	18.20	-2.83	66.10	-23.30	0.00
	14:52:00	0.619	1878.93	4.37	30.28	13.23	21.10	18.20	-2.83	66.20	-23.20	0.00
	15:07:00	0.630	1893.93	4.37	30.28	13.23	21.09	18.19	-2.84	65.90	-23.50	0.00
	15:22:00	0.640	1908.93	4.36	30.28	13.23	21.09	18.19	-2.84	66.10	-23.30	17.20
	15:37:00	0.651	1923.93	4.36	30.28	13.23	21.09	18.20	-2.83	66.10	-23.30	17.20
	15:52:00	0.661	1938.93	4.36	30.29	13.23	21.09	18.20	-2.83	66.30	-23.10	17.20
	16:07:00	0.672	1953.93	4.36	30.29	13.23	21.09	18.20	-2.83	66.30	-23.10	17.20
	16:22:00	0.682	1968.93	4.36	30.30	13.23	21.09	18.20	-2.83	66.30	-23.10	17.20
	16:37:00	0.692	1983.93	4.36	30.31	13.23	21.09	18.20	-2.83	66.10	-23.30	17.20
	16:52:00	0.703	1998.93	4.36	30.30	13.21	21.07	18.20	-2.83	66.10	-23.30	17.20
	17:07:00	0.713	2013.93	4.36	30.26	13.17	21.01	18.19	-2.84	66.00	-23.40	17.20

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	17:22:00	0.724	2028.93	4.36	30.24	13.19	21.05	18.19	-2.84	66.30	-23.10	17.20
	17:37:00	0.734	2043.93	4.36	30.25	13.20	21.07	18.19	-2.84	66.10	-23.30	17.20
	17:52:00	0.744	2058.93	4.36	30.23	13.17	21.02	18.19	-2.84	66.00	-23.40	17.20
	18:07:00	0.755	2073.93	4.36	30.23	13.19	21.02	18.19	-2.84	66.10	-23.30	17.20
	18:22:00	0.765	2088.93	4.36	30.22	13.20	21.02	18.18	-2.85	66.00	-23.40	17.20
	18:37:00	0.776	2103.93	4.36	30.21	13.20	21.05	18.18	-2.85	66.10	-23.30	17.20
	18:52:00	0.786	2118.93	4.36	30.20	13.19	21.01	18.18	-2.85	66.10	-23.30	17.20
	19:07:00	0.797	2133.93	4.36	30.20	13.20	21.01	18.17	-2.86	66.10	-23.30	17.20
	19:22:00	0.807	2148.93	4.35	30.18	13.19	21.03	18.17	-2.86	66.00	-23.40	17.20
	19:37:00	0.817	2163.93	4.36	30.17	13.18	21.03	18.17	-2.86	65.90	-23.50	17.20
	19:52:00	0.828	2178.93	4.35	30.18	13.18	20.99	18.16	-2.87	66.00	-23.40	17.20
	20:07:00	0.838	2193.93	4.35	30.17	13.18	20.99	18.16	-2.87	65.70	-23.70	17.20
	20:22:00	0.849	2208.93	4.35	30.15	13.17	20.99	18.15	-2.88	66.00	-23.40	17.20
	20:37:00	0.859	2223.93	4.35	30.15	13.16	20.97	18.14	-2.89	65.80	-23.60	17.20
	20:52:00	0.869	2238.93	4.35	30.15	13.17	20.96	18.12	-2.91	65.70	-23.70	17.20
	21:07:00	0.880	2253.93	4.35	30.14	13.17	20.95	18.11	-2.92	65.70	-23.70	17.20
	21:22:00	0.890	2268.93	4.35	30.13	13.16	20.94	18.10	-2.93	65.90	-23.50	17.20
	21:37:00	0.901	2283.93	4.35	30.12	13.15	20.93	18.10	-2.93	65.70	-23.70	17.20
	21:52:00	0.911	2298.93	4.35	30.11	13.15	20.92	18.09	-2.94	65.80	-23.60	17.20
	22:07:00	0.922	2313.93	4.35	30.10	13.14	20.92	18.08	-2.95	65.70	-23.70	17.10
	22:22:00	0.932	2328.93	4.35	30.09	13.13	20.93	18.07	-2.96	65.60	-23.80	17.10
	22:37:00	0.942	2343.93	4.35	30.08	13.11	20.90	18.05	-2.98	65.70	-23.70	17.10
	22:52:00	0.953	2358.93	4.35	30.08	13.10	20.87	18.04	-2.99	65.60	-23.80	17.10
	23:07:00	0.963	2373.93	4.35	30.07	13.10	20.86	18.03	-3.00	65.60	-23.80	17.10
	23:22:00	0.974	2388.93	4.34	30.06	13.10	20.86	18.01	-3.02	65.60	-23.80	17.10
	23:37:00	0.984	2403.93	4.34	30.05	13.09	20.85	18.00	-3.03	65.70	-23.70	17.10
	23:52:00	0.994	2418.93	4.35	30.04	13.08	20.84	17.99	-3.04	65.60	-23.80	
04-15-94	00:07:00	0.005	2433.93	4.35	30.02	13.06	20.82	17.98	-3.05	65.60	-23.80	17.10
	00:22:00	0.015	2448.93	4.35	30.02	13.05	20.81	17.97	-3.06	65.60	-23.80	17.10
	00:37:00	0.026	2463.93	4.34	30.01	13.04	20.80	17.97	-3.06	65.60	-23.80	17.10
	00:52:00	0.036	2478.93	4.34	30.00	13.04	20.79	17.95	-3.08	65.70	-23.70	17.10
	01:07:00	0.047	2493.93	4.35	30.00	13.04	20.79	17.95	-3.08	65.60	-23.80	17.10
	01:22:00	0.057	2508.93	4.35	29.99	13.03	20.78	17.95	-3.08	65.40	-24.00	17.10
	01:37:00	0.067	2523.93	4.35	29.98	13.02	20.77	17.93	-3.10	65.60	-23.80	17.10
	01:52:00	0.078	2538.93	4.35	29.97	13.01	20.76	17.93	-3.10	65.60	-23.80	17.10
	02:07:00	0.088	2553.93	4.35	29.96	13.00	20.76	17.92	-3.11	65.50	-23.90	17.10
	02:22:00	0.099	2568.93	4.35	29.96	13.00	20.76	17.92	-3.11	65.50	-23.90	17.00
	02:37:00	0.109	2583.93	4.35	29.96	13.00	20.75	17.91	-3.12	65.60	-23.80	17.00
	02:52:00	0.119	2598.93	4.35	29.95	12.99	20.75	17.91	-3.12	65.50	-23.90	17.00
	03:07:00	0.130	2613.93	4.35	29.95	12.98	20.74	17.91	-3.12	65.60	-23.80	17.00
	03:22:00	0.140	2628.93	4.35	29.94	12.98	20.73	17.91	-3.12	65.60	-23.80	17.00
	03:37:00	0.151	2643.93	4.35	29.94	12.98	20.73	17.91	-3.12	65.60	-23.80	17.00
	03:52:00	0.161	2658.93	4.35	29.93	12.98	20.73	17.91	-3.12	65.60	-23.80	17.00

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	04:07:00	0.172	2673.93	4.35	29.89	12.97	20.76	17.91	-3.12	65.60	-23.80	17.00
	04:22:00	0.182	2688.93	4.35	29.91	12.96	20.73	17.91	-3.12	65.50	-23.90	17.00
	04:37:00	0.192	2703.93	4.35	29.91	12.96	20.73	17.91	-3.12	65.50	-23.90	17.00
	04:52:00	0.203	2718.93	4.35	29.90	12.96	20.73	17.90	-3.13	65.50	-23.90	17.00
	05:07:00	0.213	2733.93	4.35	29.89	12.95	20.72	17.90	-3.13	65.50	-23.90	17.00
	05:22:00	0.224	2748.93	4.35	29.89	12.95	20.72	17.89	-3.14	65.50	-23.90	17.00
	05:37:00	0.234	2763.93	4.35	29.89	12.95	20.72	17.90	-3.13	65.50	-23.90	17.00
	05:52:00	0.244	2778.93	4.35	29.89	12.94	20.71	17.89	-3.14	65.30	-24.10	17.00
	06:07:00	0.255	2793.93	4.35	29.88	12.94	20.71	17.89	-3.14	65.60	-23.80	17.00
	06:22:00	0.265	2808.93	4.35	29.87	12.93	20.70	17.89	-3.14	65.40	-24.00	17.00
	06:37:00	0.276	2823.93	4.34	29.86	12.93	20.70	17.88	-3.15	65.50	-23.90	16.90
	06:52:00	0.286	2838.93	4.34	29.84	12.92	20.72	17.88	-3.15	65.50	-23.90	17.00
	07:07:00	0.297	2853.93	4.34	29.84	12.91	20.69	17.88	-3.15	65.50	-23.90	17.00
	07:22:00	0.307	2868.93	4.34	29.84	12.91	20.69	17.87	-3.16	65.30	-24.10	17.00
	07:37:00	0.317	2883.93	4.34	29.84	12.91	20.68	17.87	-3.16	65.50	-23.90	16.90
	07:52:00	0.328	2898.93	4.33	29.81	12.90	20.70	17.86	-3.17	65.50	-23.90	16.90
	08:07:00	0.338	2913.93	4.33	29.81	12.89	20.68	17.85	-3.18	65.50	-23.90	16.90
	08:22:00	0.349	2928.93	4.33	29.81	12.88	20.66	17.85	-3.18	65.50	-23.90	16.90
	08:37:00	0.359	2943.93	4.33	29.81	12.88	20.66	17.84	-3.19	65.20	-24.20	16.90
	08:52:00	0.369	2958.93	4.33	29.80	12.87	20.65	17.83	-3.20	65.30	-24.10	16.80
	09:07:00	0.380	2973.93	4.33	29.77	12.86	20.67	17.83	-3.20	65.50	-23.90	16.80
	09:22:00	0.390	2988.93	4.33	29.78	12.85	20.63	17.82	-3.21	65.70	-23.70	16.80
	09:37:00	0.401	3003.93	4.33	29.77	12.85	20.62	17.81	-3.22	65.60	-23.80	16.80
	09:52:00	0.411	3018.93	4.33	29.77	12.84	20.62	17.80	-3.23	65.50	-23.90	16.80
	10:07:00	0.422	3033.93	4.33	29.77	12.84	20.61	17.80	-3.23	65.60	-23.80	16.80
	10:22:00	0.432	3048.93	4.33	29.76	12.83	20.61	17.80	-3.23	65.50	-23.90	16.80
	10:37:00	0.442	3063.93	4.33	29.73	12.82	20.64	17.79	-3.24	65.80	-23.60	16.80
	10:52:00	0.453	3078.93	4.33	29.74	12.81	20.60	17.79	-3.24	65.80	-23.60	16.80
	11:07:00	0.463	3093.93	4.33	29.72	12.80	20.60	17.78	-3.25	65.70	-23.70	16.80
	11:22:00	0.474	3108.93	4.33	29.72	12.79	20.58	17.78	-3.25	65.80	-23.60	16.80
	11:37:00	0.484	3123.93	4.33	29.71	12.79	20.59	17.77	-3.26	65.80	-23.60	16.80
	11:52:00	0.494	3138.93	4.33	29.71	12.78	20.57	17.76	-3.27	65.80	-23.60	16.80
	12:07:00	0.505	3153.93	4.33	29.71	12.78	20.57	17.75	-3.28	65.80	-23.60	16.80
	12:22:00	0.515	3168.93	4.33	29.70	12.77	20.56	17.75	-3.28	65.70	-23.70	16.70
	12:37:00	0.526	3183.93	4.33	29.69	12.76	20.56	17.74	-3.29	65.80	-23.60	16.70
	12:52:00	0.536	3198.93	4.33	29.69	12.76	20.55	17.74	-3.29	65.80	-23.60	16.70
	13:07:00	0.547	3213.93	4.33	29.69	12.76	20.55	17.73	-3.30	65.70	-23.70	16.70
	13:22:00	0.557	3228.93	4.33	29.68	12.75	20.54	17.73	-3.30	65.90	-23.50	16.70
	13:37:00	0.567	3243.93	4.33	29.68	12.75	20.54	17.72	-3.31	65.70	-23.70	16.70
	13:52:00	0.578	3258.93	4.33	29.66	12.74	20.54	17.72	-3.31	65.70	-23.70	16.70
	14:07:00	0.588	3273.93	4.33	29.64	12.74	20.56	17.72	-3.31	65.70	-23.70	16.70
	14:22:00	0.599	3288.93	4.33	29.64	12.74	20.56	17.72	-3.31	65.70	-23.70	16.70
	14:37:00	0.609	3303.93	4.33	29.64	12.73	20.55	17.71	-3.32	65.50	-23.90	16.70

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	14:52:00	0.619	3318.93	4.32	29.65	12.73	20.55	17.71	-3.32	65.80	-23.60	16.70
	15:07:00	0.630	3333.93	4.32	29.65	12.72	20.54	17.71	-3.32	65.80	-23.60	16.70
	15:22:00	0.640	3348.93	4.32	29.66	12.72	20.54	17.70	-3.33	65.80	-23.60	16.70
	15:37:00	0.651	3363.93	4.32	29.67	12.72	20.54	17.70	-3.33	65.60	-23.80	16.70
	15:52:00	0.661	3378.93	4.32	29.68	12.72	20.54	17.70	-3.33	65.70	-23.70	16.70
	16:07:00	0.672	3393.93	4.32	29.69	12.72	20.54	17.70	-3.33	65.60	-23.80	16.70
	16:22:00	0.682	3408.93	4.33	29.64	12.66	20.48	17.70	-3.33	65.60	-23.80	16.70
	16:37:00	0.692	3423.93	4.33	29.63	12.68	20.53	17.70	-3.33	65.70	-23.70	16.70
	16:52:00	0.703	3438.93	4.32	29.63	12.69	20.54	17.70	-3.33	65.40	-24.00	16.70
	17:07:00	0.713	3453.93	4.32	29.64	12.69	20.54	17.69	-3.34	65.60	-23.80	16.70
	17:22:00	0.724	3468.93	4.32	29.64	12.69	20.54	17.69	-3.34	65.60	-23.80	16.70
	17:37:00	0.734	3483.93	4.32	29.64	12.70	20.54	17.69	-3.34	65.60	-23.80	16.70
	17:52:00	0.744	3498.93	4.32	29.65	12.68	20.52	17.69	-3.34	65.40	-24.00	16.70
	18:07:00	0.755	3513.93	4.32	29.62	12.64	20.47	17.69	-3.34	65.30	-24.10	16.60
	18:22:00	0.765	3528.93	4.32	29.61	12.66	20.52	17.68	-3.35	65.60	-23.80	16.70
	18:37:00	0.776	3543.93	4.31	29.61	12.67	20.50	17.68	-3.35	65.60	-23.80	16.70
	18:52:00	0.786	3558.93	4.32	29.60	12.68	20.50	17.68	-3.35	65.50	-23.90	16.70
	19:07:00	0.797	3573.93	4.32	29.60	12.69	20.49	17.68	-3.35	65.50	-23.90	16.70
	19:22:00	0.807	3588.93	4.32	29.59	12.69	20.49	17.68	-3.35	65.50	-23.90	16.70
	19:37:00	0.817	3603.93	4.31	29.58	12.69	20.48	17.67	-3.36	65.50	-23.90	16.70
	19:52:00	0.828	3618.93	4.31	29.58	12.69	20.47	17.67	-3.36	65.60	-23.80	16.70
	20:07:00	0.838	3633.93	4.31	29.56	12.68	20.51	17.67	-3.36	65.40	-24.00	16.70
	20:22:00	0.849	3648.93	4.31	29.56	12.68	20.52	17.66	-3.37	65.40	-24.00	16.70
	20:37:00	0.859	3663.93	4.31	29.55	12.66	20.47	17.66	-3.37	65.50	-23.90	16.70
	20:52:00	0.869	3678.93	4.31	29.56	12.66	20.47	17.65	-3.38	65.30	-24.10	16.70
	21:07:00	0.880	3693.93	4.31	29.55	12.66	20.47	17.65	-3.38	65.50	-23.90	16.70
	21:22:00	0.890	3708.93	4.31	29.55	12.66	20.46	17.65	-3.38	65.40	-24.00	16.70
	21:37:00	0.901	3723.93	4.31	29.55	12.66	20.45	17.65	-3.38	65.30	-24.10	16.70
	21:52:00	0.911	3738.93	4.31	29.54	12.66	20.45	17.64	-3.39	65.10	-24.30	16.70
	22:07:00	0.922	3753.93	4.31	29.53	12.66	20.43	17.63	-3.40	65.50	-23.90	16.70
	22:22:00	0.932	3768.93	4.30	29.52	12.65	20.42	17.61	-3.42	65.30	-24.10	16.60
	22:37:00	0.942	3783.93	4.30	29.50	12.64	20.45	17.60	-3.43	65.30	-24.10	16.60
	22:52:00	0.953	3798.93	4.30	29.51	12.63	20.41	17.59	-3.44	65.20	-24.20	16.60
	23:07:00	0.963	3813.93	4.30	29.50	12.63	20.40	17.59	-3.44	65.10	-24.30	16.60
	23:22:00	0.974	3828.93	4.30	29.50	12.62	20.39	17.57	-3.46	65.20	-24.20	16.60
	23:37:00	0.984	3843.93	4.31	29.49	12.62	20.38	17.56	-3.47	65.10	-24.30	16.60
	23:52:00	0.994	3858.93	4.31	29.48	12.61	20.37	17.55	-3.48	65.00	-24.40	
04-16-94	00:07:00	0.005	3873.93	4.31	29.47	12.60	20.36	17.55	-3.48	65.20	-24.20	16.60
	00:22:00	0.015	3888.93	4.31	29.47	12.60	20.35	17.54	-3.49	65.10	-24.30	16.60
	00:37:00	0.026	3903.93	4.31	29.46	12.59	20.35	17.53	-3.50	65.20	-24.20	16.60
	00:52:00	0.036	3918.93	4.31	29.46	12.59	20.35	17.53	-3.50	65.20	-24.20	16.60
	01:07:00	0.047	3933.93	4.31	29.45	12.59	20.34	17.52	-3.51	65.20	-24.20	16.60
	01:22:00	0.057	3948.93	4.31	29.45	12.58	20.33	17.51	-3.52	65.20	-24.20	16.60

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	01:37:00	0.067	3963.93	4.31	29.45	12.57	20.32	17.50	-3.53	65.10	-24.30	16.60
	01:52:00	0.078	3978.93	4.30	29.44	12.56	20.30	17.48	-3.55	65.00	-24.40	16.60
	02:07:00	0.088	3993.93	4.31	29.43	12.56	20.30	17.47	-3.56	65.20	-24.20	16.60
	02:22:00	0.099	4008.93	4.31	29.43	12.55	20.29	17.47	-3.56	65.00	-24.40	16.50
	02:37:00	0.109	4023.93	4.31	29.42	12.54	20.28	17.47	-3.56	65.10	-24.30	16.50
	02:52:00	0.119	4038.93	4.31	29.42	12.54	20.28	17.46	-3.57	65.20	-24.20	16.50
	03:07:00	0.130	4053.93	4.31	29.41	12.53	20.28	17.46	-3.57	65.00	-24.40	16.50
	03:22:00	0.140	4068.93	4.31	29.40	12.53	20.27	17.46	-3.57	65.00	-24.40	16.50
	03:37:00	0.151	4083.93	4.31	29.40	12.53	20.27	17.46	-3.57	65.10	-24.30	16.50
	03:52:00	0.161	4098.93	4.32	29.40	12.52	20.26	17.45	-3.58	65.20	-24.20	16.40
	04:07:00	0.172	4113.93	4.31	29.37	12.50	20.28	17.44	-3.59	65.00	-24.40	16.50
	04:22:00	0.182	4128.93	4.31	29.37	12.48	20.24	17.43	-3.60	65.10	-24.30	16.40
	04:37:00	0.192	4143.93	4.31	29.38	12.49	20.24	17.43	-3.60	65.10	-24.30	16.40
	04:52:00	0.203	4158.93	4.31	29.38	12.49	20.24	17.43	-3.60	65.00	-24.40	16.40
	05:07:00	0.213	4173.93	4.31	29.38	12.49	20.24	17.43	-3.60	64.90	-24.50	16.40
	05:22:00	0.224	4188.93	4.31	29.37	12.48	20.23	17.42	-3.61	65.00	-24.40	16.40
	05:37:00	0.234	4203.93	4.31	29.36	12.47	20.22	17.41	-3.62	64.90	-24.50	16.40
	05:52:00	0.244	4218.93	4.31	29.36	12.46	20.22	17.40	-3.63	65.00	-24.40	16.40
	06:07:00	0.255	4233.93	4.31	29.35	12.46	20.21	17.40	-3.63	64.70	-24.70	16.40
	06:22:00	0.265	4248.93	4.31	29.34	12.46	20.21	17.40	-3.63	64.90	-24.50	16.40
	06:37:00	0.276	4263.93	4.31	29.34	12.46	20.21	17.40	-3.63	65.10	-24.30	16.40
	06:52:00	0.286	4278.93	4.32	29.34	12.45	20.20	17.40	-3.63	65.00	-24.40	16.40
	07:07:00	0.297	4293.93	4.32	29.33	12.45	20.20	17.40	-3.63	64.90	-24.50	16.40
	07:22:00	0.307	4308.93	4.31	29.31	12.44	20.22	17.39	-3.64	65.10	-24.30	16.40
	07:37:00	0.317	4323.93	4.31	29.32	12.42	20.18	17.39	-3.64	65.00	-24.40	16.40
	07:52:00	0.328	4338.93	4.31	29.32	12.43	20.19	17.38	-3.65	64.90	-24.50	16.40
	08:07:00	0.338	4353.93	4.31	29.29	12.42	20.21	17.38	-3.65	65.00	-24.40	16.40
	08:22:00	0.349	4368.93	4.31	29.30	12.40	20.19	17.38	-3.65	65.10	-24.30	16.30
	08:37:00	0.359	4383.93	4.31	29.29	12.40	20.20	17.38	-3.65	65.00	-24.40	16.40
	08:52:00	0.369	4398.93	4.31	29.30	12.40	20.20	17.39	-3.64	65.20	-24.20	16.30
	09:07:00	0.380	4413.93	4.31	29.30	12.40	20.20	17.38	-3.65	65.30	-24.10	16.40
	09:22:00	0.390	4428.93	4.31	29.30	12.39	20.17	17.38	-3.65	65.30	-24.10	16.40
	09:37:00	0.401	4443.93	4.31	29.29	12.40	20.17	17.37	-3.66	65.50	-23.90	16.30
	09:52:00	0.411	4458.93	4.32	29.26	12.40	20.16	17.36	-3.67	65.40	-24.00	16.30
	10:07:00	0.422	4473.93	4.32	29.25	12.39	20.15	17.36	-3.67	65.40	-24.00	16.30
	10:22:00	0.432	4488.93	4.32	29.25	12.39	20.15	17.35	-3.68	65.40	-24.00	16.30
	10:37:00	0.442	4503.93	4.32	29.24	12.38	20.15	17.35	-3.68	65.20	-24.20	16.30
	10:52:00	0.453	4518.93	4.32	29.24	12.38	20.14	17.34	-3.69	65.40	-24.00	16.30
	11:07:00	0.463	4533.93	4.31	29.23	12.37	20.15	17.32	-3.71	64.60	-24.80	16.30
	11:22:00	0.474	4548.93	4.31	29.21	12.36	20.16	17.32	-3.71	64.80	-24.60	16.30
	11:37:00	0.484	4563.93	4.31	29.21	12.35	20.15	17.31	-3.72	64.90	-24.50	16.30
	11:52:00	0.494	4578.93	4.31	29.21	12.34	20.14	17.30	-3.73	64.80	-24.60	16.30
	12:07:00	0.505	4593.93	4.31	29.22	12.34	20.13	17.30	-3.73	64.90	-24.50	16.30

ROMP 22 AVON PARK APT

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	12:22:00	0.515	4608.93	4.31	29.23	12.34	20.11	17.30	-3.73	64.80	-24.60	16.30
	12:37:00	0.526	4623.93	4.31	29.23	12.34	20.11	17.28	-3.75	65.00	-24.40	16.20
	12:52:00	0.536	4638.93	4.31	29.20	12.33	20.14	17.28	-3.75	64.90	-24.50	16.20
	13:07:00	0.547	4653.93	4.31	29.21	12.33	20.14	17.28	-3.75	64.80	-24.60	16.20
	13:22:00	0.557	4668.93	4.31	29.22	12.32	20.13	17.27	-3.76	64.80	-24.60	16.20
	13:37:00	0.567	4683.93	4.31	29.21	12.30	20.11	17.27	-3.76	64.70	-24.70	16.20
	13:52:00	0.578	4698.93	4.31	29.21	12.29	20.09	17.27	-3.76	64.80	-24.60	16.20
	14:07:00	0.588	4713.93	4.31	29.22	12.30	20.09	17.27	-3.76	64.80	-24.60	16.20
	14:22:00	0.599	4728.93	4.31	29.21	12.30	20.09	17.26	-3.77	64.80	-24.60	16.10
	14:37:00	0.609	4743.93	4.31	29.19	12.30	20.11	17.25	-3.78	64.70	-24.70	16.20
	14:52:00	0.619	4758.93	4.31	29.19	12.28	20.08	17.25	-3.78	64.80	-24.60	16.20
	15:07:00	0.630	4773.93	4.31	29.20	12.29	20.07	17.24	-3.79	64.80	-24.60	16.30
	15:22:00	0.640	4788.93	4.31	29.19	12.28	20.07	17.24	-3.79	64.80	-24.60	16.20
	15:37:00	0.651	4803.93	4.31	29.19	12.28	20.07	17.23	-3.80	64.80	-24.60	16.20
	15:52:00	0.661	4818.93	4.31	29.19	12.27	20.06	17.24	-3.79	64.80	-24.60	16.20
	16:07:00	0.672	4833.93	4.31	29.18	12.27	20.08	17.23	-3.80	64.70	-24.70	16.20
	16:22:00	0.682	4848.93	4.30	29.17	12.27	20.08	17.23	-3.80	64.70	-24.70	16.20
	16:37:00	0.692	4863.93	4.30	29.17	12.27	20.09	17.22	-3.81	64.80	-24.60	16.20
	16:52:00	0.703	4878.93	4.30	29.18	12.25	20.05	17.22	-3.81	64.80	-24.60	
	17:05:01	0.712	4891.95	4.30	29.17	12.24	20.06	17.22	-3.81	64.60	-24.80	16.10
	17:05:04	0.712	4892.00	4.30	29.17	12.24	20.06	17.22	-3.81	64.70	-24.70	16.10
	17:05:07	0.712	4892.05	4.30	29.17	12.24	20.06	17.22	-3.81	64.60	-24.80	16.10

recovery

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
04-16-94	17:05:10	0.712	0.00	4.30	29.17	12.24	20.06	17.22	0.00	64.50	0.00	16.10
	17:05:13	0.712	0.05	4.30	29.17	12.24	20.06	17.22	0.00	68.20	3.70	16.20
	17:05:16	0.712	0.10	4.30	29.17	12.24	20.06	17.23	0.01	84.60	20.10	16.20
	17:05:19	0.712	0.15	4.30	29.17	12.24	20.06	17.24	0.02	97.10	32.60	16.20
	17:05:22	0.712	0.20	4.30	29.17	12.24	20.06	17.27	0.05	107.80	43.30	16.20
	17:05:25	0.712	0.25	4.30	29.17	12.24	20.06	17.34	0.12	110.90	46.40	16.20
	17:05:28	0.712	0.30	4.30	29.17	12.24	20.06	17.46	0.24	108.60	44.10	16.20
	17:05:31	0.712	0.35	4.30	29.17	12.24	20.06	17.62	0.40	102.60	38.10	16.20
	17:05:34	0.712	0.40	4.30	29.17	12.24	20.06	17.82	0.60	94.50	30.00	16.20
	17:05:37	0.712	0.45	4.30	29.17	12.24	20.06	18.01	0.79	86.60	22.10	16.20
	17:05:40	0.712	0.50	4.30	29.17	12.24	20.06	18.17	0.95	80.40	15.90	16.20
	17:05:43	0.712	0.55	4.30	29.17	12.24	20.06	18.24	1.02	76.70	12.20	16.10
	17:05:46	0.712	0.60	4.30	29.17	12.24	20.05	18.22	1.00	75.10	10.60	16.10
	17:05:49	0.712	0.65	4.30	29.17	12.24	20.06	18.10	0.88	75.50	11.00	16.10
	17:05:52	0.712	0.70	4.30	29.17	12.24	20.06	17.91	0.69	77.30	12.80	16.10
	17:05:55	0.712	0.75	4.30	29.17	12.23	20.05	17.70	0.48	80.30	15.80	16.20
	17:05:58	0.712	0.80	4.30	29.17	12.24	20.05	17.50	0.28	84.10	19.60	16.20
	17:06:01	0.713	0.85	4.30	29.17	12.24	20.06	17.37	0.15	88.10	23.60	16.20
	17:06:04	0.713	0.90	4.30	29.17	12.24	20.05	17.33	0.11	91.50	27.00	16.20
	17:06:07	0.713	0.95	4.30	29.17	12.24	20.06	17.40	0.18	93.90	29.40	16.20
	17:06:10	0.713	1.00	4.30	29.17	12.23	20.05	17.57	0.35	94.90	30.40	16.20
	17:06:13	0.713	1.05	4.30	29.17	12.23	20.05	17.80	0.58	94.30	29.80	16.20
	17:06:16	0.713	1.10	4.30	29.17	12.23	20.05	18.06	0.84	92.30	27.80	16.20
	17:06:19	0.713	1.15	4.30	29.17	12.24	20.06	18.29	1.07	89.60	25.10	16.20
	17:06:22	0.713	1.20	4.30	29.17	12.23	20.05	18.43	1.21	86.80	22.30	16.20
	17:06:25	0.713	1.25	4.30	29.17	12.23	20.05	18.48	1.26	84.40	19.90	16.10
	17:06:28	0.713	1.30	4.30	29.17	12.23	20.05	18.41	1.19	82.60	18.10	16.10
	17:06:31	0.713	1.35	4.30	29.17	12.23	20.05	18.24	1.02	81.80	17.30	16.10
	17:06:34	0.713	1.40	4.30	29.17	12.23	20.05	18.02	0.80	81.80	17.30	16.10
	17:06:37	0.713	1.45	4.30	29.17	12.23	20.05	17.78	0.56	82.60	18.10	16.10
	17:06:40	0.713	1.50	4.30	29.17	12.23	20.05	17.59	0.37	84.20	19.70	16.20
	17:06:43	0.713	1.55	4.30	29.17	12.23	20.05	17.47	0.25	86.10	21.60	16.20
	17:06:46	0.713	1.60	4.30	29.17	12.23	20.05	17.46	0.24	88.00	23.50	16.20
	17:06:49	0.713	1.65	4.30	29.17	12.23	20.05	17.56	0.34	89.60	25.10	16.20
	17:06:52	0.713	1.70	4.30	29.17	12.23	20.05	17.74	0.52	90.60	26.10	16.20
	17:06:55	0.713	1.75	4.30	29.17	12.23	20.05	17.97	0.75	90.90	26.40	16.20
	17:06:58	0.713	1.80	4.30	29.17	12.23	20.05	18.19	0.97	90.50	26.00	16.20
	17:07:01	0.713	1.85	4.30	29.17	12.23	20.05	18.36	1.14	89.50	25.00	16.20
	17:07:07	0.713	1.95	4.30	29.17	12.23	20.05	18.45	1.23	86.70	22.20	16.20
	17:07:13	0.713	2.05	4.30	29.17	12.23	20.05	18.19	0.97	84.50	20.00	16.20
	17:07:19	0.713	2.15	4.30	29.17	12.23	20.05	17.82	0.60	84.30	19.80	16.10
	17:07:25	0.713	2.25	4.30	29.17	12.23	20.05	17.64	0.42	85.80	21.30	16.20

recovery

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	17:07:31	0.714	2.35	4.30	29.17	12.23	20.05	17.78	0.56	87.90	23.40	16.20
	17:07:37	0.714	2.45	4.30	29.17	12.23	20.05	18.10	0.88	89.20	24.70	16.20
	17:07:43	0.714	2.55	4.30	29.17	12.22	20.05	18.36	1.14	88.90	24.40	16.20
	17:07:49	0.714	2.65	4.30	29.17	12.22	20.05	18.35	1.13	87.50	23.00	16.20
	17:07:55	0.714	2.75	4.30	29.17	12.22	20.05	18.10	0.88	85.90	21.40	16.20
	17:08:01	0.714	2.85	4.30	29.17	12.22	20.05	17.87	0.65	85.30	20.80	16.20
	17:08:07	0.714	2.95	4.30	29.17	12.22	20.05	17.82	0.60	85.90	21.40	16.20
	17:08:13	0.714	3.05	4.30	29.17	12.22	20.05	17.97	0.75	87.20	22.70	16.20
	17:08:19	0.714	3.15	4.30	29.17	12.22	20.05	18.20	0.98	88.30	23.80	16.20
	17:08:25	0.714	3.25	4.30	29.17	12.22	20.05	18.30	1.08	88.50	24.00	16.20
	17:08:31	0.714	3.35	4.30	29.17	12.22	20.05	18.23	1.01	87.70	23.20	16.20
	17:08:37	0.714	3.45	4.30	29.17	12.22	20.05	18.05	0.83	86.70	22.20	16.20
	17:08:43	0.714	3.55	4.30	29.17	12.22	20.05	17.95	0.73	86.00	21.50	16.20
	17:08:49	0.714	3.65	4.30	29.17	12.22	20.05	17.98	0.76	86.20	21.70	16.20
	17:08:55	0.715	3.75	4.30	29.17	12.22	20.05	18.12	0.90	86.90	22.40	16.20
	17:09:01	0.715	3.85	4.30	29.17	12.22	20.05	18.23	1.01	87.70	23.20	16.20
	17:09:07	0.715	3.95	4.30	29.17	12.22	20.05	18.23	1.01	88.10	23.60	16.20
	17:09:13	0.715	4.05	4.30	29.17	12.22	20.05	18.14	0.92	87.80	23.30	16.20
	17:09:19	0.715	4.15	4.30	29.17	12.22	20.05	18.04	0.82	87.10	22.60	16.20
	17:09:25	0.715	4.25	4.30	29.17	12.22	20.05	18.04	0.82	86.50	22.00	16.20
	17:09:31	0.715	4.35	4.30	29.17	12.22	20.05	18.11	0.89	86.40	21.90	16.20
	17:09:37	0.715	4.45	4.30	29.17	12.22	20.05	18.21	0.99	86.80	22.30	16.20
	17:09:43	0.715	4.55	4.30	29.17	12.22	20.05	18.23	1.01	87.40	22.90	16.20
	17:09:49	0.715	4.65	4.30	29.17	12.22	20.05	18.17	0.95	87.70	23.20	16.20
	17:09:55	0.715	4.75	4.30	29.17	12.22	20.05	18.10	0.88	87.70	23.20	16.20
	17:10:01	0.715	4.85	4.30	29.17	12.22	20.05	18.08	0.86	87.30	22.80	16.20
	17:10:16	0.715	5.10	4.30	29.17	12.22	20.05	18.23	1.01	86.70	22.20	16.20
	17:10:31	0.716	5.35	4.30	29.17	12.21	20.05	18.14	0.92	87.50	23.00	16.10
	17:10:46	0.716	5.60	4.30	29.17	12.21	20.05	18.15	0.93	87.20	22.70	16.20
	17:11:01	0.716	5.85	4.30	29.17	12.21	20.05	18.25	1.03	86.90	22.40	16.20
	17:11:16	0.716	6.10	4.30	29.17	12.22	20.05	18.12	0.90	87.50	23.00	16.20
	17:11:31	0.716	6.35	4.30	29.17	12.21	20.05	18.23	1.01	87.20	22.70	16.20
	17:11:46	0.717	6.60	4.30	29.17	12.21	20.05	18.21	0.99	87.10	22.60	16.20
	17:12:01	0.717	6.85	4.30	29.17	12.21	20.05	18.17	0.95	87.40	22.90	16.20
	17:12:16	0.717	7.10	4.30	29.17	12.21	20.05	18.27	1.05	87.20	22.70	16.20
	17:12:31	0.717	7.35	4.30	29.17	12.21	20.05	18.18	0.96	87.10	22.60	16.20
	17:12:46	0.717	7.60	4.30	29.17	12.21	20.05	18.23	1.01	87.40	22.90	16.20
	17:13:01	0.717	7.85	4.30	29.17	12.21	20.06	18.26	1.04	87.30	22.80	16.20
	17:13:16	0.718	8.10	4.30	29.17	12.21	20.06	18.20	0.98	87.20	22.70	16.20
	17:13:31	0.718	8.35	4.30	29.17	12.21	20.06	18.27	1.05	87.40	22.90	16.20
	17:13:46	0.718	8.60	4.30	29.17	12.21	20.06	18.24	1.02	87.30	22.80	16.20
	17:14:01	0.718	8.85	4.30	29.17	12.21	20.06	18.23	1.01	87.30	22.80	16.20

recovery

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	17:14:16	0.718	9.10	4.30	29.17	12.21	20.06	18.28	1.06	87.30	22.80	16.20
	17:14:31	0.718	9.35	4.30	29.17	12.21	20.06	18.24	1.02	87.30	22.80	16.20
	17:14:46	0.719	9.60	4.30	29.17	12.21	20.06	18.27	1.05	87.30	22.80	16.20
	17:15:01	0.719	9.85	4.30	29.17	12.21	20.06	18.27	1.05	87.30	22.80	16.20
	17:15:31	0.719	10.35	4.30	29.17	12.21	20.06	18.30	1.08	87.30	22.80	16.20
	17:16:01	0.719	10.85	4.30	29.17	12.21	20.06	18.29	1.07	87.30	22.80	16.20
	17:16:31	0.720	11.35	4.30	29.17	12.21	20.06	18.28	1.06	87.30	22.80	16.20
	17:17:01	0.720	11.85	4.30	29.17	12.21	20.06	18.30	1.08	87.30	22.80	16.20
	17:17:31	0.720	12.35	4.30	29.17	12.21	20.06	18.31	1.09	87.30	22.80	16.20
	17:18:01	0.721	12.85	4.30	29.16	12.21	20.06	18.31	1.09	87.30	22.80	16.20
	17:18:31	0.721	13.35	4.30	29.16	12.21	20.06	18.31	1.09	87.40	22.90	16.20
	17:19:01	0.722	13.85	4.30	29.17	12.21	20.07	18.32	1.10	87.40	22.90	16.20
	17:19:31	0.722	14.35	4.30	29.16	12.21	20.06	18.33	1.11	87.40	22.90	16.20
	17:20:01	0.722	14.85	4.30	29.16	12.21	20.07	18.34	1.12	87.40	22.90	16.20
	17:20:31	0.723	15.35	4.30	29.16	12.21	20.07	18.34	1.12	87.40	22.90	16.20
	17:21:01	0.723	15.85	4.30	29.16	12.21	20.07	18.35	1.13	87.40	22.90	16.20
	17:21:31	0.723	16.35	4.30	29.16	12.21	20.07	18.35	1.13	87.40	22.90	16.20
	17:22:01	0.724	16.85	4.30	29.16	12.21	20.07	18.36	1.14	87.40	22.90	16.20
	17:22:31	0.724	17.35	4.30	29.16	12.21	20.07	18.36	1.14	87.40	22.90	16.20
	17:23:01	0.724	17.85	4.30	29.16	12.21	20.07	18.36	1.14	87.40	22.90	16.20
	17:23:31	0.725	18.35	4.30	29.16	12.21	20.08	18.37	1.15	87.40	22.90	16.20
	17:24:01	0.725	18.85	4.30	29.16	12.21	20.08	18.38	1.16	87.40	22.90	16.20
	17:24:31	0.725	19.35	4.30	29.16	12.21	20.08	18.38	1.16	87.40	22.90	16.20
	17:25:01	0.726	19.85	4.30	29.16	12.21	20.08	18.38	1.16	87.40	22.90	16.20
	17:26:01	0.726	20.85	4.30	29.16	12.21	20.08	18.39	1.17	87.40	22.90	16.20
	17:27:01	0.727	21.85	4.30	29.16	12.21	20.09	18.40	1.18	87.40	22.90	16.20
	17:28:01	0.728	22.85	4.30	29.16	12.21	20.09	18.41	1.19	87.40	22.90	16.20
	17:29:01	0.728	23.85	4.30	29.16	12.21	20.09	18.42	1.20	87.40	22.90	16.20
	17:30:01	0.729	24.85	4.30	29.16	12.21	20.09	18.42	1.20	87.40	22.90	16.20
	17:31:01	0.730	25.85	4.30	29.16	12.21	20.09	18.43	1.21	87.40	22.90	16.20
	17:32:01	0.731	26.85	4.30	29.16	12.21	20.10	18.43	1.21	87.40	22.90	16.20
	17:33:01	0.731	27.85	4.30	29.16	12.21	20.10	18.44	1.22	87.40	22.90	16.30
	17:34:01	0.732	28.85	4.30	29.16	12.21	20.10	18.45	1.23	87.50	23.00	16.30
	17:35:01	0.733	29.85	4.30	29.16	12.21	20.11	18.46	1.24	87.50	23.00	16.30
	17:36:01	0.733	30.85	4.30	29.16	12.21	20.11	18.47	1.25	87.50	23.00	16.30
	17:37:01	0.734	31.85	4.30	29.16	12.21	20.11	18.47	1.25	87.50	23.00	16.30
	17:38:01	0.735	32.85	4.30	29.16	12.21	20.12	18.48	1.26	87.50	23.00	16.30
	17:39:01	0.735	33.85	4.30	29.16	12.21	20.12	18.48	1.26	87.50	23.00	16.30
	17:40:01	0.736	34.85	4.30	29.16	12.21	20.13	18.49	1.27	87.50	23.00	16.30
	17:41:01	0.737	35.85	4.30	29.16	12.21	20.13	18.49	1.27	87.50	23.00	16.30
	17:42:01	0.738	36.85	4.30	29.16	12.21	20.13	18.49	1.27	87.50	23.00	16.30
	17:43:01	0.738	37.85	4.30	29.16	12.21	20.14	18.50	1.28	87.50	23.00	16.30

recovery

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	17:44:01	0.739	38.85	4.30	29.16	12.21	20.14	18.51	1.29	87.50	23.00	16.30
	17:45:01	0.740	39.85	4.30	29.16	12.21	20.15	18.52	1.30	87.50	23.00	16.30
	17:50:01	0.743	44.85	4.30	29.16	12.22	20.16	18.54	1.32	87.50	23.00	16.30
	17:55:01	0.747	49.85	4.30	29.17	12.23	20.18	18.55	1.33	87.50	23.00	16.30
	18:00:01	0.750	54.85	4.30	29.17	12.23	20.20	18.58	1.36	87.60	23.10	16.40
	18:05:01	0.753	59.85	4.29	29.17	12.24	20.21	18.60	1.38	87.60	23.10	16.40
	18:10:01	0.757	64.85	4.29	29.17	12.25	20.22	18.61	1.39	87.60	23.10	16.40
	18:15:01	0.760	69.85	4.29	29.17	12.26	20.23	18.62	1.40	87.60	23.10	16.40
	18:20:01	0.764	74.85	4.29	29.17	12.27	20.25	18.64	1.42	87.60	23.10	16.40
	18:25:01	0.767	79.85	4.29	29.17	12.27	20.27	18.66	1.44	87.70	23.20	16.40
	18:30:01	0.771	84.85	4.29	29.17	12.28	20.28	18.67	1.45	87.70	23.20	16.40
	18:35:01	0.774	89.85	4.29	29.17	12.30	20.29	18.68	1.46	87.70	23.20	16.50
	18:45:01	0.781	99.85	4.28	29.17	12.32	20.31	18.70	1.48	87.70	23.20	16.50
	18:55:01	0.788	109.85	4.28	29.17	12.34	20.34	18.73	1.51	87.70	23.20	
	19:05:00	0.795	119.83					18.73	1.51	87.70	23.20	16.50
	19:07:00	0.797	121.83	4.29	29.17	12.36	20.36	18.74	1.52	87.70	23.20	16.60
	19:22:00	0.807	136.83	4.29	29.17	12.39	20.39	18.77	1.55	87.70	23.20	16.70
	19:37:00	0.817	151.83	4.29	29.12	12.33	20.34	18.81	1.59	87.80	23.30	16.70
	19:52:00	0.828	166.83	4.30	29.11	12.40	20.39	18.83	1.61	87.80	23.30	16.70
	20:07:00	0.838	181.83	4.30	29.11	12.46	20.42	18.85	1.63	87.80	23.30	16.70
	20:22:00	0.849	196.83	4.30	29.10	12.48	20.45	18.87	1.65	87.80	23.30	16.70
	20:37:00	0.859	211.83	4.30	29.09	12.52	20.47	18.89	1.67	87.80	23.30	16.80
	20:52:00	0.869	226.83	4.29	29.08	12.53	20.48	18.90	1.68	87.80	23.30	16.80
	21:07:00	0.880	241.83	4.29	29.08	12.56	20.50	18.91	1.69	87.80	23.30	16.80
	21:22:00	0.890	256.83	4.29	29.07	12.58	20.52	18.93	1.71	87.80	23.30	16.80
	21:37:00	0.901	271.83	4.29	29.07	12.60	20.53	18.94	1.72	87.80	23.30	16.80
	21:52:00	0.911	286.83	4.29	29.07	12.62	20.54	18.94	1.72	87.80	23.30	16.80
	22:07:00	0.922	301.83	4.29	29.06	12.64	20.55	18.95	1.73	87.80	23.30	16.80
	22:22:00	0.932	316.83	4.29	29.06	12.65	20.56	18.97	1.75	87.80	23.30	16.90
	22:37:00	0.942	331.83	4.29	29.06	12.66	20.58	18.98	1.76	87.80	23.30	16.90
	22:52:00	0.953	346.83	4.29	29.06	12.68	20.59	18.99	1.77	87.80	23.30	16.90
	23:07:00	0.963	361.83	4.30	29.06	12.70	20.60	19.00	1.78	87.80	23.30	16.90
	23:22:00	0.974	376.83	4.30	29.06	12.72	20.61	19.00	1.78	87.80	23.30	16.90
	23:37:00	0.984	391.83	4.30	29.06	12.72	20.62	19.01	1.79	87.90	23.40	17.00
	23:52:00	0.994	406.83	4.30	29.06	12.74	20.63	19.02	1.80	87.90	23.40	
04-17-94	00:07:00	0.005	421.83	4.30	29.06	12.75	20.64	19.03	1.81	87.80	23.30	17.00
	00:22:00	0.015	436.83	4.30	29.06	12.77	20.65	19.04	1.82	87.90	23.40	17.00
	00:37:00	0.026	451.83	4.30	29.06	12.78	20.66	19.04	1.82	87.90	23.40	17.00
	00:52:00	0.036	466.83	4.30	29.05	12.78	20.67	19.05	1.83	87.90	23.40	17.00
	01:07:00	0.047	481.83	4.30	29.05	12.79	20.67	19.05	1.83	87.90	23.40	17.00
	01:22:00	0.057	496.83	4.30	29.05	12.80	20.68	19.06	1.84	87.90	23.40	17.00
	01:37:00	0.067	511.83	4.30	29.05	12.81	20.69	19.06	1.84	87.80	23.30	17.00

recovery

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	01:52:00	0.078	526.83	4.30	29.05	12.82	20.70	19.06	1.84	87.90	23.40	17.00
	02:07:00	0.088	541.83	4.30	29.05	12.84	20.71	19.07	1.85	87.90	23.40	17.00
	02:22:00	0.099	556.83	4.31	29.05	12.85	20.71	19.07	1.85	87.80	23.30	17.00
	02:37:00	0.109	571.83	4.31	29.05	12.85	20.72	19.07	1.85	87.80	23.30	17.10
	02:52:00	0.119	586.83	4.31	29.05	12.85	20.73	19.08	1.86	87.90	23.40	17.10
	03:07:00	0.130	601.83	4.31	29.05	12.86	20.73	19.09	1.87	87.90	23.40	17.10
	03:22:00	0.140	616.83	4.31	29.05	12.87	20.74	19.10	1.88	87.90	23.40	17.10
	03:37:00	0.151	631.83	4.31	29.05	12.88	20.75	19.10	1.88	87.90	23.40	17.10
	03:52:00	0.161	646.83	4.32	29.05	12.89	20.76	19.11	1.89	87.90	23.40	17.10
	04:07:00	0.172	661.83	4.32	29.05	12.90	20.76	19.12	1.90	87.90	23.40	17.10
	04:22:00	0.182	676.83	4.32	29.05	12.91	20.78	19.13	1.91	87.90	23.40	17.10
	04:37:00	0.192	691.83	4.32	29.05	12.91	20.78	19.13	1.91	87.90	23.40	17.10
	04:52:00	0.203	706.83	4.31	29.04	12.91	20.79	19.13	1.91	87.90	23.40	17.10
	05:07:00	0.213	721.83	4.31	29.04	12.92	20.79	19.13	1.91	87.90	23.40	17.10
	05:22:00	0.224	736.83	4.32	29.04	12.92	20.79	19.13	1.91	87.80	23.30	17.10
	05:37:00	0.234	751.83	4.32	29.04	12.93	20.79	19.13	1.91	87.90	23.40	17.10
	05:52:00	0.244	766.83	4.32	29.04	12.94	20.80	19.14	1.92	87.90	23.40	17.10
	06:07:00	0.255	781.83	4.32	29.03	12.94	20.80	19.14	1.92	87.90	23.40	17.10
	06:22:00	0.265	796.83	4.31	29.03	12.94	20.80	19.14	1.92	87.90	23.40	17.10
	06:37:00	0.276	811.83	4.31	29.02	12.95	20.80	19.14	1.92	87.80	23.30	17.10
	06:52:00	0.286	826.83	4.31	29.02	12.95	20.81	19.14	1.92	87.80	23.30	17.10
	07:07:00	0.297	841.83	4.31	29.01	12.95	20.81	19.14	1.92	87.80	23.30	17.10
	07:22:00	0.307	856.83	4.31	29.01	12.96	20.81	19.14	1.92	87.80	23.30	17.10
	07:37:00	0.317	871.83	4.31	29.00	12.96	20.81	19.14	1.92	87.80	23.30	17.10
	07:52:00	0.328	886.83	4.30	29.00	12.96	20.81	19.14	1.92	87.80	23.30	17.10
	08:07:00	0.338	901.83	4.30	29.00	12.96	20.81	19.14	1.92	87.80	23.30	17.10
	08:22:00	0.349	916.83	4.30	29.00	12.97	20.82	19.14	1.92	87.80	23.30	17.20
	08:37:00	0.359	931.83	4.31	28.99	12.97	20.82	19.14	1.92	87.80	23.30	17.20
	08:52:00	0.369	946.83	4.31	28.99	12.97	20.82	19.14	1.92	87.80	23.30	17.20
	09:07:00	0.380	961.83	4.31	28.99	12.98	20.82	19.14	1.92	87.80	23.30	17.20
	09:22:00	0.390	976.83	4.31	28.98	12.98	20.83	19.15	1.93	87.80	23.30	17.20
	09:37:00	0.401	991.83	4.30	28.98	12.98	20.83	19.15	1.93	87.80	23.30	17.20
	09:52:00	0.411	1006.83	4.30	28.98	12.98	20.83	19.15	1.93	87.80	23.30	17.20
	10:07:00	0.422	1021.83	4.30	28.97	12.98	20.83	19.14	1.92	87.80	23.30	17.20
	10:22:00	0.432	1036.83	4.30	28.97	12.98	20.83	19.14	1.92	87.80	23.30	17.10
	10:37:00	0.442	1051.83	4.30	28.96	12.98	20.83	19.14	1.92	87.80	23.30	17.10
	10:52:00	0.453	1066.83	4.30	28.96	12.98	20.83	19.14	1.92	87.80	23.30	17.10
	11:07:00	0.463	1081.83	4.30	28.95	12.98	20.83	19.13	1.91	87.80	23.30	17.20
	11:22:00	0.474	1096.83	4.30	28.95	12.98	20.83	19.13	1.91	87.80	23.30	17.10
	11:37:00	0.484	1111.83	4.30	28.95	12.98	20.84	19.14	1.92	87.80	23.30	17.10
	11:52:00	0.494	1126.83	4.30	28.95	12.99	20.84	19.14	1.92	87.80	23.30	17.10
	12:07:00	0.505	1141.83	4.30	28.94	12.99	20.84	19.14	1.92	87.80	23.30	17.10

recovery

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	12:22:00	0.515	1156.83	4.29	28.94	12.99	20.84	19.14	1.92	87.80	23.30	17.10
	12:37:00	0.526	1171.83	4.29	28.93	12.99	20.85	19.14	1.92	87.80	23.30	17.10
	12:52:00	0.536	1186.83	4.30	28.93	12.99	20.85	19.14	1.92	87.80	23.30	17.10
	13:07:00	0.547	1201.83	4.29	28.93	12.99	20.85	19.14	1.92	87.80	23.30	17.10
	13:22:00	0.557	1216.83	4.29	28.93	13.00	20.86	19.14	1.92	87.80	23.30	17.10
	13:37:00	0.567	1231.83	4.29	28.93	13.00	20.86	19.14	1.92	87.80	23.30	17.10
	13:52:00	0.578	1246.83	4.29	28.93	13.00	20.86	19.14	1.92	87.80	23.30	17.10
	14:07:00	0.588	1261.83	4.30	28.93	13.00	20.86	19.14	1.92	87.80	23.30	17.10
	14:22:00	0.599	1276.83	4.30	28.93	13.01	20.86	19.15	1.93	87.80	23.30	17.10
	14:37:00	0.609	1291.83	4.30	28.93	13.01	20.86	19.15	1.93	87.80	23.30	17.10
	14:52:00	0.619	1306.83	4.30	28.92	13.01	20.86	19.15	1.93	87.80	23.30	17.10
	15:07:00	0.630	1321.83	4.30	28.92	13.02	20.87	19.15	1.93	87.80	23.30	17.10
	15:22:00	0.640	1336.83	4.30	28.92	13.02	20.87	19.15	1.93	87.80	23.30	17.10
	15:37:00	0.651	1351.83	4.30	28.92	13.03	20.88	19.15	1.93	87.80	23.30	17.10
	15:52:00	0.661	1366.83	4.30	28.92	13.03	20.88	19.15	1.93	87.80	23.30	17.10
	16:07:00	0.672	1381.83	4.30	28.92	13.03	20.88	19.15	1.93	87.80	23.30	17.10
	16:22:00	0.682	1396.83	4.30	28.92	13.03	20.89	19.15	1.93	87.80	23.30	17.10
	16:37:00	0.692	1411.83	4.30	28.92	13.03	20.89	19.15	1.93	87.80	23.30	17.10
	16:52:00	0.703	1426.83	4.30	28.91	13.04	20.89	19.15	1.93	87.80	23.30	17.10
	17:07:00	0.713	1441.83	4.30	28.91	13.04	20.88	19.15	1.93	87.80	23.30	17.10
	17:22:00	0.724	1456.83	4.29	28.90	13.04	20.89	19.15	1.93	87.80	23.30	17.10
	17:37:00	0.734	1471.83	4.29	28.90	13.04	20.89	19.15	1.93	87.80	23.30	17.10
	17:52:00	0.744	1486.83	4.29	28.90	13.04	20.88	19.15	1.93	87.80	23.30	17.10
	18:07:00	0.755	1501.83	4.29	28.89	13.04	20.88	19.15	1.93	87.80	23.30	17.10
	18:22:00	0.765	1516.83	4.29	28.89	13.04	20.89	19.15	1.93	87.80	23.30	17.10
	18:37:00	0.776	1531.83	4.29	28.89	13.04	20.89	19.15	1.93	87.80	23.30	17.10
	18:52:00	0.786	1546.83	4.28	28.88	13.04	20.89	19.15	1.93	87.80	23.30	17.10
	19:07:00	0.797	1561.83	4.28	28.88	13.04	20.89	19.14	1.92	87.80	23.30	17.10
	19:22:00	0.807	1576.83	4.28	28.88	13.04	20.89	19.15	1.93	87.80	23.30	17.10
	19:37:00	0.817	1591.83	4.28	28.88	13.04	20.89	19.14	1.92	87.80	23.30	17.10
	19:52:00	0.828	1606.83	4.28	28.87	13.04	20.88	19.14	1.92	87.80	23.30	17.10
	20:07:00	0.838	1621.83	4.28	28.87	13.04	20.88	19.14	1.92	87.80	23.30	17.10
	20:22:00	0.849	1636.83	4.28	28.87	13.04	20.88	19.14	1.92	87.80	23.30	17.10
	20:37:00	0.859	1651.83	4.28	28.87	13.04	20.88	19.14	1.92	87.80	23.30	17.10
	20:52:00	0.869	1666.83	4.28	28.87	13.04	20.88	19.14	1.92	87.80	23.30	17.10
	21:07:00	0.880	1681.83	4.27	28.87	13.04	20.88	19.14	1.92	87.80	23.30	17.10
	21:22:00	0.890	1696.83	4.27	28.87	13.04	20.87	19.13	1.91	87.70	23.20	17.10
	21:37:00	0.901	1711.83	4.27	28.86	13.03	20.87	19.13	1.91	87.70	23.20	17.10
	21:52:00	0.911	1726.83	4.27	28.86	13.03	20.87	19.13	1.91	87.70	23.20	17.20
	22:07:00	0.922	1741.83	4.27	28.86	13.03	20.87	19.13	1.91	87.70	23.20	17.10
	22:22:00	0.932	1756.83	4.27	28.86	13.03	20.87	19.13	1.91	87.70	23.20	17.10
	22:37:00	0.942	1771.83	4.27	28.85	13.03	20.86	19.12	1.90	87.70	23.20	17.10

recovery

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	22:52:00	0.953	1786.83	4.29	28.85	13.02	20.86	19.12	1.90	87.70	23.20	17.10
	23:07:00	0.963	1801.83	4.29	28.84	13.02	20.86	19.12	1.90	87.70	23.20	17.10
	23:22:00	0.974	1816.83	4.29	28.84	13.02	20.86	19.12	1.90	87.70	23.20	17.10
	23:37:00	0.984	1831.83	4.29	28.84	13.02	20.86	19.13	1.91	87.70	23.20	17.20
	23:52:00	0.994	1846.83	4.29	28.85	13.03	20.86	19.13	1.91	87.70	23.20	
04-18-94	00:07:00	0.005	1861.83	4.30	28.84	13.03	20.87	19.13	1.91	87.70	23.20	17.20
	00:22:00	0.015	1876.83	4.30	28.85	13.03	20.87	19.13	1.91	87.70	23.20	17.20
	00:37:00	0.026	1891.83	4.29	28.84	13.03	20.87	19.13	1.91	87.70	23.20	17.20
	00:52:00	0.036	1906.83	4.29	28.84	13.03	20.87	19.13	1.91	87.70	23.20	17.20
	01:07:00	0.047	1921.83	4.29	28.84	13.03	20.87	19.13	1.91	87.70	23.20	17.20
	01:22:00	0.057	1936.83	4.29	28.84	13.03	20.87	19.13	1.91	87.70	23.20	17.20
	01:37:00	0.067	1951.83	4.29	28.84	13.04	20.87	19.14	1.92	87.70	23.20	17.20
	01:52:00	0.078	1966.83	4.30	28.84	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	02:07:00	0.088	1981.83	4.30	28.84	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	02:22:00	0.099	1996.83	4.30	28.84	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	02:37:00	0.109	2011.83	4.29	28.84	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	02:52:00	0.119	2026.83	4.29	28.84	13.04	20.88	19.15	1.93	87.70	23.20	17.20
	03:07:00	0.130	2041.83	4.29	28.84	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	03:22:00	0.140	2056.83	4.29	28.84	13.04	20.88	19.15	1.93	87.70	23.20	17.20
	03:37:00	0.151	2071.83	4.29	28.84	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	03:52:00	0.161	2086.83	4.29	28.83	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	04:07:00	0.172	2101.83	4.28	28.83	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	04:22:00	0.182	2116.83	4.28	28.83	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	04:37:00	0.192	2131.83	4.28	28.83	13.04	20.88	19.14	1.92	87.70	23.20	17.20
	04:52:00	0.203	2146.83	4.28	28.82	13.04	20.87	19.13	1.91	87.70	23.20	17.20
	05:07:00	0.213	2161.83	4.28	28.82	13.04	20.87	19.13	1.91	87.70	23.20	17.20
	05:22:00	0.224	2176.83	4.28	28.82	13.04	20.86	19.13	1.91	87.70	23.20	17.20
	05:37:00	0.234	2191.83	4.28	28.81	13.04	20.86	19.13	1.91	87.70	23.20	17.20
	05:52:00	0.244	2206.83	4.27	28.81	13.03	20.86	19.12	1.90	87.70	23.20	17.20
	06:07:00	0.255	2221.83	4.27	28.80	13.03	20.86	19.12	1.90	87.70	23.20	17.20
	06:22:00	0.265	2236.83	4.27	28.80	13.03	20.86	19.11	1.89	87.70	23.20	17.20
	06:37:00	0.276	2251.83	4.27	28.80	13.02	20.86	19.11	1.89	87.70	23.20	17.20
	06:52:00	0.286	2266.83	4.27	28.80	13.02	20.85	19.11	1.89	87.60	23.10	17.20
	07:07:00	0.297	2281.83	4.27	28.80	13.02	20.85	19.11	1.89	87.60	23.10	17.20
	07:22:00	0.307	2296.83	4.27	28.80	13.02	20.85	19.10	1.88	87.60	23.10	17.20
	07:37:00	0.317	2311.83	4.26	28.79	13.01	20.84	19.10	1.88	87.60	23.10	17.20
	07:52:00	0.328	2326.83	4.26	28.79	13.00	20.83	19.09	1.87	87.60	23.10	17.10
	08:07:00	0.338	2341.83	4.26	28.78	13.00	20.83	19.08	1.86	87.60	23.10	17.10
	08:22:00	0.349	2356.83	4.26	28.78	13.00	20.83	19.08	1.86	87.60	23.10	17.10
	08:37:00	0.359	2371.83	4.26	28.77	13.00	20.83	19.08	1.86	87.60	23.10	17.10
	08:52:00	0.369	2386.83	4.26	28.77	12.99	20.82	19.08	1.86	87.60	23.10	17.10
	09:07:00	0.380	2401.83	4.26	28.77	12.99	20.82	19.08	1.86	87.60	23.10	17.10

recovery

Date	Time	Time General	Elapsed Time	Ch. 1 SURFICIAL	Ch. 2 UPR.INT.	Ch. 3 LWR.INT.	Ch. 4 SUWANNEE MONITOR	Ch. 5 AVON PK.	displacement (feet)	Ch. 6 PROD.WEL	displacement (feet)	Ch. 7 SUWANNEE PROD.WELL
	09:22:00	0.390	2416.83	4.26	28.76	12.99	20.82	19.08	1.86	87.60	23.10	17.10
	09:37:00	0.401	2431.83	4.27	28.76	12.99	20.82	19.08	1.86	87.60	23.10	17.10
	09:52:00	0.411	2446.83	4.27	28.76	12.99	20.82	19.07	1.85	87.60	23.10	17.10
	10:07:00	0.422	2461.83	4.26	28.76	12.99	20.82	19.07	1.85	87.60	23.10	17.10
	10:22:00	0.432	2476.83	4.26	28.75	12.98	20.82	19.07	1.85	87.60	23.10	17.10
	10:37:00	0.442	2491.83	4.26	28.75	12.98	20.81	19.07	1.85	87.60	23.10	17.10
	10:52:00	0.453	2506.83	4.26	28.75	12.98	20.81	19.06	1.84	87.60	23.10	17.10
	11:07:00	0.463	2521.83	4.26	28.75	12.98	20.81	19.06	1.84	87.50	23.00	17.10
	11:22:00	0.474	2536.83	4.26	28.74	12.98	20.81	19.06	1.84	87.60	23.10	17.10
	11:37:00	0.484	2551.83	4.26	28.74	12.98	20.81	19.07	1.85	87.60	23.10	17.10
	11:52:00	0.494	2566.83	4.26	28.74	12.98	20.81	19.07	1.85	87.60	23.10	17.10
	12:07:00	0.505	2581.83	4.26	28.74	12.98	20.81	19.06	1.84	87.60	23.10	17.10
	12:22:00	0.515	2596.83	4.26	28.74	12.98	20.82	19.07	1.85	87.60	23.10	17.10
	12:37:00	0.526	2611.83	4.26	28.74	12.98	20.82	19.07	1.85	87.60	23.10	17.00
	12:52:00	0.536	2626.83	4.26	28.71	12.99	20.84	19.06	1.84	87.50	23.00	17.00
	13:07:00	0.547	2641.83	4.25	28.68	0.00	20.80	19.06	1.84	87.50	23.00	17.00
	13:22:00	0.557	2656.83	4.24	28.70	0.00	20.81	19.06	1.84	87.50	23.00	17.00
	13:37:00	0.567	2671.83	4.24	28.71	0.00	20.81	19.06	1.84	87.50	23.00	17.00
	13:52:00	0.578	2686.83	4.24	28.72	0.00	20.79	19.07	1.85	87.50	23.00	0.00
	14:07:00	0.588	2701.83	4.24	28.71	0.00	20.78	19.03	1.81	87.50	23.00	0.00
	14:07:00	0.588	2701.83	0.00	28.64	0.00	0.00	19.01	1.79	87.50	23.00	

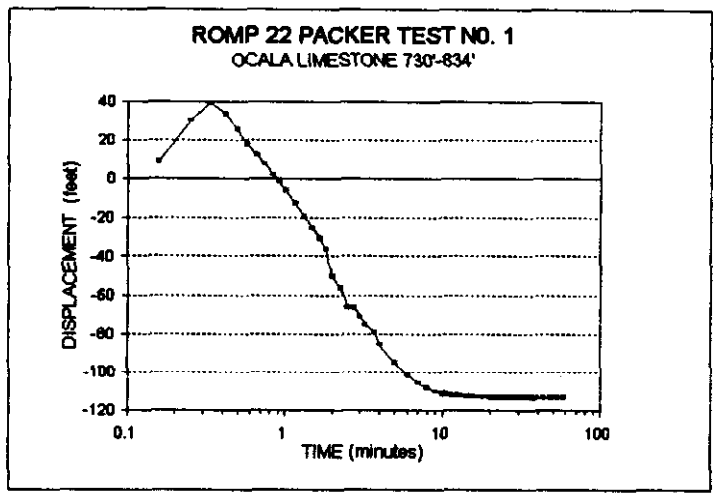
Romp-22, Utopia

DRAWDOWN PT-1

Pumping Rate(gpm):
13.4

ds: 98.8
t(o): 1
Thickness: 104
Transmissivity (T): 4.786854
Conductivity (K): 0.0460274

Time(m)	Ch 1	drawdown(ft)
0.00	105.2	0
0.08	105.6	-0.4
0.16	96.2	9
0.25	74.8	30.4
0.33	65.9	39.3
0.42	71.7	33.5
0.50	79.4	25.8
0.58	87.7	17.5
0.66	92.9	12.3
0.75	97.6	7.6
0.83	103.1	2.1
0.91	106.9	-1.7
1.00	111.3	-6.1
1.16	117.7	-12.5
1.33	124.3	-19.1
1.50	130.4	-25.2
1.66	136.2	-31
1.83	141.5	-36.3
2.00	155.5	-50.3
2.25	161.4	-56.2
2.50	166.7	-66.3
2.75	171.5	-66.3
3.00	176.2	-71
3.25	180.3	-75.1
3.75	184.2	-79
4.00	190.7	-85.5
5.00	200.4	-95.2
6.00	206.9	-101.7
7.00	211.1	-105.9
8.00	213.8	-108.6
9.00	215.5	-110.3
10.00	216.5	-111.3
10.50	216.9	-111.7
11.50	217.4	-112.2
12.5	217.7	-112.5
13.5	217.9	-112.7
14.5	218.1	-112.9
15.5	218.2	-113
16.5	218.3	-113.1
17.5	218.4	-113.2
18.5	218.4	-113.2
19.5	218.4	-113.2



Regression Output:

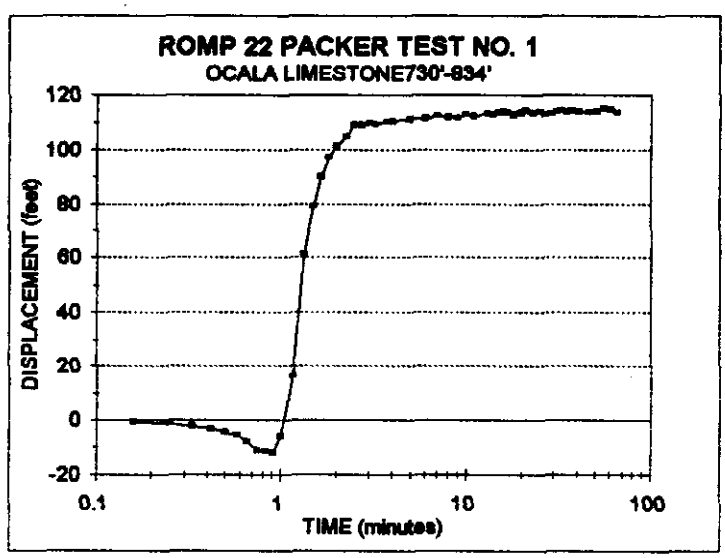
Constant		-22.2203207
Std Err of Y Est		16.1316097
R Squared		0.796052956
No. of Observations		20
Degrees of Freedom		18
X Coefficient(s)	-11.2814817	
Std Err of Coef.	1.345914952	

DRAWDOWN PT-1

Pumping Rate(gpm):
13.4

ds: 119.1
t(o): 1
Thickness: 104
Transmissivity (T): 3.97095866
Conductivity (K): 0.03818229

Time(m)	Ch 1	drawdown(ft)
0.00	219.90	0.00
0.08	219.90	0.00
0.16	220.50	-0.60
0.25	221.10	-1.20
0.33	222.10	-2.20
0.42	223.20	-3.30
0.50	224.40	-4.50
0.58	225.50	-5.60
0.66	227.80	-7.90
0.75	231.10	-11.20
0.83	231.20	-11.30
0.91	231.90	-12.00
1.00	226.00	-6.10
1.16	203.50	16.40
1.33	158.60	61.30
1.50	140.80	79.10
1.66	130.10	89.80
1.83	122.80	97.10
2.00	118.70	101.20
2.25	114.90	105.00
2.50	111.80	109.10
2.75	110.80	109.10
3.00	110.20	109.70
3.25	110.70	109.20
3.75	109.80	110.10
4.00	109.50	110.40
5.00	108.80	111.10
6.00	108.50	111.40
7.00	107.30	112.60
8.00	108.00	111.90



Regression Output:

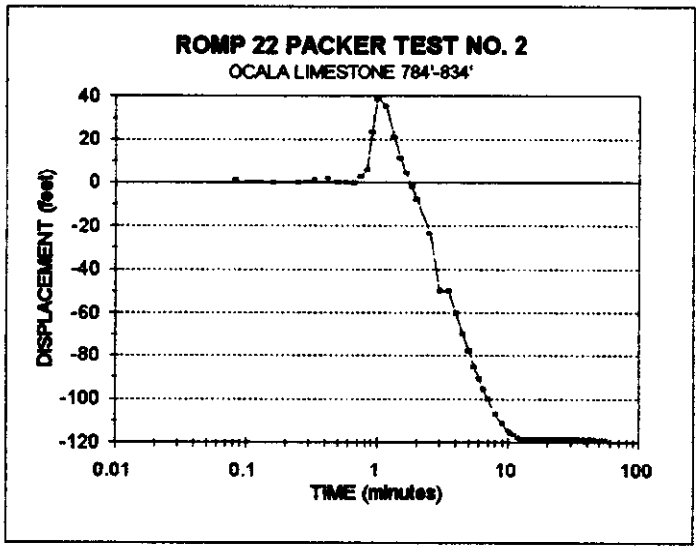
Constant		68.93888325
Std Err of Y Est		28.87151029
R Squared		0.282946355
No. of Observations		20
Degrees of Freedom		18
X Coefficient(s)	6.419805869	
Std Err of Coef.	2.408848102	

Romp-22, Utopia

DRAWDOWN PT-2

Pumping Rate(gpm):
10.4

ds: 153.8
t(o): 1
Thickness 54
Transmissivity (T): 17.85176
Conductivity (K): 0.330588



Time(min)	Ch 1	drawdown(ft)
0.00	100.30	0.00
0.08	99.60	0.70
0.16	100.40	-0.10
0.25	100.30	0.00
0.33	99.50	0.80
0.42	99.00	1.30
0.50	100.50	-0.20
0.58	100.50	-0.20
0.66	100.80	-0.50
0.75	97.90	2.40
0.83	94.70	5.60
0.91	76.70	23.60
1.00	61.30	39.00
1.16	65.10	35.20
1.33	79.10	21.20
1.50	88.90	11.40
1.66	96.10	4.20
1.83	102.50	-2.20
2.00	108.40	-8.10
2.50	123.50	-23.20
3.00	123.50	-49.70
3.50	150.00	-49.70
4.00	160.70	-60.40
4.50	170.20	-69.90

Regression Output:

Constant		28.1659917
Std Err of Y Est		18.1964104
R Squared		0.88445876
No. of Observations		20
Degrees of Freedom		18
X Coefficient(s)	-17.640024	
Std Err of Coef.	1.50277047	

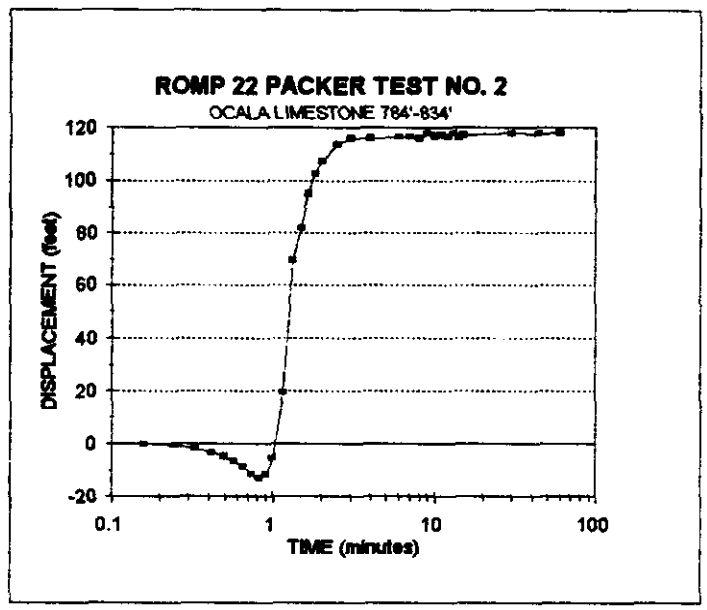
Romp-22, Utopia

RECOVERY PT-2

Pumping Rate(gpm):
10.41

ds: 122.5
t(o): 1
Thicknes 54
Transmissivity (T, 2.99928
Conductivity (K): 0.05554

Time(m)	Ch 1	drawdown(ft)
0.00	218.7	0
0.08	218.7	0
0.16	218.8	-0.1
0.25	219.3	-0.6
0.33	220.6	-1.9
0.42	222	-3.3
0.50	223.5	-4.8
0.58	225.4	-6.7
0.66	227.4	-8.7
0.75	230.2	-11.5
0.83	231.9	-13.2
0.91	230.3	-11.6
1.00	224.2	-5.5
1.16	199.1	19.6
1.33	149.1	69.6
1.50	136.8	81.9
1.66	123.6	95.1
1.83	116	102.7
2.00	111.3	107.4
2.50	105	113.7
3.00	103.8	116.1
4.00	102.6	116.1
6.00	102	116.7
7.00	102	116.7
8.00	102.6	116.1
9.00	100.9	117.8
10.00	101.7	117
11.00	101.3	117.4
12.00	101.9	116.8



Regression Output:

Constant		65.4322983
Std Err of Y Est		32.4210741
R Squared		0.33042013
No. of Observations		15
Degrees of Freedom		13
X Coefficient(s)	6.99379043	
Std Err of Coef.	2.76127004	

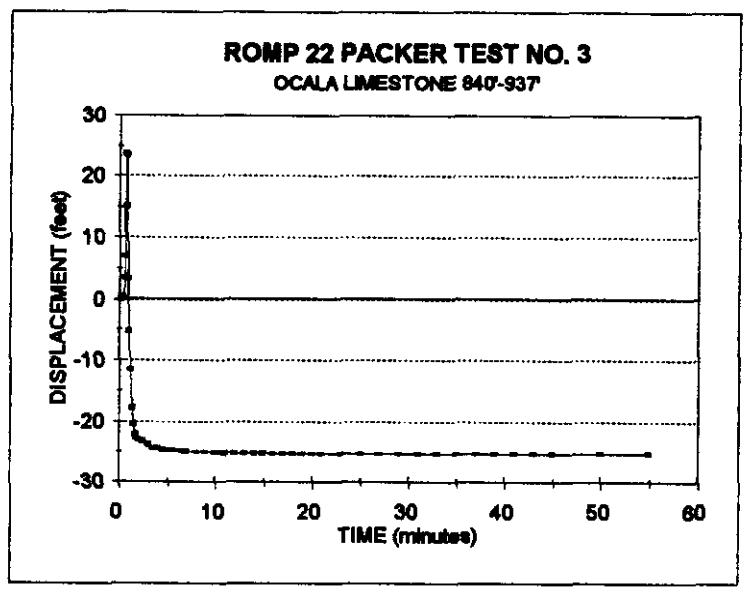
Romp-22, Utopia

DRAWDOWN PT-3

Pumping Rate(gpm):
43.42

ds:	13.6
t(o):	1
Thickness:	97
Transmissivity (T):	112.68166
Conductivity (K):	1.1616666

Time(m)	Ch 1	drawdown(ft)
0.00	194.40	0.00
0.08	193.90	0.50
0.16	194.50	-0.10
0.25	194.00	0.40
0.33	194.30	0.10
0.42	190.90	3.50
0.50	187.40	7.00
0.58	170.60	23.80
0.66	170.90	23.50
0.75	179.30	15.10
0.83	191.10	3.30
0.91	199.80	-5.40
1.00	206.00	-11.60
1.16	212.20	-17.80
1.33	214.80	-20.40
1.50	216.60	-22.20
1.66	217.20	-22.80
1.83	217.40	-23.00
2.00	217.60	-23.20
2.50	218.20	-23.80
3.00	218.50	-24.40
3.50	218.80	-24.40
4.00	219.00	-24.60
4.50	219.10	-24.70
5.00	219.20	-24.80
5.50	219.30	-24.90
6.00	219.40	-25.00
6.50	219.40	-25.00
7.00	219.50	-25.10



Regression Output:

Constant	-12.28429
Std Err of Y Est	11.744899
R Squared	0.2331145
No. of Observations	58
Degrees of Freedom	56
X Coefficient(s)	-0.429025
Std Err of Coef.	0.1039848

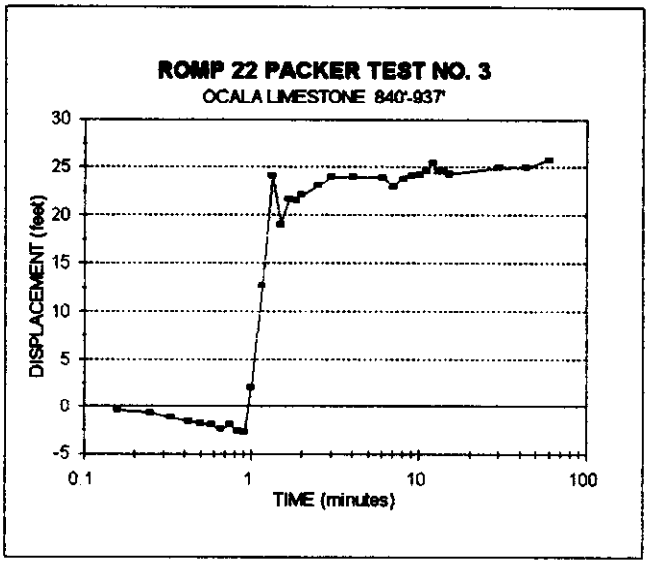
Romp-22, Utopia

RECOVERY PT-3

Pumping Rate(gpm):
43.42

ds:	22.1
t(o):	1
Thickness:	97
Transmissivity (T):	69.342560554
Conductivity (K):	0.7148717583

Time(m)	Ch 1	drawdown(ft)
0.00	219.90	0.00
0.08	219.90	0.00
0.16	220.30	-0.40
0.25	220.60	-0.70
0.33	221.10	-1.20
0.42	221.50	-1.60
0.50	221.70	-1.80
0.58	221.90	-2.00
0.66	222.30	-2.40
0.75	221.90	-2.00
0.83	222.50	-2.60
0.91	222.60	-2.70
1.00	217.80	2.10
1.16	207.30	12.60
1.33	195.80	24.10
1.50	200.90	19.00
1.66	198.20	21.70
1.83	198.30	21.60
2.00	197.80	22.10
2.50	196.80	23.10
3.00	196.80	24.00
4.00	195.90	24.00
6.00	196.00	23.90
7.00	196.90	23.00
8.00	196.10	23.80
9.00	195.80	24.10
10.00	195.70	24.20
11.00	195.20	24.70
12.00	194.50	25.40



Regression Output:

Constant		17.298459716
Std Err of Y Est		5.510565148
R Squared		0.2194630879
No. of Observations		15
Degrees of Freedom		13
X Coefficient(s)	0.8972910152	
Std Err of Coef.	0.4693292517	

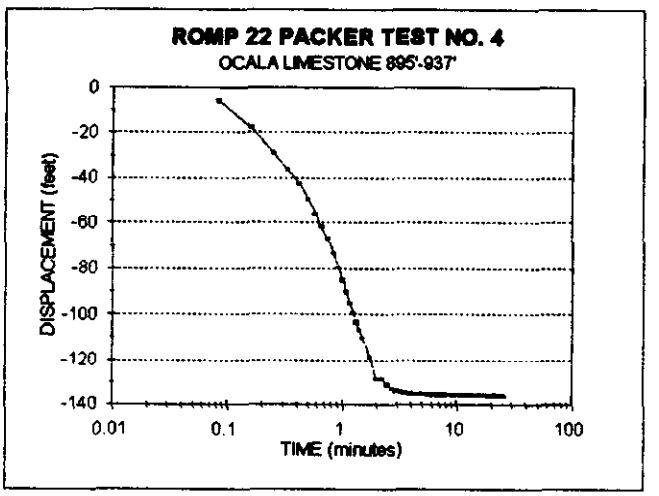
Romp-22, Utopia

DRAWDOWN PT-4

Pumping Rate(gpm):
16.82

ds:	50.10
t(o):	1.00
Thickness:	42.00
Transmissivity (T):	11.85
Conductivity (K):	0.28

Time(m)	Ch 1	drawdown(ft)
0.00	83.70	0.00
0.08	89.80	-6.10
0.16	101.70	-18.00
0.25	112.90	-29.20
0.33	120.20	-36.50
0.42	126.30	-42.60
0.50	133.30	-49.60
0.58	140.00	-56.30
0.66	145.80	-62.10
0.75	151.00	-67.30
0.83	157.40	-73.70
0.91	163.10	-79.40
1.00	169.10	-85.40
1.08	174.30	-90.60
1.16	179.10	-95.40
1.25	183.40	-99.70
1.33	187.40	-103.70
1.41	190.90	-107.20
1.50	194.20	-110.50
1.75	202.60	-118.90
2.00	208.60	-129.00
2.25	212.70	-129.00
2.50	215.30	-131.60
2.75	216.90	-133.20
3.00	217.90	-134.20
3.25	218.40	-134.70
3.50	218.70	-135.00
3.75	218.80	-135.10
4.00	219.00	-135.30



Regression Output:

Constant		-109.61731492
Std Err of Y Est		11.516329632
R Squared		0.4630588986
No. of Observations		33
Degrees of Freedom		31
X Coefficient(s)	-3.8920322789	
Std Err of Coef.	0.7527327191	

Romp-22, Utopia

Pumping Rate(gpm):

16.82

RECOVERY PT-4

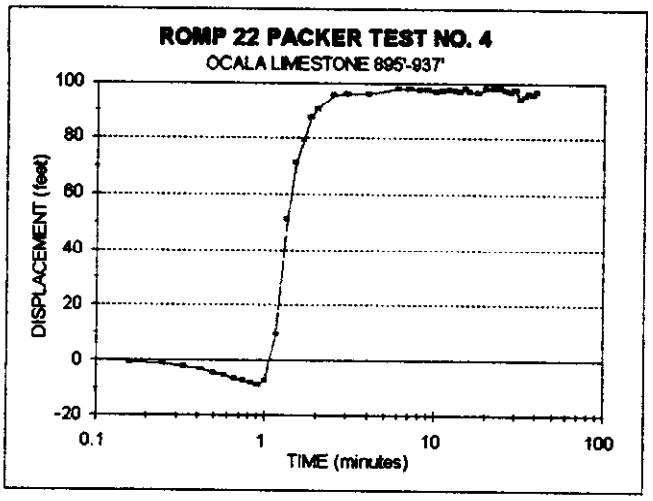
ds: 103.9

t(o): 1

Thickness: 42

Transmissivity (T): 5.7136387

Conductivity (K): 0.136039



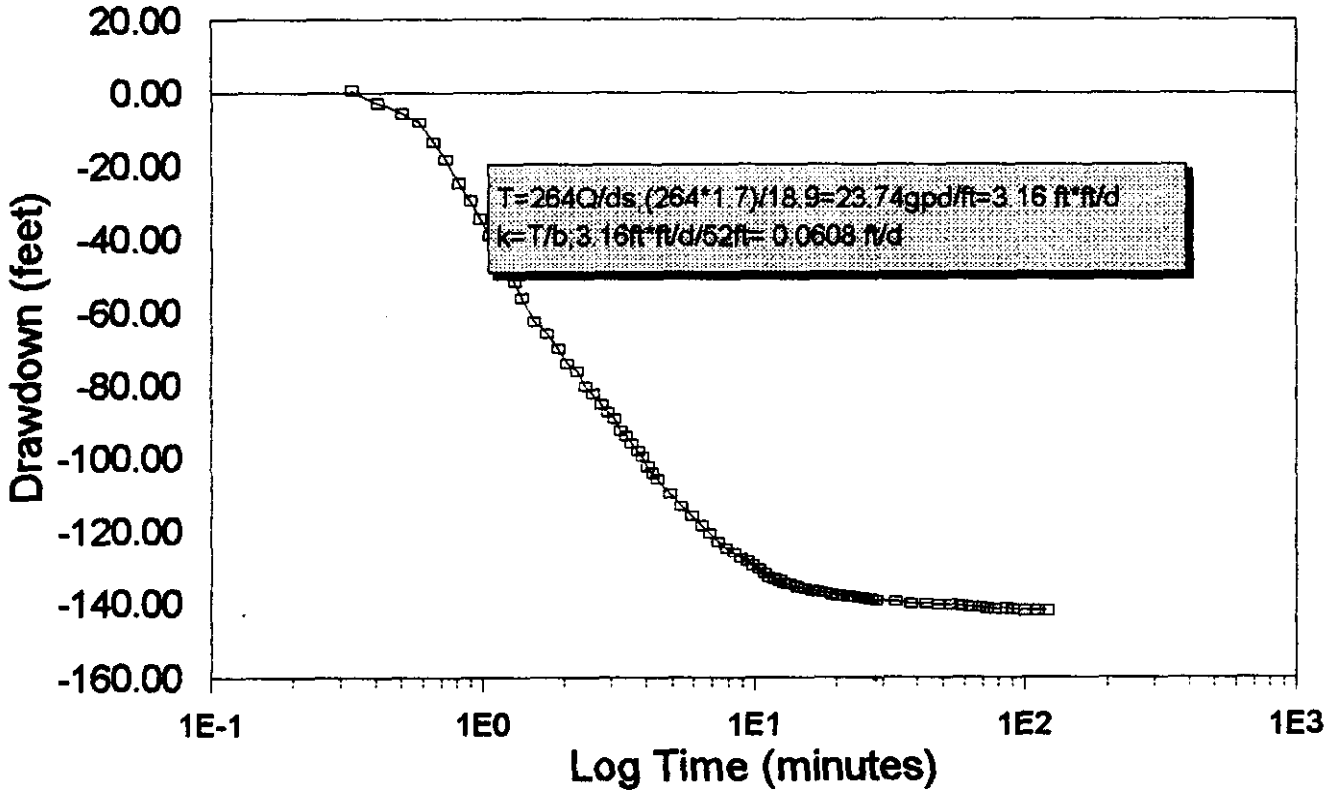
Time(m)	Ch 1	drawdown(ft)
0.00	220.10	0.00
0.08	220.10	0.00
0.16	220.80	-0.70
0.25	221.30	-1.20
0.33	222.10	-2.00
0.42	223.20	-3.10
0.50	224.50	-4.40
0.58	225.40	-5.30
0.66	226.30	-6.20
0.75	227.40	-7.30
0.83	228.00	-7.90
0.91	228.80	-8.70
1.00	227.20	-7.10
1.16	210.50	9.60
1.33	168.90	51.20
1.50	149.10	71.00
1.66	141.00	79.10
1.83	132.90	87.20
2.00	129.80	90.30
2.50	124.30	95.80
3.00	124.70	96.00
4.00	124.10	96.00
6.00	122.00	98.10
7.00	122.20	97.90
8.00	122.40	97.70
9.00	122.50	97.60
10.00	123.30	96.80
11.00	122.80	97.30
12.00	122.40	97.70

Regression Output:

Constant	52.890042935
Std Err of Y Est	28.732486333
R Squared	0.3209419781
No. of Observations	15
Degrees of Freedom	13
X Coefficient(s)	6.0657734725
Std Err of Coef.	2.4471167566

ROMP 22 Utopia

Packer Test 6,Drawdown vs. Time



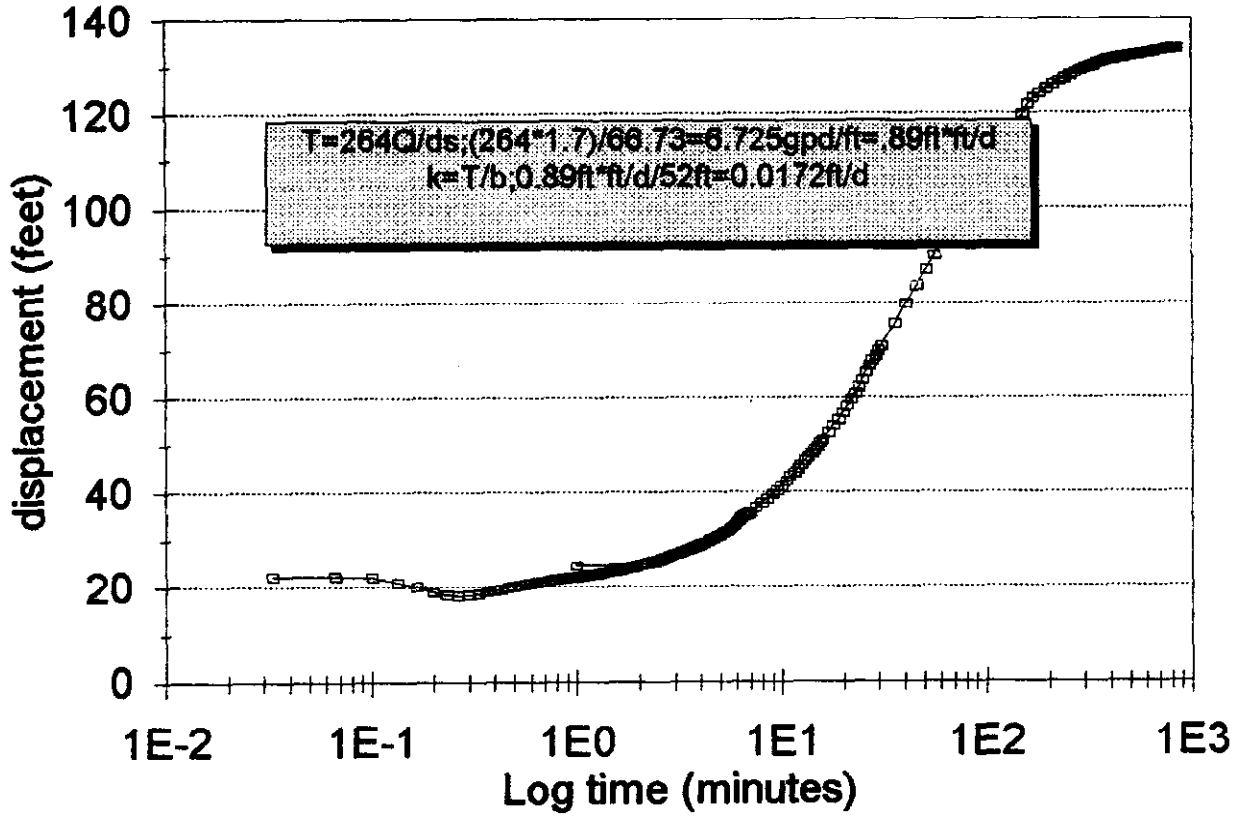
ROMP 22 WRAP No. 6
Packer Test No. 6
Test Interval: 1743'-1795'
Saturated Thickness: 52
Pumping Rate(gpm): 1.7
T=264Q/ds; (264*1.7)/18.9= 23.74 gpd/ft= 3.16ft*ft/d
K=T/b; 3.16 ft*ft/d/52 ft= 0.0608 ft/d
Transmissivity: 23.74603175 gpd/ft;

Time	Elapsed Time (min)	log time	Ch 1 head(ft)	Ch 2 head(ft)	combined head(ft)	displacement (feet)	Ch 3 head(ft)	displacement feet
00:00:00	0.00		118.10	34.53	152.63	0.00	28.90	0.00
15:22:11	0.18	-0.74473	118.10	35.42	153.52	0.89	28.91	-0.01
15:22:16	0.28	-0.55503	118.10	35.42	153.52	0.89	28.91	0.00
15:22:20	0.33	-0.48149	118.10	35.18	153.28	0.65	28.90	0.01
15:22:25	0.41	-0.38722	118.10	31.60	149.70	-2.93	28.91	-0.01
15:22:30	0.50	-0.30103	118.10	28.82	146.92	-5.71	28.90	0.01
15:22:35	0.59	-0.23657	118.10	26.24	144.34	-8.29	28.88	0.02
15:22:40	0.66	-0.18046	118.20	23.97	142.17	-10.46	28.88	0.00
15:22:44	0.73	-0.13668	113.00	21.15	134.15	-18.48	28.87	0.01
15:22:49	0.81	-0.09151	109.60	17.97	127.57	-25.06	28.87	0.00
15:22:54	0.90	-0.04576	107.50	15.39	122.89	-29.74	28.87	0.00
15:22:59	0.98	-0.00877	104.90	12.85	117.85	-34.78	28.86	0.01
15:23:04	1.06	0.025306	102.70	10.74	113.44	-39.19	28.86	0.00
15:23:09	1.15	0.060698	100.20	8.55	108.75	-43.88	28.86	0.00
15:23:14	1.23	0.089905	98.40	6.28	104.68	-47.94	28.85	0.01
15:23:19	1.31	0.117271	96.40	4.18	100.58	-52.05	28.84	0.01
15:23:24	1.40	0.146128	94.00	2.18	96.18	-56.45	28.83	0.01
15:23:34	1.56	0.193125	88.70	0.00	88.70	-62.93	28.83	0.00
15:23:44	1.73	0.238046	86.50	0.00	86.50	-65.13	28.83	0.00
15:23:54	1.90	0.278754	82.30	0.00	82.30	-70.33	28.82	0.01
15:24:04	2.06	0.313867	78.20	0.00	78.20	-74.43	28.82	0.00
15:24:14	2.23	0.348305	78.20	0.00	78.20	-78.43	28.82	0.00
15:24:24	2.40	0.380211	72.10	0.00	72.10	-80.53	28.82	0.00
15:24:34	2.56	0.40824	70.10	0.00	70.10	-82.53	28.82	0.00
15:24:44	2.73	0.436163	67.20	0.00	67.20	-85.43	28.83	-0.01
15:24:54	2.90	0.462398	65.00	0.00	65.00	-87.63	28.82	0.01
15:25:04	3.06	0.485721	63.00	0.00	63.00	-89.63	28.81	0.01
15:25:14	3.23	0.509203	59.90	0.00	59.90	-92.73	28.81	0.00
15:25:24	3.40	0.531479	58.50	0.00	58.50	-94.13	28.81	0.00
15:25:34	3.56	0.55145	56.40	0.00	56.40	-96.23	28.82	-0.01
15:25:44	3.73	0.571709	54.30	0.00	54.30	-98.33	28.82	0.00
15:25:54	3.90	0.591065	52.90	0.00	52.90	-99.73	28.81	0.01
15:26:04	4.06	0.608526	50.10	0.00	50.10	-102.53	28.81	0.00
15:26:14	4.23	0.62634	48.30	0.00	48.30	-104.33	28.82	-0.01
15:26:24	4.40	0.643453	46.80	0.00	46.80	-105.83	28.81	0.01
15:26:54	4.90	0.690196	42.70	0.00	42.70	-109.93	28.81	0.00
15:27:24	5.40	0.732394	39.20	0.00	39.20	-113.43	28.81	0.00
15:27:54	5.90	0.770852	36.50	0.00	36.50	-116.13	28.81	0.00
15:28:24	6.40	0.80618	33.70	0.00	33.70	-118.93	28.80	0.01
15:28:54	6.90	0.838849	31.50	0.00	31.50	-121.13	28.80	0.00
15:29:24	7.40	0.869232	29.20	0.00	29.20	-123.43	28.80	0.00
15:29:54	7.90	0.897627	27.40	0.00	27.40	-125.23	28.80	0.00
15:30:24	8.40	0.924279	26.20	0.00	26.20	-126.43	28.80	0.00
15:30:54	8.90	0.94939	24.80	0.00	24.80	-127.83	28.80	0.00
15:31:24	9.40	0.973128	23.90	0.00	23.90	-128.73	28.80	0.00
15:31:54	9.90	0.995635	22.70	0.00	22.70	-129.93	28.80	0.00
15:32:24	10.40	1.017033	21.50	0.00	21.50	-131.13	28.80	0.00
15:32:54	10.90	1.037426	20.40	0.00	20.40	-132.23	28.80	0.00
15:33:24	11.40	1.056905	19.30	0.00	19.30	-133.33	28.80	0.00
15:33:54	11.90	1.075547	19.00	0.00	19.00	-133.63	28.80	0.00
15:34:24	12.40	1.093422	18.50	0.00	18.50	-134.13	28.80	0.00
15:34:54	12.90	1.11059	17.90	0.00	17.90	-134.83	28.80	0.00

15:35:24	13.40	1.127105	17.50	0.00	17.50	-135.13	29.80	0.00
15:36:24	14.40	1.156362	16.70	0.00	16.70	-135.93	29.80	0.00
15:37:24	15.40	1.187521	16.20	0.00	16.20	-136.43	29.80	0.00
15:38:24	16.40	1.214844	15.70	0.00	15.70	-136.93	29.80	0.00
15:39:24	17.40	1.240549	15.50	0.00	15.50	-137.13	29.80	0.00
15:40:24	18.40	1.264818	15.20	0.00	15.20	-137.43	29.80	0.00
15:41:24	19.40	1.287802	14.70	0.00	14.70	-137.93	29.80	0.00
15:42:24	20.40	1.30963	14.50	0.00	14.50	-138.13	29.80	0.00
15:43:24	21.40	1.330414	14.20	0.00	14.20	-138.43	29.80	0.00
15:44:24	22.40	1.350248	14.10	0.00	14.10	-138.53	29.80	0.00
15:45:24	23.40	1.369216	14.00	0.00	14.00	-138.63	29.80	0.00
15:46:24	24.40	1.38739	13.80	0.00	13.80	-138.83	29.80	0.00
15:47:24	25.40	1.404834	13.80	0.00	13.80	-138.83	29.80	0.00
15:48:24	26.40	1.421604	13.40	0.00	13.40	-139.23	29.80	0.00
15:49:24	27.40	1.437751	13.40	0.00	13.40	-139.23	29.80	0.00
15:50:24	28.40	1.453318	13.10	0.00	13.10	-139.53	29.80	0.00
15:55:24	33.40	1.523746	12.70	0.00	12.70	-139.93	29.81	-0.01
16:00:24	38.40	1.584331	12.30	0.00	12.30	-140.33	29.80	0.01
16:05:24	43.40	1.63749	12.10	0.00	12.10	-140.53	29.81	-0.01
16:10:24	48.40	1.684845	11.90	0.00	11.90	-140.73	29.81	0.00
16:15:24	53.40	1.727541	11.80	0.00	11.80	-140.83	29.81	0.00
16:20:24	58.40	1.766413	11.50	0.00	11.50	-141.13	29.82	-0.01
16:25:24	63.40	1.802069	11.20	0.00	11.20	-141.43	29.82	0.00
16:30:24	68.40	1.835056	11.20	0.00	11.20	-141.43	29.82	0.00
16:35:24	73.40	1.865696	10.90	0.00	10.90	-141.73	29.83	-0.01
16:40:24	78.40	1.894316	10.80	0.00	10.80	-141.83	29.82	0.01
16:45:24	83.40	1.936514	11.00	0.00	11.00	-141.63	29.83	-0.01
16:50:24	91.40	1.980946	10.80	0.00	10.80	-141.83	29.83	0.00
17:00:24	101.40	2.006039	10.30	0.00	10.30	-142.33	29.84	-0.01
17:10:24	111.4	2.046865	10.40	0.00	10.40	-142.23	29.85	-0.01
17:20:24	121.4	2.084219	10.30	0.00	10.30	-142.33	29.85	0.00

ROMP 22 Utopia

Packer Test 6, Recovery vs. Time



ROMP 22 WRAP No. 6
Packer Test No. 6
Test Interval: 1743'-1795'
Saturated Thickness: 50
Pumping Rate(gpm): 1.7
T=264Q/ds;(264*1.7)/66.73=6.725gpd/ft=.89ft*ft/d
K=T/b;0.89ft*ft/d/52ft=0.0172ft/d
Transmissivity: 6.7256107 gpd/ft

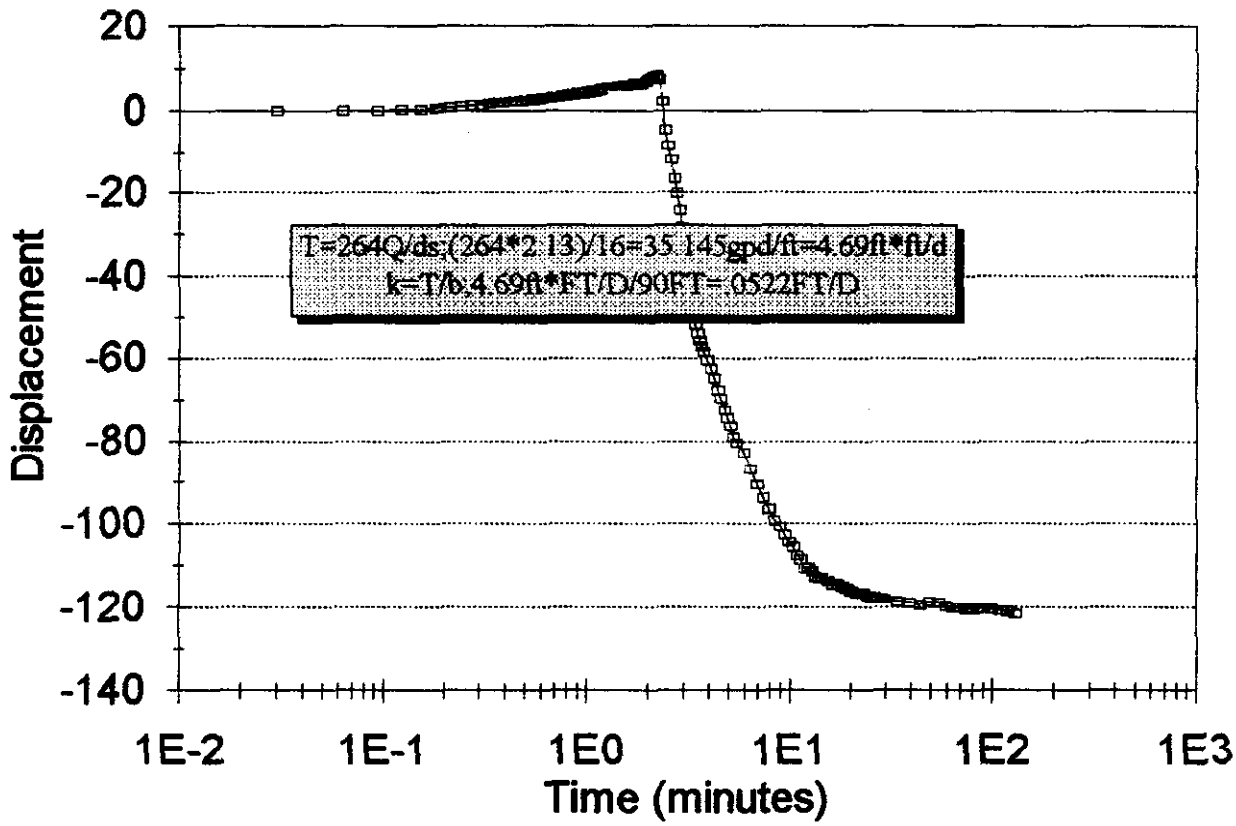
Time	Elapsed Time(min)	log time	Ch. 1 head(ft)	Ch. 2 head(ft)	combined head(ft)	displacement (feet)	Ch. 3 head(ft)	diplacement feet
17:10:24	0	ERR	10.40	0.00	10.4	10.40	28.86	0.00
17:20:24	10	1	10.30	0.00	10.3	10.30	28.86	0.00
17:30:00	0.000	ERR	22.30	0.00	22.3	22.30	28.86	0.00
17:30:02	0.033	-1.481486	22.40	0.00	22.4	22.40	28.87	-0.02
17:30:04	0.066	-1.180456	22.30	0.00	22.3	22.30	28.86	0.01
17:30:06	0.100	-1	22.10	0.00	22.1	22.10	28.86	0.00
17:30:08	0.133	-0.876148	21.00	0.00	21	21.00	28.86	0.00
17:30:10	0.166	-0.779892	20.10	0.00	20.1	20.10	28.86	0.00
17:30:12	0.199	-0.701147	18.90	0.00	18.9	18.90	28.86	0.00
17:30:14	0.232	-0.634512	18.30	0.00	18.3	18.30	28.86	0.00
17:30:16	0.265	-0.576754	18.10	0.00	18.1	18.10	28.86	0.00
17:30:18	0.298	-0.525784	18.30	0.00	18.3	18.30	28.86	0.00
17:30:20	0.331	-0.480172	18.60	0.00	18.6	18.60	28.86	0.00
17:30:22	0.364	-0.438899	18.90	0.00	18.9	18.90	28.86	0.00
17:30:24	0.397	-0.401209	19.20	0.00	19.2	19.20	28.86	0.00
17:30:26	0.430	-0.366532	19.50	0.00	19.5	19.50	28.86	0.00
17:30:28	0.463	-0.334419	20.00	0.00	20	20.00	28.86	0.00
17:30:30	0.496	-0.304518	20.20	0.00	20.2	20.20	28.86	0.00
17:30:32	0.529	-0.276544	20.40	0.00	20.4	20.40	28.86	0.00
17:30:34	0.562	-0.250264	20.60	0.00	20.6	20.60	28.86	0.00
17:30:36	0.595	-0.225483	20.80	0.00	20.8	20.80	28.86	0.00
17:30:38	0.628	-0.20204	20.90	0.00	20.9	20.90	28.86	0.00
17:30:40	0.661	-0.179799	21.00	0.00	21	21.00	28.86	0.00
17:30:42	0.694	-0.158641	21.20	0.00	21.2	21.20	28.86	0.00
17:30:44	0.727	-0.138466	21.30	0.00	21.3	21.30	28.86	0.00
17:30:46	0.760	-0.119186	21.40	0.00	21.4	21.40	28.86	0.00
17:30:48	0.793	-0.100727	21.50	0.00	21.5	21.50	28.86	0.00
17:30:50	0.826	-0.08302	21.60	0.00	21.6	21.60	28.86	0.00
17:30:52	0.859	-0.066007	21.70	0.00	21.7	21.70	28.86	0.00
17:30:54	0.892	-0.049635	21.80	0.00	21.8	21.80	28.86	0.00
17:30:56	0.925	-0.033858	21.90	0.00	21.9	21.90	28.86	0.00
17:30:58	0.958	-0.018634	21.90	0.00	21.9	21.90	28.86	0.00
17:31:00	1.000	0	22.00	0.00	22	22.00	28.86	0.00
17:31:02	1.033	0.0141003	22.10	0.00	22.1	22.10	28.86	0.00
17:31:04	1.066	0.0277572	22.20	0.00	22.2	22.20	28.86	0.00
17:31:06	1.100	0.0413927	22.30	0.00	22.3	22.30	28.86	0.00
17:31:08	1.133	0.0542299	22.40	0.00	22.4	22.40	28.86	0.00
17:31:10	1.166	0.0666986	22.50	0.00	22.5	22.50	28.86	0.00
17:31:12	1.199	0.0788192	22.50	0.00	22.5	22.50	28.86	0.00
17:31:14	1.232	0.0906107	22.60	0.00	22.6	22.60	28.86	0.00
17:31:16	1.265	0.1020905	22.70	0.00	22.7	22.70	28.86	0.00
17:31:18	1.299	0.1132747	22.80	0.00	22.8	22.80	28.86	0.00

17:31:20	1.331	0.1241781	22.90	0.00	22.9	22.90	28.86	0.00
17:31:22	1.364	0.1348144	23.00	0.00	23	23.00	28.86	0.00
17:31:24	1.397	0.1451964	23.00	0.00	23	23.00	28.86	0.00
17:31:26	1.430	0.155336	23.10	0.00	23.1	23.10	28.86	0.00
17:31:28	1.463	0.1652443	23.20	0.00	23.2	23.20	28.86	0.00
17:31:30	1.496	0.1749316	23.30	0.00	23.3	23.30	28.86	0.00
17:31:32	1.529	0.1844075	23.40	0.00	23.4	23.40	28.86	0.00
17:31:34	1.562	0.193681	23.40	0.00	23.4	23.40	28.86	0.00
17:31:36	1.595	0.2027607	23.50	0.00	23.5	23.50	28.86	0.00
17:31:38	1.628	0.2116544	23.60	0.00	23.6	23.60	28.86	0.00
17:31:40	1.661	0.2203696	23.70	0.00	23.7	23.70	28.86	0.00
17:31:42	1.694	0.2289134	23.80	0.00	23.8	23.80	28.86	0.00
17:31:44	1.727	0.2372923	23.80	0.00	23.8	23.80	28.86	0.00
17:31:46	1.760	0.2455127	23.90	0.00	23.9	23.90	28.86	0.00
17:31:48	1.793	0.2535803	24.00	0.00	24	24.00	28.86	0.00
17:31:50	1.826	0.2615008	24.10	0.00	24.1	24.10	28.86	0.00
17:31:52	1.859	0.2692794	24.20	0.00	24.2	24.20	28.86	0.00
17:31:54	1.892	0.2769211	24.20	0.00	24.2	24.20	28.86	0.00
17:31:56	1.925	0.2844307	24.30	0.00	24.3	24.30	28.86	0.00
17:31:58	1.958	0.2918127	24.40	0.00	24.4	24.40	28.86	0.00
17:32:00	1.000	0	24.50	0.00	24.5	24.50	28.86	0.00
17:32:05	2.089	0.3186893	24.70	0.00	24.7	24.70	28.86	0.00
17:32:10	2.186	0.3356585	24.90	0.00	24.9	24.90	28.86	0.00
17:32:15	2.246	0.3514098	25.10	0.00	25.1	25.10	28.86	0.00
17:32:20	2.332	0.3677285	25.20	0.00	25.2	25.20	28.86	0.00
17:32:25	2.415	0.3829171	25.40	0.00	25.4	25.40	28.86	0.00
17:32:30	2.498	0.3975924	25.60	0.00	25.6	25.60	28.86	0.00
17:32:35	2.581	0.411768	25.80	0.00	25.8	25.80	28.86	0.00
17:32:40	2.664	0.4255342	26.00	0.00	26	26.00	28.86	0.00
17:32:45	2.747	0.4388587	26.20	0.00	26.2	26.20	28.86	0.00
17:32:50	2.830	0.4517964	26.40	0.00	26.4	26.40	28.86	0.00
17:32:55	2.913	0.4643405	26.60	0.00	26.6	26.60	28.86	0.00
17:33:00	2.996	0.4765418	26.70	0.00	26.7	26.70	28.86	0.00
17:33:05	3.089	0.4889735	26.90	0.00	26.9	26.90	28.86	0.00
17:33:10	3.186	0.5005109	27.10	0.00	27.1	27.10	28.86	0.00
17:33:15	3.248	0.5113485	27.30	0.00	27.3	27.30	28.86	0.00
17:33:20	3.320	0.5211381	27.40	0.00	27.4	27.40	28.86	0.00
17:33:25	3.415	0.5333907	27.70	0.00	27.7	27.70	28.86	0.00
17:33:30	3.498	0.5438198	27.80	0.00	27.8	27.80	28.86	0.00
17:33:35	3.581	0.5540043	28.00	0.00	28	28.00	28.86	0.00
17:33:40	3.664	0.5639555	28.20	0.00	28.2	28.20	28.86	0.00
17:33:45	3.747	0.5736837	28.40	0.00	28.4	28.40	28.86	0.00
17:33:50	3.830	0.5831988	28.50	0.00	28.5	28.50	28.86	0.00
17:33:55	3.913	0.5925098	28.70	0.00	28.7	28.70	28.86	0.00
17:34:00	3.996	0.6016255	28.90	0.00	28.9	28.90	28.86	0.00
17:34:10	4.166	0.6197193	29.20	0.00	29.2	29.20	28.86	0.00
17:34:20	4.332	0.6366884	29.60	0.00	29.6	29.60	28.86	0.00
17:34:30	4.498	0.6530195	30.00	0.00	30	30.00	28.86	0.00
17:34:40	4.664	0.6687585	30.30	0.00	30.3	30.30	28.86	0.00
17:34:50	4.830	0.6839471	30.70	0.00	30.7	30.70	28.86	0.00
17:35:00	4.996	0.6986224	31.00	0.00	31	31.00	28.86	0.00
17:35:10	5.166	0.7131544	31.40	0.00	31.4	31.40	28.86	0.00
17:35:20	5.332	0.7268901	31.70	0.00	31.7	31.70	28.86	0.00

17:35:30	5.496	0.7402047	32.10	0.00	32.1	32.10	28.86	0.00
17:35:40	5.664	0.7531232	32.60	0.00	32.6	32.60	28.86	0.00
17:35:50	5.830	0.7656686	33.00	0.00	33	33.00	28.86	0.00
17:36:00	5.996	0.7778616	33.50	0.00	33.5	33.50	28.86	0.00
17:36:10	6.166	0.7900035	34.00	0.00	34	34.00	28.86	0.00
17:36:20	6.332	0.8015409	34.50	0.00	34.5	34.50	28.87	-0.01
17:36:30	6.496	0.8127797	34.90	0.00	34.9	34.90	28.87	0.00
17:36:40	6.664	0.823735	35.20	0.00	35.2	35.20	28.87	0.00
17:36:50	6.830	0.8344207	35.50	0.00	35.5	35.50	28.87	0.00
17:37:00	6.998	0.8448466	35.80	0.00	35.8	35.80	28.87	0.00
17:37:30	7.500	0.8750613	36.80	0.00	36.8	36.80	28.87	0.00
17:38:00	8.000	0.90309	37.70	0.00	37.7	37.70	28.87	0.00
17:38:30	8.500	0.9294189	38.70	0.00	38.7	38.70	28.87	0.00
17:39:00	9.000	0.9542425	39.60	0.00	39.6	39.60	28.87	0.00
17:39:30	9.500	0.9777236	40.50	0.00	40.5	40.50	28.87	0.00
17:40:00	10.000	1	41.40	0.00	41.4	41.40	28.87	0.00
17:40:30	10.500	1.0211893	42.30	0.00	42.3	42.30	28.87	0.00
17:41:00	11.000	1.0413927	43.20	0.00	43.2	43.20	28.87	0.00
17:41:30	11.500	1.0606978	44.00	0.00	44	44.00	28.87	0.00
17:42:00	12.000	1.0791812	44.90	0.00	44.9	44.90	28.87	0.00
17:42:30	12.500	1.09691	45.70	0.00	45.7	45.70	28.88	-0.01
17:43:00	13.000	1.1139434	46.60	0.00	46.6	46.60	28.88	0.00
17:43:30	13.500	1.1303338	47.40	0.00	47.4	47.40	28.88	0.00
17:44:00	14.000	1.146128	48.20	0.00	48.2	48.20	28.89	-0.01
17:44:30	14.500	1.161368	49.00	0.00	49	49.00	28.90	-0.01
17:45:00	15.000	1.1760913	49.70	0.00	49.7	49.70	28.91	-0.01
17:45:30	15.500	1.1903317	50.50	0.00	50.5	50.50	28.91	0.00
17:46:00	16.000	1.20412	51.30	0.00	51.3	51.30	28.91	0.00
17:47:00	17.000	1.2304489	52.80	0.00	52.8	52.80	28.92	-0.01
17:48:00	18.000	1.2552725	54.20	0.00	54.2	54.20	28.92	0.00
17:49:00	19.000	1.2787536	55.60	0.00	55.6	55.60	28.93	-0.01
17:50:00	20.000	1.30103	57.00	0.00	57	57.00	28.93	0.00
17:51:00	21.000	1.3222193	58.30	0.00	58.3	58.30	28.93	0.00
17:52:00	22.000	1.3424227	59.70	0.00	59.7	59.70	28.93	0.00
17:53:00	23.000	1.3617278	60.90	0.00	60.9	60.90	28.94	-0.01
17:54:00	24.000	1.3802112	62.20	0.00	62.2	62.20	28.94	0.00
17:55:00	25.000	1.39794	63.70	0.00	63.7	63.70	28.94	0.00
17:56:00	26.000	1.4149733	65.50	0.00	65.5	65.50	28.95	-0.01
17:57:00	27.000	1.4313638	66.70	0.00	66.7	66.70	28.95	0.00
17:58:00	28.000	1.447158	67.80	0.00	67.8	67.80	28.95	0.00
17:59:00	29.000	1.462398	68.80	0.00	68.8	68.80	28.95	0.00
18:00:00	30.000	1.4771213	69.90	0.00	69.9	69.90	28.95	0.00
18:01:00	31.000	1.4913617	70.90	0.00	70.9	70.90	28.95	0.00
18:06:00	36.000	1.5563025	75.60	0.00	75.6	75.60	28.95	0.00
18:11:00	41.000	1.6127839	79.80	0.00	79.8	79.80	28.96	-0.01
18:16:00	46.000	1.6627578	83.60	0.01	83.61	83.61	28.96	0.00
18:21:00	51.000	1.7075702	87.00	0.01	87.01	87.01	28.96	0.00
18:26:00	56.000	1.748188	90.10	0.01	90.11	90.11	28.96	0.00
18:31:00	61.000	1.7853298	92.90	0.01	92.91	92.91	28.97	-0.01
18:36:00	66.000	1.8195439	96.20	0.02	96.22	96.22	28.97	0.00
18:41:00	71.000	1.8512583	98.40	0.02	98.42	98.42	28.97	0.00
18:46:00	76.000	1.8808136	100.40	0.02	100.42	100.42	28.97	0.00
18:51:00	81.000	1.908485	102.20	0.02	102.22	102.22	28.97	0.00

ROMP 22 Utopia

Packer Test 7, Drawdown vs. Time



ROMP 22 WRAP No. 7
Packer Test No. 7
Test Interval: 1705'-1795'
Saturated Thickness: 90
Pumping Rate(gpm): 2.13
T=264Q/ds;264*2.13/16=35.145gpd/ft=4.69ft*ft/d
k=T/b;4.69ft*ft/d/90ft=0.0521ft/d
Transmissivity: 35.145 gpd/ft

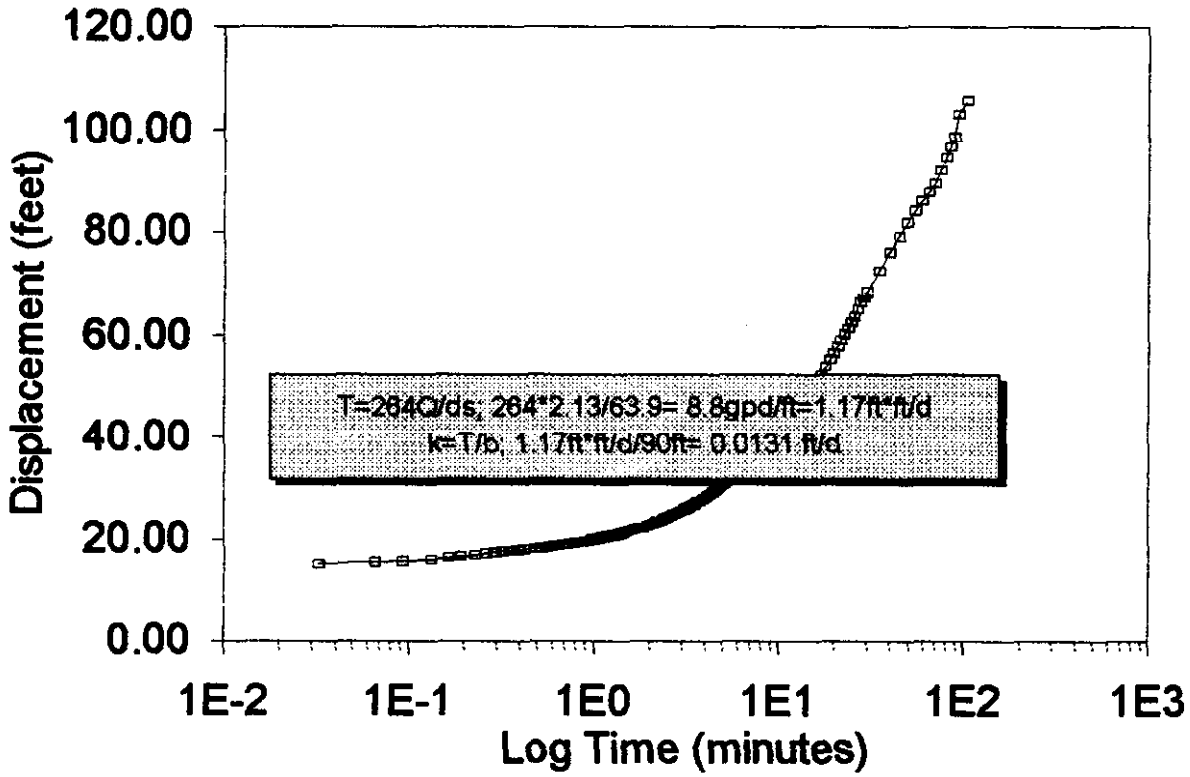
Time	Elapsed Time(min)	log time	Ch. 1 head(ft)	Ch. 2 head(ft)	combined head(ft)	displacement (feet)	Ch. 3 head(ft)	displacement (feet)
12:49:00	0	ERR	115.40	26.59	141.99	0.09	19.98	0.00
12:49:02	0.02	-1.522879	115.40	26.59	141.99	0.09	19.98	0.00
12:49:04	0.039	-1.200659	115.40	26.59	141.99	0.09	19.98	0.00
12:49:06	0.099	-1.031517	115.50	26.61	142.11	0.21	19.98	0.00
12:49:08	0.123	-0.910095	115.60	26.68	142.28	0.38	19.98	0.00
12:49:10	0.159	-0.816909	115.70	26.91	142.61	0.71	19.99	0.00
12:49:12	0.183	-0.737549	115.80	26.93	142.73	0.83	19.98	0.00
12:49:14	0.213	-0.67162	115.90	27.07	142.97	1.07	19.98	0.00
12:49:16	0.243	-0.614394	116.00	27.19	143.19	1.29	19.98	0.00
12:49:18	0.273	-0.563637	116.10	27.28	143.38	1.48	19.98	0.00
12:49:20	0.309	-0.510557	116.30	27.38	143.68	1.78	19.98	0.00
12:49:22	0.333	-0.477556	116.40	27.46	143.86	1.96	19.98	0.00
12:49:24	0.363	-0.440093	116.40	27.56	143.96	2.06	19.98	0.00
12:49:26	0.393	-0.405607	116.50	27.64	144.14	2.24	19.99	0.01
12:49:28	0.423	-0.37366	116.50	27.67	144.17	2.27	19.98	-0.01
12:49:30	0.459	-0.343902	116.60	27.73	144.33	2.43	19.99	0.01
12:49:32	0.489	-0.316053	116.60	27.84	144.44	2.54	19.98	-0.01
12:49:34	0.519	-0.289683	116.70	27.86	144.56	2.66	19.98	0.00
12:49:36	0.543	-0.2652	116.80	27.95	144.75	2.85	19.98	0.00
12:49:38	0.573	-0.241845	116.90	28.01	144.91	3.01	19.98	0.00
12:49:40	0.603	-0.219683	116.90	28.09	144.99	3.09	19.99	0.01
12:49:42	0.633	-0.198596	116.90	28.12	145.02	3.12	19.98	-0.01
12:49:44	0.669	-0.178486	117.00	28.20	145.20	3.30	19.98	0.00
12:49:46	0.693	-0.159267	117.10	28.24	145.34	3.44	19.99	0.01
12:49:48	0.723	-0.140862	117.20	28.29	145.49	3.59	19.99	0.00
12:49:50	0.753	-0.123205	117.30	28.34	145.64	3.74	19.98	-0.01
12:49:52	0.783	-0.106236	117.30	28.43	145.73	3.83	19.99	0.01
12:49:54	0.813	-0.089909	117.30	28.47	145.77	3.87	19.99	0.00
12:49:56	0.849	-0.074172	117.40	28.49	145.89	3.99	19.99	0.00
12:49:58	0.879	-0.056996	117.50	28.56	146.06	4.16	19.99	0.00
12:50:00	0.903	-0.044312	117.50	28.61	146.11	4.21	19.99	0.00
12:50:02	0.933	-0.030118	117.50	28.69	146.19	4.29	19.99	0.00
12:50:04	0.963	-0.016374	117.60	28.74	146.34	4.44	19.99	0.00
12:50:06	0.993	-0.003051	117.70	28.74	146.44	4.54	19.99	0.00
12:50:08	1.023	0.0098756	117.80	28.85	146.65	4.75	19.99	0.00
12:50:10	1.059	0.0224284	117.70	28.90	146.60	4.70	19.99	0.00
12:50:12	1.083	0.0346285	117.80	28.93	146.73	4.83	19.99	0.00
12:50:14	1.113	0.0464952	117.90	28.98	146.88	4.98	19.99	0.00
12:50:16	1.143	0.0580462	117.90	29.10	147.00	5.10	19.99	0.00
12:50:19	1.159	0.0640834	118.00	29.12	147.12	5.22	19.99	0.00
12:50:20	1.175	0.0700379	118.10	29.16	147.26	5.36	19.99	0.00
12:50:22	1.205	0.080987	118.00	29.19	147.19	5.29	19.99	0.00

12:50:24	1.235	0.091667	118.10	29.25	147.35	5.45	19.99	0.00
12:50:26	1.265	0.1020905	118.10	29.38	147.48	5.58	19.99	0.00
12:50:28	1.295	0.1122698	118.10	29.36	147.46	5.56	19.99	0.00
12:50:30	1.325	0.1222159	118.10	29.45	147.55	5.65	19.99	0.00
12:50:32	1.355	0.1319393	118.10	29.45	147.55	5.65	19.99	0.00
12:50:34	1.385	0.1414498	118.10	29.51	147.61	5.71	19.99	0.00
12:50:36	1.415	0.1507564	118.10	29.68	147.78	5.88	19.99	0.00
12:50:38	1.445	0.1598678	118.10	29.61	147.71	5.81	19.99	0.00
12:50:40	1.475	0.168792	118.10	29.71	147.81	5.91	19.99	0.00
12:50:42	1.505	0.1775365	118.10	29.79	147.89	5.99	19.99	0.00
12:50:44	1.535	0.1861064	118.10	29.84	147.94	6.04	19.99	0.00
12:50:46	1.565	0.1945143	118.10	29.84	147.94	6.04	19.99	0.00
12:50:48	1.595	0.2027607	118.10	29.96	148.06	6.16	19.98	-0.01
12:50:50	1.625	0.2108534	118.10	29.92	148.02	6.12	19.99	0.01
12:50:52	1.655	0.218798	118.10	30.01	148.11	6.21	19.99	0.00
12:50:54	1.685	0.2265999	118.10	30.31	148.41	6.51	19.99	0.00
12:50:56	1.715	0.2342641	118.10	30.08	148.18	6.28	19.99	0.00
12:50:58	1.745	0.2417954	118.10	30.13	148.23	6.33	19.99	0.00
12:51:00	1.775	0.2491984	118.10	30.21	148.31	6.41	19.99	0.00
12:51:05	1.850	0.2690457	118.10	30.73	148.83	6.93	19.99	0.00
12:51:10	1.941	0.2880255	118.10	31.33	149.43	7.53	19.99	0.00
12:51:15	2.024	0.3062105	118.10	31.80	149.90	8.00	19.99	0.00
12:51:20	2.107	0.3236645	118.10	32.07	150.17	8.27	19.99	0.00
12:51:25	2.19	0.3404441	118.10	31.23	149.33	7.43	19.99	0.00
12:51:30	2.273	0.3565994	116.90	27.97	144.17	2.27	19.98	-0.01
12:51:35	2.356	0.3721753	113.00	24.40	137.40	-4.50	19.98	0.00
12:51:40	2.439	0.3872118	111.10	22.55	133.65	-8.25	19.97	-0.01
12:51:46	2.502	0.4017461	109.60	20.79	130.39	-11.66	19.96	0.01
12:51:50	2.605	0.4158077	107.20	18.42	125.62	-16.28	19.96	-0.02
12:51:55	2.688	0.4294293	105.40	16.47	121.87	-20.03	19.96	0.00
12:52:00	2.771	0.4426365	103.20	14.51	117.71	-24.19	19.96	0.00
12:52:05	2.854	0.455454	101.10	12.58	113.68	-28.22	19.95	-0.01
12:52:10	2.937	0.4679039	99.30	10.69	109.99	-31.91	19.96	0.01
12:52:15	3.02	0.4800069	97.20	8.92	106.12	-35.78	19.95	-0.01
12:52:20	3.103	0.4917818	95.20	6.99	102.19	-39.71	19.94	-0.01
12:52:25	3.186	0.5032458	92.90	4.33	97.23	-44.67	19.93	-0.01
12:52:30	3.269	0.5144149	91.30	2.69	93.99	-47.91	19.93	0.00
12:52:35	3.352	0.525304	89.10	0.98	90.08	-51.82	19.94	0.01
12:52:40	3.435	0.5359267	87.90	0.00	87.90	-54.00	19.93	-0.01
12:52:45	3.518	0.5462958	86.20	0.00	86.20	-55.70	19.93	0.00
12:52:50	3.601	0.5564231	84.70	0.01	84.71	-57.19	19.92	-0.01
12:52:55	3.684	0.5663196	83.60	0.01	83.61	-58.29	19.93	0.01
12:53:00	3.767	0.5759956	81.60	0.01	81.61	-60.29	19.93	0.00
12:53:10	3.933	0.5947239	79.40	0.01	79.41	-62.49	19.93	0.00
12:53:20	4.099	0.6126779	77.20	0.01	77.21	-64.69	19.93	0.00
12:53:30	4.265	0.629919	74.30	0.01	74.31	-67.59	19.92	-0.01
12:53:40	4.431	0.6465018	72.20	0.00	72.20	-69.70	19.93	0.01
12:53:50	4.597	0.6624745	69.50	0.00	69.50	-72.40	19.92	-0.01
12:54:00	4.763	0.6778806	67.70	0.00	67.70	-74.20	19.92	0.00
12:54:10	4.929	0.6927588	65.70	0.00	65.70	-76.20	19.91	-0.01
12:54:20	5.095	0.7071442	62.90	0.00	62.90	-79.00	19.92	0.01
12:54:30	5.261	0.7210683	61.50	0.00	61.50	-80.40	19.91	-0.01
12:54:40	5.427	0.7345598	59.10	0.00	59.10	-82.80	19.91	0.00

12:55:10	5.927	0.7728349	55.10	0.00	55.10	-86.80	19.91	0.00
12:55:40	6.427	0.8080063	51.50	0.00	51.50	-90.40	19.9	-0.01
12:56:10	6.927	0.8405452	48.30	0.00	48.30	-93.60	19.91	0.01
12:56:40	7.427	0.8708134	45.50	0.00	45.50	-96.40	19.91	0.00
12:57:10	7.927	0.8991089	42.50	0.00	42.50	-99.40	19.9	-0.01
12:57:40	8.427	0.925673	41.10	0.00	41.10	-100.80	19.91	0.01
12:58:10	8.927	0.9507055	39.30	0.00	39.30	-102.60	19.9	-0.01
12:58:40	9.427	0.9743735	37.60	0.00	37.60	-104.30	19.9	0.00
12:59:10	9.927	0.996818	36.30	0.00	36.30	-105.60	19.9	0.00
12:59:40	10.427	1.0181594	34.40	0.00	34.40	-107.50	19.91	0.01
13:00:10	10.927	1.0385009	33.40	0.00	33.40	-108.50	19.91	0.00
13:00:40	11.427	1.0579322	31.30	0.00	31.30	-110.60	19.91	0.00
13:01:10	11.927	1.0765312	31.40	0.00	31.40	-110.50	19.9	-0.01
13:01:40	12.427	1.0943666	30.40	0.00	30.40	-111.50	19.9	0.00
13:02:10	12.927	1.1114977	29.30	0.00	29.30	-112.60	19.91	0.01
13:02:40	13.427	1.127979	29.00	0.00	29.00	-112.90	19.9	-0.01
13:03:10	13.927	1.1438576	28.90	0.00	28.90	-113.00	19.9	0.00
13:03:40	14.427	1.159176	28.30	0.00	28.90	-113.60	19.9	0.00
13:04:40	15.427	1.1882815	27.40	0.00	27.40	-114.50	19.9	0.00
13:05:40	16.427	1.2155583	27.40	0.00	27.40	-114.50	19.9	0.00
13:06:40	17.427	1.2412226	26.90	0.00	26.90	-115.00	19.9	0.00
13:07:40	18.427	1.2654546	26.30	0.00	26.30	-115.60	19.9	0.00
13:08:40	19.427	1.2884057	25.80	0.00	25.80	-116.10	19.9	0.00
13:09:40	20.427	1.3102046	25.30	0.00	25.30	-116.60	19.9	0.00
13:10:40	21.427	1.3309614	25.30	0.00	25.30	-116.60	19.9	0.00
13:11:40	22.427	1.3507712	25.20	0.00	25.20	-116.70	19.9	0.00
13:12:40	23.427	1.3697167	24.70	0.00	24.70	-117.20	19.9	0.00
13:13:40	24.427	1.3878701	24.50	0.00	24.50	-117.40	19.9	0.00
13:14:40	25.427	1.4052951	24.40	0.00	24.40	-117.50	19.91	0.01
13:15:40	26.427	1.4220479	24.20	0.00	24.20	-117.70	19.9	-0.01
13:16:40	27.427	1.4381783	24.20	0.00	24.20	-117.70	19.9	0.00
13:17:40	28.427	1.453731	23.90	0.00	23.90	-118.00	19.9	0.00
13:18:40	29.427	1.468746	23.40	0.00	23.40	-118.50	19.9	0.00
13:23:40	34.427	1.5368992	23.10	0.00	23.10	-118.80	19.91	0.01
13:28:40	39.427	1.5957937	22.80	0.00	22.80	-119.30	19.91	0.00
13:33:40	44.427	1.647647	23.30	0.00	23.30	-118.80	19.91	0.00
13:38:40	49.427	1.6939643	23.10	0.00	23.10	-118.80	19.92	0.01
13:43:40	54.427	1.7358144	22.30	0.00	22.30	-119.60	19.91	-0.01
13:48:40	59.427	1.7739838	21.90	0.00	21.90	-120.00	19.92	0.01
13:53:40	64.427	1.8090679	22.10	0.00	22.10	-119.80	19.93	0.01
13:58:40	69.427	1.8415284	21.50	0.00	21.50	-120.40	19.92	-0.01
14:03:40	74.427	1.8717305	21.80	0.00	21.80	-120.10	19.93	0.01
14:08:40	79.427	1.8999692	21.50	0.00	21.50	-120.40	19.93	0.00
14:13:40	84.427	1.9264814	21.70	0.00	21.70	-120.20	19.93	0.00
14:18:40	89.427	1.9514687	21.50	0.00	21.50	-120.40	19.94	0.01
14:28:40	99.427	1.9975043	21.10	0.00	21.10	-120.80	19.93	-0.01
14:38:40	109.427	2.0391245	20.90	0.00	20.90	-121.00	19.94	0.01
14:48:40	119.427	2.0771025	20.30	0.00	20.30	-121.60	19.94	0.00
14:58:40	129.427	2.1120249	20.60	0.00	20.60	-121.30	19.96	0.02

ROMP 22 UTOPIA

Packer Test 7, Recovery vs. Time



R 'P 22 WRAP NO. 7
Packer Test No. 7
Test Interval: 1705'-1795'
Saturated Thciknes: 90
Pumping Rate(gpm): 2.13
T=264Q/ds;264*2.13/63.9=8.8gpd/ft=1.17ft²/d
k=T/b;1.17ft²/d/90ft=0.0131 ft/d
Transmissivity: 8.8gpd/ft

Time	Elapsed Time (min)	log time	Ch. 1 head (ft)	Ch. 2 head (ft)	combined head (ft)	displacement (feet)	Ch. 3 head(ft)	displacement (feet)
15:25:16	0	ERR	14.9	0	14.9	0	19.96	0
15:25:18	0.033	-1.48149	15.3	0	15.3	0.4	19.96	0
15:25:20	0.066	-1.18046	15.6	0	15.6	0.7	19.96	0
15:25:22	0.0999	-1.03012	15.9	0	15.9	1	19.96	0
15:25:24	0.133	-0.87815	16.1	0	16.1	1.2	19.96	0
15:25:26	0.166	-0.78252	16.5	0	16.5	1.6	19.96	0
15:25:28	0.199	-0.71444	16.7	0	16.7	1.8	19.96	0
15:25:30	0.2313	-0.63582	17	0	17	2.1	19.96	0
15:25:32	0.2649	-0.5779	17.3	0	17.3	2.4	19.96	0
15:25:34	0.2939	-0.53269	17.5	0	17.5	2.6	19.96	0
15:25:36	0.3263	-0.48639	17.7	0	17.7	2.8	19.96	0
15:25:38	0.3593	-0.44454	17.9	0	17.9	2.9	19.96	0
15:25:40	0.3926	-0.40605	17.9	0	17.9	3	19.96	0
15:25:42	0.4256	-0.371	18.1	0	18.1	3.2	19.96	0
15:25:44	0.4586	-0.33957	18.2	0	18.2	3.3	19.96	0
15:25:46	0.4916	-0.30639	18.3	0	18.3	3.4	19.96	0
15:25:48	0.5246	-0.28017	18.4	0	18.4	3.5	19.96	0
15:25:50	0.5576	-0.25368	18.5	0	18.5	3.6	19.96	0
15:25:52	0.5906	-0.22871	18.7	0	18.7	3.8	19.96	0
15:25:54	0.6236	-0.20509	18.8	0	18.8	3.9	19.96	0
15:25:56	0.6566	-0.1827	18.9	0	18.9	4	19.96	0
15:25:58	0.6896	-0.1614	19	0	19	4.1	19.96	0
15:26:00	0.7226	-0.1411	19.1	0	19.1	4.2	19.96	0
15:26:02	0.7556	-0.12171	19.2	0	19.2	4.3	19.96	0
15:26:04	0.7886	-0.10314	19.3	0	19.3	4.4	19.96	0
15:26:06	0.8216	-0.08534	19.4	0	19.4	4.5	19.96	0
15:26:08	0.8546	-0.06824	19.5	0	19.5	4.6	19.96	0
15:26:10	0.8876	-0.05178	19.6	0	19.6	4.7	19.96	0
15:26:12	0.9206	-0.03593	19.7	0	19.7	4.8	19.96	0
15:26:14	0.9536	-0.02063	19.8	0	19.8	4.9	19.96	0
15:26:16	0.9866	-0.00586	20	0	20	5.1	19.96	0
15:26:18	1.0196	0.00843	20	0	20	5.1	19.96	0
15:26:20	1.0526	0.022263	20.2	0	20.2	5.3	19.96	0
15:26:22	1.0856	0.03567	20.2	0	20.2	5.3	19.96	0
15:26:24	1.1186	0.048675	20.4	0	20.4	5.5	19.96	0
15:26:26	1.1516	0.061302	20.4	0	20.4	5.5	19.96	0
15:26:28	1.1846	0.073572	20.6	0	20.6	5.7	19.96	0
15:26:30	1.2176	0.085505	20.6	0	20.6	5.7	19.96	0
15:26:32	1.2506	0.097118	20.8	0	20.8	5.9	19.96	0
15:26:34	1.2836	0.10843	20.8	0	20.8	5.9	19.96	0
15:26:36	1.3166	0.119454	20.9	0	20.9	6	19.96	0
15:26:38	1.3496	0.130205	21	0	21	6.1	19.96	0
15:26:40	1.3826	0.140697	21.1	0	21.1	6.2	19.96	0

3:42	1.4156	0.150941	21.3	0	21.3	6.4	19.96	0
15:26:44	1.4486	0.160948	21.3	0	21.3	6.4	19.96	0
15:26:46	1.4816	0.170731	21.4	0	21.4	6.5	19.96	0
15:26:48	1.5146	0.180298	21.5	0	21.5	6.6	19.96	0
15:26:50	1.5476	0.189659	21.6	0	21.6	6.7	19.96	0
15:26:52	1.5806	0.198822	21.7	0	21.7	6.8	19.96	0
15:26:54	1.6136	0.207798	21.8	0	21.8	6.9	19.96	0
15:26:56	1.6466	0.216599	21.9	0	21.9	7	19.96	0
15:26:58	1.6796	0.225206	22	0	22	7.1	19.96	0
15:27:00	1.7959	0.254282	22.1	0	22.1	7.2	19.96	0
15:27:05	1.9769	0.273904	22.3	0	22.3	7.4	19.96	0
15:27:10	1.9819	0.292677	22.6	0	22.6	7.7	19.96	0
15:27:15	2.0449	0.310672	22.8	0	22.8	7.9	19.96	0
15:27:20	2.1279	0.327951	23	0	23	8.1	19.96	0
15:27:25	2.2109	0.344569	23.3	0	23.3	8.4	19.96	0
15:27:30	2.2939	0.360574	23.5	0	23.5	8.6	19.96	0
15:27:35	2.3769	0.376011	23.8	0	23.8	8.9	19.96	0
15:27:40	2.4599	0.390917	24	0	24	9.1	19.96	0
15:27:45	2.5429	0.405329	24.2	0	24.2	9.3	19.96	0
15:27:50	2.6259	0.419278	24.4	0	24.4	9.5	19.96	0
15:27:55	2.7089	0.432793	24.7	0	24.7	9.8	19.96	0
15:28:00	2.7919	0.4459	24.9	0	24.9	10	19.96	0
15:28:05	2.8749	0.458623	25.1	0	25.1	10.2	19.96	0
15:28:10	2.9579	0.470983	25.3	0	25.3	10.4	19.96	0
15:28:15	3.0409	0.483002	25.5	0	25.5	10.6	19.97	0.01
3:20	3.1239	0.494697	25.6	0	25.6	10.9	19.96	0
15:28:25	3.2069	0.506085	26	0	26	11.1	19.97	0.01
15:28:30	3.2899	0.517183	26.2	0	26.2	11.3	19.97	0.01
15:28:35	3.3729	0.528003	26.4	0	26.4	11.5	19.97	0.01
15:28:40	3.4559	0.538561	26.6	0	26.6	11.7	19.97	0.01
15:28:45	3.5389	0.548868	26.8	0	26.8	11.9	19.97	0.01
15:28:50	3.6219	0.558936	27.1	0	27.1	12.2	19.97	0.01
15:28:55	3.7049	0.568776	27.3	0	27.3	12.4	19.97	0.01
15:29:00	3.7879	0.578399	27.5	0	27.5	12.6	19.97	0.01
15:29:10	3.9546	0.597103	27.9	0	27.9	13	19.97	0.01
15:29:20	4.1206	0.61496	28.3	0	28.3	13.4	19.96	0
15:29:30	4.2873	0.632184	28.7	0	28.7	13.8	19.97	0.01
15:29:40	4.4533	0.648882	29.2	0	29.2	14.3	19.97	0.01
15:29:50	4.6193	0.664576	29.6	0	29.6	14.7	19.97	0.01
15:30:00	4.7853	0.679909	30	0	30	15.1	19.97	0.01
15:30:10	4.9513	0.694719	30.4	0	30.4	15.5	19.97	0.01
15:30:20	5.1173	0.709041	30.8	0	30.8	15.9	19.97	0.01
15:30:30	5.2833	0.722905	31.2	0	31.2	16.3	19.97	0.01
15:30:40	5.4493	0.736341	31.6	0	31.6	16.7	19.97	0.01
15:31:10	5.9493	0.774466	33.1	0	33.1	18.2	19.97	0.01
15:31:40	6.4493	0.809513	34.9	0	34.9	1.9	19.97	0.01
15:32:10	6.9493	0.841941	36.1	0	36.1	21.2	19.97	0.01
15:32:40	7.4493	0.872115	37.1	0	37.1	22.2	19.97	0.01
15:33:10	7.9493	0.900329	38.1	0	38.1	23.2	19.97	0.01
15:33:40	8.4493	0.926821	39.1	0	39.1	24.2	19.97	0.01
4:10	8.9493	0.951799	40.1	0	40.1	25.2	19.97	0.01
15:34:40	9.4493	0.9754	41	0	41	26.1	19.97	0.01
15:35:10	10.4493	1.019087	41.9	0	41.9	27	19.97	0.01
15:35:40	10.9493	1.039386	42.8	0	42.8	27.9	19.98	0.02
15:36:10	11.4493	1.058779	43.7	0	43.7	28.8	19.98	0.02

3:40	11.9493	1.077342	44.6	0	44.6	29.7	19.98	0.02
15:37:10	12.4493	1.095145	45.4	0	45.4	30.5	19.98	0.02
15:37:40	12.9493	1.112246	46.3	0	46.3	31.4	19.98	0.02
15:38:10	13.4493	1.1287	47.1	0	47.1	32.2	19.98	0.02
15:38:40	13.9493	1.144552	48	0	48	33.1	19.98	0.02
15:39:10	14.4493	1.159947	48.7	0	48.7	33.8	19.98	0.02
15:39:40	14.9493	1.174621	49.5	0	49.5	34.6	19.98	0.02
15:40:40	15.9493	1.202742	51	0	51	36.1	19.98	0.02
15:41:40	16.9493	1.229152	52.5	0	52.5	37.6	19.98	0.02
15:42:40	17.9493	1.254048	53.9	0	53.9	39	19.99	0.03
15:43:40	18.9493	1.277593	55.3	0	55.3	40.4	19.99	0.03
15:44:40	19.9493	1.299928	56.6	0	56.6	41.7	19.99	0.03
15:45:40	20.9493	1.32117	57.9	0	57.9	43	19.99	0.03
15:46:40	21.9493	1.341421	59.1	0	59.1	44.2	19.99	0.03
15:47:40	22.9493	1.360769	60.3	0	60.3	45.4	19.99	0.03
15:48:40	23.9493	1.379293	61.4	0	61.4	46.5	19.99	0.03
15:49:40	24.9493	1.397058	62.6	0	62.6	47.7	19.99	0.03
15:50:40	25.9493	1.414126	63.7	0	63.7	48.8	19.99	0.03
15:51:40	26.9493	1.430547	65.1	0	65.1	50.2	20	0.04
15:52:40	27.9493	1.446371	66.5	0	66.5	51.6	20	0.04
15:53:40	28.9493	1.461639	67.4	0	67.4	52.5	20	0.04
15:54:40	29.9493	1.476397	68.4	0	68.4	53.5	20	0.04
15:55:40	30.9493	1.490689	69.8	0	69.8	54.9	20	0.04
16:04:40	39.9493	1.601509	76.1	0	76.1	61.2	20.01	0.05
16:09:40	44.9493	1.652723	79.2	0	79.2	64.3	20.01	0.05
16:14:40	49.9493	1.698529	81.9	0	81.9	67	20.01	0.05
9:40	54.9493	1.739962	84.2	0	84.2	69.3	20.01	0.05
16:24:40	59.9493	1.777784	86.2	0	86.2	71.3	20.02	0.06
16:29:40	64.9493	1.812574	87.9	0	87.9	1.7	20.01	0.05
16:34:40	69.9493	1.844783	89.5	0	89.5	1.6	20.02	0.06
16:39:40	74.9493	1.874768	90.9	1.14	92.04	2.54	20.02	0.06
16:44:40	79.9493	1.902815	92.1	2.35	94.45	2.41	20.02	0.06
16:49:40	84.9493	1.92916	93.2	3.43	96.63	2.18	20.03	0.07
16:54:40	89.9493	1.953998	94.2	4.41	98.61	1.98	20.03	0.07
17:04:40	94.9493	1.977492	96.5	6.69	103.19	4.58	20.03	0.07
17:14:40	104.9493	2.02098	97.9	8	105.9	2.61	20.03	0.07

APPENDIX G

LITHOLOGIC WELL LOG PRINTOUT

SOURCE - FGS

WELL NUMBER: W-16783
TOTAL DEPTH: 01813 FT.
SAMPLES - NONE

COUNTY - SARASOTA
LOCATION: T.36S R.20E S.31 BB
LAT = 27D 18M 43S
LON = 82D 20M 17S

COMPLETION DATE: 16/11/93
ELEVATION: 35 FT
OTHER TYPES OF LOGS AVAILABLE - CALIPER, GAMMA, ELECTRIC, SONIC, TEMPERATURE

OWNER/DRILLER:SWFWMD ROMP 22 ("UTOPIA")

WORKED BY:HYDROGEOLOGISTS JOHN DECKER & DON THOMPSON (SWFWMD) & RICK GREEN (F
HOLLOW STEM (LSD-34')
WIRELINE CORE (34'-1204')
6/21/93 TO 11/16/93 DRILL CUTTINGS (1204'-1798')
6/20/91 TO 10/2/91 CORE FROM SS-40 (1798'-1813')
SAMPLES POOR TO EXCELLENT
VENICE CLAY FROM 18.6 TO 20.5 BLS

0.	-	18.6	090UDSC	UNDIFFERENTIATED SAND AND CLAY
18.6	-	20.5	122HTRN	HAWTHORN GROUP
20.5	-	64.7	122PCRV	PEACE RIVER FM.
64.7	-	263.0	122ARCA	ARCADIA FM.
163.0	-	323.0	122TAMP	TAMPA MEMBER OF ARCADIA FM.
323.0	-	373.5	122ARCA	ARCADIA FM.
18.6	-	373.5	122HTRN	HAWTHORN GROUP
373.5	-	639.	123SWNN	SUWANNEE LIMESTONE
639.	-	941.	124OCAL	OCALA GROUP
941.	-	.	124AVPK	AVON PARK FM.

0 - 1.1 SAND; DARK GRAY TO MODERATE DARK GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: MEDIUM TO FINE
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
POOR INDURATION
CEMENT TYPE(S): ORGANIC MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BEDDED
ACCESSORY MINERALS: PLANT REMAINS- %
FOSSILS: ORGANICS

1.1- 1.7 SAND; LIGHT OLIVE GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: MEDIUM TO FINE
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
POOR INDURATION
SEDIMENTARY STRUCTURES: MASSIVE, BEDDED
ACCESSORY MINERALS: PLANT REMAINS- %
FOSSILS: ORGANICS

1.7- 3 SAND; GRAYISH BROWN TO BROWNISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: MEDIUM TO FINE
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
UNCONSOLIDATED
CEMENT TYPE(S): ORGANIC MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, BEDDED
ACCESSORY MINERALS: PLANT REMAINS- %, IRON STAIN- %
PHOSPHATIC SAND- %, HEAVY MINERALS-%

3 - 6.5 SAND; MODERATE BROWN TO GRAYISH BROWN
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: MEDIUM TO FINE
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
UNCONSOLIDATED
CEMENT TYPE(S): IRON CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, BEDDED
ACCESSORY MINERALS: IRON STAIN- %, HEAVY MINERALS- %
OTHER FEATURES: FROSTED

6.5- 8.5 SAND; LIGHT REDDISH BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: MEDIUM TO FINE
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX, IRON CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, INTERBEDDED
ACCESSORY MINERALS: IRON STAIN- %, CLAY- %
HEAVY MINERALS- %, PHOSPHATIC SAND- %
OTHER FEATURES: FROSTED
SPARSE PHOSPHORITE, HEAVY MINERALS?, SPARSE SUBROUNDED
FROSTED QUARTZ SAND, CLAYEY SAND AT BOTTOM OF SECTION.

8.5- 12.5 SAND; YELLOWISH GRAY TO PINKISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO MEDIUM
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
UNCONSOLIDATED
SEDIMENTARY STRUCTURES: MASSIVE, BEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
FOSSILS: ORGANICS

12.5- 13.4 SAND; LIGHT OLIVE GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX, IRON CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, INTERBEDDED
ACCESSORY MINERALS: IRON STAIN- %, CLAY- %
PHOSPHATIC SAND- %
OTHER FEATURES: FROSTED
FOSSILS: ORGANICS

13.4- 16.5 SAND; YELLOWISH GRAY TO LIGHT BROWN
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX, IRON CEMENT
ACCESSORY MINERALS: IRON STAIN- %, CLAY- %
PHOSPHATIC SAND- %
OTHER FEATURES: FROSTED
FOSSILS: FOSSIL FRAGMENTS
MOLLUSK (SHELL) FRAGMENT AT 14.5' AND 16.5', CLAYEY QUARTZ SAND, IRON.

16.5- 18.6 SAND; GRAYISH GREEN TO MODERATE YELLOWISH GREEN
POROSITY: INTERGRANULAR
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX, IRON CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, INTERBEDDED
ACCESSORY MINERALS: CLAY-20%, PHOSPHATIC SAND- %
IRON STAIN- %
OTHER FEATURES: FROSTED

18.6- 20.5 CLAY; LIGHT BLUE GREEN TO LIGHT GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND-15%, IRON STAIN- %
PHOSPHATIC SAND- %
OTHER FEATURES: PLASTIC
FOSSILS: FOSSIL FRAGMENTS
BLUE GREEN-PALE GREEN CLAY BED, VERY FINE QUARTZ SAND LENSES; PEACE RIVER FORMATION.

20.5- 26 SAND; LIGHT GRAYISH GREEN TO LIGHT YELLOWISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN SIZE: MEDIUM; RANGE: FINE TO GRANULE
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, INTERBEDDED
ACCESSORY MINERALS: CLAY-30%, PHOSPHATIC GRAVEL-10%
PHOSPHATIC SAND-20%
OTHER FEATURES: FROSTED, GRANULAR
HIGHLY PHOSPHATIC (BROWN-BLACK), MEDIUM-GRAVEL SIZE SAND.

26 - 30 CLAY; GRAYISH GREEN TO MODERATE GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %, IRON STAIN- %
OTHER FEATURES: PLASTIC
DUSKY YELLOW-MODERATE GREEN PLASTIC, STICKY CLAY
INTERBEDDED SAND.

30 - 31 SAND; MODERATE YELLOWISH GREEN TO GRAYISH OLIVE
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO FINE
ROUNDNESS: SUB-ANGULAR TO ANGULAR; MEDIUM SPHERICITY
POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-30%, IRON STAIN- %
PHOSPHATIC GRAVEL-20%, PHOSPHATIC SAND- %
OTHER FEATURES: PLASTIC
FOSSILS: FOSSIL FRAGMENTS
GRADES FROM CLAY TO CLAYEY AND PHOSPHATIZED LIMESTONE
SHELL FRAGMENTS (30.5' TO 31'), SOME PHOSPHATIC SAND AND
GRAVEL, REWORKED FORMATIONAL MATERIAL, DOLOMITIC LIMESTONE
SEAM.

31 - 34 DOLOSTONE; LIGHT YELLOWISH ORANGE TO GRAYISH YELLOW
POROSITY: INTERGRANULAR, LOW PERMEABILITY, VUGULAR
10-50% ALTERED; ANHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
CEMENT TYPE(S): PHOSPHATE CEMENT, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL-40%
PHOSPHATIC SAND-10%, QUARTZ SAND-10%, LIMESTONE-20%
OTHER FEATURES: GRANULAR, DOLOMITIC
FOSSILS: FOSSIL MOLDS
PARTIALLY PHOSPHATIZED AND CALCAREOUS DOLOMITE
BROWN-BLACK, DARK GRAY; PHOSPHATIC SAND AND GRAVEL, CHERT
FROSTED ROUNDED QUARTZ PEBBLES, IRON; MOLLUSK SHELL
FRAGMENTS, REWORKED FORMATION MATERIAL, WEATHERING RINDS.

34 - 39.1 CLAY; LIGHT GRAYISH GREEN TO MODERATE YELLOWISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND-15%
PHOSPHATIC GRAVEL-30%, DOLOMITE-20%, LIMESTONE-30%
OTHER FEATURES: DOLOMITIC
FOSSILS: VERTEBRATE
HIGHLY PHOSPHATIC, PHOSPHATIC LIMESTONE, RUBBLE ZONE (31-39.1').

39.1- 42.5 CALCILUTITE; LIGHT GRAYISH GREEN TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
PHOSPHATE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: SPAR- %, PHOSPHATIC GRAVEL- %
DOLOMITE- %, PHOSPHATIC SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL MOLDS
MARLY, CLAYEY CALCILUTITE.

42.5- 45 CLAY; MODERATE YELLOWISH GREEN TO GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND-15%, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, PLASTIC
FOSSILS: NO FOSSILS

45 - 48 LIMESTONE;
POROSITY: INTERGRANULAR, VUGULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
PHOSPHATE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %, DOLOMITE- %
CLAY-30%, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, SPECKLED
FOSSILS: FOSSIL MOLDS
INTERBEDDED LIMESTONE AND GRAY-GREEN CLAY; VUGGY, MOLDIC PHOSPHATIC LIMESTONE.

48 - 60.5 CLAY; GRAYISH GREEN TO GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %, CALCILUTITE- %
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, PLASTIC
FOSSILS: NO FOSSILS
INTERBEDDED CLAY AND MARLY-CLAYEY CALCILUTITE, SLIGHTLY DOLOMITIC.

60.5- 64.7 CALCILUTITE; YELLOWISH GRAY TO PINKISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
PHOSPHATE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MASSIVE, MOTTLED
ACCESSORY MINERALS: PHOSPHATIC SAND-15%, CLAY-45%
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, SPECKLED
FOSSILS: FOSSIL MOLDS
INTERBEDDED CALCILUTITE AND MODERATE YELLOWISH GREEN CLAY.

64.7- 69.3 CALCILUTITE; LIGHT GREENISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, BIOGENIC
GOOD INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
PHOSPHATE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, MASSIVE
ACCESSORY MINERALS: PHOSPHATIC SAND-10%, CLAY- %
PHOSPHATIC GRAVEL- %, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, SPECKLED
FOSSILS: FOSSIL MOLDS
INTERBEDDED CLAY AND PHOSPHATIC CALCILUTITE, ARCADIA FORMATION TOP.

69.3- 70.7 CLAY; YELLOWISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, VUGULAR; POOR INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: CALCILUTITE-40%, PHOSPHATIC SAND- %
OTHER FEATURES: CALCAREOUS
FOSSILS: FOSSIL MOLDS

70.7- 74 CALCILUTITE; LIGHT GREENISH GRAY TO PINKISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, PHOSPHATE CEMENT
CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %
QUARTZ SAND- %, PHOSPHATIC GRAVEL- %
OTHER FEATURES: CALCAREOUS, SPECKLED
FOSSILS: FOSSIL MOLDS
GRADES TO CALCILUTITIC CLAY, SLIGHTLY DOLOMITIC, HIGHLY PHOSPHATIC.

74 - 74.6 CLAY; DARK GRAYISH GREEN TO LIGHT GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY; GOOD INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: PLASTIC, CALCAREOUS
FOSSILS: ORGANICS

74.6- 83.7 CALCILUTITE; PINKISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
PHOSPHATE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MASSIVE, MOTTLED
ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, SPECKLED
FOSSILS: FOSSIL MOLDS, FOSSIL FRAGMENTS
SLIGHTLY DOLOMITIC, BECOMES LESS PHOSPHATIC NEAR BOTTOM OF SECTION; LOW PERMEABILITY, SPECKLED WITH BROWN AND BLACK PHOSPHATIC SAND.

83.7- 87 CALCILUTITE; LIGHT GREENISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, VUGULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY- %, PHOSPHATIC SAND- %
QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: ORGANICS
CLAY-FILLED VUGS, GRAY GREEN-GRAYISH YELLOW GREEN CLAY (ORGANIC CLAY).

87 - 98.8 CALCILUTITE; LIGHT GREENISH GRAY TO PINKISH GRAY
POROSITY: INTERGRANULAR, VUGULAR, MOLDIC
GRAIN TYPE: CALCILUTITE, BIOGENIC
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-10%, PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL-10%, DOLOMITE-40%
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL MOLDS, FOSSIL FRAGMENTS
MOTTLED AT TOP OF SECTION; DOLOMITIC, NUMEROUS PHOSPHATIC PEBBLES AND GRAVEL AT BOTTOM OF SECTION, SOME VERTICAL AND HORIZONTAL FRACTURES, MODERATE YELLOWISH GREEN CLAY-FILLED VUGS, SILICA SAND.

98.8- 107.3 CALCARENITE; LIGHT GRAY TO VERY LIGHT GRAY
POROSITY: INTERGRANULAR, MOLDIC
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MASSIVE
GRADED BEDDING
ACCESSORY MINERALS: PHOSPHATIC SAND-15%
PHOSPHATIC GRAVEL- %, QUARTZ SAND- %, CALCILUTITE-20%
OTHER FEATURES: CALCAREOUS, SPECKLED
FOSSILS: FOSSIL MOLDS, FOSSIL FRAGMENTS, MOLLUSKS
GRADES TO VERY LIGHT GRAY CALCILUTITE.

107.3- 123 CLAY; VERY LIGHT GREEN TO LIGHT YELLOWISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND-10%, CALCILUTITE- %
QUARTZ SAND- %, DOLOMITE- %
OTHER FEATURES: PLASTIC, SPECKLED
FOSSILS: FOSSIL MOLDS
GRADES FROM CLAYEY CALCILUTITE TO DOLOMITIC PHOSPHATIC CLAY WHICH IS INTERBEDDED WITH PHOSPHATIC CALCILUTITE.

123 - 125 CALCARENITE; VERY LIGHT GREEN TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %, DOLOMITE- %
FOSSILS: FOSSIL MOLDS, BRYOZOA, FOSSIL FRAGMENTS, MOLLUSKS
GRADES TO A YELLOWISH GRAY DOLOMITIC CALCILUTITE.

125 - 127 CLAY; DARK GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %, DOLOMITE- %, QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: ORGANICS

127 - 129.1 CHERT; DARK GREENISH GRAY
POROSITY: NOT OBSERVED; GOOD INDURATION
CEMENT TYPE(S): SILICIC CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CALCILUTITE-35%, CLAY-25%
PHOSPHATIC SAND- %
OTHER FEATURES: MUDDY
INTERBEDDED CHERT, DARK YELLOWISH CLAY AND FOSSILIFEROUS CALCARENITE.

129.1- 135 CLAY; LIGHT GRAYISH GREEN TO GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS
INTERBEDDED CLAY AND LIGHT GREENISH GRAY DOLOMITIC CALCILUTITE.

135 - 135.3 CHERT; DARK GREENISH GRAY
POROSITY: NOT OBSERVED; GOOD INDURATION
CEMENT TYPE(S): SILICIC CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
FOSSILS: NO FOSSILS

135.3- 139 CLAY; LIGHT GRAYISH GREEN TO GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %, CALCILUTITE-30%
DOLOMITE- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS
INTERBEDDED CLAY AND LIGHT GREENISH GRAY DOLOMITIC CALCILUTITE; ORGANICS?

139 - 141 CALCARENITE; LIGHT GREENISH GRAY TO DARK GREENISH YELLOW
POROSITY: INTERGRANULAR, MOLDIC
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %, CLAY- %
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL MOLDS, FOSSIL FRAGMENTS, MOLLUSKS

141 - 142 CHERT; BROWNISH GRAY TO PINKISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY; GOOD INDURATION
CEMENT TYPE(S): SILICIC CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BRECCIATED, MOTTLED
ACCESSORY MINERALS: CLAY- %, DOLOMITE- %
PHOSPHATIC SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS
INTERBEDDED CHERT, CLAY AND DOLOMITE - VERY LOW POROSITY.

142 - 147.3 CALCILUTITE; LIGHT YELLOWISH GREEN TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS

147.3- 148 CLAY; LIGHT YELLOWISH GREEN TO VERY LIGHT GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CLAY MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS

148 - 154.3 CALCARENITE; YELLOWISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, MOLDIC
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, PHOSPHATE CEMENT
SILICIC CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE- %, PHOSPHATIC SAND- %
CHERT- %, PHOSPHATIC GRAVEL- %
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, MOLLUSKS
WORM TRACES
SOME BROWN-GRAY CHERT, BIOTURBATED, GRAVEL SIZE PHOSPHATE
GRADES TO A YELLOWISH GRAY DOLOMITIC CALCILUTITE, WITH
PHOSPHATIC AND SILICA SAND.

154.3- 156.7 CALCILUTITE; LIGHT GREENISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
ACCESSORY MINERALS: PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS

156.7- 157.7 CLAY; GRAYISH GREEN TO DARK GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY, MOLDIC
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, BIOTURBATED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %
OTHER FEATURES: PLASTIC, DOLOMITIC
FOSSILS: ORGANICS, FOSSIL FRAGMENTS

157.7- 158.7 CALCILUTITE; LIGHT GREENISH GRAY TO PINKISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS

158.7- 166.5 CLAY; LIGHT GREENISH GRAY TO LIGHT GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
OTHER FEATURES: DOLOMITIC, PLASTIC
FOSSILS: NO FOSSILS

166.5- 169.4 CALCILUTITE; GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: CLAY-40%, PHOSPHATIC GRAVEL- %
PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC, SPECKLED
FOSSILS: NO FOSSILS
INTERBEDDED CALCILUTITE AND CLAY-MOTTLED APPEARANCE
CLAY-FILLED VUGS.

169.4- 170.1 CLAY; LIGHT GREENISH GRAY TO LIGHT GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %, QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC, PLASTIC
FOSSILS: NO FOSSILS

170.1- 174.8 CALCILUTITE; LIGHT GREENISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY, MOLDIC
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-21%, PHOSPHATIC GRAVEL- %
PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS
INTERBEDDED WITH GREEN CLAY.

174.8- 178.3 CLAY; DARK YELLOWISH GREEN TO MODERATE GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %
PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC, PLASTIC
FOSSILS: NO FOSSILS
ABUNDANT PHOSPHATIC SAND, GRAVEL.

178.3- 184 CALCILUTITE; YELLOWISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY, FRACTURE
GRAIN TYPE: CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: CLAY-45%, PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %
OTHER FEATURES: DOLOMITIC, PARTINGS
FOSSILS: NO FOSSILS

184 - 185.3 AS ABOVE
GRAYISH-GREEN CLAY SEAM AT 181.5'; GRADES TO A DOLOMITIC AND CALCILUTITIC CLAY; SOME PHOSPHATE GRAVEL; SOME CLAY-FILLED VUGS.

185.3- 189.4 CALCILUTITE; YELLOWISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SILICIC CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: CHERT-05%, PHOSPHATIC GRAVEL- %
PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS
BROWN TO BLACK CHERT (185.5')(198.6'); VUGGY AT BOTTOM OF SECTION.

189.4- 193 CLAY; LIGHT GREENISH GRAY TO GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %, QUARTZ SAND- %
CALCILUTITE- %
OTHER FEATURES: DOLOMITIC, PLASTIC
FOSSILS: NO FOSSILS

193 - 195.1 CALCILUTITE; LIGHT GREENISH GRAY TO GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %
OTHER FEATURES: DOLOMITIC, PARTINGS
FOSSILS: BARNACLES

195.1- 205 CLAY; LIGHT GREENISH GRAY TO GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %
OTHER FEATURES: DOLOMITIC, PLASTIC
FOSSILS: NO FOSSILS
SPARSE PHOSPHATIC SAND, STICKY.

205 - 208.5 CALCILUTITE; LIGHT GREENISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %
OTHER FEATURES: DOLOMITIC
FOSSILS: NO FOSSILS

208.5- 209.3 CLAY; GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %
OTHER FEATURES: PLASTIC
FOSSILS: NO FOSSILS

209.3- 210 CALCILUTITE; YELLOWISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %
FOSSILS: NO FOSSILS

210 - 211.5 CLAY; LIGHT GREEN TO LIGHT GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
OTHER FEATURES: PLASTIC, CALCAREOUS
FOSSILS: NO FOSSILS

211.5- 211.8 DOLOSTONE; YELLOWISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY; 50-90% ALTERED
ANHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %, QUARTZ SAND- %
FOSSILS: NO FOSSILS

211.8- 212.3 CLAY; LIGHT YELLOWISH GREEN TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, BRECCIATED
ACCESSORY MINERALS: PHOSPHATIC GRAVEL- %
OTHER FEATURES: PLASTIC, CALCAREOUS
FOSSILS: NO FOSSILS
MOTTLED AND BRECCIATED APPEARANCE AT TOP OF SECTION.

212.3- 215 CLAY; LIGHT GRAYISH GREEN TO GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND- %
OTHER FEATURES: PLASTIC
FOSSILS: NO FOSSILS

215 - 218.5 CLAY; LIGHT GREENISH GRAY TO LIGHT GRAYISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND- %
OTHER FEATURES: PLASTIC
FOSSILS: NO FOSSILS

218.5- 223 CLAY; LIGHT GREENISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
OTHER FEATURES: PLASTIC
FOSSILS: NO FOSSILS

223 - 229.1 CALCILUTITE; YELLOWISH GRAY TO WHITE
POROSITY: INTERGRANULAR, PIN POINT VUGS, FRACTURE
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CLAY-20%, PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %, QUARTZ SAND- %
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL MOLDS
INTERBEDDED GREEN YELLOW CLAY AND CLAYEY CALCILUTITE
CLAY-FILLED HORIZONTAL FRACTURE, SOME PHOSPHATIC PEBBLES.

229.1- 233.1 CLAY; MODERATE YELLOWISH GREEN TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, STREAKED, MOTTLED
ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: PLASTIC
FOSSILS: NO FOSSILS

233.1- 238.5 CALCARENITE; YELLOWISH GRAY TO WHITE
POROSITY: INTERGRANULAR, FRACTURE
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SPARRY CALCITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %
PHOSPHATIC GRAVEL- %, QUARTZ SAND- %, SPAR- %
OTHER FEATURES: CALCAREOUS
FOSSILS: NO FOSSILS
CALCITE-FILLED HORIZONTAL FRACTURE; TOP OF SECOND
TRANSMISSIVE ZONE MORE PERMEABLE THAN ABOVE SECTION.

238.5- 343.5 CALCARENITE; LIGHT BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, VUGULAR
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND-05%, QUARTZ SAND-40%
PHOSPHATIC GRAVEL- %
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS
TRANSMISSIVE, VUGGY AND MOLDIC POROSITY, MOLLUSK MOLDS
QUARTZ SANDY.

343.5- 263 SANDSTONE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, MOLDIC
POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM
MEDIUM SPHERICITY; POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND-05%, LIMESTONE-45%
CLAY- %, PHOSPHATIC SAND- %
OTHER FEATURES: GRANULAR, CALCAREOUS, FROSTED
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, CORAL
PELECYPOD AND GASTROPOD (TURRITELLA) MOLDS, CORAL OR
BRYOZOAN? QUARTZ SANDY CLAY-FILLED VUGS AND SEAMS.

263 - 265 SANDSTONE; LIGHT BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM
MEDIUM SPHERICITY; POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND-05%, LIMESTONE-40%
OTHER FEATURES: GRANULAR, CALCAREOUS, FROSTED
FOSSILS: FOSSIL MOLDS

265 - 277 SAND; YELLOWISH GRAY TO LIGHT GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM
MEDIUM SPHERICITY; UNCONSOLIDATED
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND-05%, LIMESTONE-15%
OTHER FEATURES: GRANULAR, CALCAREOUS, FROSTED
FOSSILS: FOSSIL FRAGMENTS
ECHINOID SPINES.

277 - 283.5 SANDSTONE; YELLOWISH GRAY TO LIGHT GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN SIZE: FINE; RANGE: VERY FINE TO MEDIUM
MEDIUM SPHERICITY; POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND-03%, LIMESTONE-30%
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: FOSSIL MOLDS, FOSSIL FRAGMENTS
LENS OF FOSSILIFEROUS CALCARENITE (LAMINATED), TAMPA
MEMBER?

283.5- 288.5 CALCARENITE; YELLOWISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR
GRAIN TYPE: CALCILUTITE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CALCILUTITE-40%, PHOSPHATIC SAND- %
QUARTZ SAND-20%, CLAY- %
OTHER FEATURES: GRANULAR, CALCAREOUS, WEATHERED
FOSSILS: NO FOSSILS
GRADES TO A CLAYEY CALCILUTITE; LESS PHOSPHATIC SAND.

288.5- 298 CALCARENITE; YELLOWISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, FRACTURE, PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, LAMINATED
ACCESSORY MINERALS: CALCILUTITE-30%, PHOSPHATIC SAND- %
QUARTZ SAND- %, PHOSPHATIC GRAVEL- %
OTHER FEATURES: GRANULAR, CALCAREOUS, WEATHERED
FOSSILS: FOSSIL MOLDS
SOME CALCITE-FILLED FRACTURES (HORIZONTAL, VERTICAL) TOP OF TAMPA MEMBER; ARCADIA FORMATION (288.5'); LESS PHOSPHATIC SAND; MOTTLED, BRECCIATED APPEARANCE, RECRYSTALLIZATION SPARSE PHOSPHATIC PEBBLES.

298 - 307 CALCARENITE; YELLOWISH GRAY TO LIGHT GREENISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
VUGULAR
GRAIN TYPE: CALCILUTITE, BIOGENIC
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, LAMINATED
ACCESSORY MINERALS: CALCILUTITE-30%, PHOSPHATIC SAND- %
QUARTZ SAND- %, DOLOMITE- %
OTHER FEATURES: GRANULAR, CALCAREOUS, WEATHERED
FOSSILS: FOSSIL MOLDS
SOME DOLOSTONE LENSES, SOME CALCITE-LINED MOLDS (GASTROPODS), PELECYPODS.

307 - 318.5 CALCARENITE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
FRACTURE
GRAIN TYPE: CALCILUTITE, BIOGENIC
POOR INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, LAMINATED
ACCESSORY MINERALS: DOLOMITE- %, CALCILUTITE- %
QUARTZ SAND-20%, PHOSPHATIC SAND- %
OTHER FEATURES: GRANULAR, WEATHERED, DOLOMITIC
FOSSILS: FOSSIL MOLDS
POOR TO UNCONSOLIDATED (QUARTZ SAND-FILLED CAVITY?) MOTTLED
APPEARANCE DUE TO PARTIAL DOLOMITIZATION-FORMATION
MATERIAL, BRECCIATED, CALCITE-FILLED FRACTURES.

318.5- 323 CALCARENITE; LIGHT BROWN
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND- %, PHOSPHATIC SAND-02%
OTHER FEATURES: GRANULAR, WEATHERED, CALCAREOUS
FOSSILS: FOSSIL MOLDS

323 - 333.5 SANDSTONE; LIGHT BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC; POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BRECCIATED
BIOTURBATED
ACCESSORY MINERALS: PHOSPHATIC SAND-03%, LIMESTONE-40%
CALCITE- %, CHERT- %
OTHER FEATURES: GRANULAR, WEATHERED, CALCAREOUS
FOSSILS: FOSSIL MOLDS, FOSSIL FRAGMENTS
QUARTZ; PHOSPHATE AND CALCARENITE SAND (VERY FINE-FINE
GRAINED), MOLDIC; SOME MODERATE BROWN CHERT; MINOR
BRECCIATION.

333.5- 353.5 CALCARENITE; YELLOWISH GRAY TO LIGHT GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: QUARTZ SAND-45%, DOLOMITE- %
PHOSPHATIC SAND-03%, CALCITE- %
OTHER FEATURES: GRANULAR, WEATHERED, CALCAREOUS
FOSSILS: FOSSIL MOLDS
MOTTLED APPEARANCE, SOME CRYSTALLINE CALCITE-FILLED
HORIZONAL FRACTURE, MINOR PHOSPHATIC GRAVEL.

353.5- 358.5 CALCARENITE; YELLOWISH GRAY TO GRAYISH ORANGE PINK
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
VUGULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SILICIC CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
ACCESSORY MINERALS: DOLOMITE- %, PHOSPHATIC SAND-03%
QUARTZ SAND-20%, PHOSPHATIC GRAVEL- %
OTHER FEATURES: GRANULAR, WEATHERED, CALCAREOUS, DOLOMITIC
FOSSILS: FOSSIL MOLDS
MODERATE BROWN DOLOMITE SEAM; GRAYISH ORANGE CHERT.

358.5- 363.5 CALCARENITE; VERY LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: DOLOMITE- %, QUARTZ SAND- %
CALCITE- %, PHOSPHATIC SAND-01%
OTHER FEATURES: GRANULAR, WEATHERED, CALCAREOUS, DOLOMITIC
FOSSILS: FOSSIL MOLDS, WORM TRACES, ECHINOID
SECOND TRANSMISSIVE ZONE BASE; GRADES TO DOLOMITIC
LIMESTONE, VERY FINE SAND.

363.5- 373.5 DOLOSTONE; LIGHT GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, MOLDIC, LOW PERMEABILITY
10-50% ALTERED; ANHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: LIMESTONE-45%, QUARTZ SAND- %
PHOSPHATIC SAND- %
OTHER FEATURES: DOLOMITIC, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL MOLDS, CORAL, FOSSIL FRAGMENTS
TOP OF CONFINING BED, POSSIBLE BASE OF TAMPA MEMBER
UNDIFFERENTIATED ARCADIA FORMATION AGAIN; MOLDIC; SPARSE
PHOSPHATE, SOME FRACTURES CRYSTALLINE, CRYSTAL-LINED MOLDS.

373.5- 388.5 CALCARENITE; YELLOWISH GRAY TO LIGHT GRAY
POROSITY: INTERGRANULAR, MOLDIC
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-45%
OTHER FEATURES: DOLOMITIC, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL MOLDS, MOLLUSKS, FOSSIL FRAGMENTS, CORAL
BENTHIC FORAMINIFERA
LOST CIRCULATION, POSSIBLE CAVITY (378') MOLDIC POROSITY
SORITES SP.

388.5- 393.5 CALCARENITE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
UNCONSOLIDATED
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: PHOSPHATIC SAND- %, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
SOFT, CALCARENITIC SAND AND GRAVEL; ECHINOID SPINES.

393.5- 398.5 CALCARENITE; YELLOWISH GRAY TO GRAYISH ORANGE PINK
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, MEDIUM RECRYSTALLIZATION
FOSSILS: CORAL, FOSSIL MOLDS, BRYOZOA
GRADES TO MORE CONSOLIDATED, HARDER CALCILUTITE, CALCITIC
CRYSTALLINE.

398.5- 408.5 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, MOLLUSKS
TOP OF SUWANNEE (398.5')? COLOR CHANGE TO DARKER YELLOWISH
GRAY.

408.5- 418.5 CALCARENITE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
UNCONSOLIDATED
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %, CALCITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS
ECHINOID SPINES, UNCONSOLIDATED.

418.5- 428.5 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %, CALCITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS
GASTROPOD MOLDS (TURRITELLA), FINER GRAINED CALCARENITE.

428.5- 438.5 CALCARENITE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
UNCONSOLIDATED
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %, CALCITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
ECHINOID SPINES, CALCITE ROTALIA MEXICANA?

438.5- 458.5 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR, WEATHERED
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, MOLLUSKS
FOSSIL MOLDS
GYPSINA GLOBIA, SORITES SP., TURRITELLA MOLDS, SLIGHT COLOR CHANGE.

458.5- 473.5 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE- %, QUARTZ SAND- %
CALCITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR, WEATHERED
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, FOSSIL MOLDS
BENTHIC FORAMINIFERA
COSKINOLINA FLORIDANA?, GYPSINA GLOBIA, ECHINOID SPINE
COLOR CHANGE.

473.5- 478.5 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE- %, CALCITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, FOSSIL MOLDS
COSKINOLINA FLORIDANA.

478.5- 483.5 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
UNCONSOLIDATED
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCITE- %, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS

483.5- 503.5 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE- %, CALCITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS, BRYOZOA, BENTHIC FORAMINIFERA
FOSSIL MOLDS
COSKINOLINA FLORIDANA, BRYOZOAN PAVEMENT, ECHINOID SPINES.

503.5- 513.5 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
UNCONSOLIDATED
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %, CALCITE- %
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS

513.5- 534.5 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS
LESS FOSSILIFEROUS, FINER GRAINED.

534.5- 543.5 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE- %, CALCITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, MOLLUSKS
ECHINOID SPINES, CALCITE CRYSTAL-LINED ECHINOID MOLD.

543.5- 548.5 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
POOR INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, MILIOLIDS

548.5- 553.5 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
UNCONSOLIDATED
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS

553.5- 564 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
VUGULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, CONES
COSKINOLINA FLORIDANA.

564 - 573.5 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
UNCONSOLIDATED
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS

573.5- 583.5 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, MOLLUSKS
ECHINOID? AND TURRITELLA MOLDS, ECHINOID SPINES.

583.5- 588.5 CALCARENITE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
UNCONSOLIDATED
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS

588.5- 613.5 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
MODERATE INDURATION
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, BRYOZOA
GRADES TO A POORLY CONSOLIDATED, LESS FOSSILIFEROUS
CALCARENITE.

613.5- 629 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, GRANULAR
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, WORM TRACES
HARDER, MORE CRYSTALLINE, AND CONSOLIDATED; CALCITE-LINED WORM HOLES.

629 - 634 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: CALCILUTITE- %, PHOSPHATIC SAND- %
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, GRANULAR, PARTINGS, SPECKLED
MEDIUM RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS
SAME COLOR CHANGE - PHOSPHATIC SAND? MOTTLED AT BOTTOM OF SECTION.

634 - 635 CALCILUTITE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, LOW PERMEABILITY, PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, CLAY MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE- %, PHOSPHATIC SAND- %
QUARTZ SAND- %, DOLOMITE- %
OTHER FEATURES: CALCAREOUS, CHALKY, WEATHERED, PARTINGS
FOSSILS: FOSSIL MOLDS, PLANT REMAINS
CLAYEY CALCILUTITE FORMATION CHANGING - MORE CALCILUTITIC CHALKY, HARDER, MORE CONSOLIDATED, MORE DOLOMITIC.

635 - 638.1 DOLOSTONE; LIGHT OLIVE GRAY TO GRAYISH BROWN
POROSITY: INTERGRANULAR, INTERCRYSTALLINE
LOW PERMEABILITY; 50-90% ALTERED; ANHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
OTHER FEATURES: SUCROSIC
FOSSILS: NO FOSSILS
HARD, SUCROSIC DOLOMITE, DARK GRAY SPOTS - PHOSPHATE.

638.1- 639 CLAY; LIGHT GRAYISH GREEN TO LIGHT YELLOWISH GREEN
POROSITY: INTERGRANULAR, LOW PERMEABILITY; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
PHOSPHATIC GRAVEL- %, PHOSPHATIC SAND- %
OTHER FEATURES: PLASTIC, CHALKY
FOSSILS: ORGANICS
CLAY SEAM; BASE OF SUWANNEE FORMATION, TOP OF OCALA GROUP.

639 - 674 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
CALCITE- %, QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
FOSSILS: FOSSIL MOLDS, FOSSIL FRAGMENTS, MOLLUSKS
WORM TRACES, BENTHIC FORAMINIFERA
GYPSINA GLOBULA, ECHINOID MOLD AND CASTS; LEPIDOCYCLINA SP.
(644') MOLDS AND CASTS ALTERED, FINER GRAINED; TOP OF OCALA
GROUP (CRYSTAL RIVER FORMATION).

674 - 694 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS
BENTHIC FORAMINIFERA, ECHINOID, WORM TRACES
LEPIDOCYCLINA SP. CASTS (ALTERED) CORAL, FINER GRAINED
GASTROPOD MOLDS, ECHINOID, CASTS; OCALA GROUP - CRYSTAL
RIVER FORMATION.

694 - 714 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, VUGULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE-30%, CALCITE- %
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, MEDIUM RECRYSTALLIZATION
WEATHERED
FOSSILS: FOSSIL MOLDS, FOSSIL FRAGMENTS
BENTHIC FORAMINIFERA, ECHINOID, WORM TRACES
NUMMULITES SP. (ALTERED AND NUMEROUS) LEPIDOCYCLINA SP.
(ALTERED).

714 - 732.5 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: LIMESTONE- %, CALCITE- %
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION, CHALKY
WEATHERED
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS
BENTHIC FORAMINIFERA, WORM TRACES
NUMMULITES SP. MOLDS, CASTS AND LEPIDOCYCLINA (ALTERED)
SPARSE SAND; LESS FOSSILIFEROUS, CHALKY, POSSIBLE MINOR
FRACTURES, OPERCULINOIDES?

732.5- 749 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, VUGULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-35%, CALCITE- %
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
WEATHERED
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS
BENTHIC FORAMINIFERA, WORM TRACES
NUMMULITES SP., MOLLUSKS (GASTROPOD CASTS, LEPIDOCYCLINA
SP. (ALTERED); ECHINOID SPINES, ECHINOID CAST, MORE
FOSSILIFEROUS, OPERCULINOIDES SP.

749 - 769 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, VUGULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-25%, CALCITE- %
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
WEATHERED
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS
BENTHIC FORAMINIFERA
NUMMULITES, OPERCULINIODES SP., LEPIDOCYCLINA SP. (ALTERED)
ECHINOID SPINES.

769 - 778 CALCARENITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, VUGULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCILUTITE-30%, CALCITE- %
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
WEATHERED
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS
BENTHIC FORAMINIFERA, ECHINOID
LEPIDOCYCLINA SP., OPERCULINOIDES SP.; NUMMULITES SP.
(ALTERED); ECHINOID CAST.

778 - 799 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, VUGULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE, BIOTURBATED
ACCESSORY MINERALS: LIMESTONE-45%, CALCITE- %
QUARTZ SAND- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
WEATHERED, CHALKY
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS
BENTHIC FORAMINIFERA
MORE CALCILUTITIC, SOME GRAY (ALTERED) FORAMINIFERA
(PHOSPHATIC?); LEPIDOCYCLINA SP., OPERCULINOIDES SP.
NUMMULITES, GYPSINA GLOBULA.

799 - 808.6 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, VUGULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: LIMESTONE- %, CALCITE- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
WEATHERED, CHALKY
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS
BENTHIC FORAMINIFERA, ECHINOID
OPERCULINOIDES SP., NUMMULITES SP., LEPIDOCYCLINA SP.
ECHINOID CAST; SOME PHOSPHATIZED FORAMINIFERA; CHANGES TO
DARKER YELLOWISH GRAY.

808.6- 814.3 CALCARENITE; YELLOWISH GRAY TO GRAYISH BROWN
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SILICIC CEMENT
DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCITE- %, QUARTZ SAND-30%
DOLOMITE- %
OTHER FEATURES: CALCAREOUS, LOW RECRYSTALLIZATION
GRANULAR
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA, ECHINOID
NUMEROUS OPERCULINOIDES SP.; HARDER, MORE CONSOLIDATED AT
BOTTOM OF SECTION, LEPIDOCYCLINA SP., NUMMULITES SP., SOME
SILICA SAND, SOME DOLOMITE (RHOMBIC CRYSTALS) HIGHLY
FOSSILIFEROUS (FORAMINIFERA), BIOTURBATED.

814.3- 829.7 CALCARENITE; GRAYISH BROWN
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SILICIC CEMENT
DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE, BIOTURBATED
ACCESSORY MINERALS: CALCITE- %, CALCILUTITE-30%
QUARTZ SAND-45%, DOLOMITE- %
OTHER FEATURES: GRANULAR, DOLOMITIC
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
DOLOMITE (RHOMBIC CRYSTALS), HIGHLY
FOSSILIFEROUS-FORAMINIFERA (OPERCULINOIDES) LEPIDOCYCLINA
SP., OPERCULINOIDES SP. CASTS.

829.7- 832.4 CALCILUTITE; YELLOWISH GRAY TO GRAYISH ORANGE PINK
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELTAL CAST
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SILICIC CEMENT
DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, BIOTURBATED
ACCESSORY MINERALS: CALCITE- %, DOLOMITE- %
QUARTZ SAND-30%, LIMESTONE- %
OTHER FEATURES: DOLOMITIC, SUCROSIC
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA
CLAY SEAM AT 830.4 (GRAYISH YELLOW GREEN), OPERCULINOIDES CASTS.

832.4- 832.5 CALCILUTITE; LIGHT BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, INTERCRYSTALLINE, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELTAL CAST
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SILICIC CEMENT
DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: DOLOMITE- %, QUARTZ SAND- %
CLAY- %
OTHER FEATURES: VARVED, FROSTED, GREASY
SLIGHTLY DOLOMITIC, SOME RHOMBIC CRYSTALS; OPERCULINOIDES SP. CASTS (CALCAREOUS, WHITE COLOR).

832.5- 839 DOLOSTONE; LIGHT BROWN
POROSITY: INTERCRYSTALLINE, MOLDIC, INTERGRANULAR
10-50% ALTERED; SUBHEDRAL
GRAIN SIZE: VERY FINE; RANGE: MICROCRYSTALLINE TO FINE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, SILICIC CEMENT
DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CALCILUTITE-45%, QUARTZ SAND- %
CLAY- %
OTHER FEATURES: DOLOMITIC, SUCROSIC
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL MOLDS, MOLLUSKS
LIGHT BROWN CALCAREOUS CLAY SEAM (837.9'-838.1')
OPERCULINOIDES SP.; MOLDS AND CAST (CALCAREOUS, WHITE COLOR), SOME RHOMBIC CRYSTALS (DOLOSTONE).

839 - 854 DOLOSTONE; LIGHT BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE, MOLDIC
POSSIBLY HIGH PERMEABILITY; 50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: DOLOMITIC, SUCROSIC
HIGH RECRYSTALLIZATION
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, ECHINOID
HIGHLY MOLDIC (OPERCULINOIDES), ECHINOID MOLDS? AND
ECHINOID CAST.

854 - 855.1 DOLOSTONE; LIGHT BROWN TO MODERATE YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 10-50% ALTERED; SUBHEDRAL
GRAIN SIZE: VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE-30%
OTHER FEATURES: DOLOMITIC, SUCROSIC
HIGH RECRYSTALLIZATION
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA

855.1- 860.1 DOLOSTONE; LIGHT BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE, MOLDIC
POSSIBLY HIGH PERMEABILITY; 50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: DOLOMITIC, SUCROSIC
HIGH RECRYSTALLIZATION
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA, ECHINOID
HIGHLY MOLDIC (OPERCULINOIDES) ECHINOID MOLDS?
LEPIDOCYCLINA MOLDS.

860.1- 861.6 DOLOSTONE; LIGHT BROWN TO MODERATE YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 10-50% ALTERED; SUBHEDRAL
GRAIN SIZE: VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE-30%
OTHER FEATURES: DOLOMITIC, SUCROSIC
HIGH RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

861.6- 874 DOLOSTONE; LIGHT BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE, MOLDIC
POSSIBLY HIGH PERMEABILITY; 50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: VERY FINE TO MICROCRYSTALLINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: DOLOMITIC, SUCROSIC
HIGH RECRYSTALLIZATION
FOSSILS: FOSSIL FRAGMENTS, BENTHIC FORAMINIFERA

874 - 879 NO SAMPLES

879 - 881 DOLOSTONE; MODERATE YELLOWISH BROWN TO GRAYISH ORANGE
15% POROSITY: MOLDIC, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 50-90% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA

881 - 884 DOLOSTONE; GRAYISH ORANGE TO GRAYISH YELLOW
10% POROSITY: MOLDIC, PIN POINT VUGS; 50-90% ALTERED
SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
FOSSILS: FOSSIL MOLDS, BENTHIC FORAMINIFERA
GRADES TO A FINER GRAINED, DOLOSILT, CALCAREOUS FORAM
TESTS, LEPIDOCYCLINA.

884 - 891 DOLOSTONE; GRAYISH ORANGE TO VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, PIN POINT VUGS
LOW PERMEABILITY; 10-50% ALTERED
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCITE-02%, SILT- %
OTHER FEATURES: CALCAREOUS
FOSSILS: BENTHIC FORAMINIFERA
ABUNDANT CALCAREOUS LEPIDOCYCLINA TESTS, VERY FINE GRAINED
DOLOMITE.

891 - 893.5 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, PIN POINT VUGS
LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCITE-05%, DOLOMITE- %
OTHER FEATURES: DOLOMITIC
FOSSILS: BENTHIC FORAMINIFERA, MOLLUSKS
CALCAREOUS FORAM TESTS COMMON, LEPIDOCYCLINA AND ABUNDANT NUMMULITES SP.

893.5- 896.5 DOLOSTONE; GRAYISH ORANGE TO GRAYISH YELLOW
05% POROSITY: MOLDIC, PIN POINT VUGS, LOW PERMEABILITY
10-50% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
ACCESSORY MINERALS: CALCITE-01%
OTHER FEATURES: CALCAREOUS
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL MOLDS
NUMMULITES MOLDS AND CALCAREOUS TESTS COMMON, FEW LEPIDOCYCLINA.

896.5- 898 CALCILUTITE; YELLOWISH GRAY
05% POROSITY: INTERGRANULAR, MOLDIC, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCITE-02%
OTHER FEATURES: DOLOMITIC
FOSSILS: BENTHIC FORAMINIFERA

898 - 904 CALCILUTITE; YELLOWISH GRAY
05% POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCITE-05%
OTHER FEATURES: CHALKY
FOSSILS: BENTHIC FORAMINIFERA

904 - 914 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCITE-05%
OTHER FEATURES: CHALKY
FOSSILS: BENTHIC FORAMINIFERA
ABUNDANT CALCAREOUS FORAM TESTS, LEPIDOCYCLINA SP.
NUMMULITES SP.

914 - 918.5 CALCILUTITE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
05% POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED, BIOTURBATED
ACCESSORY MINERALS: CALCITE-05%
OTHER FEATURES: VARIEGATED, DOLOMITIC
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID

918.5- 921 DOLOSTONE; YELLOWISH GRAY TO GRAYISH YELLOW
10% POROSITY: INTERGRANULAR, MOLDIC, LOW PERMEABILITY
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID

921 - 923.5 CALCILUTITE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
05% POROSITY: INTERGRANULAR, PIN POINT VUGS
LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: DOLOMITE-10%, CALCITE-01%
OTHER FEATURES: DOLOMITIC
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID
FORAMS COMMON, BECOMING MORE DOLOMITIC AT BOTTOM OF SECTION.

923.5- 927 DOLOSTONE; GRAYISH ORANGE TO GRAYISH YELLOW
10% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
50-90% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE
ACCESSORY MINERALS: CALCITE-01%
OTHER FEATURES: CALCAREOUS
FOSSILS: BENTHIC FORAMINIFERA, ECHINOID, FOSSIL MOLDS
ABUNDANT FORAM MOLDS, SOME FORAM TESTS, GRADES TO A DOLO-CALCILUTITE.

927 - 930 CALCILUTITE; YELLOWISH GRAY TO LIGHT OLIVE GRAY
05% POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED, BIOTURBATED
ACCESSORY MINERALS: DOLOMITE- %
OTHER FEATURES: PARTINGS, DOLOMITIC
FOSSILS: BENTHIC FORAMINIFERA, ORGANICS

930 - 934 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
10% POROSITY: INTERGRANULAR, FRACTURE
POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED, BIOTURBATED
INTERBEDDED
ACCESSORY MINERALS: DOLOMITE- %
OTHER FEATURES: PARTINGS, DOLOMITIC
FOSSILS: BENTHIC FORAMINIFERA, ORGANICS
ABUNDANT PARTINGS, POSSIBLE HIGH HORIZONTAL PERMEABILITY.

934 - 937 CALCILUTITE; YELLOWISH GRAY TO VERY LIGHT ORANGE
05% POROSITY: INTERGRANULAR, PIN POINT VUGS
LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, BIOGENIC
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED, BIOTURBATED
ACCESSORY MINERALS: DOLOMITE-05%
OTHER FEATURES: DOLOMITIC, VARIEGATED

937 - 941 DOLOSTONE; GRAYISH BROWN TO YELLOWISH GRAY
10% POROSITY: VUGULAR, FRACTURE, MOLDIC; 50-90% ALTERED
SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: MASSIVE, MOTTLED
OTHER FEATURES: SUCROSIC, VARIEGATED
FOSSILS: FOSSIL MOLDS, ORGANICS

941 - 942.5 DOLOSTONE; LIGHT BROWN TO GRAYISH BROWN
10% POROSITY: INTERGRANULAR, MOLDIC, PIN POINT VUGS
10-50% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, ORGANIC MATRIX
CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED
ACCESSORY MINERALS: CALCITE-01%, PEAT- %, LIMESTONE- %
QUARTZ SAND- %
OTHER FEATURES: SUCROSIC, VARIEGATED
FOSSILS: ECHINOID, FOSSIL MOLDS, ORGANICS
POSSIBLE ALGAL LAMINATIONS (ORGANIC), RHOMBIC CRYSTALS
(DOLOMITE); FORAMINIFERA TESTS (OPERCULINOIDES SP.?).

942.5- 949 DOLOSTONE; GRAYISH BROWN TO LIGHT GRAYISH BROWN
15% POROSITY: INTERGRANULAR, MOLDIC, LOW PERMEABILITY
10-50% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MASSIVE, MOTTLED
BIOTURBATED
ACCESSORY MINERALS: LIMESTONE- %, CALCITE- %
OTHER FEATURES: SUCROSIC, MEDIUM RECRYSTALLIZATION
COQUINA
FOSSILS: ECHINOID, FOSSIL MOLDS, MOLLUSKS
FOSSIL FRAGMENTS
NUMEROUS ECHINOIDS (WHITE COLORED) RHOMBIC CRYSTALS
(DOLOMITE)

949 - 951.9 LIMESTONE; GRAYISH BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, MOLDIC
GRAIN TYPE: CALCILUTITE, BIOGENIC, SKELETAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
BIOTURBATED
ACCESSORY MINERALS: DOLOMITE-40%
OTHER FEATURES: SUCROSIC, LOW RECRYSTALLIZATION, COQUINA
FOSSILS: BENTHIC FORAMINIFERA, FOSSIL MOLDS
FOSSIL FRAGMENTS
NUMEROUS ECHINOIDS.

951.9- 954 LIMESTONE; GRAYISH BROWN TO GRAYISH ORANGE PINK
POROSITY: INTERGRANULAR, MOLDIC
GRAIN TYPE: CALCILUTITE, BIOGENIC, SKELETAL
GRAIN SIZE: VERY FINE; GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: DOLOMITE-30%, CALCITE- %
OTHER FEATURES: CHALKY, LOW RECRYSTALLIZATION
FOSSILS: ECHINOID, FOSSIL MOLDS, FOSSIL FRAGMENTS
ECHINOID MOLDS AND CASTS; BECOMES MORE DOLOMITIC AT BOTTOM OF SECTION; VARIABLE PERMEABILITY, CALCITE; NEOLAGANUM DURHAMI, ECHINOIDS.

954 - 959.7 LIMESTONE; GRAYISH BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, MOLDIC
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED
BIOTURBATED
ACCESSORY MINERALS: DOLOMITE-45%
OTHER FEATURES: LOW RECRYSTALLIZATION, PARTINGS
CALCAREOUS
FOSSILS: ECHINOID, FOSSIL MOLDS, FOSSIL FRAGMENTS
MOLLUSKS
ECHINOID MOLD AND CASTS (NEOLAGANUM DURHAMI AND NEOLAGANUM DALLI?); CALCITE-LINED MOLDS, ALGAL (ORGANIC) LAMINATIONS
VARIABLE PERMEABILITY, VARIES BETWEEN DOLOMITIC CALCILUTITE AND CALCARENITE LIMESTONE; POSSIBLE OCALA GROUP BASE (INGLIS FM); TOP OF AVON PARK FORMATION AT 954'?

959.7- 978 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELTAL CAST
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
ACCESSORY MINERALS: CALCITE- %, DOLOMITE-20%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, GRANULAR
CALCAREOUS
FOSSILS: ECHINOID, FOSSIL MOLDS, ORGANICS, CONES
ECHINOID MOLDS AND CASTS (NEOLAGANUM DALLI)? PALE BROWN CALCILUTITIC SEAMS; CALCILUTITE-LINED ECHINOID MOLDS
VARIABLE POROSITY, ORGANIC, CONES; COSKINOLINA FLORIDANA
AVON PARK FM.

978 - 993 CALCARENITE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED
ACCESSORY MINERALS: DOLOMITE- %, CALCILUTITE-20%
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: ECHINOID, FOSSIL MOLDS, FOSSIL FRAGMENTS
ORGANICS
LESS FOSSILIFEROUS THAN ABOVE, ORGANIC SEAM; ECHINOID MOLDS AND CASTS (981'-983') NEOLAGANUM DALLI?, CONES - COSKINOLINA FLORIDANA; SOME CALCILUTITIC SEAMS (MOTTLED APPEARANCE), FRACTURE.

993 - 994.9 CALCARENITE; VERY LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED
ACCESSORY MINERALS: DOLOMITE- %, CALCILUTITE- %
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: ORGANICS
DARK GRAY ORGANICS.

994.9- 996 CALCARENITE; LIGHT GREENISH YELLOW TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, MOLDIC
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: CALCILUTITE-45%
FOSSILS: ECHINOID, FOSSIL MOLDS

996 - 999.7 DOLOSTONE; MODERATE BROWN TO LIGHT BROWN
POROSITY: INTERCRYSTALLINE, INTERGRANULAR, MOLDIC
10-50% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: GRADED BEDDING, LAMINATED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: SUCROSIC, MEDIUM RECRYSTALLIZATION
FOSSILS: ECHINOID, FOSSIL MOLDS, ORGANICS
ECHINOID MOLDS AND CASTS, LAMINATED AT BOTTOM OF SECTION.

999.7- 1003 CALCARENITE; YELLOWISH GRAY TO LIGHT BROWN
POROSITY: INTERGRANULAR, LOW PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
ACCESSORY MINERALS: DOLOMITE-45%
FOSSILS: ECHINOID, FOSSIL MOLDS, ORGANICS

1003 - 1005.8 DOLOSTONE; LIGHT BROWN TO GRAYISH BROWN
POROSITY: INTERCRYSTALLINE, INTERGRANULAR
LOW PERMEABILITY; 10-50% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
ACCESSORY MINERALS: CALCILUTITE- %, CLAY- %
OTHER FEATURES: SUCROSIC
FOSSILS: ECHINOID, FOSSIL MOLDS, ORGANICS
FOSSIL FRAGMENTS
INTERBEDDED DOLOMITIC LIMESTONE AND DOLOMITE, ORGANIC
SEAMS; CLAY SEAM ECHINOID MOLDS (NEOLAGANUM DALLI?)

1005.8- 1008.6 CALCARENITE; LIGHT BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED
ACCESSORY MINERALS: DOLOMITE-15%, CALCITE- %
CALCILUTITE- %
OTHER FEATURES: GRANULAR, DOLOMITIC
FOSSILS: FOSSIL FRAGMENTS

1008.6- 1021.4 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, FRACTURE
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
BRECCIATED
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
CALCITE- %
OTHER FEATURES: GRANULAR, DOLOMITIC
FOSSILS: FOSSIL FRAGMENTS, ECHINOID, ORGANICS
SOME OFFSET IN FRACTURE, ECHINOID CAST (NEOLAGANUM DALLI)
ALTERNATING CALCARENITE AND CALCILUTITE IN TEXTURE
BRECCIATED APPEARANCE; ORGANIC LAMINATION (ALGAL?)
VARIABLE POROSITY, FOSSILS CASTS (ALTERED).

1021.4- 1030.9 CALCARENITE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, FRACTURE
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
CALCITE- %, QUARTZ SAND- %
OTHER FEATURES: GRANULAR, DOLOMITIC
FOSSILS: FOSSIL FRAGMENTS, MOLLUSKS, ORGANICS
GASTROPOD MOLDS (TURRITELLA), ORGANIC (ALGAL LAMINATIONS)?

1030.9- 1051.7 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
FRACTURE
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BRECCIATED, MASSIVE, LAMINATED
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
CALCITE- %, QUARTZ SAND- %
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, WORM TRACES
CONES, MILIOLIDS
FOSSILS (ALTERED) BECOMES MORE PERMEABLE TOWARD BOTTOM OF
SECTION COSKINOLINA FLORIDANA, DICTYOCONUS COOKEI
LAMINATIONS (1035- 1035.5'); ECHINOID SPINE, ECHINOID CAST
(NEOLAGANUM DALLI) UNIDENTIFIED FORAMS.

1051.7- 1056.3 CALCARENITE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE, MOTTLED
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
CALCITE- %
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, ECHINOID
WORM TRACES
ECHINOID TESTS AND MOLDS (NEOLAGANUM DALLI) CALCITE-LINED
ECHINOID SPINE, UNIDENTIFIED FORAMS, GASTROPOD TEST.

1056.3- 1064 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR
GRAIN TYPE: BIOGENIC, CALCILUTITE, SKELETAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE-20%, DOLOMITE- %
CALCITE- %
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, ECHINOID, CONES
MILIOLIDS
GASTROPOD MOLDS AND CASTS (TURRITELLA); LARGE CALCITIC
CRYSTAL IN A GASTROPOD CAST AT 1062.5', ECHINOID MOLDS AND
CASTS, COSKINOLINA FLORIDANA; DICTYOCONUS COOKEI
DOLOMITIZED LIMESTONE LENSES.

1064 - 1084 CALCARENITE; YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE-10%, DOLOMITE- %
CALCITE- %
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, ECHINOID, CONES
MOLLUSKS
COSKINOLINA FLORIDANA; SOME ECHINOID MOLDS AND CASTS
(NEOLAGANUM DALLI); CALCITE CRYSTALS-MOLDS, LARGE PELECYPOD
CASTS, FRACTURE TRACES.

1084 - 1094 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
CALCITE- %
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, ECHINOID, CONES
MOLLUSKS
SOME FRACTURE TRACES, MORE PERMEABLE THAN ABOVE
CALCITE-LINED MOLDS; COSKINOLINA FLORIDANA, PELECYPOD
CASTS, ECHINOID (NEOLAGANUM DALLI); TURRITELLA MOLDS.

1094 - 1114.2 CALCARENITE; YELLOWISH GRAY TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, POSSIBLY HIGH PERMEABILITY
PIN POINT VUGS
GRAIN TYPE: BIOGENIC, CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MASSIVE, LAMINATED
MOTTLED
ACCESSORY MINERALS: CALCILUTITE- %, DOLOMITE- %
OTHER FEATURES: GRANULAR, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, ECHINOID
MOLLUSKS
SOME APPROXIMATELY 45 DEGREE ANGLE FRACTURES, SOME
LAMINATIONS, BLACK ORGANIC INCLUSIONS IN THE CALCARENITE
ORGANIC SEAM, PELECYPOD MOLDS; MILIOLIDS (1113.4-1113.8')
COSKINOLINA FLORIDANA.

1114.2- 1115.2 CALCILUTITE; VERY LIGHT ORANGE TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, FRACTURE, PIN POINT VUGS
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
ACCESSORY MINERALS: DOLOMITE-30%, LIMESTONE-20%
OTHER FEATURES: DOLOMITIC
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, ECHINOID
ORGANICS
FRACTURED, MOTTLED, LAMINATION (ORGANIC-ALGAL), NEOLAGANUM
DALLI.

1115.2- 1119.5 CALCARENITE; LIGHT BROWN TO GRAYISH BROWN
POROSITY: INTERGRANULAR, FRACTURE, PIN POINT VUGS
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, LAMINATED
ACCESSORY MINERALS: DOLOMITE-35%, CALCILUTITE- %
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, DOLOMITIC
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, ORGANICS
ECHINOID MOLDS AND CASTS (NEOLAGANUM DALLI); MORE
DOLOMITIZED.

1119.5- 1121.9 CALCILUTITE; VERY LIGHT ORANGE TO LIGHT BROWN
POROSITY: INTERGRANULAR, FRACTURE, INTRAGRANULAR
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED, BRECCIATED
ACCESSORY MINERALS: CALCILUTITE-45%, LIMESTONE-20%
OTHER FEATURES: DOLOMITIC, MEDIUM RECRYSTALLIZATION
FOSSILS: ORGANICS, CONES, FOSSIL FRAGMENTS
BRECCIATED, LIMESTONE INCLUSIONS, FRACTURE TRACE
LAMINATED, ORGANICS COSKINOLINA FLORIDANA, INTERBEDDED
BROWN CALCARENITE; FRACTURES.

1121.9- 1124.5 DOLOSTONE; LIGHT BROWN TO MODERATE BROWN
POROSITY: INTERGRANULAR, INTERCRYSTALLINE, VUGULAR
10-50% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
BRECCIATED
ACCESSORY MINERALS: CALCILUTITE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: FOSSIL MOLDS
SOME DOLOMITIC CALCILUTITE, RHOMBIC CRYSTALS (DOLOMITE)
BRECCIATED; SOME FRACTURE TRACES, INTERBEDDED DOLOMITIC
CALCILUTITE AND DOLOMITE.

1124.5- 1138.7 CALCARENITE; LIGHT BROWN TO VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, FRACTURE, PIN POINT VUGS
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED
ACCESSORY MINERALS: DOLOMITE-45%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CALCAREOUS
FOSSILS: FOSSIL FRAGMENTS, FOSSIL MOLDS, ECHINOID
VERY PALE ORANGE DOLOMITE INCLUSIONS, FRACTURE TRACES
ECHINOID MOLDS (NEOLAGANUM DALLI), COSKOLINA FLORIDANA
ORGANIC LAMINATIONS.

1138.7- 1139.4 CALCARENITE; LIGHT BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS, FRACTURE
GRAIN TYPE: BIOGENIC, CALCILUTITE
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED
ACCESSORY MINERALS: DOLOMITE-30%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CALCAREOUS
FOSSILS: ORGANICS, FOSSIL FRAGMENTS
LAMINATIONS (ORGANIC-ALGAL?), COSKINOLINA FLORIDANA
FRACTURE TRACES.

1139.4- 1143.2 DOLOSTONE; LIGHT BROWN TO LIGHT GRAYISH BROWN
POROSITY: INTERGRANULAR, INTERCRYSTALLINE, PIN POINT VUGS
10-50% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, BANDED, LAMINATED
ACCESSORY MINERALS: CALCITE- %, CALCILUTITE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: FOSSIL MOLDS, ORGANICS
GRADES FROM DOLOMITIC LIMESTONE TO CALCAREOUS DOLOSTONE
VARIABLE POROSITY, SOME FRACTURE TRACES, RHOMBIC DOLOMITE
CRYSTAL.

1143.2- 1144.6 DOLOSTONE; GRAYISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, FRACTURE, LOW PERMEABILITY
50-90% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: NO FOSSILS
RHOMBIC DOLOMITIC CRYSTALS.

1144.6- 1147.3 DOLOSTONE; GRAYISH BROWN TO LIGHT BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, INTERCRYSTALLINE
50-90% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS, FOSSIL MOLDS
LOW TO MODERATE POROSITY.

1147.3- 1153.5 CALCARENITE; VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: QUARTZ SAND- %, CALCILUTITE-40%
DOLOMITE- %
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, DOLOMITIC
FOSSILS: NO FOSSILS

1153.5- 1156.5 DOLOSTONE; VERY LIGHT ORANGE TO LIGHT BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, FRACTURE
10-50% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
BANDED
ACCESSORY MINERALS: LIMESTONE-30%
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, CALCAREOUS
FOSSILS: ORGANICS, ECHINOID

1156.5- 1158.7 AS ABOVE
FRACTURE TRACES, INTERBEDDED DOLOMITIC LIMESTONE AND
CALCAREOUS DOLOSTONE, LIMESTONE INCLUSIONS AND ECHINOID
MOLDS (VERY PALE ORANGE).

1158.7- 1164 DOLOSTONE; GRAYISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, FRACTURE, VUGULAR
90-100% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: FOSSIL MOLDS
ECHINOID MOLDS, SOME VUGS.

1164 - 1170.5 CALCARENITE; YELLOWISH GRAY TO LIGHT GREENISH YELLOW
POROSITY: INTERGRANULAR, LOW PERMEABILITY, FRACTURE
GRAIN TYPE: CALCILUTITE, BIOGENIC
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, BRECCIATED MOTTLED
ACCESSORY MINERALS: DOLOMITE- %, CALCILUTITE-45%
OTHER FEATURES: LOW RECRYSTALLIZATION, CALCAREOUS
FOSSILS: ORGANICS
NUMEROUS FRACTURE TRACES, BRECCIATED APPEARANCE.

1170.5- 1187.9 DOLOSTONE; VERY LIGHT ORANGE TO MODERATE BROWN
POROSITY: INTERGRANULAR, VUGULAR, PIN POINT VUGS
10-50% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, BRECCIATED MOTTLED
ACCESSORY MINERALS: CALCILUTITE-40%, LIMESTONE- %
CLAY- %
OTHER FEATURES: MEDIUM RECRYSTALLIZATION
FOSSILS: ORGANICS, FOSSIL MOLDS
INTERBEDDED CALCILUTITE, LIMESTONE AND DOLOSTONE, FRACTURE TRACES, CLAY; SOME ECHINOID MOLDS, HIGHLY LAMINATED BRECCIATED, MOTTLED AND VUGGY.

1187.9- 1194 DOLOSTONE; MODERATE BROWN TO BLACK
POROSITY: INTERGRANULAR, VUGULAR, PIN POINT VUGS
10-50% ALTERED; SUBHEDRAL
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
ACCESSORY MINERALS: PLANT REMAINS- %, QUARTZ SAND- %
OTHER FEATURES: MEDIUM RECRYSTALLIZATION, GRANULAR
FOSSILS: ORGANICS
LAMINATED, HIGH PERCENTAGE (BLACK ORGANIC MATERIAL - CLAYEY) INTERBEDDED WITH MODERATE BROWN GRANULAR AND CRYSTALLINE DOLOSTONE.

1194 - 1204 DOLOSTONE; MODERATE BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, VUGULAR, FRACTURE
90-100% ALTERED; SUBHEDRAL
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: CHERT- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
VUGGY, PROBABLY PERMEABLE, SUCROSIC, FRACTURED, MOLDS
(ECHINOIDS)

1204 - 1205 DOLOSTONE; MODERATE BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: CRYPTOCRYSTALLINE
RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1205 - 1210 DOLOSTONE; LIGHT GRAYISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, FRACTURE; 50-90% ALTERED
SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: MEDIUM RECRYSTALLIZATION
HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1210 - 1215 DOLOSTONE; MODERATE BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE; 50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: MEDIUM RECRYSTALLIZATION
HIGH RECRYSTALLIZATION
FOSSILS: ORGANICS

1215 - 1220 DOLOSTONE; MODERATE BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: CRYPTOCRYSTALLINE
RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS
VERY HARD, SUCROSIC DOLOMITE WITH SOME WEATHERED SURFACES.

1220 - 1235 DOLOSTONE; GRAYISH BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE, FRACTURE; 90-100% ALTERED
SUBHEDRAL
GRAIN SIZE: CRYPTOCRYSTALLINE
RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1235 - 1245 DOLOSTONE; DARK YELLOWISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS
HARD, SUCROSIC.

1245 - 1260 DOLOSTONE; DARK YELLOWISH BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE, FRACTURE; 90-100% ALTERED
SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CALCITE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS
SUCROSIC; CALCITE CRYSTALS; TRACE FRACTURES; SOME FRACTURE
POROSITY.

1260 - 1270 DOLOSTONE; DARK YELLOWISH BROWN TO MODERATE YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, INTERGRANULAR, FRACTURE
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED
ACCESSORY MINERALS: LIMESTONE-02%
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1270 - 1279 DOLOSTONE; DARK YELLOWISH BROWN TO LIGHT BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS, INTERGRANULAR
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, CALCILUTITE MATRIX
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: LIMESTONE-05%
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1279 - 1280 DOLOSTONE; DARK YELLOWISH BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS, FRACTURE
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %, CLAY- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: NO FOSSILS

1280 - 1300 DOLOSTONE; DARK YELLOWISH BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE-02%
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: NO FOSSILS

1300 - 1310 DOLOSTONE; MODERATE YELLOWISH BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: CRYPTOCRYSTALLINE
RANGE: MICROCRYSTALLINE TO CRYPTOCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY-02%, LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: NO FOSSILS

1310 - 1340 DOLOSTONE; LIGHT BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: CLAY-01%, LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1340 - 1380 DOLOSTONE; LIGHT BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1380 - 1403 DOLOSTONE; GRAYISH BROWN TO LIGHT BROWN
POROSITY: INTERCRYSTALLINE, INTERGRANULAR, PIN POINT VUGS
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS, FOSSIL FRAGMENTS

1403 - 1425 DOLOSTONE; GRAYISH BROWN TO LIGHT BROWN
POROSITY: INTERCRYSTALLINE, VUGULAR
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1425 - 1440 DOLOSTONE; MODERATE YELLOWISH BROWN TO MODERATE BROWN
POROSITY: INTERCRYSTALLINE, VUGULAR
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS
HARD, VUGULAR DOLOSTONE; FRACTURE POROSITY (1300-1400')
PIN POINT VUGS.

1440 - 1445 DOLOSTONE; MODERATE YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, VUGULAR
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: NO FOSSILS

1445 - 1465 DOLOSTONE; MODERATE YELLOWISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED
ACCESSORY MINERALS: HEAVY MINERALS- %, LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1465 - 1495 DOLOSTONE; MODERATE YELLOWISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, VUGULAR
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED, INTERBEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS
VARIABLE POROSITY; PIN-POINT VUGS, SOME INTERGRANULAR, AND FRACTURE.

1495 - 1500 DOLOSTONE; MODERATE YELLOWISH BROWN TO LIGHT BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1500 - 1520 DOLOSTONE; GRAYISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, VUGULAR
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS
HARD, VUGULAR DOLOSTONE; TRACE ANHYDRITE; CRUMBLY, HIGHLY TRANSMISSIVE ZONE; SOME INTERGRANULAR POROSITY AND PIN-POINT VUGS.

1520 - 1535 DOLOSTONE; GRAYISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, FRACTURE
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS
HARD, FRACTURED DOLOSTONE; ORGANIC CONTENT HIGH ALONG FRACTURE TRACES.

1535 - 1595 DOLOSTONE; GRAYISH BROWN TO LIGHT BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS, INTERGRANULAR
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, MOTTLED
ACCESSORY MINERALS: GYPSUM- %, LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC
FOSSILS: ORGANICS

1595 - 1600 DOLOSTONE; LIGHT BROWN TO YELLOWISH GRAY
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS, INTERGRANULAR
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: GYPSUM- %, LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC

1600 - 1625 DOLOSTONE; YELLOWISH GRAY TO LIGHT BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS, INTERGRANULAR
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, INTERBEDDED
ACCESSORY MINERALS: LIMESTONE- %
OTHER FEATURES: HIGH RECRYSTALLIZATION, SUCROSIC

1625 - 1645 LIMESTONE; LIGHT BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERCRYSTALLINE, INTERGRANULAR, PIN POINT VUGS
GRAIN TYPE: CALCILUTITE, CRYSTALS
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED
ACCESSORY MINERALS: DOLOMITE-40%, GYPSUM- %
OTHER FEATURES: CALCAREOUS, DOLOMITIC
MEDIUM RECRYSTALLIZATION, SUCROSIC, GRANULAR
FOSSILS: ORGANICS
DOLOMITIC LIMESTONE; TRACE GYPSUM; INTERBEDDED LIMESTONE
AND DOLOMITE.

1645 - 1650 DOLOSTONE; GRAYISH BROWN TO YELLOWISH GRAY
POROSITY: INTERCRYSTALLINE, INTERGRANULAR, PIN POINT VUGS
50-90% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): CALCILUTITE MATRIX, DOLOMITE CEMENT
ACCESSORY MINERALS: LIMESTONE-40%
OTHER FEATURES: CALCAREOUS, DOLOMITIC
MEDIUM RECRYSTALLIZATION, SUCROSIC, GRANULAR
FOSSILS: ORGANICS
INTERBEDDED LIMESTONE AND DOLOMITE. LITHOLOGICAL DATA
COLLECTED FROM AVON PARK EXPLORATORY WELL (1660-1813').

1650 - 1660 DOLOSTONE; GRAYISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, LAMINATED, MOTTLED
ACCESSORY MINERALS: LIMESTONE-02%
OTHER FEATURES: HIGH RECRYSTALLIZATION
LOW RECRYSTALLIZATION
FOSSILS: ORGANICS

1660 - 1670 DOLOSTONE; MODERATE YELLOWISH BROWN TO YELLOWISH GRAY
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: LIMESTONE-30%
OTHER FEATURES: HIGH RECRYSTALLIZATION
MEDIUM RECRYSTALLIZATION
FOSSILS: ORGANICS

1670 - 1695 LIMESTONE; VERY LIGHT ORANGE TO GRAYISH BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, CRYSTALS
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: HIGH RECRYSTALLIZATION
FOSSILS: ORGANICS

1695 - 1700 DOLOSTONE; MODERATE YELLOWISH BROWN TO WHITE
POROSITY: INTERGRANULAR, VUGULAR; 90-100% ALTERED
SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): GYPSUM CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: GYPSUM-30%
OTHER FEATURES: FROSTED

1700 - 1705 GYPSUM; WHITE TO DARK YELLOWISH BROWN
POROSITY: INTERGRANULAR, VUGULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): GYPSUM CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, NODULAR
ACCESSORY MINERALS: DOLOMITE- %
OTHER FEATURES: FROSTED
FOSSILS: NO FOSSILS

1705 - 1709 DOLOSTONE; VERY LIGHT ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): GYPSUM CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, MOTTLED
ACCESSORY MINERALS: GYPSUM-30%
OTHER FEATURES: FROSTED
FOSSILS: NO FOSSILS

1709 - 1716 DOLOSTONE; GRAYISH ORANGE TO DARK YELLOWISH ORANGE
POROSITY: INTERGRANULAR, PIN POINT VUGS, VUGULAR
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, INTERBEDDED
ACCESSORY MINERALS: GYPSUM-05%
OTHER FEATURES: BROWN ANHYDRITE CRYSTALS
FOSSILS: FOSSIL MOLDS

1716 - 1724 DOLOSTONE; GRAYISH BROWN TO DARK YELLOWISH BROWN
POROSITY: INTERGRANULAR, VUGULAR
POSSIBLY HIGH PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, INTERBEDDED
ACCESSORY MINERALS: GYPSUM- %, SPAR-05%
OTHER FEATURES: GRANULAR
FOSSILS: ORGANICS

1724 - 1730 LIMESTONE; VERY LIGHT ORANGE TO GRAYISH BROWN
POROSITY: INTERCRYSTALLINE, VUGULAR, LOW PERMEABILITY
GRAIN TYPE: CALCILUTITE, CRYSTALS
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED
ACCESSORY MINERALS: GYPSUM- %, ANHYDRITE-05%
DOLOMITE-20%
OTHER FEATURES: GRANULAR
FOSSILS: ORGANICS

1730 - 1740 DOLOSTONE; VERY LIGHT ORANGE TO GRAYISH BROWN
POROSITY: INTERCRYSTALLINE, PIN POINT VUGS
LOW PERMEABILITY; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
ACCESSORY MINERALS: ANHYDRITE-05%
OTHER FEATURES: GRANULAR
FOSSILS: ORGANICS

1740 - 1744 DOLOSTONE; VERY LIGHT ORANGE TO LIGHT BROWN
POROSITY: INTERCRYSTALLINE, LOW PERMEABILITY
PIN POINT VUGS; 90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
GOOD INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, ANHYDRITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, INTERBEDDED, NODULAR
ACCESSORY MINERALS: GYPSUM-20%, ANHYDRITE-05%
OTHER FEATURES: GRANULAR

1744 - 1750 GYPSUM; WHITE
POROSITY: INTERCRYSTALLINE, VUGULAR, LOW PERMEABILITY
MODERATE INDURATION
CEMENT TYPE(S): GYPSUM CEMENT, ANHYDRITE CEMENT
SEDIMENTARY STRUCTURES: INTERBEDDED, NODULAR
ACCESSORY MINERALS: DOLOMITE-20%, ANHYDRITE-05%
OTHER FEATURES: GRANULAR

1750 - 1768 DOLOSTONE; VERY LIGHT ORANGE TO GRAYISH BROWN
POROSITY: INTERCRYSTALLINE, NOT OBSERVED, LOW PERMEABILITY
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, ANHYDRITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, NODULAR
ACCESSORY MINERALS: GYPSUM-20%, ANHYDRITE-30%
OTHER FEATURES: GRANULAR
FOSSILS: ORGANICS

1768 - 1775 DOLOSTONE; VERY LIGHT ORANGE TO DARK YELLOWISH BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, ANHYDRITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, INTERBEDDED, NODULAR
ACCESSORY MINERALS: GYPSUM-10%, ANHYDRITE-15%
OTHER FEATURES: GRANULAR

1775 - 1798.2 DOLOSTONE; VERY LIGHT ORANGE TO MODERATE BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED
OTHER FEATURES: HIGH RECRYSTALLIZATION
LIGHT TAN, VUGGY, DOLOSTONE; INTERBEDDED CRYSTALLINE
DOLOSTONE AND GYPSUM.

1798.2- 1800 DOLOSTONE; VERY LIGHT ORANGE TO LIGHT BROWN
POROSITY: INTERGRANULAR, PIN POINT VUGS, LOW PERMEABILITY
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, ANHYDRITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, INTERBEDDED, MOTTLED
ACCESSORY MINERALS: ANHYDRITE-20%
OTHER FEATURES: DOLOMITIC
MEDIUM-LIGHT GRAY - WHITE ANHYDRITE AND GYPSUM-FILLED VUGS
AND SEAMS.

1800 - 1801.2 DOLOSTONE; VERY LIGHT ORANGE TO LIGHT BROWN
POROSITY: INTERGRANULAR, VUGULAR, LOW PERMEABILITY
90-100% ALTERED; SUBHEDRAL
GRAIN SIZE: MICROCRYSTALLINE
RANGE: CRYPTOCRYSTALLINE TO MICROCRYSTALLINE
MODERATE INDURATION
CEMENT TYPE(S): DOLOMITE CEMENT, ANHYDRITE CEMENT
SEDIMENTARY STRUCTURES: BEDDED, INTERBEDDED
ACCESSORY MINERALS: ANHYDRITE-05%, GYPSUM- %
OTHER FEATURES: SPECKLED
FOSSILS: ORGANICS
THIN ANHYDRITE LENS AT 1801.5'; SAMPLES APPEAR SPECKLED
SOME EVIDENCE OF SULFATE STAINING.

1801.2- 1813 ANHYDRITE; WHITE TO VERY LIGHT GRAY
POROSITY: INTERCRYSTALLINE, FRACTURE, LOW PERMEABILITY
GOOD INDURATION
CEMENT TYPE(S): ANHYDRITE CEMENT, GYPSUM CEMENT
SEDIMENTARY STRUCTURES: MOTTLED, GRADED BEDDING
ACCESSORY MINERALS: DOLOMITE-10%, GYPSUM-30%
OTHER FEATURES: FROSTED, STROMATAL
SOME GRAY-BROWNISH BLACK GYPSUM AND ORGANICS--FRACTURE FILLED. FRACTURES FORMED FROM DESICCATION (DRYING OUT) AND THEN SOLUTION FILLED, FOLLOWED BY RECRYSTALLIZATION AGAIN
SOME DARK BROWN ANHYDRITE.

1813 TOTAL DEPTH