Hydrogeology, Water Quality, and Well Construction at the ROMP 88 – Rock Ridge Well Site in Polk County, Florida

Southwest Florida Water Management District
Geohydrologic Data Section

June 2025

Cover:
All photographs by Tiffany Horstman, Southwest Florida Water Management District.
Left, Geohydrologic Data section staff performing core drilling using a Universal Drill Rigs 200D LS drill rig at the ROMP 88 – Rock Ridge well site in Polk County, Florida.
Top right, Permanent upper Floridan aquifer monitor well (U Fldn Aq [Avpk] Monitor) at the ROMP 88 – Rock Ridge well site in Polk County, Florida.
Bottom right, Aquifer performance test discharge from the lower Floridan aquifer below middle confining unit VIII at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

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The hydrogeologic evaluations and interpretations contained in *Hydrogeology, Water Quality, and Well Construction at the ROMP 88 – Rock Ridge Well Site in Polk County, Florida* have been prepared by or approved by a licensed Professional Geologist in the State of Florida, in accordance with Chapter 492, Florida Statutes.

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Foreword

The Geohydrologic Data Section (GEO) administers the Regional Observation and Monitor-well Program (ROMP) at the Southwest Florida Water Management District (District). The ROMP was started in 1974 in response to the need for hydrogeologic information by the District. The focus of the ROMP is to quantify the flow characteristics and water quality of the groundwater systems that serve as the primary source of water supply within southwest Florida. The original design of the ROMP consisted of an inland 10-mile grid network composed of 122 well sites and a coastal transect network composed of 24 coastal monitor transects of two to three well sites each. The number of wells at a well site varies with specific regional needs; usually two to five permanent monitor wells are constructed at each site. The numbering system for both networks generally increases from south to north with ROMP-labeled wells representing the inland grid network and TR-labeled wells representing the coastal transect network.

In addition to the ROMP, the GEO section oversees construction of monitor wells and performs aquifer testing activities for other District programs and projects. The broad objectives at each well site are to determine the hydrogeology, water quality, and hydraulic properties of the units present, and to install wells for long-term monitoring. Site activities include exploratory coring and testing, well construction, and aquifer performance testing. These activities provide data for the hydrogeologic and groundwater quality characterization of the well sites. These characterizations are used to ensure the monitor wells are properly designed for appropriate data collection. At the completion of each well site, a summary report is generated and can be found at the District's website at www.watermatters.org/data. The monitor wells form the backbone of the District's long-term aquifer monitoring networks, which supply critical data for the District's regional models, hydrologic conditions reporting, and regulatory water use permitting.

M. Ted Gates

Manager

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Conversion Factors and Datums

Multiply	By	To obtain
	Length	
inch (in.)	2.54	centimeter (cm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
	Area	
acre	0.004047	square kilometer (km^2)
square foot (ft^2)	0.09290	square meter (m^2)
	Volume	
gallon (gal)	3.785	liter (L)
gallon (gal)	0.003785	cubic meter (m^2)
cubic foot (ft^3)	0.02832	cubic meter (m^3)
	Flow Rate	
foot per day (ft/d)	0.3048	meters per day (m/d)
cubic foot per day (ft^3/d)	0.02832	cubic meter per day (m^3/d)
gallon per day (gal/d)	0.003785	cubic meter per day (m^3/d)
	Pressure	
atmosphere, standard (atm)	101.3	kilopascal (kPa)
bar	100	kilopascal (kPa)
	Transmissivity*	
foot squared per day (ft^2/d)	0.09290	meter squared per day (m^2/d)

*Transmissivity: The standard unit for transmissivity is cubic foot per day per square foot times foot of aquifer thickness [(ft^3/d)/ft^2] ft. In this report, the mathematically reduced form, foot squared per day (ft^2/d), is used for convenience.

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:

°F = (1.8 x °C) + 32

Temperature in degrees Fahrenheit (°F) may be converted to degrees Celsius (°C) as follows:

°C = (°F - 32) / 1.8

Vertical coordinate information is referenced to the North American Vertical Datum of 1988 (NAVD 88).

Elevation, as used in this report, refers to distance above the vertical datum.

Abbreviations and Acronyms

µg/L	micrograms per liter
µmhos/cm	micromhos per centimeter
µS/cm	microsiemens per centimeter
als	above land surface
AP COND	apparent conductivity
APT	aquifer performance test/aquifer pumping test
Aq	aquifer
Avpk	Avon Park
bl	below
bls	below land surface
btoc	below top of casing
CAL	caliper
Cannon	David Cannon Well Drilling, Inc.
CFWI	Central Florida Water Initiative
CME	Central Mine Equipment 85 drill rig
commun.	communication
CPS	counts per second
day^{-1}	per day (used to report leakance rate in feet per day per foot)
District	Southwest Florida Water Management District
DMIT	Data, Monitoring, and Investigations Team
EDP	Environmental Data Portal
FGS	Florida Geological Survey
fig.	figure
figs.	figures
Fldn	Floridan
F.R.	first reading above total depth a geophysical tool makes a measurement
ft	feet
ft/d	feet per day
ft^2/d	foot squared per day
ft/min	feet per minute
GAM(NAT)	natural gamma
gpm	gallons per minute
HQ	3.06-inch inner diameter and 3.5-inch outer diameter steel core drilling rod
Huss	Huss Drilling, Inc.
HWT	4-inch inner diameter temporary steel casing
ID	identification
Inc.	Incorporated
K	horizontal hydraulic conductivity
L	lower
LFA	lower Floridan aquifer
MCU	middle confining unit
Meq/L	Milliequivalents per liter

Abbreviations and Acronyms Continued

mg/L	milligrams per liter
ml	milliliters
N	north
NAT	natural
NAVD 88	North American Vertical Datum of 1988
NRQ	2.38-inch inner diameter and 2.75-inch outer diameter steel core drilling rod
OBI	optical borehole imaging tool
PVC	polyvinyl chloride
RES	single-point resistance
RES (16N)	short-normal resistivity
RES (64N)	long-normal resistivity
ROMP	Regional Observation and Monitor-well Program
SDR	standard dimension ratio
SID	station identification
SOP	Standard Operating Procedure
SP	spontaneous potential
SP COND	specific conductance
SWFWMD	Southwest Florida Water Management District
T.D.	total depth
TDS	total dissolved solids
Temp	Temporary or temperature
U	upper
UDR	Universal Drill Rigs 200D LS drill rig
U.S.	United States
USGS	United States Geological Survey
W	west
WCP	Well Construction Permit
WQMP	Water Quality Monitoring Program

Hydrogeology, Water Quality, and Well Construction at the ROMP 88 – Rock Ridge Well Site in Polk County, Florida

By Tiffany Horstman

Introduction

The Southwest Florida Water Management District (District) conducted a detailed hydrogeologic investigation at the Regional Observation and Monitor-well Program (ROMP) 88 – Rock Ridge well site in northwestern Polk County, Florida (fig. 1). The ROMP 88 – Rock Ridge (herein referred to as ROMP 88) well site supports the Central Florida Water Initiative (CFWI). The CFWI is a collaborative water supply planning effort between the District, the South Florida Water Management District, the St. Johns Water Management District, and other agencies and stakeholders (Central Florida Water Initiative, 2025). The CFWI planning area covers Orange, Osceola, Polk, Seminole, and southern Lake counties where the boundaries of the District, South Florida Water Management District, and St. Johns River Water Management District meet (fig. 1). The Data, Monitoring, and Investigations Team (DMIT), which is a subgroup of the CFWI, identified this location as a key site for lower Floridan aquifer exploration in the DMIT Hydrogeologic Work Plan for FY2015 – FY2020 (Data, Monitoring, and Investigations Team, 2015) and subsequent updates in 2016, 2018, 2019, 2020, and 2021. Additionally, this site was selected to ascertain the elevations and geographic extents of the middle confining units and provide a detailed characterization of the upper Floridan aquifer and lower Floridan aquifers. The data collected at the ROMP 88 well site will aid the District in making informed management decisions central to its mission of balancing water needs of current and future users while protecting and maintaining water and related natural resources. In particular, the data will increase the understanding of the lower Floridan aquifers and the viability of the lower Floridan aquifers as an alternative water supply source within the CFWI region.

The ROMP 88 well site was first established in 1982 when exploratory drilling from land surface to 385 feet below land surface (bls) was conducted and an upper Floridan aquifer well was constructed. The ROMP 88 well site was revisited for further investigation and was generally developed in three phases: (1) exploratory core drilling and testing to 2,607 feet bls, (2) well construction, and (3) aquifer performance testing. Exploratory core drilling and testing began November 1, 2016, and was completed April 8, 2020, with the District's Central Mine Equipment 85 (CME) and Universal Drill Rigs 200D LS (UDR) core drilling rigs and staff. Well construction began September 2019 and ended August 2024. Aquifer performance testing began February 2023 and ended May 2023. The purpose of this report is to present all the activities performed and all the data collected at the well site during the three phases of the site revisit. The author acknowledges the expertise, dedication, and assistance of the District's drilling staff in completing the well site investigation. Appreciation is also extended to Angel Martin, former U.S. Geological Survey (USGS) technical reviewer and former District employee, for volunteering his time and providing a thorough review of this report.

Site Location

The ROMP 88 well site is in northwestern Polk County in the southeast ¼ of the southwest ¼ of the northeast ¼ of Section 16, Township 25 South, and Range 24 East at latitude 28° 18' 38.0" North and longitude 81° 54' 40.8" West (fig. 1). The well site is on the District-owned Green Swamp Wilderness Preserve East Tract. The elevation at the ROMP 88 well site is approximately 110 feet above the North American Vertical Datum of 1988 (NAVD 88). District staff installed two vertical control stations near the site and performed vertical control surveys. The layout for the ROMP 88 well site is presented in figure 2.

The ROMP 88 well site can be found by heading east on Interstate 4 in Tampa for approximately 24 miles. Take exit 32, turn left (north) onto US Highway 98, and follow for about 8 miles. Turn right onto Rockridge Road and follow for about 11 miles. Turn left onto Smith Place Road (dirt road) into the Green Swamp Wilderness Preserve East Tract. Follow Smith Place Road for about 0.25 miles to the well site.

The ROMP 88 well site is centrally located in the Green Swamp geomorphic province of the Ocala Karst District (Williams and others, 2022). The Green Swamp province is a relatively flat area bounded by the Lake Wales Ridge Complex province to the east, the Tsala Apopka Plain province to the north, the Lake Wales Ridge Complex province to the southeast, the Hardee Upland province to the southwest, the Land O' Lakes Karst Plain province to the southwest, and the Brooksville Ridge province to the northwest. The Green

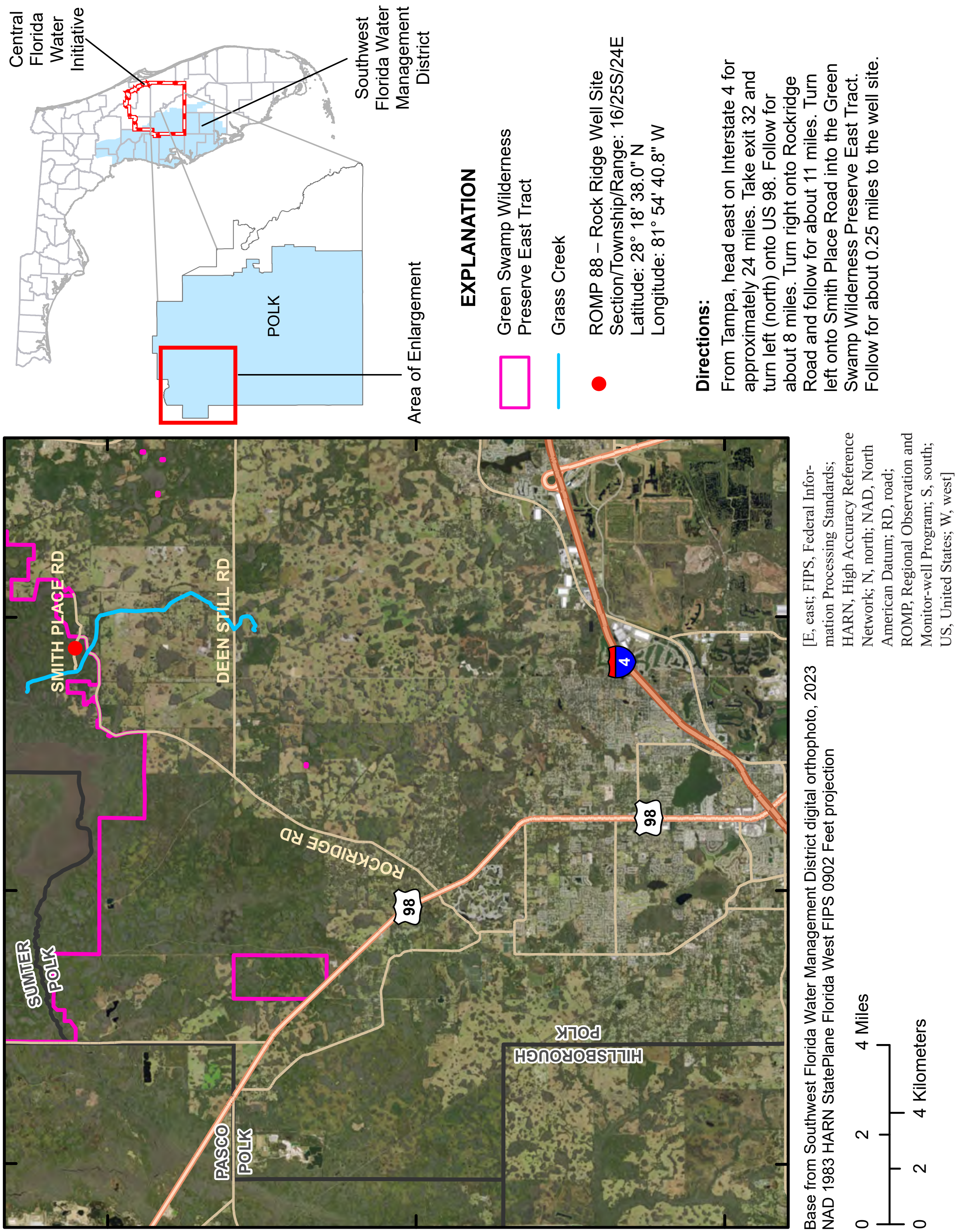
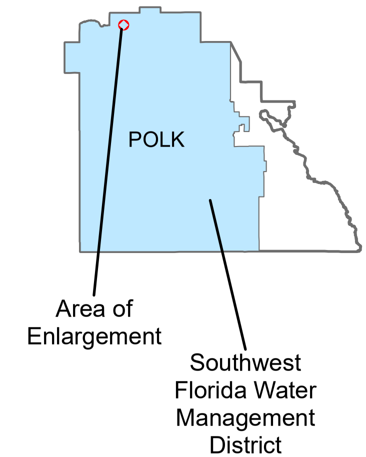


Figure 1. Location of the ROMP 88 – Rock Ridge well site in Polk County, Florida.



EXPLANATION

ROMP 88 – Rock Ridge monitor well location and name

ROMP 88 – Rock Ridge temporary well location and name

See table 1 for well details

Base from Southwest Florida Water Management District digital orthophoto, 2023
NAD 1983 HARN StatePlane Florida West FIPS 0902 Feet projection

0 25 50 Feet
0 10 20 Meters

[Aq, aquifer; Avpk, Avon Park; bl, below; Expl, exploratory; FIPS, Federal Information Processing Standards; Fldn, Floridan; HARN, High Accuracy Reference Network; L, lower; MCU, middle confining unit; N, north; NAD, North American Datum; Prod, production; ROMP, Regional Observation and Monitor-well Program; Temp, temporary; U, upper; W, west]

Figure 2. Well site layout for the ROMP 88 – Rock Ridge well site in Polk County, Florida.

Swamp is an important physiographic feature forming the headwaters for the Withlacoochee, Hillsborough, Oklawaha, and Peace rivers and providing recharge to the Floridan aquifer system.

Methods

During construction of the ROMP 88 well site, a variety of hydrogeologic data was collected including lithologic, hydraulic, water quality, and geophysical data. During and after exploratory core drilling and testing, monitor wells were constructed by a well drilling contractor. The following sections provide data collection method details specific to the ROMP 88 well site. Detailed descriptions of the data collection methods used by the Geohydrologic Data section are presented in appendix A. Data collected at this well site are available for download from the District's website via the Environmental Data Portal (EDP): https://www.swfwmd.state.fl.us/resources/data-maps/environmental-data-portal. Data are compiled in the ROMP 88 Rock Ridge site group. As of February 2025, available data include water quality and long-term water level data. Well construction details and survey data are also available for download from the EDP using the Advanced Metadata Retrieval application. This report, stratigraphy, geophysical logs, Florida Geological Survey (FGS) lithologic descriptions, and aquifer test characteristics are available for download from the District's website via the Geohydrologic Data Map Viewer: https://swfwmd.maps.arcgis.com/apps/webappviewer/index.html?id=5cfe38abbae84d1fadfdf0953c3126bc. Raw aquifer performance test and slug test data will be available for download from the Geohydrologic Data Map Viewer in the future.

Lithologic Sampling

Lithologic samples were collected from land surface to the total exploration depth of 2,607 feet bls by District staff using the District's CME and UDR core drilling rigs. Staff used a hand auger to collect samples from land surface to four feet bls, the CME to collect samples from four to 113.2 feet bls, and the UDR to collect samples from 113.2 to 2,607 feet bls. From November 1, 2016, to November 2, 2016, the District conducted punch shoe sampling using mud to collect unconsolidated and poorly consolidated sediments from four to 90 feet bls in core hole 2 (labeled core hole 2 to denote it is the second exploratory hole and the borehole explored in 1982 is considered the first). From November 3, 2016, to February 28, 2017, the District conducted hydraulic-rotary core drilling using water from 90 to 437 feet bls in core hole 2. The unconsolidated and poorly consolidated sediments caused core drilling issues and attempts to remove the 4-inch inner diameter steel temporary casing (HWT) to install permanent surface casing were unsuccessful. Permanent surface casing was installed about 10 feet away from core hole 2. Exploratory core drilling resumed in the new core hole named core hole 3. From May 25, 2017, to April 7, 2020, the District conducted hydraulic-rotary core drilling from 384 to 2,607 feet bls in core hole 3. Overlapping core samples from 384 to 387 feet were not retained. Core samples were continuously collected and retrieved in 5-foot intervals with the CME and 10-foot intervals with the UDR using a wireline recovery system. The lithologic samples were boxed, labeled, briefly described in the field, and sent to the FGS for a more detailed description and storage.

Hydraulic Testing

Hydraulic properties were estimated from 26 slug test suites conducted during exploratory core drilling and testing. An off-bottom packer or the HWT was used to isolate discrete intervals of the core hole for slug testing. The packer typically was installed 40 feet off bottom but ranged from 17 to 68 feet depending on formation conditions. The pneumatic (rising head) slug method was used for moderate to high permeability parts of formations and the drop or water (falling head) slug method was used in lower permeability parts of formations. A slug of air or water was introduced into the discrete interval lowering or raising the hydraulic head (water level). The water level in the test interval was measured with a pressure transducer and recorded on a datalogger as it returned to static conditions. Slug test data were analyzed using AQTESOLV® software to determine horizontal hydraulic conductivity estimates of the isolated test intervals (appendix A). Aquifer performance tests (APT) also were conducted to obtain large-scale estimates of hydraulic properties of the upper Floridan aquifer, the lower Floridan aquifer below middle confining unit I, and the lower Floridan aquifer below middle confining unit VIII in the area around the well site. The composite water level in core hole 2 and core hole 3 (the entire open interval) was measured daily with an electronic water level meter before exploratory core drilling and testing continued. The drilling discharge flow rate was measured using a v-notch weir during reverse-air development to clean the core holes, generally after core drilling every 20 feet, to monitor relative changes in formation permeability. Apparent permeability was estimated based on the drilling discharge rate using the following scale: 5-15 gallons per minute (gpm) is very low, 16-25 gpm is low, 26-35 gpm is moderately low, 36-45 gpm is moderately high, 46-55 gpm is high, and greater than 55 gpm is very high. Rainfall data were collected daily with a manual rain gauge.

Water Quality Sampling

Twenty-five groundwater samples were collected during exploratory core drilling and testing. The groundwater samples were collected from the discrete intervals isolated by the off-bottom packer or the HWT after conducting the slug test suites except after slug test 23 because the interval overlapped slug test 22. All samples were collected with a wireline retrievable or nested bailer. A portion of each sample was analyzed in the field for temperature, specific conductance, pH, chloride, and sulfate. The remainder of each sample was prepared and delivered to the District's Chemistry Laboratory for additional water quality analyses (Southwest Florida Water Management District, 2024a). In addition, the specific conductance, temperature, and pH of the core drilling discharge were generally measured after every 20 feet of core drilling and reverse-air development to clean the core hole of cuttings and the water that was used to perform the core drilling. These discharge readings were measured to monitor relative changes in water quality with depth. Also, water quality samples were collected during the beginning, middle, and end of the drawdown phase of the APTs and sent to the District's Chemistry Laboratory. Specific conductance and pH of the APT discharge and the creek receiving the discharge were monitored to ensure the water quality of the creek was not appreciably altered by the discharge and was one of the best management practices utilized for the Florida Department of Environmental Protection Agency's Generic Permit For Discharge Of Ground Water From Dewatering Operations permit (62-621.300(2)(a) Florida Administrative Code). Groundwater sampling was consistent with the Water Quality Monitoring Program's (WQMP) Standard Operating Procedures (SOP) (Southwest Florida Water Management District, 2024b).

Geophysical Logging

Borehole geophysical logs are used to delineate stratigraphic units, identify permeable zones and confining units, characterize water quality, and help determine well casing points and grouting requirements. Geophysical logging was performed at varying intervals from land surface to 2,422 feet bls at the ROMP 88 well site using District-owned Century® and Mount Sopris Instruments geophysical logging equipment (table 1 and appendix B). The first two logs were run in the existing upper Floridan aquifer monitor well (U Fldn Aq [Avpk] Monitor). A caliper/gamma-ray tool and a multifunction tool were run from land surface to 368.4 and 256.8 feet bls, respectively (appendix B, figs. B1 and B2). On March 2, 2017, a caliper/gamma-ray tool and a multifunction tool were run in core hole 2 from land surface to 437 feet bls before setting permanent surface casing; however, the HWT could not be removed and the surface casing could not be set (appendix B, fig. B3). On June 21, 2017, a caliper and downhole camera tool were run in core hole 3 from 385.6 to 447.2 feet bls to help identify the cause of core drilling issues and before advancing the nominal 3-inch inner diameter steel core drilling rods (HQ), which was used as temporary casing. On June 1, 2018, a caliper/gamma-ray tool and multifunction tool (gamma-ray and resistivity) were run in core hole 3 from near land surface to 1,363.2 and 1,366.4 feet bls, respectively, to verify borehole conditions were favorable for the USGS to run an optical borehole imaging tool (OBI) in the core hole (appendix B, fig. B4). On January 17, 2019, the caliper/gamma-ray tool was run in the L Fldn Aq (bl MCU I) Prod Temp well after setting 16-inch steel casing and drilling an open hole to 822.4 feet bls (appendix B, fig. B5). On June 4, 2019, the caliper and induction tools were run in core hole 3 after core drilling to 1,937 feet bls while the UDR was undergoing repairs (appendix B, figs. B6 and B7). From October 2019 to August 2022, other geophysical logs were run during well construction before setting casing strings or after the well construction was complete for the L Fldn Aq (bl MCU VIII) Monitor, the L Fldn Aq (bl MCU I) Monitor, the L Fldn Aq (bl MCU VIII) Prod Temp, the L Fldn Aq (bl MCU I) Prod Temp, and the U Fldn Aq Prod Temp wells (appendix B, figs. B8 through B15). On June 6, 2018, the USGS ran the OBI from 497 feet bls (the depth of the HQ) to 640 feet bls (the depth the tool would not pass below) in core hole 3. The image was incomplete and dark; therefore, on October 31, 2019, the USGS ran the OBI from 500 to 2,009 feet bls in the L Fldn Aq (bl MCU VIII) Monitor well.

Well Construction

The ROMP 88 well site consists of four permanent monitor wells and three temporary production wells (fig. 2). Permanent monitor wells were constructed in the Ocala Limestone part of the upper Floridan aquifer (U Fldn Aq [Ocala] Monitor), in the Avon Park Formation part of the upper Floridan aquifer (U Fldn Aq [Avpk] Monitor), the lower Floridan aquifer below middle confining unit I (L Fldn Aq [bl MCU I] Monitor), and the lower Floridan aquifer below middle confining unit VIII (L Fldn Aq [bl MCU VIII] Monitor). Three temporary production wells were constructed for the APTs in the Avon Park Formation part of the upper Floridan aquifer (U Fldn Aq [Avpk] Prod Temp), the lower Floridan aquifer below middle confining unit I (L Fldn Aq [bl MCU I] Prod Temp), and the lower Floridan aquifer below middle confining unit VIII (L Fldn Aq [bl MCU VIII] Prod Temp). The temporary wells were not plugged after testing was completed for potential use as fire suppressant wells. The District contracted David Cannon Well Drilling, Inc. (Cannon) to perform well construction at the site. The well as-built diagrams are presented in appendix C and a summary of the well construction details are presented in table 2. Daily logs for exploratory core drilling and testing, and well construction operations are available from the District's online document storage database.

The upper Floridan aquifer monitor well (U Fldn Aq [Avpk] Monitor) was constructed in 1982 during the first exploratory drilling operation and was used as the drilling water supply (appendix C, fig. C1). From January 17, 2017, to January 18, 2017, District staff constructed the U Fldn Aq (Ocala) Monitor well to compare water levels to the deeper U Fldn Aq (Avpk) Monitor well (appendix C, fig. C2). This well was used as an additional observation well during the APTs.

From March 23, 2017, to April 4, 2017, Cannon installed 20-inch steel casing to 34 feet bls and 14-inch steel casing to 103 feet bls in core hole 3 to stabilize the unconsolidated and

Table 1. Summary of geophysical logs collected at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[Aq, aquifer; Avpk, Avon Park Formation; bl, below; bls, below land surface; CAL, caliper; Fldn, Floridan; ft, feet; FTC, Mount Sopris Instruments tool measuring fluid temperature and specific conductance; GRA, gamma-ray; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; L, lower; MCU, middle confining unit; MM/DD/YYYY, month/day/year; NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, Production; PVC, polyvinyl chloride; ROMP, Regional Observation and Monitor-well Program; Temp, Temporary; U, upper; The multifunction tool includes natural gamma-ray, single-point resistance, short-normal 16-inch resistivity, long-normal 64-inch resistivity, fluid resistivity, spontaneous potential, specific conductance, and temperature parameters, unless stated otherwise; Geophysical logs are in appendix B]

Date (MM/DD/YYYY)	Well Name	Log Interval (ft bls)	Casing Type	Casing Depth (ft bls)	Borehole Diameter (inches)	Tool Type	Tool Number
04/12/2016	ROMP 88 U Fldn Aq (Avpk) Monitor	0-242.4; 242.8-368.4	PVC	195	8	caliper/ gamma-ray	9165C
08/11/2016	ROMP 88 U Fldn Aq (Avpk) Monitor	0-256.8	PVC	195	8	multifunction	8044C
03/02/2017	ROMP 88 Corehole 2	0-437	HWT	91	3	caliper/ gamma-ray	9165C
03/02/2017	ROMP 88 Corehole 2	1-437.2	HWT	91	3	multifunction	8044C
06/21/2017	ROMP 88 Corehole 3	385.6-447.2	NRQ	397	3	caliper/ downhole camera	9064A
06/01/2018	ROMP 88 Corehole 3	3.6-1,363.2	HQ	497	3	caliper	9064A
06/01/2018	ROMP 88 Corehole 3	5.2-1,366.4	HQ	497	3	multifunction (gamma-ray/Res)	9060C
01/17/2019	ROMP 88 L Fldn Aq (bl MCU I) Prod Temp	0-822.40	16-inch steel	200	10	caliper/ gamma-ray	9165C
06/04/2019	ROMP 88 Corehole 3	498.90-1,935.0	HQ	497	3	induction	9511A
06/04/2019	ROMP 88 Corehole 3	474.40-1,937.50	HQ	497	3	caliper	9165A
10/24/2019	ROMP 88 L Fldn Aq (bl MCU VIII) Monitor	3.90-2,106.40	16-inch steel	510	10	caliper/ gamma-ray	9074C
10/24/2019	ROMP 88 L Fldn Aq (bl MCU VIII) Monitor	3.80-2,106.80	16-inch steel	510	10	multifunction	8144C
12/12/2019	ROMP 88 L Fldn Aq (bl MCU I) Monitor	1.30-838.20	10-inch steel	195		caliper/ gamma-ray	9074C
02/18/2020	ROMP 88 L Fldn Aq (bl MCU VIII) Prod Temp	6.80-516.10	24-inch steel	60	24	caliper	9064A
03/31/2020	ROMP 88 L Fldn Aq (bl MCU VIII) Prod Temp	6.80-2,261.60	16-inch/10-inch steel	510/1,800	10	caliper	9064A
04/02/2020	ROMP 88 L Fldn Aq (bl MCU VIII) Prod Temp	6.80-2,422.00	16-inch/10-inch steel	510/1,800	10	caliper	9064A
07/21/2022	ROMP 88 L Fldn Aq (bl MCU I) Prod Temp	1.3-614.1	16-inch steel	200	16	caliper/ gamma-ray	CAL-6724/ GRA-6704
08/22/2022	ROMP 88 L Fldn Aq (bl MCU I) Prod Temp	2.7-855.9	10-inch steel	615	10	caliper/ gamma-ray/FTC	CAL-6724/ GRA-6704/ FTC-6692
08/23/2022	ROMP 88 U Fldn Aq Prod Temp	2.8-477.3	16-inch steel	202	10	caliper/ gamma-ray	CAL-6724/ GRA-6704

Table 2. Summary of well construction details at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[--, not applicable/no data; Aq, aquifer; Avpk, Avon Park Formation; bl, below; bls, below land surface; Expl, Exploratory; Fldn, Floridan; ft, feet; MM/DD/YYYY, month/day/year; HQ; 3.06-inch inner diameter steel core drilling rod; L, lower; MCU, middle confining unit; Ob, observation; Prod, Production; PVC, polyvinyl chloride; ROMP, Regional Observation and Monitor-well Program; SID, station identification; SWFWMD, Southwest Florida Water Management District; Temp, temporary; U, upper; WCP No., well construction permit number; All PVC casing is schedule 40 unless otherwise noted; Active status denotes well is monitored for water level or water quality, or both; Well locations are shown in figure 2; Well as-built diagrams are in appendix C]

SID	Well Name	Alternate Name	Open Interval (ft bls)	Casing Type	Casing Diameter (inches)	Start Date (MM/DD/YYYY)	Complete Date (MM/DD/YYYY)	Status	WCP No.
17708	ROMP 88 U Fldn Aq (Avpk) Monitor	--	195-385	PVC	8	07/21/1982	10/01/1982	Active	371680
876052	ROMP 88 Corehole 2	--	0-437	Steel	4 HWT (95 feet)	11/01/2016	03/24/2025	Plugged	853409 (transferred to Corehole 3), 952095
878906	ROMP 88 U Fldn Aq (Ocala) Monitor	--	10-50	PVC	3	01/17/2017	01/18/2017	Not active	856831
887169	ROMP 88 Corehole 3	ROMP 88 L Fldn Aq (bl MCU VIII) Ob	497-2,270.5	Steel	20 (34 feet); 14 (103 feet); 3 HQ (308-497 feet)	03/23/2017	12/06/2024	Plugged	853409, 862560, 871393, 880933, 883878, 928603, 945269
916330	ROMP 88 L Fldn Aq (bl MCU I) Prod Temp	ROMP 88 U Fldn Aq Prod Temp (former name)	615-853	Steel	10	01/03/2019; 07/18/2022	01/17/2019; 08/24/2022	Not active	874833, 913454
953548	ROMP 88 L Fldn Aq (bl MCU VIII) Monitor	--	1,811-2,268	Steel	4	09/19/2019; 09/17/2020; 06/26/2024	11/22/2019; 09/29/2020; 08/14/2024	Active	881334, 892878, 943803
938830	ROMP 88 L Fldn Aq (bl MCU I) Monitor	--	700-838	PVC	4.5	12/06/2019	01/30/2020	Active	884428
938848	ROMP 88 L Fldn Aq (bl MCU VIII) Prod Temp	--	1,800-2,422	Steel	10 (470-1,800 feet) 16 (0-510 feet)	02/10/2020	04/02/2020	Not active	885945
986871	ROMP 88 U Fldn Aq (Avpk) Prod Temp	--	202-477	Steel	16	08/15/2022	08/24/2022	Not active	913453
782430	ROMP 88 Expl Borehole	--	60-385	Steel	14	07/21/1982	10/01/1982	Not active	371680

poorly consolidated sediments during exploratory core drilling and testing and drilled a nominal 8-inch hole to 367 feet. From May 16, 2017, to May 17, 2017, District staff installed HQ core rods as temporary casing to 384 feet bls. District staff advanced the HQ and installed HWT to 397 feet bls because sand from core hole 2 was observed during reverse-air development after core drilling to 407 feet bls. From June 23, 2017, to July 6, 2017, District staff advanced the HQ to 457 feet bls. From July 17, 2017, to July 25, 2017, District staff advanced the HQ to 497 feet bls. After exploratory core drilling and testing, core hole 3 was back-plugged from 2,607 to 2,270.5 feet bls by District staff. Then, District staff installed 2.38-inch inner diameter steel core drilling rods (NRQ) to 1,810 feet bls and installed an inflatable packer to isolate the lower Floridan aquifer below middle confining unit VIII for use as an additional observation well during the APTs. After the APTs were complete, District staff removed the inflatable packer and NRQ, and back-plugged to 608 feet bls. Staff had difficulty removing the HQ and cut it at 308 feet bls; therefore, HQ remains in core hole 3 from 308 to 497 feet bls. Then, staff removed the HWT and back-plugged core hole 3 to land surface (appendix C, fig. C3).

Cannon constructed the L Fldn Aq (bl MCU I) Temp Prod well. This well was constructed before exploratory core drilling and testing was complete and was supposed to be an upper Floridan aquifer production well. However, after exploratory core drilling and testing was complete, it was determined the middle confining unit I is present at the site and the well was modified into a lower Floridan aquifer below middle confining unit I production well. From January 3, 2019, to January 17, 2019, Cannon installed 24-inch steel casing to 36 feet bls, 16-inch casing to 200 feet bls, and drilled a nominal 10-inch open hole to 822 feet bls. From July 18, 2022, to August 24, 2022, Cannon modified the well by drilling a nominal 16-inch hole to 615 feet bls and installed 10-inch steel casing to 615 feet bls using a cement basket with plastic streamers from 614 to 615 feet bls. Substantially more cement than the calculated theoretical amount was needed to grout the annulus from about 482 to 306 feet bls. Therefore, gravel was installed to help avoid cement loss into the formation from 482 to 477 feet bls, 457 to 412 feet bls, 409 to 404 feet bls, and 386 to 306 feet bls. Finally, Cannon deepened the 10-inch open hole interval from 822 to 853 feet bls (appendix C, fig. C4).

From September 19, 2019, to September 29, 2020, Cannon constructed the L Fldn Aq (bl MCU VIII) Monitor well. Cannon installed 24-inch steel casing to 60 feet bls and 16-inch steel casing to 510 feet bls. While setting the 16-inch casing, substantially more cement than the calculated theoretical amount was needed from about 510 to 350 feet bls. Gravel was installed to help avoid cement loss into the formation. Cement was tagged at about 470 feet bls inside the 16-inch steel casing, which Cannon drilled out before setting the 10-inch steel casing (appendix B, fig. B8). Next, Cannon drilled a nominal 8-inch pilot hole to 2,616 feet bls. The hole started to cave-in while drilling between about 2,080 to 2,180 feet bls. Cannon reamed the hole between 2,080 and 2,100 feet several times; however, logging tools would not pass below 2,100 feet. Then, Cannon reamed a nominal 16-inch hole to 943 feet bls and set 10-inch steel casing with a cement basket at 940 feet bls. Finally, Cannon reamed the nominal 8-inch pilot hole into a nominal 10-inch hole from 943 to 2,616 feet bls and installed 4-inch steel casing to 1,811 feet bls with welded cement baskets. During completion of exploratory core drilling and testing, it was determined the water quality was poor (elevated TDS, iron, sulfate, and chloride concentrations) and the formation was not productive from the total depth of 2,607 to 2,270 feet bls; therefore, the District contracted Huss Drilling, Inc. (Huss) to back-plug the well from 2,616 to 2,268 feet bls from June 26, 2024, to August 14, 2024. Huss installed HQ core drilling rods with a 3-inch core bit to 2,253 feet bls. Huss hit an obstruction at 2,130 feet bls but was able to use the weight of the rods to get past. Huss hit another obstruction at 2,213 feet bls and drilled through it to 2,253 feet bls using water. Huss could not drill below 2,253 feet using the core bit. Therefore, Huss removed the HQ rods, switched the core bit to a 3 7/8-inch tri-cone bit, and reinstalled the HQ rods. Then, Huss drilled while airlifting to 2,596 feet bls. A video log was run in the well and showed fill up to 2,596 feet bls. Finally, Huss installed cement grout from 2,596 to 2,298 feet bls, gravel from 2,298 to 2,279 feet bls, and cement grout 2,279 to 2,268 feet bls (appendix C, fig. C5).

From December 6, 2019, to January 30, 2020, Cannon constructed the L Fldn Aq (bl MCU I) Monitor well. Cannon installed 16-inch steel casing to 60 feet bls and 10-inch steel casing to 195 feet bls. Next, Cannon drilled a nominal 10-inch hole to 838 feet bls but encountered a ledge between 430 and 440 feet bls and worked for four days to knock out the ledge to open the hole. Then, Cannon installed 4.5-inch standard dimension ratio (SDR) 17 polyvinyl chloride (PVC) casing to 700 feet bls using a formation packer (appendix C, fig. C6).

From February 10, 2020, to April 2, 2020, Cannon constructed the L Fldn Aq (bl MCU VIII) Prod Temp well. Cannon installed 24-inch steel casing to 60 feet bls and 16-inch steel casing to 510 feet bls. Next, Cannon drilled a nominal 16-inch hole and installed a 10-inch steel casing back-off from 470 to 1,800 feet bls. Then, Cannon drilled a nominal 10-inch open hole from 1,800 to 2,422 feet bls (appendix C, fig. C7).

From August 15, 2022, to August 24, 2022, Cannon constructed the U Fldn Aq (Avpk) Prod Temp well. Cannon set 24-inch casing to 36 feet bls, then drilled a 23-inch nominal hole and set 16-inch casing to 202 feet bls. Finally, Cannon drilled a nominal 10-inch open hole to 477 feet bls (appendix C, fig. C8).

Geology

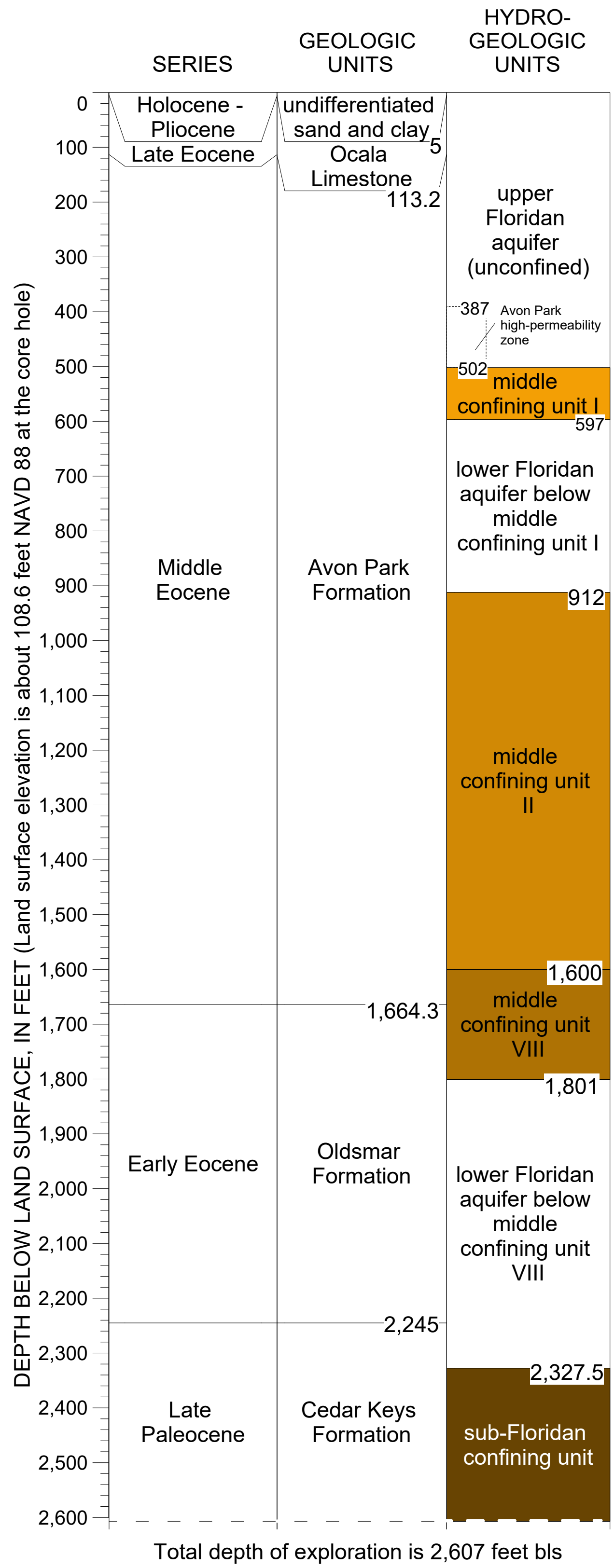
The lithostratigraphy of the ROMP 88 well site is based on the lithologic samples collected from exploratory core drilling that was conducted from land surface to 2,607 feet bls. The geologic units encountered at the well site include, in ascending order: the Cedar Keys Formation, the Oldsmar Formation, the Avon Park Formation, the Ocala Limestone, and the undifferentiated sand and clay deposits. A stratigraphic column detailing the geology encountered at the well site is presented in figure 3. The lithologic logs are presented in appendix D. Digital photographs of the lithologic core samples are presented in appendix E.

Cedar Keys Formation (Late Paleocene)

At the ROMP 88 well site, the late Paleocene age Cedar Keys Formation was encountered at 2,245 feet bls and extends past the total depth of exploration at 2,607 feet bls (fig. 3). The top of the Cedar Keys Formation is marked by a calcrete with pisoids that were subsequently replaced by kaolinite, pyrite, gypsum, and phosphate (David Budd, written commun., 2021). This lithostratigraphy indicates a cycle of prolonged marine submersion, substantial sea-level drawdown, and sea-level rise, which is consistent with sea-level estimates during the late Paleocene (Miller and others, 2020). Also, fossils resembling *Valvulammina nassauensis*, which is an index fossil for the Cedar Keys Formation, were observed at 2,257 feet bls (Applin and Jordan, 1945). The average core recovery in the Cedar Keys Formation was 96 percent.

At the ROMP 88 well site, the Cedar Keys Formation is 52 percent limestone, 47 percent dolostone, and 1 percent gypsum and anhydrite. From 2,245 to 2,277 feet bls, the lithology is light gray, well indurated, dolostone. Minerals resembling chalcopyrite and organic laminations were observed sporadically throughout this interval. The dolostone is generally not fossiliferous but fossils resembling *Valvulammina nassauensis* and other unidentifiable fossil fragments and molds were observed sporadically. One-inch diameter or larger vugs that have "cauliflower" patterns on the wall surfaces that are characteristic of prior infilling by gypsum and/or anhydrite nodules were observed throughout this interval. Observable porosity, based on visual inspection of the lithologic samples, is intercrystalline, vugular, pinpoint vugular, and fracture with some moldic. The drilling staff noted numerous bit drops including from 2,250 to 2,252 feet bls; 2,260 to 2,262 feet bls; and 2,265 to 2,266 feet. The bit drops are likely voids. Apparent permeability is high based on the drilling discharge rate measured during reverse-air development to clean the core hole, which was an average discharge rate of about 55 gpm.

From 2,277 to 2,327.5 feet bls, the lithology is light gray and very light orange, well indurated, dolostone. Organic laminations were observed throughout this interval. The dolostone is generally not fossiliferous but unidentifiable fossil fragments and molds were observed sporadically. Vugs smaller than in the interval above were observed. Observable porosity, based on visual inspection of the lithologic samples, is intercrystalline and pinpoint vugular with some vugular and moldic. Apparent permeability is moderately high based on the drilling discharge rate measured during reverse-air develop-



[bls, below land surface; NAVD 88, North American Vertical Datum of 1988]

Figure 3. Stratigraphic column detailing the hydrogeologic setting at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

ment to clean the core hole, which was an average discharge rate of about 45 gpm.

From 2,327.5 to 2,607 feet bls, the lithology is predominantly light gray to yellowish gray dolostone thickly interbedded with light gray to yellowish gray mudstone and wackestone with some packstone. Gypsum and anhydrite were observed throughout this interval as beds and interstitial pore, vein, and vug infill. Organic laminations were observed throughout this interval. Substantial bioturbation including disturbed beds and infilled burrows were observed throughout this interval. Fossils resembling *Valvulammina nassauensis*, *Haplophragmoides bushnellensis*, and *Borelis gunteri* that are index fossils of the Cedar Keys Formation and miliolids and mollusks including gastropods were observed (Applin and Jordan, 1945). Observable porosity, based on visual inspection of the lithologic samples, is predominantly intercrystalline and pinpoint vugular with some moldic and vugular. Apparent permeability is moderately low based on the drilling discharge rate measured during reverse-air development to clean the core hole, which was an average discharge rate of 26 gpm.

Oldsmar Formation (Early Eocene)

At the ROMP 88 well site, the early Eocene age Oldsmar Formation extends from 1,664.3 to 2,245 feet bls (fig. 3). The Oldsmar Formation unconformably overlies the Cedar Keys Formation. The transition to the Oldsmar Formation from the overlying Avon Park Formation is gradual and not easily differentiated because the lithology is similar. The top of the Oldsmar Formation was picked where the lithology changes from non-fossiliferous wackestone with substantial gypsum and anhydrite to fossiliferous wackestone with less gypsum and anhydrite and abundant *Helicostegina gyralis*, which is a typical (but not exclusive) fossil found in the Oldsmar Formation (Miller, 1986). A decrease in electrical resistance corresponds with the top of the Oldsmar Formation (appendix B, fig. B6). Also, an appreciable amount of chert was observed beginning at about 1,683 feet bls, which is common in the Oldsmar Formation (Chen, 1965; Miller, 1986). The average core recovery in the Oldsmar Formation was 95 percent.

At the ROMP 88 well site, the Oldsmar Formation is 59 percent limestone and 41 percent dolostone. From 1,664.3 to 1,801 feet bls, the lithology is predominantly very light orange and grayish brown, fossiliferous, well indurated, mottled packstone and wackestone with some mudstone. Some of the limestone is dolomitic. Glauconite and interstitial and nodular gypsum were observed throughout this interval. Thin chert layers and nodules, and organic laminations are interspersed in this interval. Fossil molds and fragments of benthic foraminifera including *Helicostegina gyralis*, *Orbitolites soritids*, and *Coskinolina elongata*; and bryozoa, coral, and mollusks were observed. From about 1,752.2 to 1,765 feet bls, "snowball" quartz was observed. A bed of black peat was observed from 1,772 to 1,774 feet bls. Observable porosity, based on visual inspection of the lithologic samples, is predominantly intergranular and moldic with some vugular and pinpoint vugular beginning at about 1,757.5 feet bls. Apparent permeability is low based on the drilling discharge rate measured during reverse-air development to clean the core hole, which was an average discharge rate of 16 gpm.

From 1,801 to 2,245 feet bls, the lithology changes from limestone with substantial gypsum to dolostone and limestone with less gypsum. The gypsum does not appear to impede permeability in this interval. From 1,801 to 1,945.2, the lithology is predominantly very light orange, well indurated, wackestone, mudstone, and packstone. Some of the limestone is dolomitic. Glauconite was observed throughout this interval. Fossil molds and fragments of miliolids, *Helicostegina gyralis*, and *Coskinolina elongata* were observed. Observable porosity, based on visual inspection of the lithologic samples, is intergranular and pinpoint vugular. Apparent permeability is moderately high based on the drilling discharge rate measured during reverse-air development to clean the core hole, which was an average discharge rate of about 44 gpm.

From 1,945.2 to 2,053.5 feet bls, the lithology is predominantly interbedded very light orange, well indurated mudstone and grayish brown and yellowish gray, well indurated dolostone. Some of the dolostone is sucrosic. The formation in this interval is predominantly not fossiliferous but miliolid, *Helicostegina gyralis*, and other unidentifiable benthic foraminifera fossil fragments and molds were observed sporadically. Organic laminations and vugs with "snowball" quartz and calcite crystals were observed sporadically throughout this interval. Observable porosity, based on visual inspection of the lithologic samples, is intergranular, pinpoint vugular, and vugular but also intercrystalline in the dolostone. Apparent permeability is moderately high based on the drilling discharge rate measured during reverse-air development to clean the core hole, which was an average discharge rate of about 38 gpm.

From 2,053.5 to 2,245 feet bls, the lithology is yellowish gray and grayish brown, well indurated, rubbly dolostone. Some intervals of the dolostone are brecciated. The dolostone is predominantly not fossiliferous until about 2,162 feet bls where miliolid and other unidentifiable fossil fragments and molds were observed sporadically. Minerals resembling chalcopyrite were observed between about 2,215 and 2,245 feet bls. Organic laminations were observed throughout this interval. Observable porosity, based on visual inspection of the lithologic samples, is intercrystalline, fracture, vugular, moldic, and pinpoint vugular. Beginning at about 2,057 feet bls, fractures and vugs up to 1-inch in diameter were observed throughout this interval. Some of the vugs contained calcite crystals. The drilling staff noted the formation in this interval was generally hard and difficult to core because core rods would get stuck requiring multiple attempts to core 10 feet. The drilling staff also noted numerous bit drops including from 2,061 to 2,067 feet bls; 2,076 to 2,077 feet bls; 2,102 to 2,107 feet bls; 2,143 to 2,145 feet bls; and 2,221 feet bls. The bit drops are likely voids associated with fractures. Apparent permeability is high based on the drilling discharge rate measured during reverse-air development to clean the core hole, which was an average discharge rate of about 53 gpm.

Avon Park Formation (Middle Eocene)

At the ROMP 88 well site, the middle Eocene age Avon Park Formation extends from 113.2 to 1,664.3 feet (fig. 3). The Avon Park Formation conformably overlies the Oldsmar Formation. The top of the Avon Park Formation is based on the disappearance of the foraminifera *Nummulites ocalanus* that is an index fossil characteristic of the Ocala Limestone and the appearance of foraminifera *Fabiana cubensis* and *Cushmania americana* that are index fossils characteristic of the Avon Park Formation. The top of the Avon Park Formation typically coincides with a substantial increase then decrease in gamma-ray response (typically referred to as a peak or spike) and subsequent higher background counts per second as compared to the Ocala Limestone (Arthur and others, 2008; Tihansky and Knochenmus, 2001). An increase in gamma-ray response was observed around 113.2 feet bls with subsequent higher background counts per second but it was not as substantial as typically observed (appendix B, fig. B3). The average core recovery in the Avon Park Formation was 84 percent.

At the ROMP 88 well site, the Avon Park Formation is 73 percent limestone, 23 percent dolostone, and 10 percent gypsum, anhydrite, peat, or chert. From 113.2 to 382.2 feet bls, the lithology is predominantly yellowish gray, fossiliferous, well indurated grainstone and packstone with some wackestone and mudstone. Organics and sulfide minerals resembling pyrite and chalcopyrite were observed. Seagrass was observed around 171 feet bls and corresponds to a substantial increase in gamma-ray response (appendix B, fig. B3). Observed fossils are benthic foraminifera including *Fabiana cubensis*, *Cushmania americana*, *Gunteria floridana*, *Spirolina coryensis*, *Lituonella floridana*, and miliolids; bryozoa; coral; and the echinoid *Neolaganum dalli*. Observable porosity, based on visual inspection of the lithologic samples, is intergranular and pinpoint vugular. Apparent permeability is high based on the drilling discharge rate measured during reverse-air development to clean the core hole. The discharge rate increased with depth and had an average of 46 gpm.

From 382.2 to 502 feet bls, the lithology is predominantly grayish brown, yellowish gray, and very light orange, mottled or laminated, well indurated but rubbly and fractured dolostone with organics and few sucrosic beds. The dolostone generally is not fossiliferous but some echinoid and gastropod fossil molds were observed. The drilling staff noted the formation in this interval was generally hard with bit drops from 392 to 394 feet bls, 399 to 401 feet bls, 438 to 441 feet bls, 444 to 445 feet bls, 446.5 to 447 feet bls, and 449 to 451 feet bls, which are likely voids. Observable porosity, based on visual inspection of the lithologic samples, is intergranular, pinpoint vugular, moldic, and fracture. Apparent permeability is very high based on the drilling discharge rate measured during reverse-air development to clean the core hole. The discharge flowed over the top of the weir and was more than 83 gpm in some intervals. The average discharge rate was about 63 gpm.

From 502 to 597 feet bls, the lithology is predominantly very light orange to yellowish gray, chalky, wackestone with some packstone and mudstone. Sulfide minerals resembling pyrite and chalcopyrite were observed. Fossil molds and fragments were observed but the fossil types were not identifiable. The drilling staff noted the formation in this interval was soft and core recovery averaged 44 percent. This interval corresponds to a decrease in gamma-ray response as compared to the formation above and below (appendix B, figs. B5 and B9). Observable porosity, based on visual inspection of the lithologic samples, is intergranular, pinpoint vugular, and moldic. Apparent permeability is high based on the drilling discharge rate measured during reverse-air development to clean the core hole, which was an average discharge rate of about 53 gpm.

From 597 to 613 feet bls, the lithology is grayish brown dolostone and from 613 to 912 feet bls, the lithology is predominantly, in order of decreasing abundance, very light orange to yellowish gray, dolomitic wackestone, mudstone, packstone, and grainstone. Organic laminations were observed in the dolostone and dolomitic limestone. Generally, the dolomitic limestone is well indurated with interspersed weathered, more poorly indurated beds. The drilling staff noted the formation in this interval was alternating soft and hard layers. Fossil molds of mollusks, miliolids, bryozoa, and *Cushmania americana* were observed. Beginning at about 744 feet bls, 1-inch diameter or larger vugs that have "cauliflower" patterns on the wall surfaces were observed. Beginning at about 801 feet bls, dolomite crystals were observed in the core samples and the reverse-air discharge. A "snowball" quartz-lined vug was observed around 836.5 feet bls. Beginning at about 891 feet bls, calcite crystals were observed. Observable porosity, based on visual inspection of the lithologic samples, is intergranular, pinpoint vugular, and moldic. Apparent permeability is high based on the drilling discharge rate measured during reverse-air development to clean the core hole, which was an average discharge rate of about 53 gpm.

From 912 to 1,291.5 feet bls, the lithology is predominantly very light orange to yellowish gray, dolomitic, wackestone and packstone with some mudstone and grainstone. From 1,291.5 to 1,528 feet bls, the lithology is predominantly grayish brown, very light orange, and yellowish gray mottled dolostone. From 1,528 to 1,664.3 feet bls, the lithology is predominantly very light orange and grayish brown, mottled, dolomitic wackestone and packstone. Beds of black peat ranging in thickness from 0.3 to 1.5 feet are interspersed from 1,006.8 to 1,338 feet bls. Beds of white and very light gray gypsum and anhydrite ranging in thickness from 0.4 to 2.4 feet are interspersed from 941 to 1,623 feet bls and interstitial gypsum and anhydrite were observed from 912 to 1,664.3 feet bls. Glauconite was first observed from 929.5 to 931.2 feet bls and then infrequently until 1,537 feet bls where it increased and was observed throughout the core samples until 1,664.3 feet bls. Fossil molds and fragments were observed from 912 to 1,664.3 feet but substantially decreased beginning at about

1,594 feet bls. Miliolids, bryozoa, echinoids, and *Cushmania americana* (commonly referred to as cones) were observed. Cones were observed until 1,340 feet bls but could not be identified as *Cushmaina americana* below 1,237 feet bls. Observable porosity, based on visual inspection of the lithologic samples, is intergranular, pinpoint vugular, moldic, and vugular. Apparent permeability is low based on the drilling discharge rate measured during reverse-air development to clean the core hole. The discharge rate decreased with depth and had an average of about 24 gpm.

Ocala Limestone (Late Eocene)

At the ROMP 88 well site, the late Eocene age Ocala Limestone extends from 5 to 113.2 feet bls (fig. 3). The Ocala Limestone unconformably overlies the Avon Park Formation. The top of the Ocala Limestone is picked at a 1-foot chert bed on top of limestone containing the benthic foraminifera *Lepidocyclina ocalana* (first observed at 10 feet bls) and *Nummulites ocalanus* (first observed at 15 feet bls), which are fossils characteristic to the Ocala Limestone (Miller, 1986; Arthur and others, 2008). The average core recovery in the Ocala Limestone was 63 percent.

At the ROMP 88 well site, the Ocala Limestone is predominantly white to yellowish gray, fossiliferous, weathered, soft, and poorly to moderately indurated wackestone. The fossils *Lepidocyclina ocalana*, *Nummulites ocalanus*, mollusks resembling *Amusium ocalanum* and *Pecten sp.*, miliolids, and bryozoa were observed. *Lepidocyclina ocalana* fossils were not observed below 80 feet and *Nummulites ocalanus* fossils were not observed below 112 feet bls.

From about 6 to 25 feet bls, the lithology is white to yellowish gray, fossiliferous, poorly indurated mudstone with calcareous clay. From 25 to 75 feet bls, the lithology is white to yellowish gray, fossiliferous, poorly to moderately indurated wackestone with calcareous clay. From 75 to 100 feet bls, the lithology is white to yellowish gray, fossiliferous, moderately indurated packstone with calcareous clay. From 100 to 104 feet bls, the lithology is yellowish gray to very light gray, fossiliferous, well indurated grainstone. From 104 to 107 feet bls, the lithology is yellowish gray to very light gray, fossiliferous, well indurated wackestone with calcareous clay. From 107 to 113.2 feet bls, the lithology is yellowish gray to very light gray, fossiliferous, well indurated packstone with calcareous clay. Observable porosity, based on visual inspection of the lithologic samples, is intergranular except from 110 to 113.2 feet bls where it is intergranular, vugular, and pinpoint vugular. The apparent permeability is very low based on two drilling discharge rates measured during reverse-air development to clean the core hole, which was an average discharge rate of 9 gpm. Discharge rates were not measured until 100 feet bls (near the bottom of the Ocala Limestone); therefore, the two measurements may not be representative of the entire Ocala Limestone.

Undifferentiated Sand and Clay Deposits (Pliocene-Holocene)

The Pliocene to Holocene age undifferentiated sand and clay unit is the uppermost geologic unit at the ROMP 88 well site (fig. 3). The unit extends from land surface to 5 feet bls; however, the first foot consisted of the shell pad that was laid by District staff to stabilize the ground. The lithology from 1 foot to 1.7 feet bls is dark yellowish brown, fine to medium grained sand with some mica, organics, and calcarenite. The lithology from 1.7 to 5 feet bls is grayish brown, medium to coarse grained, quartz sand with organics and iron-staining. Sediment recovery in the undifferentiated sand and clay unit was 100 percent.

Hydrogeology

The ROMP 88 – Rock Ridge well site hydrogeology was delineated based on the results of 26 slug test suites collected during exploratory core drilling and testing, APTs, lithologic descriptions, water levels, water quality data, and geophysical log data. The hydrogeologic units encountered at the well site include, in descending order: the upper Floridan aquifer, including the Avon Park high-permeability zone; the middle confining unit I; the lower Floridan aquifer below middle confining unit I; the middle confining unit II; the middle confining unit VIII; the lower Floridan aquifer below middle confining unit VIII; and the sub-Floridan confining unit (fig. 3). The naming convention used for the hydrogeologic units in this report are consistent with aquifer nomenclature guidelines proposed by Laney and Davidson (1986) and the North American Stratigraphic Code (North American Commission on Stratigraphic Nomenclature, 2021). A comparison of the nomenclature used in this report (District nomenclature that is not site-specific) and previously published reports is presented in appendix F.

As discussed in appendix A, the horizontal hydraulic conductivity (herein referred to as hydraulic conductivity) estimates derived from the slug tests may be underestimated because of unavoidable testing errors and limitations of the analysis (Butler, 1998). Consequently, the values should be used as an approximation of the relative differences between permeable and confining intervals. The slug test results are presented in table 3. A graph of the hydraulic conductivity estimates and core hole depth is presented in figure 4. The slug test data acquisition sheets are in appendix G and the curve-match analyses are in appendix H.

The near daily water level data collected during the exploratory core drilling and testing phase in the U Fldn Aq (Avpk) Monitor well and the composite (non-isolated) core holes are in appendix I. Additionally, the core hole water level data measured within isolated test intervals provide a relative profile of water level change with depth within the upper Floridan aquifer and the lower Floridan aquifers below middle

Table 3. Results from the core hole slug tests performed during core drilling and testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[bls, below land surface; ft, feet; ft/d, feet per day; HWT, 4-inch inner diameter temporary steel casing; KGS, Kansas Geological Survey; MM/DD/YYYY, month/day/year; No., number; All slug tests are pneumatic rising head except where otherwise noted; All slug test intervals are isolated with a NQ off-bottom inflatable packer except where otherwise noted. Hydraulic conductivity (K) values are underestimated for higher K zones when using NQ packer assembly. Details for the analytical methods used for slug test analyses can be found in: Butler, J.J., Jr., 1998, The Design, Performance, and Analysis of Slug Tests: Boca Raton, Florida, Lewis Publishers, 252 p.; Slug test data acquisition sheets are in appendix G; Slug test curve-match analyses are in appendix H; Shaded rows indicate slug tests conducted in a confining unit]

Slug Test No.	Date (MM/DD/YYYY)	Test Interval (ft bls)	Visual Lithologic Characterization	Geologic/ Hydrogeologic Unit	Analytical Method	Horizontal Hydraulic Conductivity (K) (ft/d)	Comments
1	11/16/2016	73.2-100	Limestone - wackestone to packstone with calcareous sand and clay	Ocala Limestone/ upper Floridan aquifer	KGS (Hyder and others, 1994)	14	Used HWT to isolate interval
2	12/20/2016	120-167	Limestone - fossiliferous grainstone	Avon Park Formation/ upper Floridan aquifer	Springer-Gelhar (1991) inertial	12	
3	01/31/2017	246-267	Limestone - fossiliferous packstone to wackestone	Avon Park Formation/ upper Floridan aquifer	KGS (Hyder and others, 1994)	3	
4	02/22/2017	327-367	Limestone - fossiliferous grainstone	Avon Park Formation/upper Floridan aquifer	Bouwer-Rice (1976)	7	
5	06/07/2017	398-437	Dolostone - fossiliferous, crystalline interbedded with fossiliferous sucrosic	Avon Park Formation/ upper Floridan aquifer	Springer-Gelhar (1991) inertial	45	Begin core hole 3
6	06/22/2017	437-457	Dolostone - fractured	Avon Park Formation/ upper Floridan aquifer	Springer-Gelhar (1991) inertial	160	Fill in bottom of core hole from 452 feet
7	08/01/2017	562-597	Dolostone - fossiliferous, crystalline interbedded with fossiliferous sucrosic	Avon Park Formation/ middle confining unit I	KGS (Hyder and others, 1994)	3	
8	08/09/2017	657-697	Dolostone - sucrosic, fossiliferous, weathered interbedded with more dense and less fossiliferous	Avon Park Formation/ lower Floridan aquifer below middle confining unit I	Butler (1998) inertial	28	
9	08/16/2017	766-817	Dolostone - weathered, fossiliferous, sucrosic	Avon Park Formation/ lower Floridan aquifer below middle confining unit I	Butler-Zahn (2004) inertial (test well)	21	
10	08/23/2017	877-917	Dolostone - weathered, fossiliferous, sucrosic	Avon Park Formation/ lower Floridan aquifer below middle confining unit I	Butler-Zahn (2004) inertial (test well)	30	Five feet into middle confining unit II
11	08/31/2017	940-957	Dolostone - moderately to well indurated with vug filling and massive gypsum/anhydrite	Avon Park Formation/ middle confining unit II	Cooper-Bredehoeft-Papadopulos (Cooper and others, 1967)	0.001	Water/falling head; Tests run on 8/30/2017 and 8/31/2017

Table 3. Results from the core hole slug tests performed during core drilling and testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

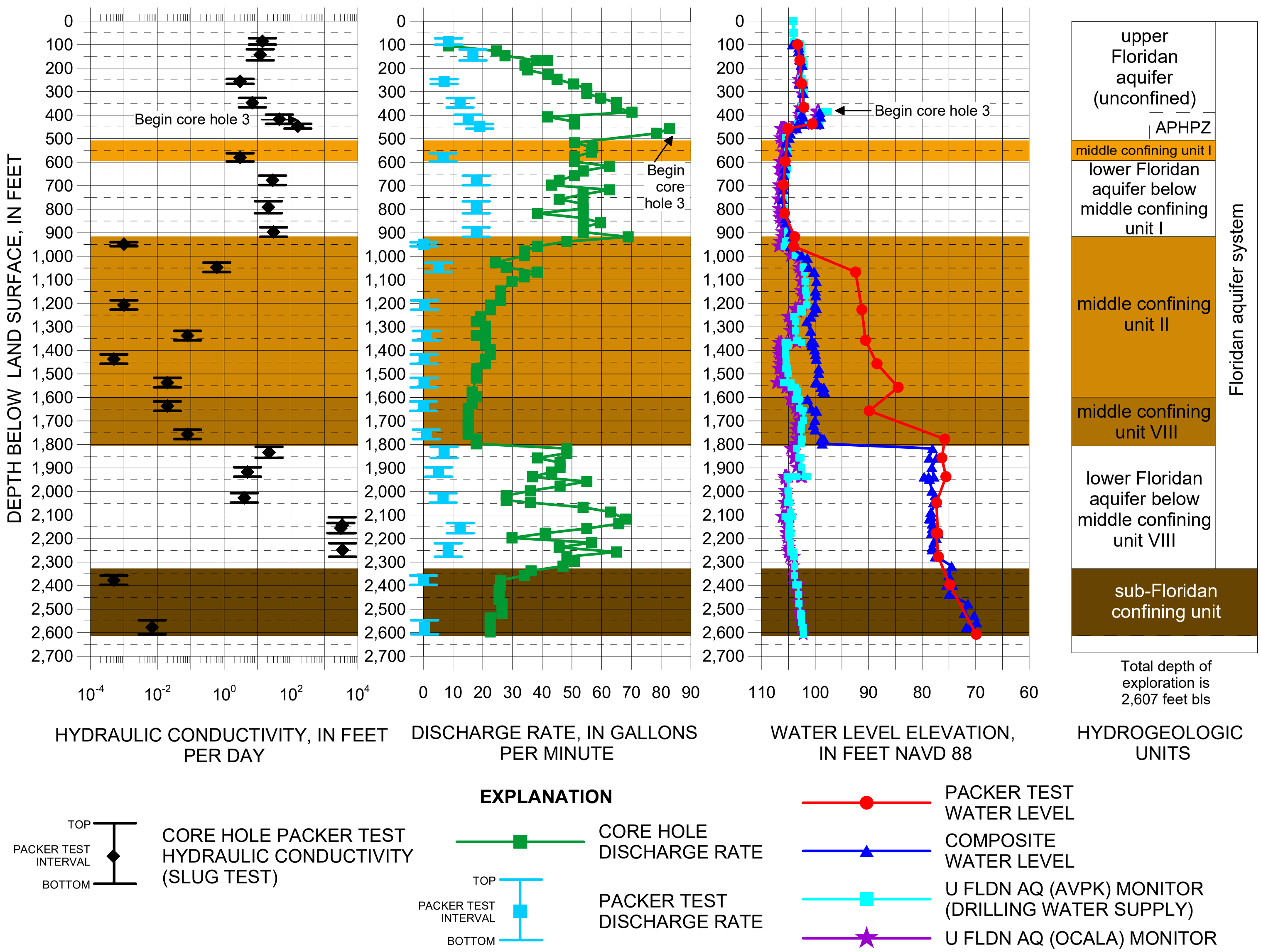
[bls, below land surface; ft, feet; ft/d, feet per day; HWT, 4-inch inner diameter temporary steel casing; KGS, Kansas Geological Survey; MM/DD/YYYY, month/day/year; No., number; All slug tests are pneumatic rising head except where otherwise noted; All slug test intervals are isolated with a NQ off-bottom inflatable packer except where otherwise noted. Hydraulic conductivity (K) values are underestimated for higher K zones when using NQ packer assembly. Details for the analytical methods used for slug test analyses can be found in: Butler, J.J., Jr., 1998, The Design, Performance, and Analysis of Slug Tests: Boca Raton, Florida, Lewis Publishers, 252 p.; Slug test data acquisition sheets are in appendix G; Slug test curve-match analyses are in appendix H; Shaded rows indicate slug tests conducted in a confining unit]

Slug Test No.	Date (MM/DD/YYYY)	Test Interval (ft bls)	Visual Lithologic Characterization	Geologic/ Hydrogeologic Unit	Analytical Method	Horizontal Hydraulic Conductivity (K) (ft/d)	Comments
12	03/20/2018	1,027-1,067	Dolostone - moderately to well indurated with vug filling and massive gypsum/anhydrite and Dolomitic Limestone - fossiliferous	Avon Park Formation/ middle confining unit II	KGS (Hyder and others, 1994)	0.6	Water/falling head
13	04/05/2018	1,187-1,227	Dolostone - moderately to well indurated with vug filling and massive gypsum/anhydrite and Dolomitic Limestone - fossiliferous	Avon Park Formation/ middle confining unit II	Cooper-Bredehoeft-Papadopulos (Cooper and others, 1967)	0.001	Water/falling head
14	04/19/2018	1,317-1,357	Dolostone - moderately to well indurated with vug filling and massive gypsum/anhydrite and Dolomitic Limestone - fossiliferous	Avon Park Formation/ middle confining unit II	KGS (Hyder and others, 1994)	0.08	Water/falling head
15	08/16/2018	1,417-1,457	Dolostone - moderately to well indurated with vug filling and massive gypsum/anhydrite and Dolomitic Limestone - fossiliferous	Avon Park Formation/ middle confining unit II	Cooper-Bredehoeft-Papadopulos (Cooper and others, 1967)	0.0005	Water/falling head
16	03/26/2019	1,517-1,557	Dolostone - moderately to well indurated with vug filling and massive gypsum/anhydrite and Dolomitic Limestone - fossiliferous	Avon Park Formation/ middle confining unit II	KGS (Hyder and others, 1994)	0.02	Water/falling head
17	04/30/2019	1,617-1,657	Dolostone - moderately to well indurated with vug filling and massive gypsum/anhydrite and Dolomitic Limestone - fossiliferous	Avon Park Formation/ middle confining unit VIII	Bouwer-Rice (1976)	0.02	Water/falling head
18	05/08/2019	1,737-1,777	Limestone - wackestone to crystalline, fossiliferous with thin dolostone layers, glauconite, and organics	Oldsmar Formation/ middle confining unit VIII	KGS (Hyder and others, 1994)	0.08	Water/falling head

Table 3. Results from the core hole slug tests performed during core drilling and testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[bls, below land surface; ft, feet; ft/d, feet per day; HWT, 4-inch inner diameter temporary steel casing; KGS, Kansas Geological Survey; MM/DD/YYYY, month/day/year; No., number; All slug tests are pneumatic rising head except where otherwise noted; All slug test intervals are isolated with a NQ off-bottom inflatable packer except where otherwise noted. Hydraulic conductivity (K) values are underestimated for higher K zones when using NQ packer assembly. Details for the analytical methods used for slug test analyses can be found in: Butler, J.J., Jr., 1998, The Design, Performance, and Analysis of Slug Tests: Boca Raton, Florida, Lewis Publishers, 252 p.; Slug test data acquisition sheets are in appendix G; Slug test curve-match analyses are in appendix H; Shaded rows indicate slug tests conducted in a confining unit]

Slug Test No.	Date (MM/DD/ YYYY)	Test Interval (ft bls)	Visual Lithologic Characterization	Geologic/ Hydrogeologic Unit	Analytical Method	Horizontal Hydraulic Conductivity (K) (ft/d)	Comments
19	05/20/2019	1,810-1,857	Limestone - very fossiliferous packstone to wackestone	Oldsmar Formation/ lower Floridan aquifer below middle confining unit VIII	Butler-Zahn (2004) inertial (test well)	22	
20	05/29/2019	1,897-1,937	Limestone - fossiliferous mudstone to wackestone	Oldsmar Formation/ lower Floridan aquifer below middle confining unit VIII	Butler-Zahn (2004) inertial (test well)	5	
21	11/21/2019	2,007-2,047	Limestone - fossiliferous mudstone to wackestone	Oldsmar Formation/ lower Floridan aquifer below middle confining unit VIII	Butler-Zahn (2004) inertial (test well)	4	
22	02/12/2020	2,134-2,177	Dolostone - fractured and vuggy	Oldsmar Formation/ lower Floridan aquifer below middle confining unit VIII	Butler (1998) inertial	3,100	
23	02/18/2020	2,109-2,177	Dolostone - fractured and vuggy	Oldsmar Formation/ lower Floridan aquifer below middle confining unit VIII	Butler (1998) inertial	3,400	
24	03/09/2020	2,220-2,277	Dolostone - vuggy with voids	Oldsmar Formation/ lower Floridan aquifer below middle confining unit VIII	Butler (1998) inertial	3,500	
25	03/19/2020	2,357-2,397	Limestone - packstone to wackestone with gypsum/anhydrite	Cedar Keys Formation/ sub-Floridan confining unit	Cooper-Bredehoeft-Papadopulos (Cooper and others, 1967)	0.0005	Water/falling head
26	04/08/2020	2,547-2,607	Limestone - dolomitic with gypsum/anhydrite and Dolostone with gypsum/ anhydrite	Cedar Keys Formation/ sub-Floridan confining unit	Cooper-Bredehoeft-Papadopulos (Cooper and others, 1967)	0.007	Water/falling head



[APHPZ, Avon Park high-permeability zone; Aq, aquifer; AVPK, Avon Park; bls, below land surface; Fldn, Floridan; NAVD 88, North American Vertical Datum of 1988; U, upper]

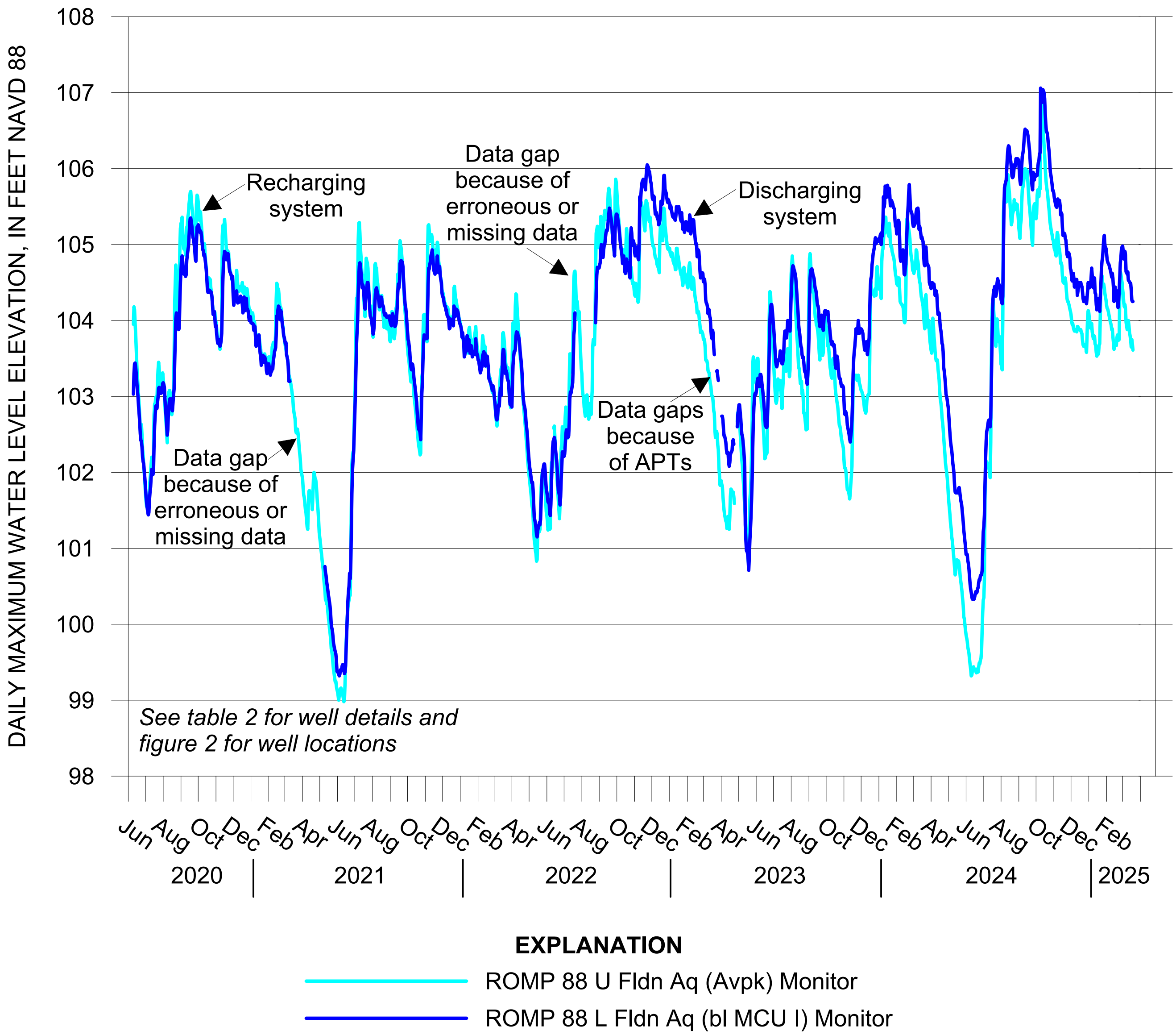
Figure 4. Horizontal hydraulic conductivity estimates and static water levels collected during core drilling at the ROMP 88 – Rock Ridge well site in Polk County, Florida. Note: the airline is 20 feet off bottom for each discharge measurement until 437 feet below land surface because the maximum length of the airline of 407 feet cannot be exceeded. Packer test water level data are from isolated intervals and composite water level data are from the entire core hole interval (non-isolated). Discharge measurements were taken with drill rods 10 feet off bottom. No water level data collected from: 03/10/2017 to 05/17/2017 (437 feet), 09/01/2017 to 01/30/2018 (957 feet), 02/03/2018 to 03/12/2018 (997 feet), 04/28/2018 to 08/02/2018 (1,367 feet),10/02/2018 to 01/27/2019 (1,537 feet), 01/31/2019 to 02/17/2019 (1,537 feet), 02/19/2019 to 03/10/2019 (1,537 feet), 06/01/2019 to 11/03/2019 (1,937 feet), 12/18/2019 to 01/05/2020 (2,107 feet)

confining units I and VIII. The composite and test interval core hole water level data recorded during exploratory core drilling and testing are presented in figure 4. The permanent monitor wells were outfitted with water level monitoring equipment and a hydrograph of water level data is presented in figure 5.

Constant-rate APTs were conducted to estimate hydraulic parameters for the upper Floridan aquifer and lower Floridan aquifers below middle confining units I and VIII. Diagnostic radial flow plots and derivative analyses of the drawdown and recovery data were used to help characterize each aquifer. The APT data collection sheets are in appendix J and the APT curve-match analyses are in appendix K.

Upper Floridan Aquifer (unconfined)

At the ROMP 88 well site, the upper Floridan aquifer extends from the water table to 502 feet bls (fig. 3). The water table was approximately 4.5 feet bls at the start of exploratory core drilling and testing (appendix I) and can fluctuate within the undifferentiated sand and clay that extends from land surface to 5 feet bls to below the top of the limestone that begins at 5 feet bls. The upper Floridan aquifer may include



[APT, aquifer performance test; Aq, aquifer; AVPK, Avon Park; bl, below; Fldn, Floridan; L, lower; MCU, middle confining unit; NAVD 88, North American Vertical Datum of 1988; ROMP, Regional Observation and Monitor-well Program; U, upper]

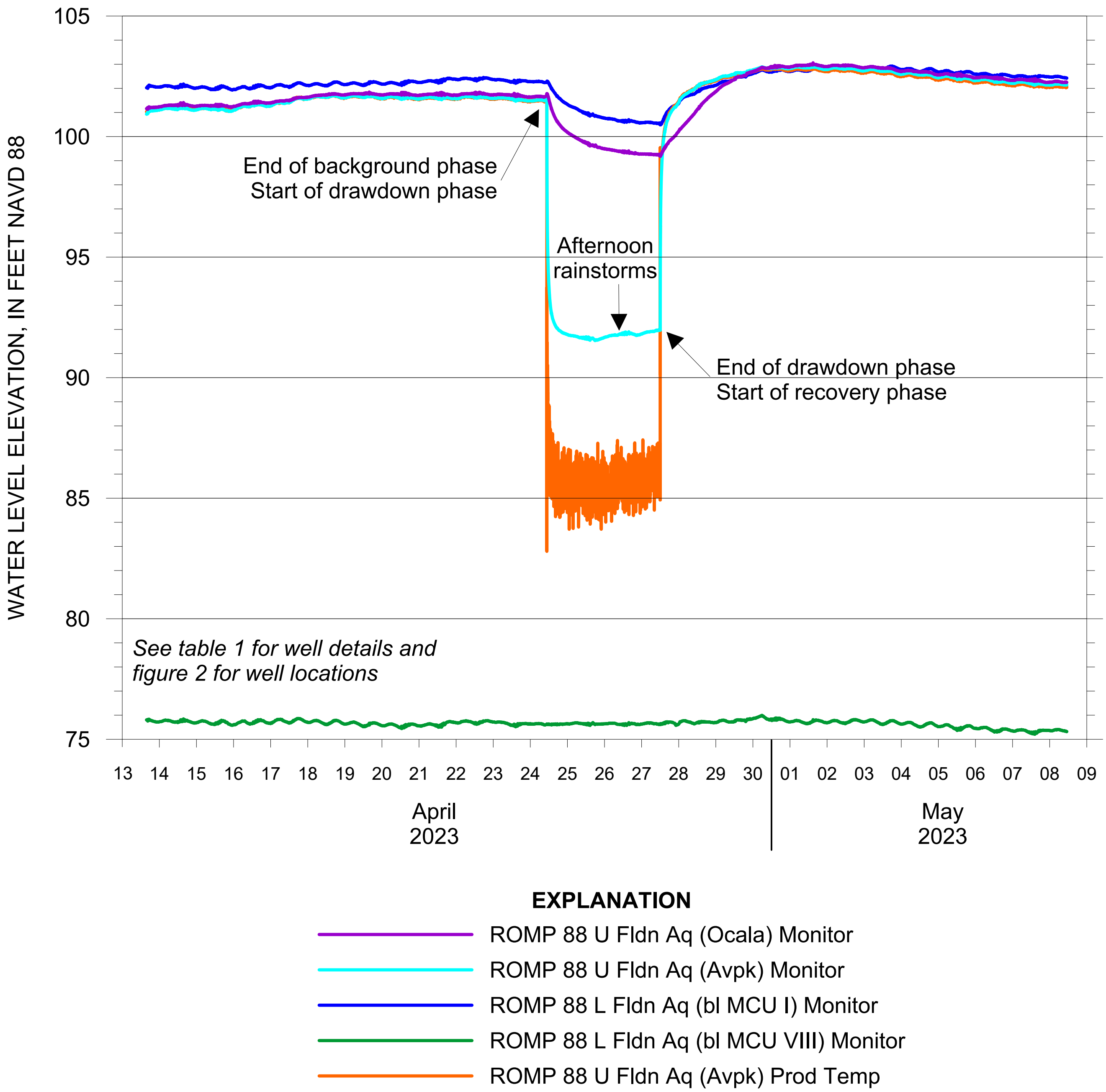
Figure 5. Hydrograph of water levels from the permanent monitor wells at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

the undifferentiated sand and clay deposits, the Ocala Limestone, and an upper part of the Avon Park Formation (fig.3). The base of the upper Floridan aquifer corresponds to the top of the middle confining unit I. Although the upper Floridan aquifer is a single aquifer, it can be subdivided based on local variations of hydraulic properties. Mappable intervals where permeability is not characteristic of the entire aquifer, whether substantially higher or lower, are referred to as zones (Laney and Davidson, 1986). Two zones often identified within the upper Floridan aquifer are the Ocala low-permeability zone and the Avon Park high-permeability zone. At the ROMP 88 well site, the Avon Park high-permeability zone extends from about 387 to 502 feet bls. The Ocala low-permeability zone was not identified at the ROMP 88 well site likely because the Ocala Limestone is close to land surface and karst processes have made it more permeable. Slug test 1 was conducted in the Ocala Limestone part of the upper Floridan aquifer from 73.2 to 100 feet bls and yielded a hydraulic conductivity estimate of 14 feet per day (ft/d) (table 3 and fig. 4). The HWT was used to isolate the interval, which eliminated the packer orifice restriction that typically causes underestimation of hydraulic conductivity. The discharge rate for the isolated test interval was 9 gpm (fig. 4). Slug tests 2, 3, and 4 were conducted in the Avon Park Formation part of the upper Floridan aquifer from 120 to 167 feet bls, 246 to 267 feet bls, and 327 to 367 feet bls and yielded hydraulic conductivity estimates of 12, 3, and 7 ft/d, respectively (table 3 and fig. 4). The average discharge rate for the isolated test intervals was 12 gpm (fig. 4). Slug tests 5 and 6 were conducted in the Avon Park high-permeability zone from 398 to 437 feet bls and 437 to 457 feet bls and yielded hydraulic conductivity estimates of 45 and 160 ft/d, respectively (table 3 and fig. 4). The average discharge rate for the isolated test intervals was 17 gpm (fig. 4).

A constant-rate APT was conducted in the upper Floridan aquifer from April 24 to 27, 2023. Background water level data were collected before the drawdown phase (from April 13 to 24, 2023) and during the recovery phase (from April 27 to May 8, 2023) to determine the regional water level trend. The background water level data collected before the drawdown phase does not indicate a discernible regional trend. Rainfall, barometric pressure, and discharge rate data were also collected. The U Fldn Aq (Avpk) Prod Temp well (production well) was pumped with a 10-inch vertical turbine pump at an average rate of 3,000 gpm for approximately 73 hours. The discharge rate was measured using a calibrated 10-inch saddle flowmeter. The water was discharged through a 10-inch aluminum pipe with a circular orifice weir approximately 3,000 feet west onto plastic erosion mats. The pipe ended about 200 feet east of Grass Creek and the discharge flowed along the ground to Grass Creek (fig. 1). The circular orifice weir was used for redundant discharge rate measurements and consisted of a 10-inch diameter orifice plate, a level 16-inch diameter pipe, and a manometer tube. The discharge rate measurements were used in the analysis of the drawdown data to correct for small variations in flow rate. The U Fldn Aq (Avpk) Monitor well (located about 217 feet northeast of the production well) and the U Fldn Aq (Ocala) Monitor well (located about 75 feet northeast of the production well) were used as observation wells during the APT (fig. 2 and table 4). Also, the water level was monitored in the L Fldn Aq (bl MCU I) Monitor and the L Fldn Aq (bl MCU VIII) Monitor wells to evaluate any effects in the non-pumped aquifers.

Prior to starting the drawdown phase of the APT on April 24, 2023, the static water level in the production well was 101.2 feet NAVD 88, the static water level in the U Fldn Aq (Avpk) Monitor well was 101.7 feet NAVD 88, the static water level in the U Fldn Aq (Ocala) Monitor well was 101.7 feet NAVD 88, the static water level in the L Fldn Aq (bl MCU I) Monitor well was 102.2 feet NAVD 88, and the static water level in the L Fldn Aq (bl MCU VIII) Monitor well was 75.6 feet NAVD 88. The maximum drawdown was about 18.8 feet in the production well, 10 feet in the U Fldn Aq (Avpk) Monitor well, 2.5 feet in the U Fldn Aq (Ocala) Monitor well, and 1.7 feet in the L Fldn Aq (bl MCU I) Monitor well. No drawdown was observed in the L Fldn Aq (bl MCU VIII) Monitor well during the upper Floridan APT. A hydrograph of water levels before, during, and after the APT is presented in figure 6.

Diagnostic flow plots and derivative analyses of the drawdown and recovery data from the U Fldn Aq (Avpk) Monitor well indicate the upper Floridan aquifer is confined and leaky (arched derivative) (appendix K, fig. K1). However, the upper Floridan aquifer is unconfined from above at the ROMP 88 well site because the sand from land surface to 5 feet bls and the limestone beginning at 5 feet bls are not confining (fig. 3 and appendix D). Because the hydraulic head of the lower Floridan aquifer below middle confining unit I was higher than the upper Floridan aquifer during the APT, groundwater was essentially pushed into the upper Floridan aquifer. This groundwater recharged the upper Floridan aquifer and did not allow limestone dewatering during pumping (S-shape derivative characteristic of unconfined aquifers) (fig. 6 and appendix K, fig. K1). Therefore, the leaky signature is presumably caused by the underlying confinement of middle confining unit I, which Miller (1986) describes as the leakiest sub-regional confining unit. Additionally, the higher hydraulic head in the lower Floridan aquifer below middle confining unit I explains the drawdown in the L Fldn Aq (bl MCU I) Monitor well beginning when the pumping started. Curve-match analyses of drawdown and recovery data from the U Fldn Aq (Avpk) Monitor well using the Hantush-Jacob (1955)/Hantush (1964) solution for leaky confined aquifers yielded an estimated transmissivity value of 25,000 feet squared per day (ft^2/d), a storativity value of 0.002, and a leakance value of 0.006 day^{-1} (table 4 and appendix K, fig. K2). The leakance value estimate may not be reliable because of the uncharacteristic aquifer response presumably caused by the higher hydraulic head in the lower Floridan aquifer below middle confining unit I compared to the upper Floridan aquifer during pumping; however, it is a plausible value for a leaky aquifer (further explanation in the Lower Floridan Aquifer Below Middle Confining Unit I section). The drawdown and recov-



[Aq, aquifer; AVPK, Avon Park; bl, below; Fldn, Floridan; L, lower; MCU, middle confining unit; NAVD 88, North American Vertical Datum of 1988; Prod, production; ROMP, Regional Observation and Monitor-well Program; Temp, temporary; U, upper]

Figure 6. Hydrograph of water levels from the wells monitored before, during, and after the upper Floridan aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

ery data from the U Fldn Aq (Ocala) Monitor well was also analyzed but not reported because the data did not fit any type curves presumably as a result of substantial partial penetration (total depth of the well is 50 feet).

Middle Confining Unit I

At the ROMP 88 well site, the middle confining unit I extends from 502 to 597 feet bls within chalky wackestone with some packstone and mudstone of the Avon Park Formation (fig. 3). According to Miller (1986), the ROMP 88 well

Table 4. Results from the aquifer performance tests conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[--, not applicable or not estimated; Aq, aquifer; Avpk, Avon Park; bl, below; day^{-1}, per day (feet per day per foot); ft, feet; ft/d, foot per day; ft^2/d, feet squared per day; Fldn, Floridan; gpm, gallons per minute; L, lower; MCU, middle confining unit; U, upper; Storativity is typically expressed as Specific Yield (SY) for unconfined aquifers and as Specific Storage (Ss) for confined aquifers because SY is negligible in confined aquifers because the aquifer remains saturated during pumping and Ss becomes negligible as an unconfined aquifer is dewatered. Curve-match analyses are in appendix K; Well locations are shown in figure 2]

Aquifer Tested	Observation Well Analyzed	Test Phase Analyzed	Aquifer Thickness (b) (ft)	Distance to Production Well (ft)	Average Pumping Rate (gpm)	Pumping Duration (hours)	Analytical Solution	Analytical Model	Transmissivity (ft^2/d)	Storativity (dimensionless)	Leakance (day^{-1})
upper Floridan aquifer	U Fldn Aq (Avpk) Monitor	Drawdown/ Recovery Combined	494	217	3,000	73	Hantush-Jacob (1955)/ Hantush (1964) without aquitard storage	Leaky	25,000	0.002	0.006[A]
lower Floridan aquifer below MCU I	L Fldn Aq (bl MCU I) Monitor	Drawdown/ Recovery Combined	315	167	350	76	Hantush-Jacob (1955)/ Hantush (1964) without aquitard storage	Leaky	5,900	0.0002	--
lower Floridan aquifer below MCU VIII	Core Hole 3	Recovery	526.5	175	2,800	72	Theis (1935) residual draw-down/ recovery	Confined	1,800,000	0.00000002	--

[A]Leakance value is more representative of the lower Floridan aquifer below middle confining unit I because of the higher hydraulic head in the lower Floridan aquifer below middle confining unit I during the upper Floridan aquifer performance test.

site is at the westernmost extent of the unit and suggests the top is about 460 feet bls. The relatively thin middle confining unit I was not easily identifiable during exploratory core drilling and testing because the core hole 3 static water levels did not appear to deviate from the U Fldn Aq (Avpk) Monitor well static water levels and the drilling discharge rate was high with an average rate of 53 gpm, which is higher than other parts of the upper Floridan aquifer (fig. 4). Geophysical logs indicate the unit coincides with a decreased gamma-ray response compared to the overlying and underlying aquifers, and decreased electrical resistance compared to the underlying aquifer (appendix B). Slug test 7 was conducted in the middle confining unit I from 562 to 597 feet bls and yielded a hydraulic conductivity estimate of 3 ft/d (table 3 and fig. 4). The discharge rate for the isolated test interval was 7 gpm (fig. 4). A well with an open interval below this unit was installed to monitor the water level and compare to the water level in the U Fldn Aq (Avpk) monitor well to help confirm the presence of the middle confining unit I (further explanation in the next section). The confining unit was delineated based on the long-term water level monitoring data collected since 2020, the lithology, and the decreased hydraulic conductivity estimates. The position of the middle confining unit I at the ROMP 88 well site is consistent with regional mapping of the unit at newer exploration sites (LaRoche and Horstman, 2024). The leakance of middle confining unit I is 0.006 day^{-1} estimated from the upper Floridan APT (discussed in the previous and next sections) (table 4).

Lower Floridan Aquifer Below Middle Confining Unit I

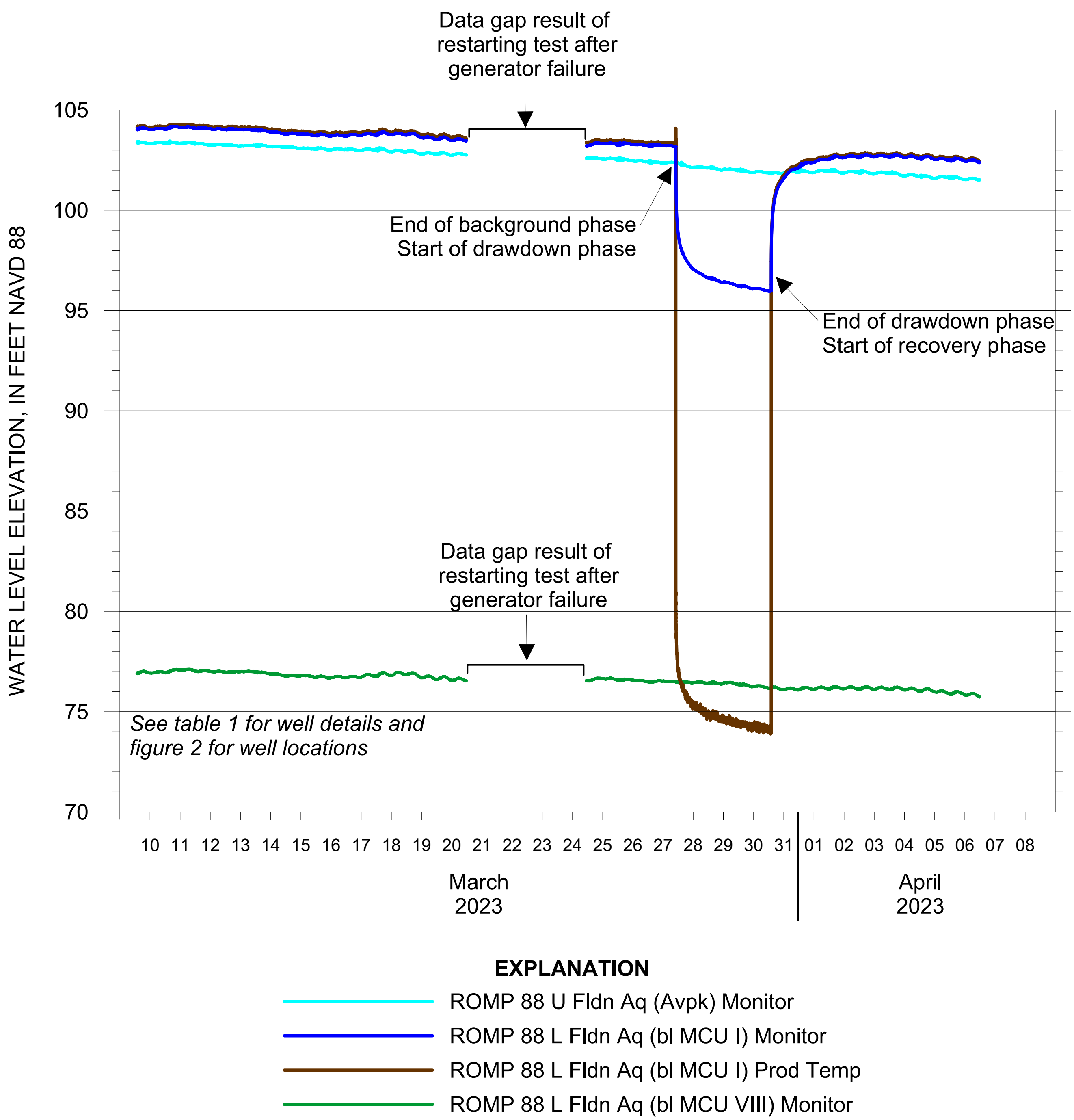
At the ROMP 88 well site, the lower Floridan aquifer below middle confining unit I, herein referred to as the lower Floridan aquifer I, extends from 597 to 912 feet bls (fig. 3). The lower Floridan aquifer I was not easily identifiable during exploratory core drilling and testing because core hole 3 static water levels did not appear to deviate from the U Fldn Aq (Avpk) Monitor well static water levels and the drilling discharge rate measured in the lower Floridan aquifer I and the middle confining unit I is similar with an average discharge rate of 53 gpm (fig. 4). However, long-term water level monitoring data collected since 2020 indicate the lower Floridan aquifer I is hydraulically separated (separate aquifer) from the upper Floridan aquifer because the hydraulic head in the lower Floridan aquifer I ranged from approximately 1 foot below to 0.7 feet above the hydraulic head in the upper Floridan aquifer (fig. 5). Geophysical logs indicate the aquifer coincides with an increased gamma-ray response and electrical resistance compared to the overlying confining unit (appendix B). Slug tests 8, 9, and 10 conducted in the lower Floridan aquifer I from 657 to 697 feet bls, 766 to 817 feet bls, and 877 to 917 feet bls yielded hydraulic conductivity estimates of 28, 21, and 30 ft/d, respectively (table 3 and fig. 4). The average discharge rate for the isolated test intervals was 18 gpm (fig. 4).

A constant-rate APT was conducted in the lower Floridan aquifer I from March 27 to March 30, 2023. Background water level data were collected before the drawdown phase (from March 9 to 27, 2023) and during the recovery phase (from March 30 to April 6, 2023) to determine the regional water level trend. Rainfall, barometric pressure, and discharge rate data were also collected. The L Fldn Aq (bl MCU I) Prod Temp well (production well) was pumped with a 30-horsepower, 6-inch submersible pump at an average rate of 350 gpm for approximately 76 hours. The water was pumped into a tank through a circular orifice weir that consisted of a level 6-inch diameter pipe, a 4-inch diameter orifice plate, and a manometer tube. Then, the discharge was gravity fed through a 10-inch aluminum pipe approximately 3,000 feet west to Grass Creek onto plastic erosion mats. The pipe ended about 200 feet east of Grass Creek and the discharge flowed along the ground to Grass Creek (fig. 1). A calibrated 6-inch saddle flowmeter was used to measure the discharge rate and the circular orifice weir was used for redundant discharge rate measurements.

The L Fldn Aq (bl MCU I) Monitor well was used as an observation well and was about 167 feet northwest of the production well (fig. 2 and table 4). Also, the water level was monitored in the U Fldn Aq (Avpk) Monitor and the L Fldn Aq (bl MCU VIII) Monitor wells to evaluate any effects in the non-pumped aquifers. Prior to starting the drawdown phase of the APT on March 27, 2023, the static water level in the production well was 103.3 feet NAVD 88, the static water level in the L Fldn Aq (bl MCU I) Monitor well was 103.18 feet NAVD 88, the static water level in the U Fldn Aq (Avpk) Monitor well was 102.4 feet NAVD 88, and the static water level in the L Fldn Aq (bl MCU VIII) Monitor well was 76.5 feet NAVD 88. The maximum drawdown was 29.3 feet in the production well, 7.2 feet in the observation well, and 0.5 feet in the U Fldn Aq (Avpk) Monitor well. Coincidentally, the water level in the L Fldn Aq (bl MCU VIII) Monitor well slightly decreased about 2,700 minutes after pumping started and increased after pumping ended; however, this is consistent with the regional trend when compared to another lower Floridan aquifer VIII monitor well in Polk County. A hydrograph of water levels before, during, and after the APT is presented in figure 7.

Prior to the analysis, all observation well data were corrected for a declining regional water level trend (0.00004 feet per minute [ft/min]) calculated from a best-fit straight trendline of the background and post-recovery data in the L Fldn Aq (bl MCU I) Monitor well. Diagnostic flow plots and derivative analyses of the drawdown and recovery data from the L Fldn Aq (bl MCU I) Monitor well indicate the lower Floridan aquifer I is confined and shows signs of leakance (slightly arched derivative) (appendix K, fig. K2).

Curve-match analyses of drawdown and recovery data from the L Fldn Aq (bl MCU I) Monitor well using the Hantush-Jacob (1955)/Hantush (1964) solution for leaky confined aquifers yielded an estimated transmissivity value of 5,900 ft^2/d, storativity value of 0.0002, and leakance value of



[Aq, aquifer; AVPK, Avon Park; bl, below; Fldn, Floridan; L, lower; MCU, middle confining unit; NAVD 88, North American Vertical Datum of 1988; Prod, production; ROMP, Regional Observation and Monitor-well Program; Temp, temporary; U, upper]

Figure 7. Hydrograph of water levels from the wells monitored before, during, and after the lower Floridan aquifer below middle confining unit I aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

0.00006 day^{-1} (table 4 and appendix K, fig. K2). The leakance value estimate is low for a leaky confined aquifer and is presumably not reliable because of the higher hydraulic head in the lower Floridan aquifer I compared to the upper Floridan aquifer during pumping. Additionally, 1.7 feet of drawdown was observed in the L Fldn Aq (bl MCU I) Monitor well during the upper Floridan APT, which indicates appreciable leakance. Therefore, the leakance value of 0.006 day^{-1} estimated from the upper Floridan APT is more plausible and reported. Additional curve-match analyses of the drawdown and recovery data from the production and observation wells yielded similar parameter estimates to the results of the Hantush-Jacob (1955)/Hantush (1964) solution (appendix K, figs. K3, K4, and K5).

Middle Confining Unit II

At the ROMP 88 well site, the middle confining unit II extends from 912 to 1,600 feet bls and is entirely within the Avon Park Formation (fig. 3). The top of the middle confining unit II was chosen at the first appearance of persistent gypsum in the Avon Park Formation that substantially decreases the permeability of the formation, which is consistent with Miller's (1986) description of the middle confining unit II. Miller (1986) suggested the top of the middle confining unit II at approximately 1,010 feet bls; however, only six wells in Polk County were used in the study by Miller (1986) and none were close to the ROMP 88 well site. Geophysical logs indicate the unit corresponds to a general increase in electrical resistivity compared to the overlying aquifer and underlying confining unit (appendix B, figs. B4, B6, and B8). Beginning near the top of middle confining unit II, the core hole composite and packer test water levels begin to deviate from the U Fldn Aq (Avpk) Monitor well static water level, and the core hole and packer test discharge rates begin to decrease (fig. 4 and appendix I). The composite and packer test water levels generally declined with depth (fig. 4 and appendix I). The average core hole drilling discharge rate decreased from 53 gpm in the lower Floridan aquifer I to 25 gpm in middle confining unit II (fig. 4). Slug tests 11 through 16 were conducted in the middle confining unit II and the hydraulic conductivity estimates range from 0.0005 to 0.6 ft/d (table 3 and fig. 4). The average discharge rate for the isolated test intervals was 1 gpm (fig. 4). No permeable rock indicative of the lower Floridan aquifer below middle confining unit II was observed between 912 and 1,600 feet bls; therefore, the lower Floridan aquifer below middle confining unit II is presumably pinched out at the ROMP 88 well site.

Middle Confining Unit VIII

At the ROMP 88 well site, the middle confining unit VIII is contiguous with middle confining unit II and extends from 1,600 to 1,801 feet bls (fig. 3). The middle confining unit VIII of Miller (1986) was originally mapped in south Florida and a part of east-central Florida within the Oldsmar Formation above the Boulder Zone based on available deep exploration data. Williams and Kuniansky (2016) expanded Miller's middle confining unit VIII across the Florida peninsula as the Glauconite marker unit based on the glauconite marker horizon of Reese and Richardson (2008) and the glauconite marker bed of Duncan and others (1994). Williams and Kuniansky (2016) correlated a gamma-ray peak with a low-resistivity response on geophysical logs as a result of glauconite within the Oldsmar Formation from wells used by Duncan and others (1994) and wells beyond the original study area. This gamma-ray and resistivity combination has been identified at several deep exploration sites across the District and is consistently present within a mapped low permeability unit that correlates to Miller's (1986) middle confining unit VIII when the contours are extrapolated across the District. Because the age (early Eocene) and general lithology of the unit are consistent with Miller's (1986) description for middle confining unit VIII, the name was adopted to be consistent with the established Floridan aquifer system framework of Miller (1986) that the District's hydrostratigraphic conceptualization is based (appendix F). The middle confining unit VIII was delineated based on decreased core hole drilling discharge rates, low hydraulic conductivity estimates, core hole lithology, and geophysical logs. The average core hole drilling discharge rate decreased to 16 gpm from 25 gpm measured in middle confining unit II (fig. 4). Slug tests 17 and 18 conducted in the middle confining unit VIII from 1,617 to 1,657 feet bls and 1,737 to 1,777 feet bls yielded hydraulic conductivity estimates of 0.02 ft/d and 0.08 ft/d, respectively (table 3 and fig. 4). The average discharge rate for the isolated test intervals was 0.5 gpm (fig. 4). The lithology is generally packstone and wackestone with glauconite and interstitial and nodular gypsum throughout the interval. Geophysical logs indicate the unit coincides with reduced electrical resistivity, and increased gamma-ray and spontaneous potential as compared to the confining unit above and aquifer below. This result is consistent with Williams and Kuniansky's (2016) characterization of the glauconite marker unit having a uniformly low resistivity response and an elevated gamma-ray response (appendix B, figs. B6 and B8).

Lower Floridan Aquifer Below Middle Confining Unit VIII

At the ROMP 88 well site, the lower Floridan aquifer below middle confining unit VIII (herein referred to as the lower Floridan aquifer VIII) extends from 1,801 to 2,327.5 feet bls (fig. 3). The top of the aquifer was delineated based on a nearly 21-feet decrease in water level elevation, an increase in the average core drilling discharge rate from 16 to 47 gpm, and a substantial increase in hydraulic conductivity estimates relative to the overlying middle confining unit VIII (fig. 4). The top of the aquifer coincides with a lithology change from low permeability limestone with gypsum to limestone and dolostone (appendix D). Geophysical logs indicate increased electrical resistivity beginning at the top of the aquifer (appendix B). Six slug test suites were conducted in the lower Floridan aquifer VIII. Slug tests 19, 20, and 21 conducted in the lower Floridan aquifer VIII from 1,810 to 1,857 feet bls, 1,897 to 1,937 feet bls, and 2,007 to 2,047 feet bls yielded hydraulic conductivity estimates of 22, 5, and 4 ft/d, respectively (table 3 and fig. 4). The average discharge rate for the isolated test intervals was 6 gpm (fig. 4). Slug tests 22, 23, and 24 conducted from 2,134 to 2,177 feet bls, 2,109 to 2,177 feet bls, and 2,220 to 2,277 feet bls yielded hydraulic conductivity estimates of 3,100 ft/d, 3,400 ft/d, and 3,500 ft/d, respectively (table 3 and fig. 4). The average discharge rate for the isolated test intervals was 11 gpm (fig. 4). The data from slug tests 22 through 24 were manually tweaked considerably to fit the type curve solutions because of insensitivity and overestimation of hydraulic conductivity presumably because the water column is substantially long causing friction loss correction to dominate the analyses (G. Duffield, written commun., 2021). The APT (discussed below) confirms the hydraulic conductivity in this aquifer is appreciably high but the automatic curve matching resulted in unrealistically high hydraulic conductivity estimates. A fractured and vuggy interval is present from 2,057 to 2,277 feet bls contributing to the higher hydraulic conductivity estimates and discharge rates, and the water column friction.

A constant-rate APT was conducted in the lower Floridan aquifer VIII from February 27, 2023, to March 2, 2023. Background water level data were collected before the drawdown phase (from February 20 to 27, 2023) and during the recovery phase (from March 2 to 9, 2023) to determine the regional water level trend. Rainfall, barometric pressure, and discharge rate data were also collected. The L Fldn Aq (bl MCU VIII) Prod Temp well (production well) was pumped with a 10-inch vertical turbine pump at an average rate of 2,800 gpm for approximately 72 hours. The discharge rate was measured using a calibrated 10-inch saddle flowmeter. The water was discharged through a 10-inch diameter aluminum pipe with a circular orifice weir approximately 3,000 feet west onto plastic erosion mats. The pipe ended about 200 feet east of Grass Creek and the discharge flowed along the ground to Grass Creek (fig. 1). The circular orifice weir was used for redundant discharge rate measurements and consisted of a 10-inch diameter orifice plate, a level 16-inch diameter pipe, and a manometer tube. The discharge rate measurements were used in the analysis of the drawdown data to correct for small variations in flow rate. The L Fldn Aq (bl MCU VIII) Monitor well was used as an observation well and was about 138 feet north of the production well (fig. 2). Core hole 3 was modified to use as an additional observation well and was about 175 feet northwest of the production well (fig. 2 and table 4). Also, the water level was monitored in the L Fldn Aq (bl MCU I) Monitor and the U Fldn Aq (Avpk) Monitor wells to evaluate any effects in the non-pumped aquifers.

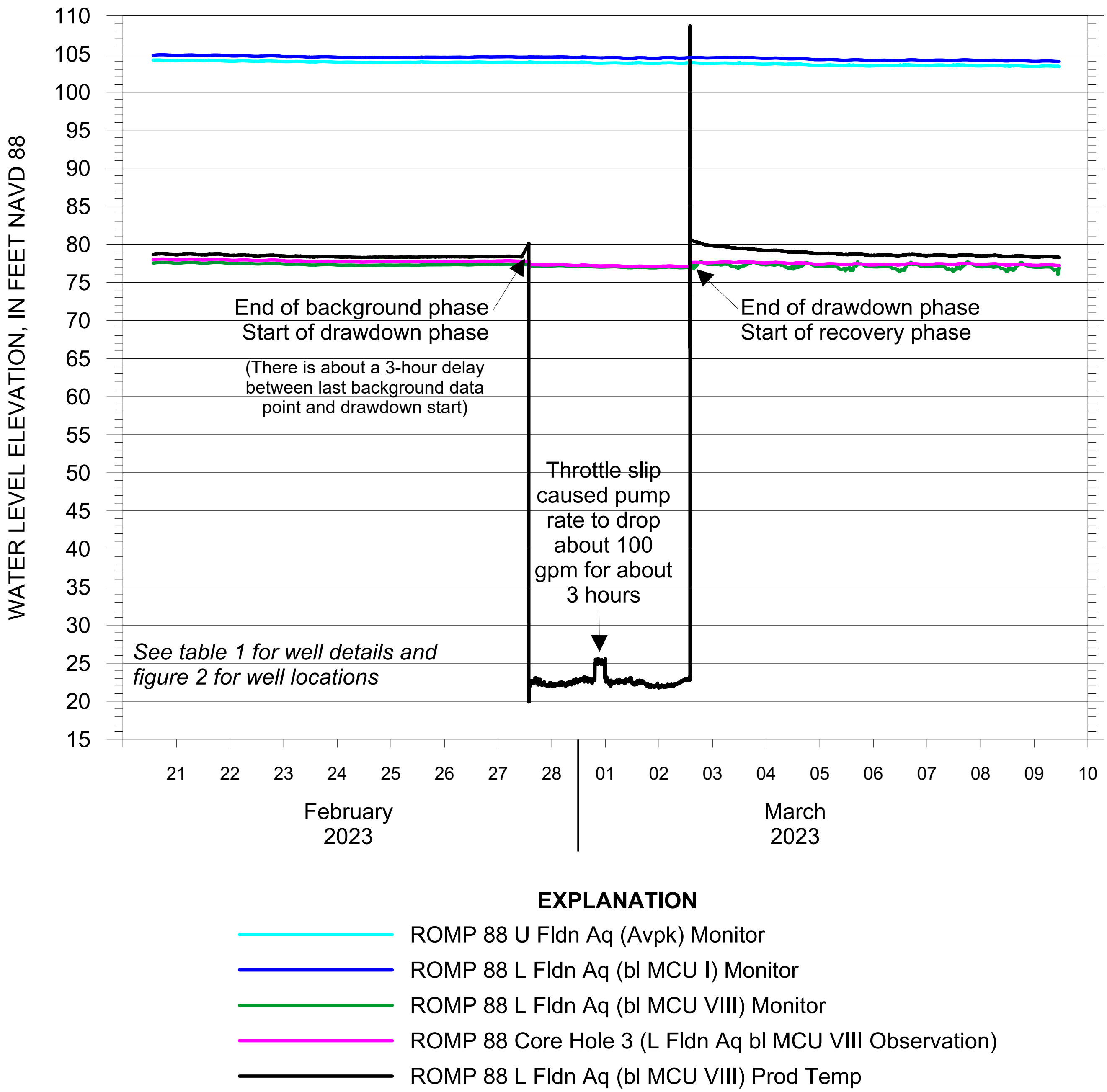
Prior to starting the drawdown phase of the APT on February 27, 2023, the static water level in the production well was 80.1 feet NAVD 88, the static water level in the L Fldn Aq (bl MCU VIII) Monitor well was 77.3 feet NAVD 88, the static water level in Core Hole 3 was 77.7 feet NAVD 88, the static water level in the L Fldn Aq (bl MCU I) Monitor well was 104.6 feet NAVD 88, and the static water level in the U Fldn Aq (Avpk) Monitor well was 103.9 feet NAVD 88. The maximum drawdown was 60.2 feet in the production well, 0.45 feet in the L Fldn Aq (bl MCU VIII) Monitor well, and 0.86 feet in Core Hole 3. The L Fldn Aq (bl MCU VIII) Monitor well that is closest to the pumped well had the least drawdown and Core hole 3 that is furthest from the pumped well had the most drawdown, but it should have had the least. This could be the result of aquifer anisotropy caused by fracture dominant flow. Drawdown was not observed in the L Fldn Aq (bl MCU I) Monitor or the U Fldn Aq (Avpk) Monitor wells during the lower Floridan aquifer VIII APT. A hydrograph of water levels before, during, and after the APT is presented in figure 8.

Prior to the analysis, all observation well data were corrected for a declining regional water level trend (0.00009 feet per minute) calculated from a best-fit straight trendline of the water levels recorded during the APT from the Crooked Lake West 3 L Fldn Aq (bl MCU VIII) Monitor well (SID 949451). The background data indicate the regional water level was increasing before the start of the APT but began decreasing soon after the start of the APT drawdown phase. Therefore, the water levels from the Crooked Lake West 3 L Fldn Aq (bl MCU VIII) Monitor well were used to determine the regional water level trend during the APT. Between the start of the drawdown phase and the end of the recovery phase, the regional water level in the lower Floridan aquifer VIII declined about 0.5 feet, which is the amount of drawdown observed in the L Fldn Aq (bl MCU VIII) Monitor well and more than half of the drawdown observed in Core Hole 3. The curve-match analyses were problematic because the response data do not fit the type curves presumably because the drawdown was not substantial enough to distinguish it from the regional water level decline.

Curve-match analyses of the drawdown and recovery data from Core Hole 3 using the Theis (1935) residual drawdown/recovery straight-line type curve solution for a confined aquifer yielded an estimated transmissivity value of 1,800,000 ft^2/d and a storativity value of 0.00000002 (table 4 and appendix K, fig. K6). Curve-match analyses of the recovery data from Core Hole 3 using the Cooper-Jacob (1946) straight-line type curve solution yielded similar results (appendix K, fig. K7). The transmissivity value may be overestimated and the storativity value may be underestimated because the curve-match was not ideal, but evidence supports the lower Floridan aquifer VIII is substantially productive because of the small drawdown in the observation wells despite the pumping rate of 2,800 gpm.

Sub-Floridan Confining Unit

At the ROMP 88 well site, the sub-Floridan confining unit extends from 2,327.5 feet bls to beyond the total depth of exploration of 2,607 feet bls (fig. 3). Miller (1986) suggested the base of the Floridan aquifer system is approximately 2,640 feet bls; however, only six wells in Polk County were used in Miller’s (1986) study and none were close to the ROMP 88 well site. The top of the unit was delineated where gypsum and anhydrite substantially decrease the permeability of the Cedar Keys Formation. Slug tests 25 and 26 were conducted in this unit from 2,357 to 2,397 feet bls and 2,547 to 2,607 feet bls and yielded hydraulic conductivity estimates of 0.0005 and



[Aq, aquifer; AVPK, Avon Park; bl, below; Fldn, Floridan; gpm, gallons per minute; L, lower; MCU, middle confining unit; NAVD 88, North American Vertical Datum of 1988; Prod, production; ROMP, Regional Observation and Monitor-well Program; Temp, temporary; U, upper]

Figure 8. Hydrograph of water levels from the wells monitored before, during, and after the lower Floridan aquifer below middle confining unit VIII aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

0.007 ft/day, respectively (table 3 and fig. 4). The average discharge rate for the isolated test intervals was 0.2 gpm (fig. 4).

Groundwater Quality

The ROMP 88 – Rock Ridge well site groundwater quality characterization is based on results from 25 groundwater samples collected during exploratory core drilling and testing. No sampling was conducted above 73.2 feet because the sediments were unconsolidated. The water quality data collection field sheets are presented in appendix L. The field analyses results, laboratory analyses results, equivalent weights and water types, and select molar ratio calculations are presented in appendix M, tables M1, M2, M3, and M4, respectively. The U.S. Environmental Protection Agency's National Secondary Drinking Water Regulations (herein referred to as secondary drinking water standards) for total dissolved solids (TDS), sulfate, chloride, and iron are 500 milligrams per liter (mg/L), 250 mg/L, 250 mg/L, and 0.3 mg/L (300 micrograms per liter [µg/L]), respectively (Hem, 1985; U.S. Environmental Protection Agency, 2018).

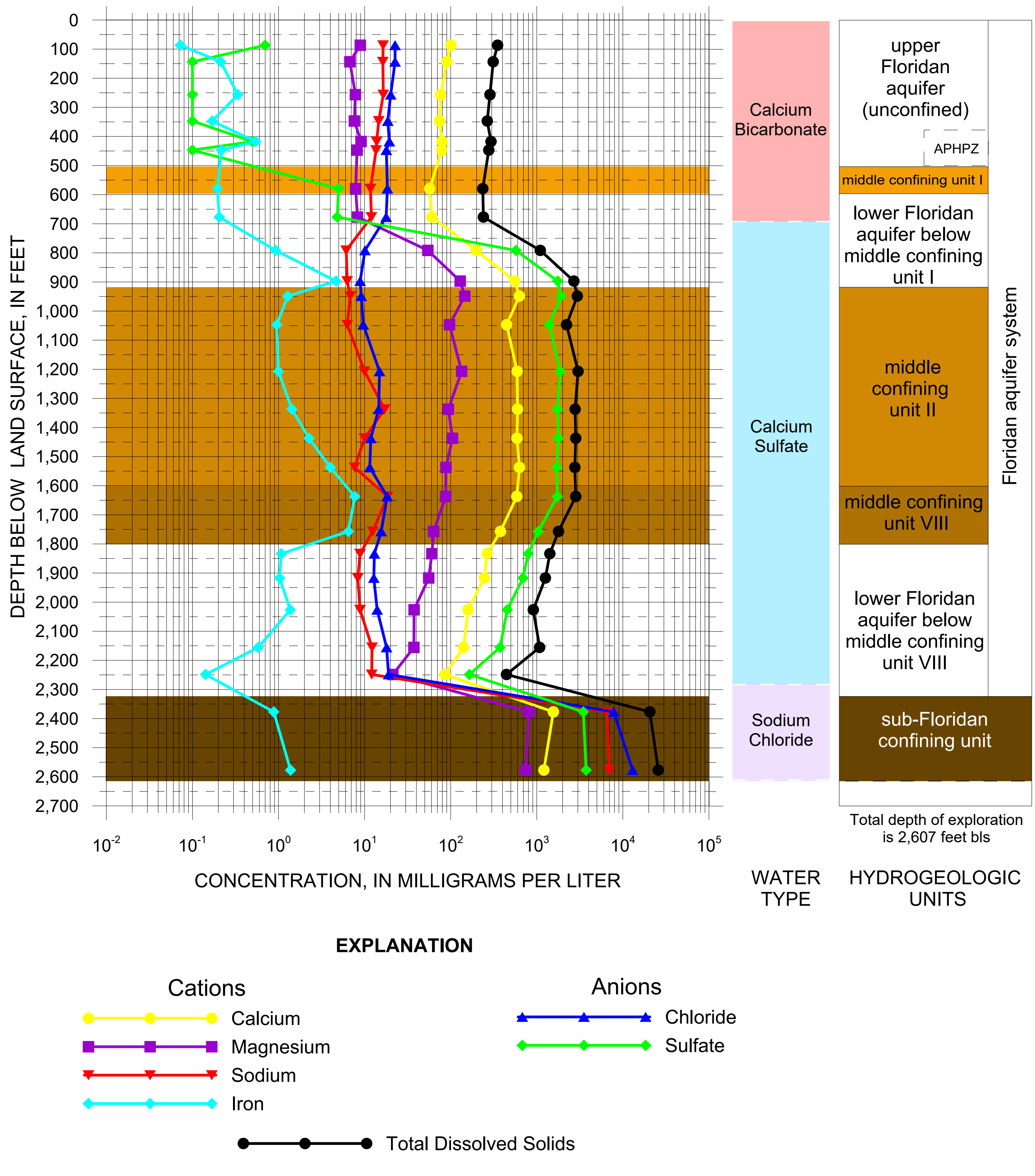
Generally, the groundwater from the water table to about 697 feet bls and from about 2,177 to 2,277 feet bls is fresh (TDS concentration is less than 1,000 mg/L) and does not exceed secondary drinking water standards, from about 697 to 2,177 feet bls is brackish (TDS concentration is between 1,000 and 10,000 mg/L) and exceeds secondary drinking water standards, and from about 2,277 to 2,607 feet bls is saline (TDS concentration is between 10,000 and 35,000 mg/L) and exceeds secondary drinking water standards. The results of six water quality samples collected from varying intervals between 73.2 and 457 feet bls indicate the groundwater in the upper Floridan aquifer is fresh because the TDS concentrations are less than 1,000 mg/L and range from 266 to 351 mg/L. However, the groundwater exceeds secondary drinking water standards for iron from about 246 to 267 feet bls and from about 398 to 437 feet bls (fig. 9 and appendix M, table M2).

The results of water quality sample 7 collected from 562 to 597 feet bls indicate the groundwater in the middle confining unit I is fresh and does not exceed secondary drinking water standards (fig. 9 and appendix M, table M2). Beginning at about 562 feet bls, the groundwater has a strong hydrogen sulfide odor that could be attributed to the organic content and minerals resembling pyrite and chalcopyrite, which contain iron sulfide, observed in the core samples (appendix D). The results of water quality sample 8 collected from 657 to 697 feet bls indicate the groundwater in the upper part of the lower Floridan aquifer I is fresh and does not exceed secondary drinking water standards (fig. 9 and appendix M, table M2). The results of water quality sample 9 collected from 766 to 817 feet bls and water quality sample 10 collected from 877 to 917 feet bls indicate the groundwater in the remainder of the lower Floridan aquifer I is brackish (TDS concentration is between 1,000 and 10,000 mg/L) and exceeds secondary drinking water standards for iron and sulfate (fig. 9 and appendix M, table M2). The increase in iron and sulfate concentrations beginning at about 766 feet bls is likely a result of the dissolution of minerals resembling pyrite and chalcopyrite that contain iron sulfide, and evaporite minerals (gypsum and anhydrite) observed in the core samples (appendix D).

The results of water quality samples 11 through 16 collected at varying intervals between 940 and 1,557 feet bls indicate the groundwater in the middle confining unit II is brackish and exceeds secondary drinking water standards for iron and sulfate (fig. 9 and appendix M, table M2). The results of water quality samples 17 and 18 collected at varying intervals between 1,617 and 1,777 feet bls indicate the groundwater in the middle confining unit VIII is brackish and exceeds secondary drinking water standards for iron and sulfate (fig. 9 and appendix M, table M2). Water quality samples 19 through 22 collected at varying intervals between 1,810 and 2,177 feet bls from the lower Floridan aquifer VIII indicate the groundwater is brackish, except from about 2,005.5 to 2,047 feet bls where it is fresh, and exceeds secondary drinking water standards for iron and sulfate (fig. 9 and appendix M, table M2). The results of water quality sample 24 collected from 2,220 to 2,277 feet bls indicate the groundwater in that part of the lower Floridan aquifer VIII is fresh and does not exceed secondary drinking water standards (fig. 9 and appendix M, table M2). The groundwater quality between about 2,005.5 and 2,277 feet bls improves and this improvement likely results because it corresponds to a vuggy and fractured interval where the permeability increases. The results of water quality sample 25 collected from 2,357 to 2,397 feet bls and water quality sample 26 collected from 2,547 to 2,607 feet bls indicate the groundwater in the sub-Floridan confining unit is saline (TDS concentration is between 10,000 and 35,000 mg/L) and exceeds secondary drinking water standards for iron, sulfate, and chloride (fig. 9 and appendix M, table M2).

For each groundwater quality sample, equivalent weights expressed in milliequivalents per liter were calculated to determine the water type, which is defined by cation and anion concentrations of 50 percent or more of the total cation and anion concentrations (appendix M, table M3). The results of water quality samples 1 through 8 indicate the water type is calcium bicarbonate in the upper Floridan aquifer, middle confining unit I, and the upper part of the lower Floridan aquifer I (fig. 9 and appendix M, table M3). The results of water quality samples 9 through 24 indicate the water type is calcium sulfate in the lower part of the lower Floridan aquifer I, the middle confining units II and VIII, and the lower Floridan aquifer VIII because of increased sulfate concentration likely from the evaporate minerals gypsum and anhydrite that are present beginning at about 789 feet bls (fig. 9, appendix M, table M3, and appendix D). The results of water quality samples 25 and 26 indicate the water type is sodium chloride in the sub-Floridan confining unit because of increased sodium and chloride concentrations, which likely is attributed to seawater (fig. 9 and appendix M, table M3).

The trends of the relative abundances of each major cation and anion species analyzed for in the groundwater quality samples collected at the ROMP 88 well site are presented on a Piper (1944) diagram in figure 10 as percent milliequivalents per liter. The Piper (1944) diagram consists of a lower left triangle (ternary diagram) that depicts the relative concentrations of the cations in each groundwater quality sample, a lower right triangle (ternary diagram) that depicts the relative concentrations of anions in each groundwater quality sample, and a diamond between the triangles (ternary diagrams) that shows the intersection of lines projected from the tri-



[APHPZ, Avon Park high-permeability zone; bls, below land surface]

Figure 9. Select cations and anions, and total dissolved solids concentrations for groundwater quality samples collected at the ROMP 88 – Rock Ridge well site in Polk County, Florida. Depth represents the middle of the discrete open interval in the hydrogeologic unit at the time of sampling.

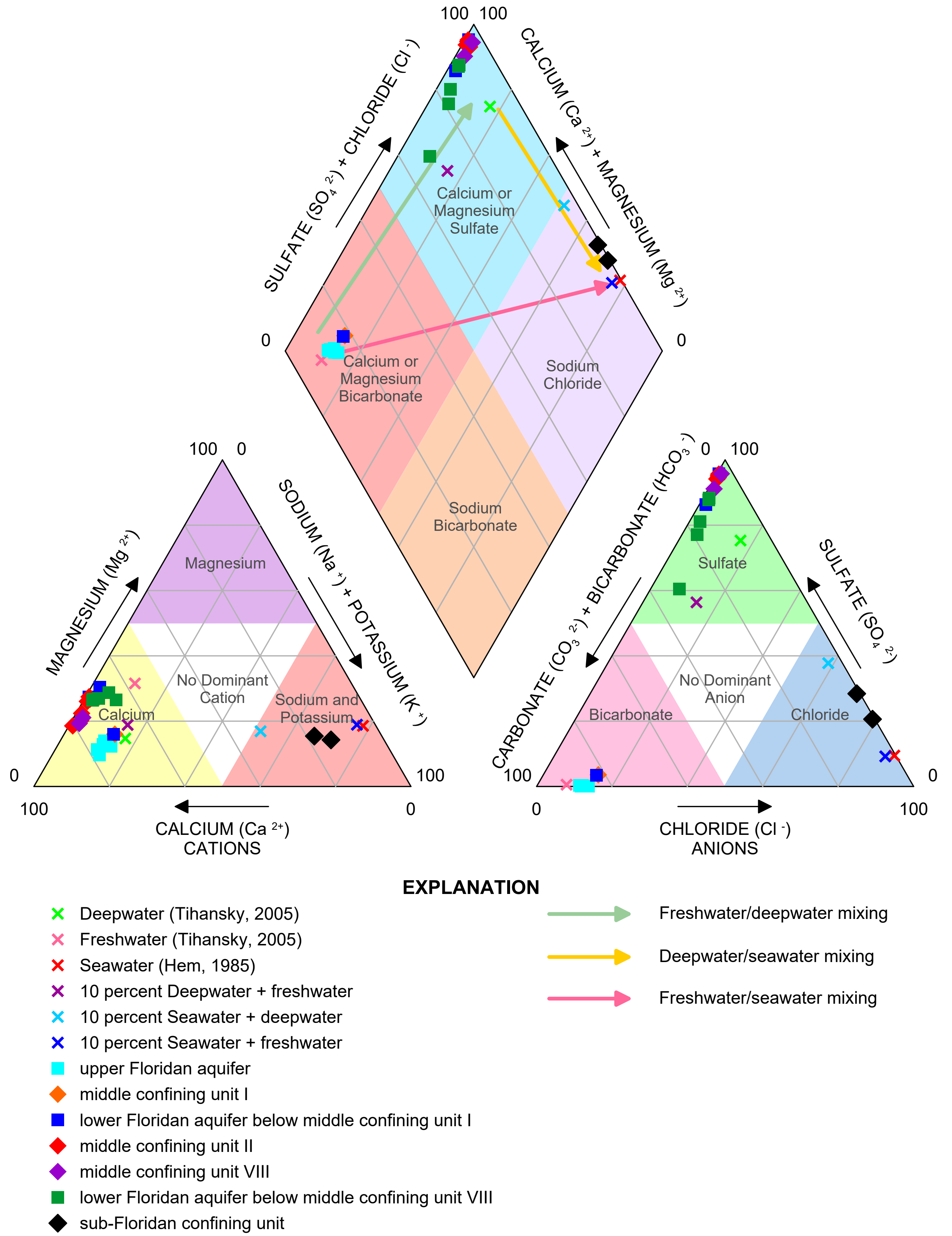


Figure 10. Piper Diagram of groundwater quality samples collected at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

angles (ternary diagrams) for the cations and anions for each groundwater quality sample, which depicts the overall water type of each groundwater quality sample. Calculated mixing lines show end-member mixing between calcium bicarbonate (freshwater), calcium sulfate (deepwater), and sodium chloride (seawater) type waters (Tihansky, 2005). Groundwater quality samples collected from the upper Floridan aquifer, middle confining unit I, and the lower Floridan aquifer I to about 766 feet bls plot in the middle left of the diamond, the bottom left of the anion ternary diagram near the freshwater end member, and the bottom left of the cation ternary diagram, which is typical for calcium bicarbonate water type not affected by deepwater or seawater mixing (Tihansky, 2005). Groundwater quality samples collected from the remainder of the lower Floridan aquifer I, middle confining unit II, and middle confining unit VIII plot at the top of the diamond and the end of the freshwater/deepwater mixing trend described by Tihansky (2005), the top of the anion ternary diagram, and the bottom left of the cation ternary diagram, which is indicative of groundwater that contains dissolved evaporite minerals. Groundwater quality samples collected from the lower Floridan aquifer VIII plot at the top and left side of the diamond along the freshwater/deepwater mixing trend described by Tihansky (2005), along the top and left side of the anion ternary diagram, and the bottom left of the cation ternary diagram, which indicate the water is substantially affected by mineralized or deep water. The groundwater quality samples collected from the lower Floridan aquifer VIII generally freshen with depth and progressively plot downward along the freshwater/deepwater mixing trend towards the freshwater endmember on the diamond (Tihansky, 2005). Groundwater quality samples collected from the sub-Floridan confining unit plot in the middle right of the diamond at the end of the deepwater/seawater mixing trend described by Tihansky (2005), the bottom right of the anion ternary diagram, and the bottom right of the cation ternary diagram, which indicate the water is substantially affected by seawater.

Select molar ratios were calculated to further investigate groundwater quality changes with depth (fig. 11 and appendix M, table M4). The evaporite track illustrates the interaction between fresh water and evaporites (gypsum and anhydrite), the dolomite track primarily identifies fresh water affected by dolomite, and the sodium chloride track depicts effects from connate water or seawater. The chloride to sulfate molar ratio on the evaporite track decreases in the lower Floridan aquifer I and middle confining units II and VIII because the sulfate concentration increases, which is likely from the dissolution of gypsum and anhydrite. The chloride to sulfate molar ratio increases in the lower Floridan aquifer VIII because the sulfate concentration decreases (fig. 11 and appendix M, tables M2 and M4). The chloride to sulfate molar ratio increases in the sub-Floridan confining unit because chloride concentration increases (fig. 11 and appendix M, tables M2 and M4). The calcium to bicarbonate and the sulfate to bicarbonate molar ratios increase in the lower Floridan aquifer I and middle confining units II and VIII, which indicate evaporites are affecting the groundwater chemistry. The calcium to magnesium molar ratio on the dolomite track generally decreases with depth because of increases in dolomitic limestone and dolostone; however, it increases in middle confining units II and VIII presumably from the increased calcium concentration likely resulting from the dissolution of gypsum and anhydrite (fig.11 and appendix M, tables M2 and M4). The sodium to chloride molar ratio on the sodium chloride track does not vary appreciably because sodium and chloride concentrations increase and decrease similarly. The chloride to bicarbonate and sodium to bicarbonate molar ratios do not vary substantially until the sub-Floridan confining unit where they increase substantially because of substantial increases in sodium and chloride concentrations compared to bicarbonate concentration. The increase likely results from the effect of connate water or seawater (fig.11 and appendix M, tables M2 and M4).

During the APTs, water quality samples were collected from the discharge at the beginning, middle, and end of the drawdown phase and sent to the District's Chemistry Laboratory for analyses to evaluate changes in water quality during pumping (appendix M, tables M5 and M6). The results indicate no substantial changes in water quality because of pumping and are similar to results from the groundwater quality samples collected during exploratory core drilling and testing (appendix M, tables M5 and M6). In addition, the discharge was monitored for specific conductance and pH to ensure the parameters remained below 50 percent above background or 1,275 micromhos per centimeter, the allowable concentration during the test, certifying the water quality of Grass Creek was not appreciably altered by the discharge (appendix M, table M5).

Summary

A hydrogeologic investigation including exploratory core drilling and testing, well construction, and aquifer performance testing was conducted at the ROMP 88 – Rock Ridge well site in northwestern Polk County, Florida from November 2016 to May 2023, by the Southwest Florida Water Management District. The well site was first established in 1982 when exploratory drilling from land surface to 385 feet below land surface was conducted and an upper Floridan aquifer well (U Fldn Aq [Avpk] Monitor) was constructed. The well site was selected for further investigation to ascertain the elevations and geographic extents of the middle confining units and lower Floridan aquifers and the viability of the lower Floridan aquifers as an alternative water supply source within the Central Florida Water Initiative region. Geohydrologic data including core samples, slug testing, aquifer performance testing, groundwater quality sampling, and geophysical logging were collected at the site. The permanent wells constructed, in addition to the U Fldn Aq (Avpk) Monitor, are the U Fldn Aq (Ocala) Monitor, the L Fldn Aq (bl MCU I) Monitor, and the L Fldn Aq (bl MCU VIII) Monitor.

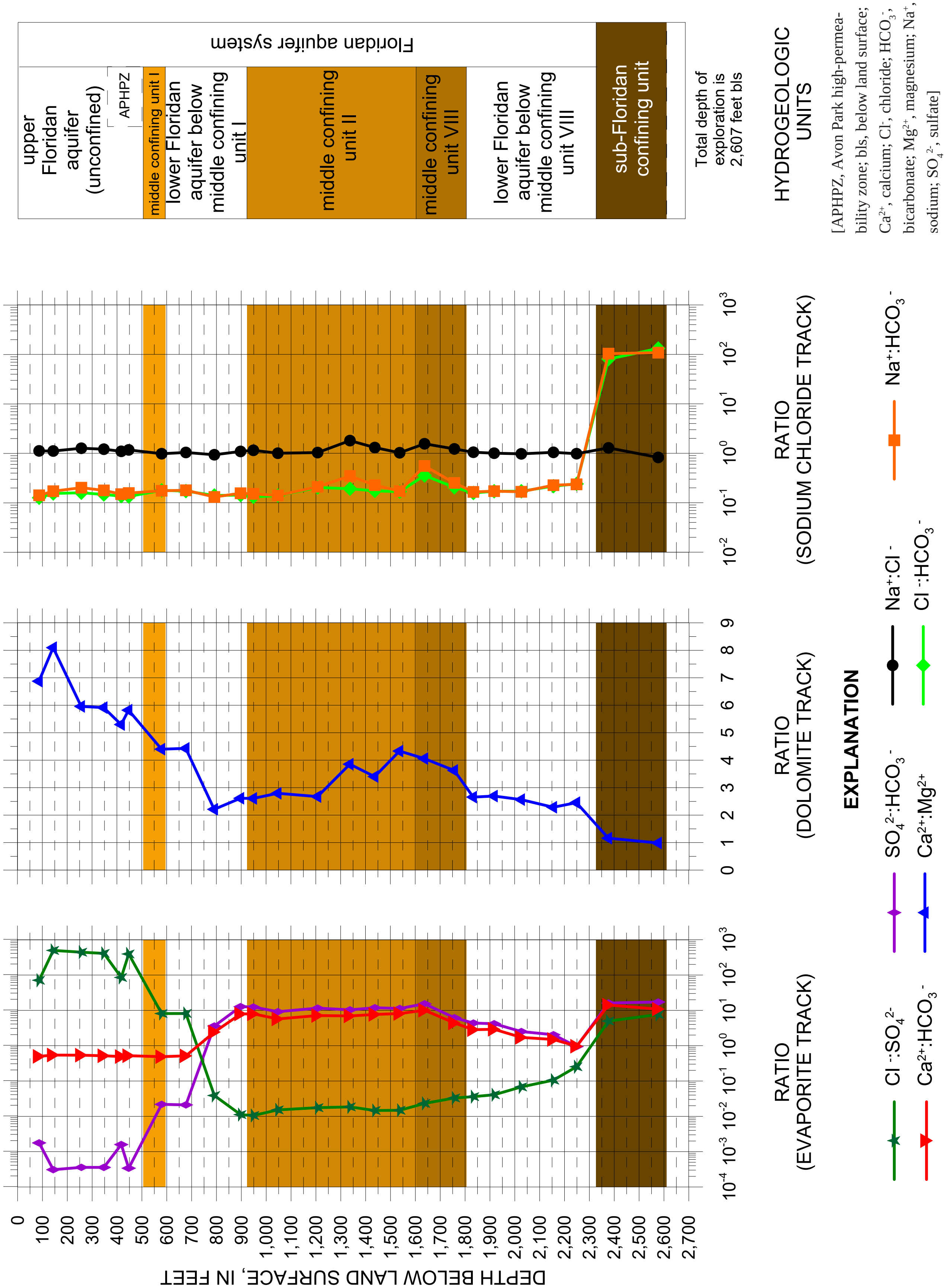


Figure 11. Select molar ratios with depth for groundwater quality samples collected at the ROMP 88 – Rock Ridge well site in Polk County, Florida. Depth represents the middle of the discrete open interval in the hydrogeologic unit at the time of sampling.

The geologic units encountered at the well site include, in ascending order: the Cedar Keys Formation, the Oldsmar Formation, the Avon Park Formation, the Ocala Limestone, and the undifferentiated sand and clay deposits. The Cedar Keys Formation extends from 2,245 feet to beyond the total depth of exploration at 2,607 feet bls and is predominantly light gray to yellowish gray dolostone interbedded with light gray to yellowish gray mudstone and wackestone and gypsum and anhydrite. The Oldsmar Formation extends from 1,664.3 to 2,245 feet bls and is predominantly very light orange to grayish brown packstone and wackestone with glauconite. Gypsum is present throughout but does not impede permeability below about 1,801 feet bls. Dolostone is present beginning at about 1,945.2 feet bls and is fractured and vuggy starting around 2,057 feet bls. The Avon Park Formation extends from 113.2 to 1,664.3 feet bls and is predominantly yellowish gray, fossiliferous grainstone and packstone from about 113.2 to 382.2 feet bls; grayish brown, fractured dolostone from about 382.2 to 502 feet bls; very light orange wackestone from about 502 to 597 feet bls; grayish brown dolostone and very light orange dolomitic wackestone from about 597 to 912 feet bls; and very light orange dolomitic wackestone and grayish brown dolostone with sporadic glauconite and substantial gypsum and anhydrite from about 912 to 1,664.3 feet bls. The Ocala Limestone extends from 5 to 113.2 feet bls and is predominantly white to yellowish gray, fossiliferous, weathered, soft, clayey, and poorly to moderately indurated mudstone and wackestone. The undifferentiated sand and clay deposits mainly consist of grayish brown sand from land surface to 5 feet below land surface.

The hydrogeologic units encountered at the well site include, in descending order: the upper Floridan aquifer including, the Avon Park high-permeability zone; the middle confining unit I; the lower Floridan aquifer below middle confining unit I; the middle confining unit II; the middle confining unit VIII; the lower Floridan aquifer below middle confining unit VIII; and the sub-Floridan confining unit. The upper Floridan aquifer extends from the water table to 502 feet bls and contains the Avon Park high-permeability zone from about 387 to 502 feet bls. Six slug test suites were conducted in the upper Floridan aquifer that yielded horizontal hydraulic conductivity estimates ranging from 3 to 14 ft/d in the undifferentiated upper Floridan aquifer and 45 to 160 ft/d in the Avon Park high-permeability zone. A constant-rate APT was conducted in the upper Floridan aquifer from April 24 to 27, 2023. The production well was pumped at an average rate of 3,000 gpm for approximately 73 hours. Diagnostic flow plots and derivative analyses of the drawdown and recovery data from the U Fldn Aq (Avpk) Monitor well indicate the upper Floridan aquifer is confined from below and leaky; however, the upper Floridan aquifer is unconfined from above at the ROMP 88 well site because the sand from land surface to 5 feet bls and the limestone beginning at 5 feet bls are not confining. Because the hydraulic head of the lower Floridan aquifer below middle confining unit I was higher than the upper Floridan aquifer during the APT, groundwater was essentially pushed into and recharged the upper Floridan aquifer and did not allow limestone dewatering during pumping. Curve-match analyses of drawdown and recovery data from the U Fldn Aq (Avpk) Monitor well using the Hantush-Jacob (1955)/Hantush (1964) solution for leaky confined aquifers yielded an estimated transmissivity value of 25,000 ft^2/d, a storativity value of 0.002, and a leakance value of 0.006 day^{-1}. The leakance value may not be reliable because of the uncharacteristic aquifer response presumably caused by the higher hydraulic head in the lower Floridan aquifer below middle confining unit I compared to the upper Floridan aquifer during pumping; however, it is a plausible value for a leaky aquifer. The middle confining unit I extends from 502 to 597 feet bls. One slug test suite was conducted in middle confining unit I from 562 to 597 feet bls and yielded a hydraulic conductivity estimate of 3 ft/d. The lower Floridan aquifer I extends from 597 to 912 feet bls. The lower Floridan aquifer I was not easily identifiable during exploratory core drilling and testing; however, long-term water level monitoring data collected since 2020 indicate the lower Floridan aquifer I is hydraulically separated from the upper Floridan aquifer because the hydraulic head in the lower Floridan aquifer I ranged from approximately 1 foot below to 0.7 feet above the hydraulic head in the upper Floridan aquifer. Three slug test suites were conducted in the lower Floridan aquifer I that yielded hydraulic conductivity estimates ranging from 21 to 30 ft/d. A constant-rate APT was conducted in the lower Floridan aquifer I from March 27 to March 30, 2023. The production well was pumped at an average rate of 350 gpm for approximately 76 hours. Diagnostic flow plots and derivative analyses of the drawdown and recovery data from the L Fldn Aq (bl MCU I) Monitor well indicate the lower Floridan aquifer I is confined and shows signs of leakance. Curve-match analyses of drawdown and recovery data from the L Fldn Aq (bl MCU I) Monitor well using the Hantush-Jacob (1955)/Hantush (1964) solution for leaky confined aquifers yielded an estimated transmissivity value of 5,900 ft^2/d, storativity value of 0.0002, and leakance value of 0.00006 day^{-1}. The leakance value estimate is low for a leaky confined aquifer and is presumably not reliable because of the higher hydraulic head in the lower Floridan aquifer I compared to the upper Floridan aquifer during pumping. Additionally, 1.7 feet of drawdown was observed in the L Fldn Aq (bl MCU I) Monitor well during the upper Floridan APT, which indicates appreciable leakance. The leakance value of 0.006 day^{-1} estimated from the upper Floridan APT is more representative. The middle confining unit II extends from 912 to 1,600 feet bls and is entirely within the Avon Park Formation. Six slug suites were conducted in the middle confining unit II that yield hydraulic conductivity estimates ranging from 0.0005 to 0.6 ft/d.

The middle confining unit VIII is contiguous with middle confining unit II and extends from 1,600 to 1,801 feet bls. Miller (1986) did not map middle confining unit VIII in this area likely because of insufficient deep exploration data but exploration since indicates the unit is present across the peninsula. Two slug test suites were conducted in middle confining unit VIII that yielded hydraulic conductivity estimates of 0.02 and 0.08 ft/d. The lower Floridan VIII extends from 1,801 to 2,327.5 feet bls. Six slug tests were performed in the lower Floridan aquifer VIII that yielded hydraulic conductivity estimates ranging from 4 to 22 ft/d from 1,810 to 2,047 feet bls and ranging from 3,100 to 3,500 ft/d from 2,134 to 2,277 feet bls. The higher hydraulic conductivity estimates are from slug tests conducted in fractured and vuggy dolostone. A constant-rate APT was conducted in the lower Floridan aquifer VIII from February 27, 2023, to March 2, 2023. The production well was pumped at an average rate of 2,800 gpm for approximately 72 hours. Curve-match analyses of the drawdown and recovery data from Core Hole 3 using the Cooper-Jacob (1946) straight-line type curve solution for a confined aquifer yielded an estimated transmissivity value of 1,800,000 ft^2/d and a storativity value of 0.00000002. The transmissivity value may be overestimated because the curve-match was not ideal, but evidence supports the lower Floridan aquifer VIII is productive because of the low drawdown in the observation wells despite the high pumping rate. The sub-Floridan confining unit extends from 2,327.5 feet bls to beyond the total depth of exploration of 2,607 feet bls. Two slug tests were conducted in this unit that yielded hydraulic conductivity estimates of 0.0005 and 0.007 ft/d.

Twenty-five groundwater quality samples were collected and analyzed for the ROMP 88 well site. The groundwater quality sample results indicate the upper Floridan aquifer at the well site is fresh because the TDS concentrations are less than 1,000 mg/L but exceeds the U.S. Environmental Protection Agency's secondary drinking water standards for iron from about 246 to 267 feet bls and 398 to 437 feet bls. The groundwater quality sample results indicate the middle confining unit I is fresh and does not exceed secondary drinking water standards. The groundwater quality results indicate the lower Floridan aquifer I is fresh and does not exceed secondary drinking water standards to about 697 feet then becomes brackish (TDS concentration is between 1,000 and 10,000 mg/L) and exceeds secondary drinking water standards for iron and sulfate. The groundwater quality sample results indicate the middle confining unit II and middle confining unit VIII are brackish and exceed secondary drinking water standards for iron and sulfate. The groundwater quality sample results indicate the lower Floridan aquifer VIII is brackish to about 2,177 feet bls, except from about 2,005.5 to 2,047 feet bls where it is fresh, and exceeds secondary drinking water standards for iron and sulfate. The groundwater quality sample results indicate the lower Floridan aquifer VIII is fresh and does not exceed secondary drinking water standards beginning at about 2,220 feet bls and likely improves because it corresponds to a vuggy and fractured interval where the permeability increases. The groundwater quality sample results indicate the groundwater in the sub-Floridan confining unit is saline (TDS concentration is between 10,000 and 35,000 mg/L) and exceeds secondary drinking water standards for iron, sulfate, and chloride.

The groundwater quality sample results indicate the water type is calcium bicarbonate in the upper Floridan aquifer, middle confining unit I, and the lower Floridan aquifer I to about 766 feet bls and on a Piper diagram plot in the middle left of the diamond, the bottom left of the anion ternary diagram near the freshwater end member, and the bottom left of the cation ternary diagram, which is typical for calcium bicarbonate water type not affected by deepwater (calcium sulfate) or seawater (sodium chloride) mixing. The groundwater quality sample results indicate the water type is calcium sulfate in the remainder of the lower Floridan aquifer I, the middle confining unit II, and the middle confining unit VIII and on a Piper diagram plot at the top of the diamond and the end of the freshwater/deepwater mixing trend, the top of the anion ternary diagram, and the bottom left of the cation ternary diagram, which is indicative of groundwater that contains dissolved evaporite minerals. The groundwater quality sample results indicate the water type in the lower Floridan aquifer VIII is also calcium sulfate but on a Piper diagram plot at the top and left side of the diamond along the freshwater/deepwater mixing trend, along the top and left side of the anion ternary diagram, and the bottom left of the cation ternary diagram. The groundwater quality samples collected from the lower Floridan aquifer VIII generally freshen with depth and progressively plot downward along the freshwater/deepwater mixing trend towards the freshwater endmember on the diamond. The groundwater quality sample results indicate the water type is sodium chloride in the sub-Floridan confining unit and on a Piper diagram plot in the middle right of the diamond at the end of the deepwater/seawater mixing trend, the bottom right of the anion ternary diagram, and the bottom right of the cation ternary diagram, which indicate the water is substantially affected by seawater. Molar ratios indicating evaporate influence are apparent in the lower Floridan aquifer I and middle confining units II and VIII because the sulfate concentration increases. Molar ratios indicating connate water or seawater influence is apparent in the sub-Floridan confining unit. During the APTs, water quality samples were collected from the discharge at the beginning, middle, and end of the drawdown phase to evaluate changes in water quality during pumping. The results indicate no substantial changes in water quality because of pumping and are similar to results from the groundwater quality samples collected during exploratory core drilling and testing.

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Appendix A. Methods of the Geohydrologic Data Section

The Southwest Florida Water Management District (District) collects the majority of the hydrogeologic data during the exploratory core drilling phase of the project. Lithologic samples will be collected during the core drilling process. Hydraulic and water quality data are collected primarily during packer tests as the core hole is advanced. Geophysical logging will be conducted on the core hole providing additional hydrogeologic data. After well construction, an aquifer performance test (APT) will be conducted on each of the major freshwater aquifers or producing zones encountered at the project site. These data will be uploaded to the District's Environmental Data Portal (EDP) or the Geohydrologic Data Map Viewer.

Collection of Lithologic Samples

The District conducts hydraulic rotary core drilling, referred to as diamond drilling, with a Central Mine Equipment (CME) 85 core drilling rig and an Universal Drilling Rigs (UDR) 200D LS core drilling rig. The basic techniques involved in hydraulic rotary core drilling are the same as in hydraulic rotary drilling (Shuter and Teasdale, 1989). The District applies a combination of HQ, HW, NW, and PW gauge working casings along with NQ or NRQ core drilling rods, associated bits, and reaming shells from Boart Longyear®. The HQ, HW, NW, and PW working casings are set and advanced as necessary to maintain a competent core hole. The NQ and NRQ size core bits produce a nominal 3-inch hole. The HQ, HW, NW, and PW working casings and NQ and NRQ coring rods are removed at the end of the project. Details on the core drilling activities are recorded on daily drilling logs completed by the District's drilling crew and hydrogeologists.

Recovery of the core samples is accomplished using a wireline recovery system (fig. A1). The District's drilling crew uses the Boart Longyear® NQ wireline inner barrel assembly. This system allows a 1.87-inch by 5 or 10-foot section and a 1.99-inch by 10-foot section of core to be retrieved with the CME 85 rig and UDR 200D LS rig, respectively. The core is retrieved without having to remove the core rods from the core hole. Grab samples of core hole cuttings are collected and bagged where poor core recovery results because of drilling conditions or where the formation is unconsolidated or poorly indurated. The core samples are placed in core boxes, depths marked, and recovery estimates calculated. Core descriptions are made in the field using standard description procedures. Rock color names are taken from the "Rock-Color Chart" of the National Research Council (Goddard and others, 1948). The textural terms used to characterize carbonate rocks are based on the classification system of Dunham (1962). The core samples are shipped to the Florida Geological Survey for detailed lithologic descriptions of core, cuttings, and unconsolidated sediments. All lithologic samples will be archived at the Florida Geological Survey in Tallahassee, Florida.

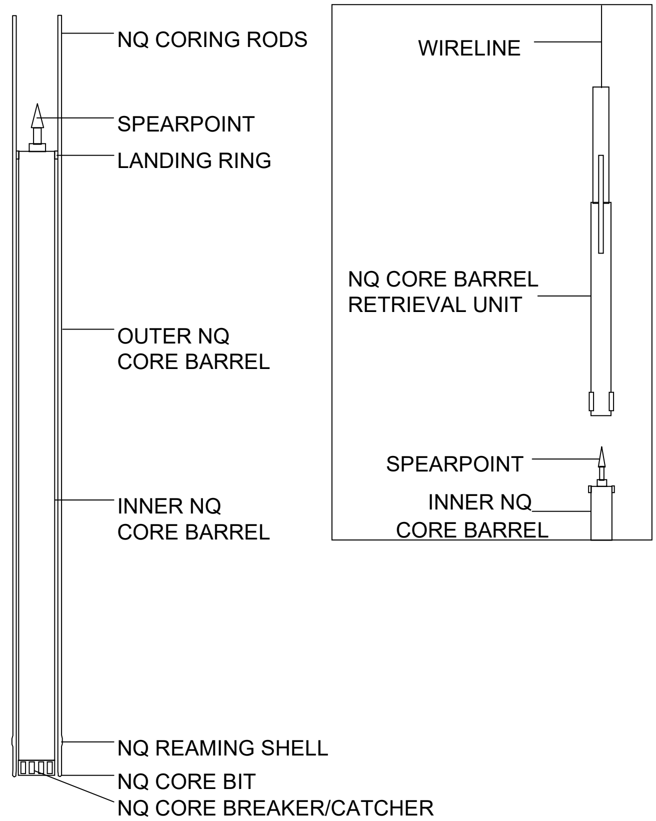


Figure A1. Boart Longyear® NQ Wireline Coring Apparatus.

Unconsolidated Coring

Various methods are available for obtaining unconsolidated material core samples, which is an extremely difficult process as compared to rock coring (Shuter and Teasdale, 1989). To ensure maximum sample recovery, the District drilling crew utilizes a punch shoe adapter on the bottom of the inner barrel along with an unconsolidated core catcher. The punch shoe extends the inner barrel beyond the bit allowing collection of the sample prior to disturbance by the bit or drilling fluid. A variety of bottom-discharge bits are used during unconsolidated coring. A thin bentonite mud may be used to help stabilize the unconsolidated material.

Rock Coring

During rock coring, the District drilling crew utilizes HQ, HW, NW, and PW working casings, as well as permanent casings to stabilize the core hole. NQ and NRQ core drilling rods and associated products are employed during the core drilling process. Core drilling is conducted by direct-circulation rotary methods using fresh water for drilling fluid. Direct water is not effective in removing the cuttings from the core hole;

therefore, a reverse-air (air-lift) pumping discharge method (fig. A2) is used to develop the core hole every 20 feet or as necessary. The District typically uses face-discharge bits for well indurated rock core drilling.

Formation Packer Testing

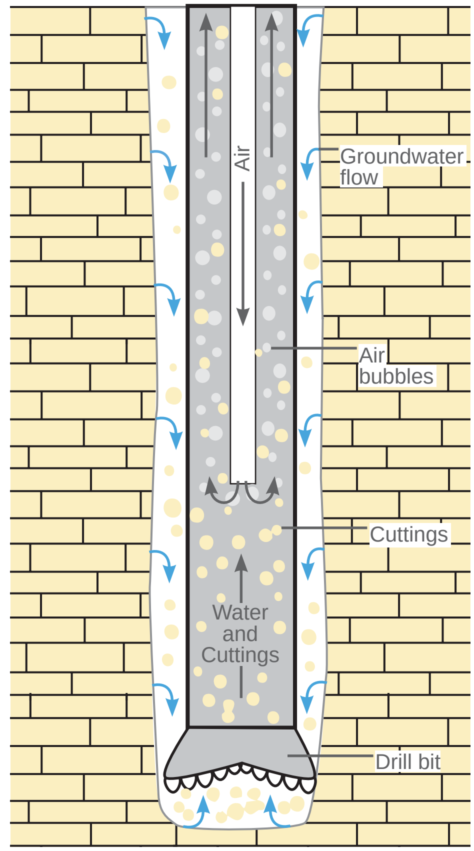
Formation (off-bottom) packer testing allows discrete testing of water levels, water quality, and hydraulic parameters. A competent core hole is necessary for packer testing, meaning unconsolidated sediments and some of the shallow weathered limestone cannot be tested using this technique. The packer assembly (fig. A3) is employed by raising the NQ or NRQ coring rods to a predetermined point, lowering the packer to the bottom of the rods by using a combination cable/air inflation line, and inflating the packer with nitrogen gas. This process isolates the test interval, which extends from the packer to the total depth of the core hole. Sometimes, the working casing may be used in place of the packer assembly. Test intervals are selected based on a regular routine of testing or at any distinct hydrogeologic change that warrants testing.

Collection of Water Level Data

Water level data is collected daily before core drilling. Additionally, water levels are recorded during each formation packer test after the necessary equilibration time. Equilibration is determined when the change in water level per unit time is negligible. Water levels are measured using a Solinst® water level meter. The water level is measured relative to an arbitrary datum near land surface, which is maintained throughout the project. These data provide a depiction of water level with core hole depth. However, these data are normally collected over many months (range can be 6 to 12 months or more) and will include temporal variation.

Collection of Water Quality Data

Water quality samples are collected during each formation packer test. Sampling methods are consistent with the "Standard Operating Procedures for the Collection of Water Quality Samples" (Southwest Florida Water Management District, 2024). The procedure involves isolating the test interval with the off-bottom packer (fig. A3) as explained above, and air-lifting the water in the NQ or NRQ coring rods. To ensure a representative sample is collected, three core hole volumes of water are removed and temperature, pH, and specific conductance are monitored for stabilization using a YSI® multiparameter meter. Samples are collected either directly from the air-lift discharge point, with a wireline retrievable stainless steel bailer (fig. A4), or with a nested bailer. When sampling a poorly producing interval, the purge time may be substantial. The nested bailer is an alternative that is attached directly to



Reverse-air pumping
Reverse-air pumping allows cuttings to be removed without the introduction of man-made drilling fluids. As air bubbles leave the airline and move up inside the rods, they expand and draw water with them, creating suction at the bit. Groundwater comes from up-hole permeable zones and is natural formation water. Suction at the bit draws water and drill cuttings up the rods to be discharged at the surface.

Figure A2. Reverse-air drilling and water sampling procedure.

the packer orifice thereby reducing the volume of water to be evacuated from the core hole because it collects water directly from the isolated interval through the orifice. Bailers are better for obtaining non-aerated samples, which are more representative because aerated samples may have elevated pH (above background level) and consequently iron precipitation.

Once the water samples are at the surface, they are transferred into a clean polypropylene beaker. A portion of the sample is bottled according to standard District procedure for laboratory analysis (Southwest Florida Water Management District, 2024). A 500 ml bottle is filled with unfiltered water. Two bottles, one 250 ml and one 500 ml, are filled with water filtered through a 0.45-micron filter. A Masterflex® console pump is used to dispense the water into the bottles. The sample in the 250 ml bottle is acidified with nitric acid to a pH of 2 in order to preserve metals for analysis. The remainder

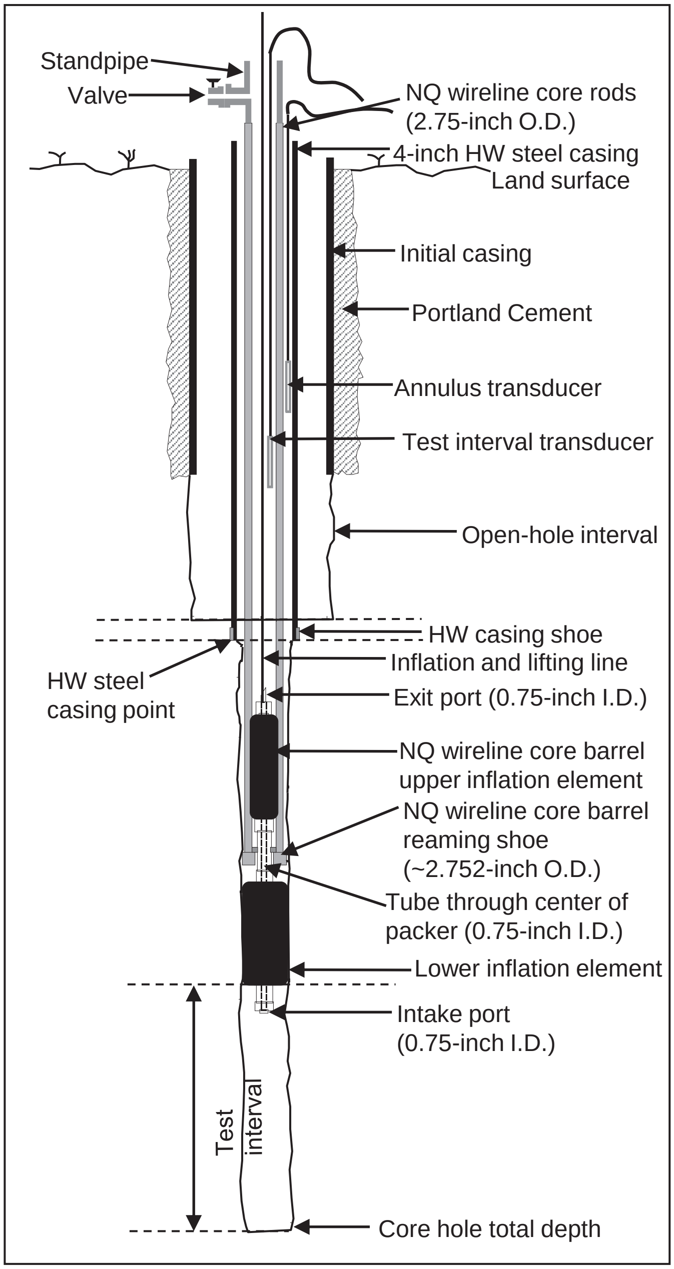


Figure A3. Formation (off-bottom) packer assembly deployed in the core hole.

is used to collect field parameters including specific conductance, temperature, pH, and chloride and sulfate concentrations. Temperature, specific conductance, and pH are measured using a YSI® multi-parameter handheld meter. Chloride and sulfate concentrations are analyzed with a YSI® 9300 photometer. The samples are delivered to the District's chemistry laboratory for additional analysis. A "Standard Complete" analysis that includes pH, calcium, chloride, ion balance, iron, magnesium, potassium, silica, sodium, strontium, specific conductance, sulfate, total dissolved solids (TDS), and total alkalinity is performed on each set of samples (Southwest Florida Water Management District, 2024). Chain of Custody forms are used to track the samples.

The analysis of the water quality data includes the evaluation of relative ion abundance and ion or molar ratios, and the determination of water type(s). The laboratory data are used to calculate milliequivalents per liter (meq/L) and percent meq/L. Using the criteria of 50 percent or greater of relative abundance of cations and anions, the water type for each sample is determined (Hem, 1985). The data are plotted on a Piper (1944) diagram to give a graphical depiction of the relative abundance of ions in an individual sample (Domenico and Schwartz, 1998) as well as how the individual samples compare to each other. Select ion ratios are calculated for each sample to further evaluate chemical similarities or differences among waters and to help explain why certain ions change with depth. Field pH is used in analyses because it is more likely to represent the actual conditions in the water since pH is sensitive to environmental changes (Driscolll, 1986; Fetter, 2001). Additionally, total alkalinity is used as bicarbonate concentration because hydroxyl ions generally are insignificant in natural groundwater and carbonate ions typically are not present in groundwater with a pH less than 8.3 (Fetter, 2001).

Collection of Slug Test Data

Some aquifer and confining unit hydraulic properties can be estimated by conducting a series of slug tests. During slug tests, the static water level in the test interval is suddenly displaced, either up or down, and the water level response is recorded as it returns to a static state. Typically, the slug tests are conducted using the off-bottom packer assembly to isolate test intervals as the core hole is advanced. KPSI® pressure transducers are used to measure the water level changes in the test interval and the annulus between the HQ or HW casing and the NQ or NRQ coring rods. The annulus pressure transducer is used as a quality control device to detect water level changes indicative of a poorly seated packer or physical connection (for example, fractures or very permeable rocks) within the formation. A third pressure transducer is used to measure air pressure during pneumatic slug testing. All pressure transducer output is recorded on a Campbell Scientific, Inc. CR800 datalogger. Prior to all slug tests, the test interval is thoroughly developed.

Slug tests can be initiated various ways. The primary methods used by the District are the pneumatic slug method and the drop slug method. Core hole conditions and apparent formation properties dictate which method is used. The pneumatic slug method is used for moderate to high hydraulic conductivity hydrogeologic units because of the near instantaneous slug initiation. The pneumatic slug method uses a NQ rod modified to include a pressure gauge and regulator, and an electronic or manual valve. The opening is sealed with compression fittings. Air pressure is used to depress the static water level. The water level is monitored for equilibration and once it returns to the initial static water level the test is initi-

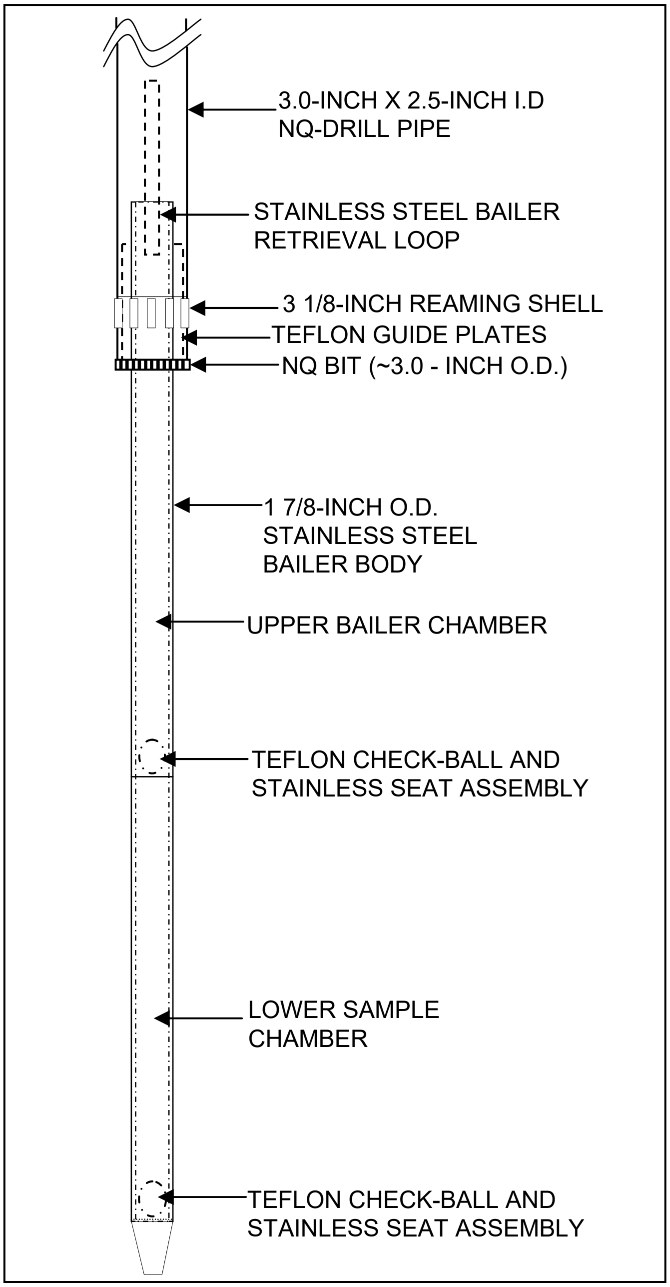


Figure A4. Diagram of the wireline retrievable bailer.

ated. The electronic or manual valve is opened to release the air pressure causing the water level to rise (rising head test). The water level is recorded until it reaches the initial static water level. The drop slug method is used for low hydraulic conductivity hydrogeologic units because of the slow slug initiation. This test initiation method is slower than the pneumatic method because the water has to travel down the core hole before reaching the test interval. The drop slug method involves adding a predetermined volume of water into the NQ or NRQ rods raising the static water level. A specially designed PVC funnel fitted with a ball valve placed over the NQ or NRQ rods is used to deliver the water. The valve is opened releasing the water causing the water level to rise. The water level is recorded until the raised level falls (falling head test) back to static level.

Various quality assurance tests are conducted in the field in order to identify any potential sources of error in the slug test data. The quality assurance tests include evaluation of the discrepancy between the expected and observed initial displacements (Butler, 1998), evaluation of the normalized plots for head dependence and evolving skin effects, and the evaluation of the annulus water level for movement. Lastly, estimates of the hydraulic conductivity values are made based on the slug test data using AQTESOLV® (Duffield, 2007) software by applying the appropriate analytical solution.

Slug tests in which the formation packer assembly is used all have one common source of error resulting from the orifice restriction (fig. A3). The water during the slug tests moves through NQ or NRQ coring rods with an inner diameter of 2.38 inches, the orifice on the packer assembly with an inner diameter of 0.75 inch, and the core hole with a diameter of approximately 3 inches. The error associated with this restriction is evident as head dependence in the response data of multiple tests conducted on the same test interval with varying initial displacements. The error associated with the orifice restriction will result in an underestimation of the hydraulic conductivity values. To reduce the error associated with the orifice restriction, the District uses a technique that inserts a spacer within the zone of water level fluctuation, thereby reducing the effective casing radius from 1.19 inches to 0.81 inches. A second technique used to minimize the effects caused by the orifice restriction is the use of initial displacements (slugs) of less than 1.5-feet in height. Also, if the working casing is used instead of the packer, the error is eliminated.

Geophysical Logging

Geophysical logs are useful in determining subsurface geologic and groundwater characteristics (Fetter, 2001). Geophysical logs provide three major types of information from water wells: hydrologic (water quality, aquifer characteristics, porosity, and flow zone detection), geologic (lithology, formation delineation), and physical characteristics (depth, diameter, casing depth, texture of well bore, packer points, and integrity of well construction).

Geophysical logging entails lowering the geophysical tool into the monitor well on a wireline and measuring the tool's response to the formations and water quality in and near the core hole during retrieval. Core hole geophysical logs are run during various stages of core drilling. When feasible, geophysical logs are run prior to casing advancements, while the core hole is still open to the formation.

The District uses Century® and Mount Sopris geophysical logging equipment. The three types of geophysical probes used are the caliper/gamma, induction, and multifunction. The multifunction tool measures natural gamma-ray [GAM

(NAT)], spontaneous potential (SP), single-point resistivity (RES), short [RES(16N)], long [RES(64N)] normal resistivity, fluid temperature (TEMP) and fluid specific conductance (SP COND). Each log type is explained below.

Caliper (CAL)

Caliper logs are used to measure the diameter of the borehole. This log can identify deviations from the nominal borehole diameter and, in turn, locate cavities, washouts, and build-up. This log is useful for determining packer and casing placement because competent, well-indurated layers can be located. The caliper log also aids in calculating volumes of material such as cement, gravel, sand, and bentonite needed when installing casing during well construction and filling open-hole intervals for abandonment.

Gamma [GAM(NAT)]

Natural gamma-ray logs measure the amount of natural radiation emitted by materials surrounding the borehole. Natural gamma radiation is emitted from decaying radioactive elements present in certain types of geologic materials, thus specific rock materials can be identified from the log. Some of these materials include clays that trap radioactive isotopes as they migrate with groundwater, organic deposits, and phosphates. Clays contain high amounts of radioactive isotopes in contrast to more stable rock materials like carbonates and sands; therefore, can be identified easily (Keys and MacCary, 1971). One advantage using natural gamma-ray radiation is that it can be measured through PVC and steel casing, although it is subdued by steel casing. Gamma-ray logs are used chiefly to identify rock lithology and correlate stratigraphic units because gamma-ray radiation can be measured through casing and has relatively consistent responses to stratigraphic units.

Spontaneous Potential (SP)

Spontaneous potential logs measure the electrical potential (voltages) that result from chemical and physical changes at the contacts between different types of geological materials (Driscoll, 1986). They must be run in fluid-filled, uncased boreholes, and function best when the fluid in the borehole is different from that in the formation. They are useful in identifying contacts between different lithologies and stratigraphic correlation.

Single-Point Resistance (RES)

Single-point resistance logs measure the electrical resistance, in ohms, from rocks and fluids in the borehole to a point at land surface. Electrical resistance of the borehole materials is a measure of the current drop between a current electrode placed in the borehole and the electrode placed on land surface. The log must be run in a fluid-filled, uncased borehole. They are used for geologic correlation, such as bed boundaries, changes in lithology, and identification of fractures in resistive rocks (Keys and MacCary, 1971).

Short-Normal [RES (16N)] and Long-Normal [RES (64N)]

Short-normal and long-normal resistivity logs measure the electrical resistivity of the borehole materials and the surrounding rocks and water by using two electrodes. The 16 and 64 refers to the space, in inches, between the potential electrodes on the logging probe. The short-normal curve indicates the resistivity of the zone close to the borehole and the long-normal has more spacing between the electrodes; therefore measures the resistivity of materials further away from the borehole (Fetter, 2001). Short-normal and long-normal logs are useful in locating highly resistive geologic materials such as limestone, dolostone, and pure, homogenous sand and low resistivity materials like clay or clayey, silty sand. Also, the logs indicate water quality changes because fresh water has high resistivity whereas poor quality water has low resistivity. Resistivity logs must be run in fluid-filled, open boreholes.

Temperature (TEMP)

Temperature logs record the water temperature in the borehole. Temperature variations may indicate water entering or exiting the borehole from different aquifers. Thus, the log is useful in locating permeable zones. The log must be run in fluid-filled boreholes.

Specific Conductance (SP COND)

Specific Conductance logs measure the capacity of borehole fluid to conduct an electrical current with depth. The log indicates the total dissolved solids concentration of the borehole fluid. The specific conductance log may be useful in determining permeable zones because zones of increased inflow or outflow may show a change in water quality.

Aquifer Performance Tests

An APT is a controlled field experiment conducted to determine the hydraulic properties of water-bearing (aquifers) units (Stallman, 1976). APTs can be either single-well or multi-well and may partially or fully penetrate the aquifer. An APT involves pumping the aquifer at a known rate and monitoring the water level response. The general procedure, applied by the District, for conducting an APT involves design, field observation, and data analysis. Test design is based on the geologic and hydraulic setting of the site, such as knowledge of the aquifer thickness, probable range in transmissivity and storage, the presence of uncontrolled boundaries (sources/sinks), and any practical limitations related to the equipment. Field observations of the discharge and water levels are recorded to ensure a successful test. The District measures the discharge rate using an impeller meter and circular orifice weir. The District measures water levels using pressure transducers and an electric tape. All the recording devices are calibrated and traceable to the National Institute of Standards and Technology.

Data analysis includes first making estimates of drawdown observed during the test and then using analytical and numerical methods to estimate hydraulic properties of the aquifer and adjacent confining units. Diagnostic radial flow plots and derivative analyses of APT data are valuable tools in characterizing the type of aquifer present and specific boundary conditions that may be acting on the system during an APT.

Single-Well Aquifer Performance Test

Single-well APTs includes one test (pumped) well within the production zone used for both pumping and monitoring the water level response. A single-well APT may include monitoring the background water level in the test well for a duration of at least twice the pumping period (Stallman, 1976). Background data collection may not be necessary if the duration of the single-well test is short (less than 4 hours) and the on-site hydrogeologist does not consider background data necessary. After background data collection is complete and it is determined that a successful test can be accomplished, pumping is started. During the test, the discharge rate is monitored and controlled to less than 10-percent fluctuation to ensure a constant rate test. The water level is recorded in the test well during the drawdown (pumping) and recovery phases. Other wells outside of the production zone may be monitored in order to provide additional information on the flow system. The response data are used to estimate drawdown and then analyzed using analytical methods to estimate the hydraulic properties of the aquifer and adjacent confining units. Typically, response data are analyzed using AQTESOLV® (Duffield, 2007) software by applying the appropriate analytical solution.

Multi-Well Aquifer Performance Test

Multi-well APTs involve a test (pumped) well and at least one observation well for monitoring the water level response in the production zone. Background water level data is collected for a period of at least twice the planned pumping period (Stallman, 1976). The background data allow for the determination of whether a successful test can be conducted and permits the estimation of drawdown. After the background data collection period is complete and it is determined that a successful test can be completed, pumping is started. During the test, the discharge rate is monitored and controlled to less than 10-percent fluctuation. The water level response is recorded in both the test well and the observation well(s) during the drawdown (pumping) and recovery phases. Other wells outside of the production zone may be monitored in order to provide additional information on the groundwater flow system. The response data are used to estimate drawdown and then analyzed using analytical or numerical methods to estimate the hydraulic properties of the aquifer and adjacent confining units. Typically, response data is analyzed using AQTESOLV® (Duffield, 2007) software by applying the appropriate analytical solution.

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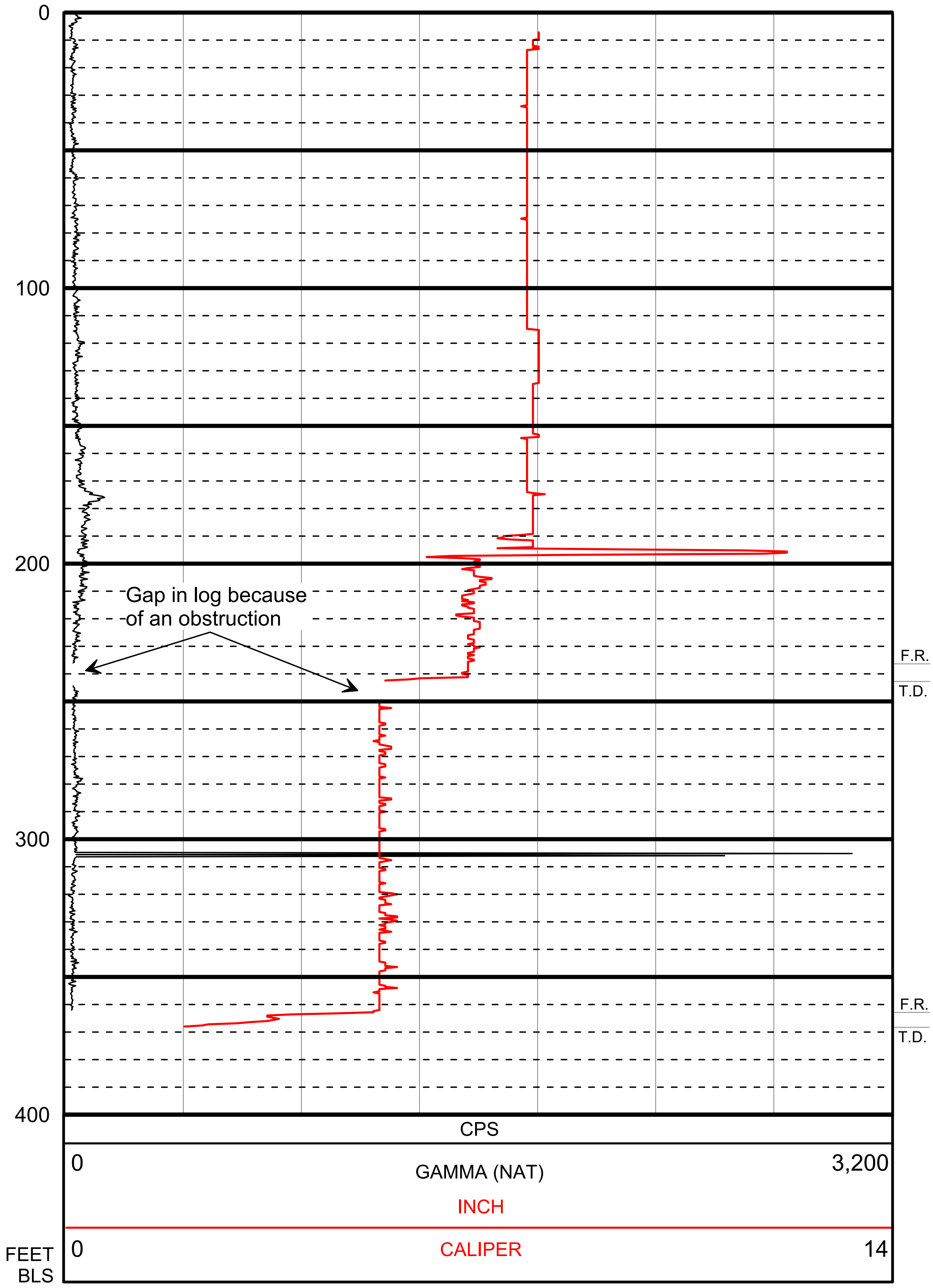
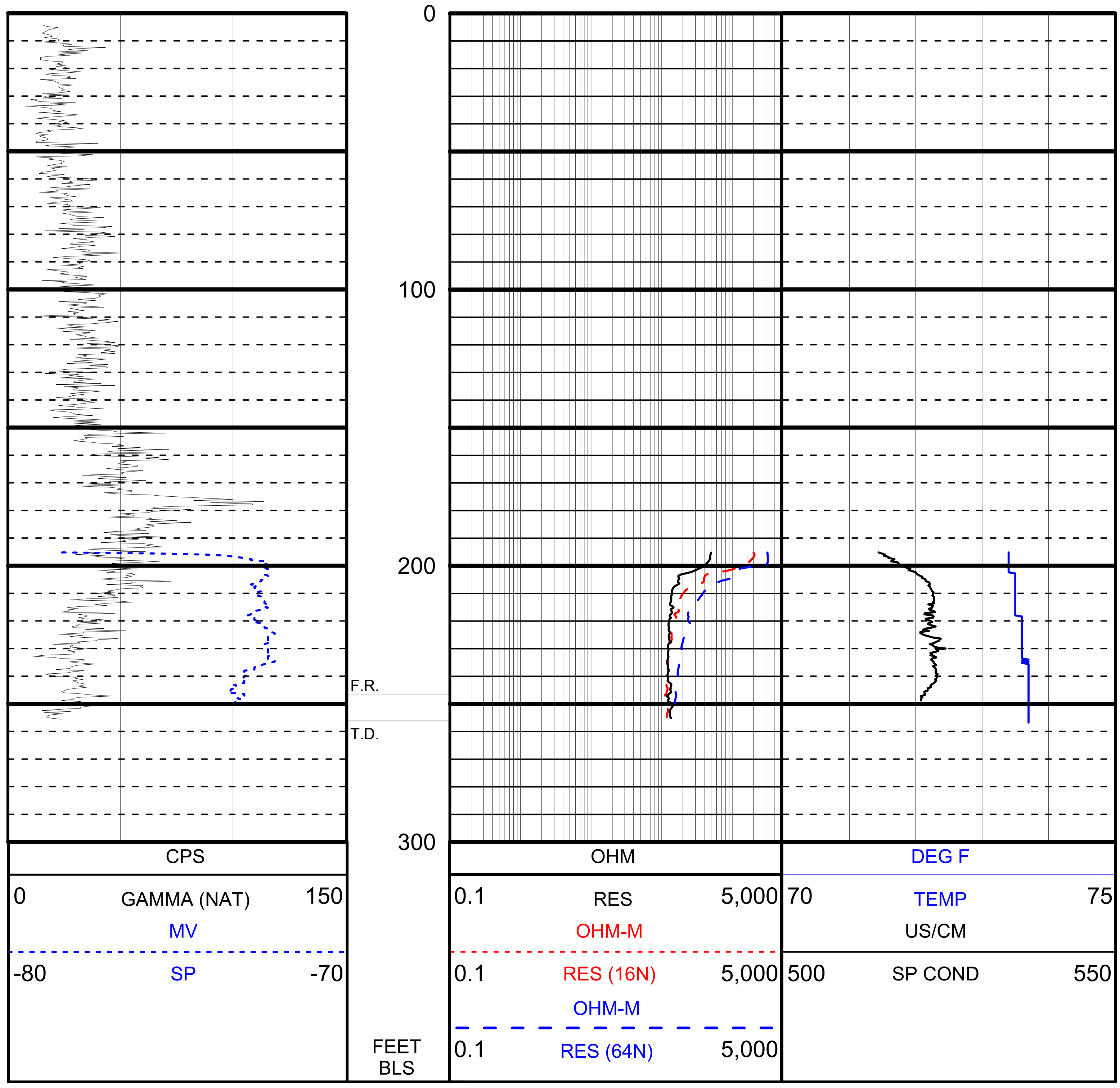
Appendix B. Geophysical Logs for the ROMP 88 – Rock Ridge Well Site in Polk County, Florida



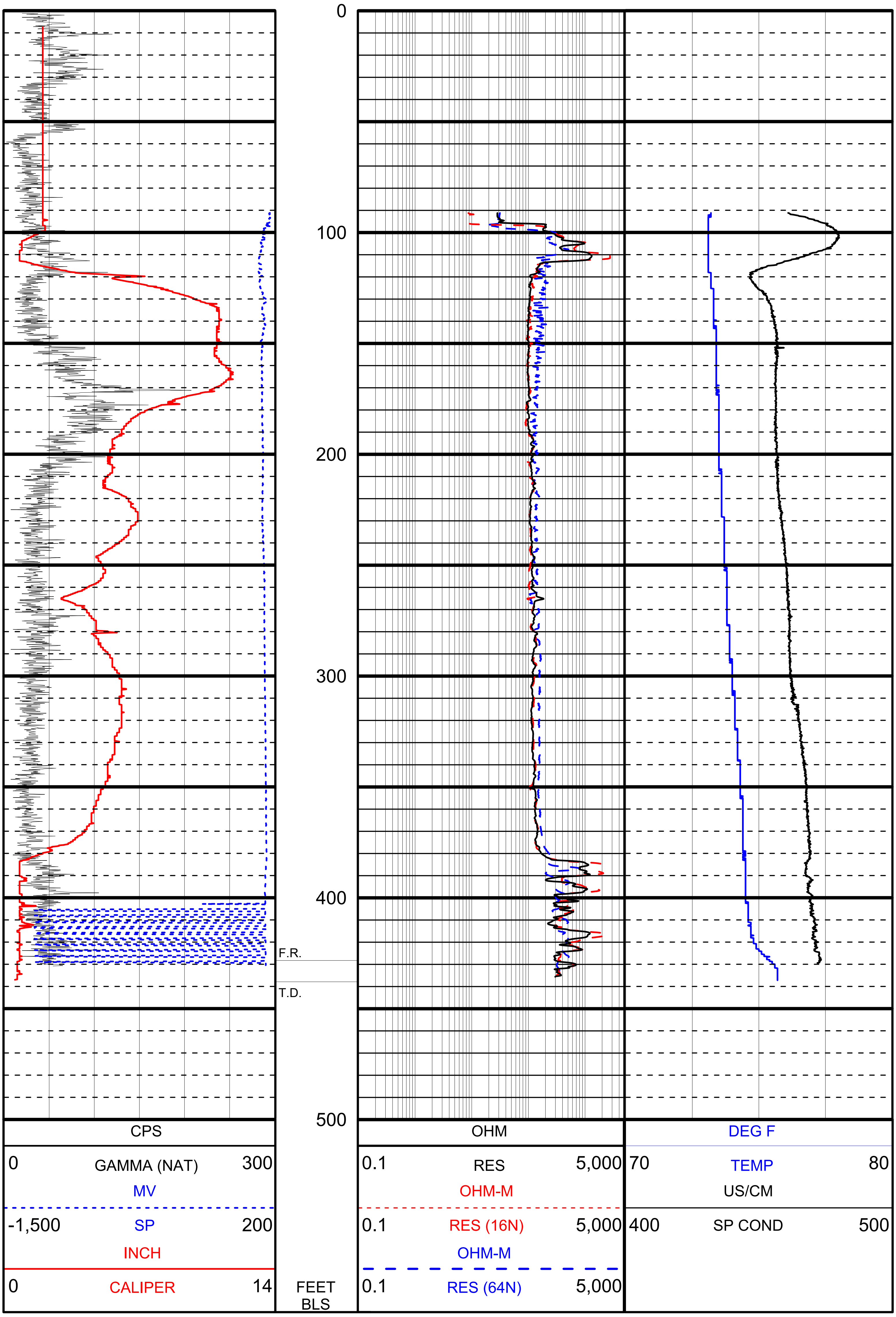
[BLS, below land surface; CPS, counts per second; F.R., first reading above total depth a geophysical tool makes a measurement; NAT, natural; T.D., total depth]

Figure B1. Gamma-ray and caliper log for the U Fldn Aq (Avpk) Monitor well from land surface to 368.4 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on April 12, 2016, using the Century® 9165C (caliper/gamma-ray) tool. The tool was run twice because of an obstruction. The first run was from land surface to 242.4 feet bls and the second run was from 242.8 to 368.4 feet bls. Four-inch polyvinyl casing was installed to 195 feet below land surface at time of logging. The log scale is 2 inches per 100 feet and is linearly scaled. The first reading is 236 feet below land surface for the first run and 362 feet below land surface for the second run.



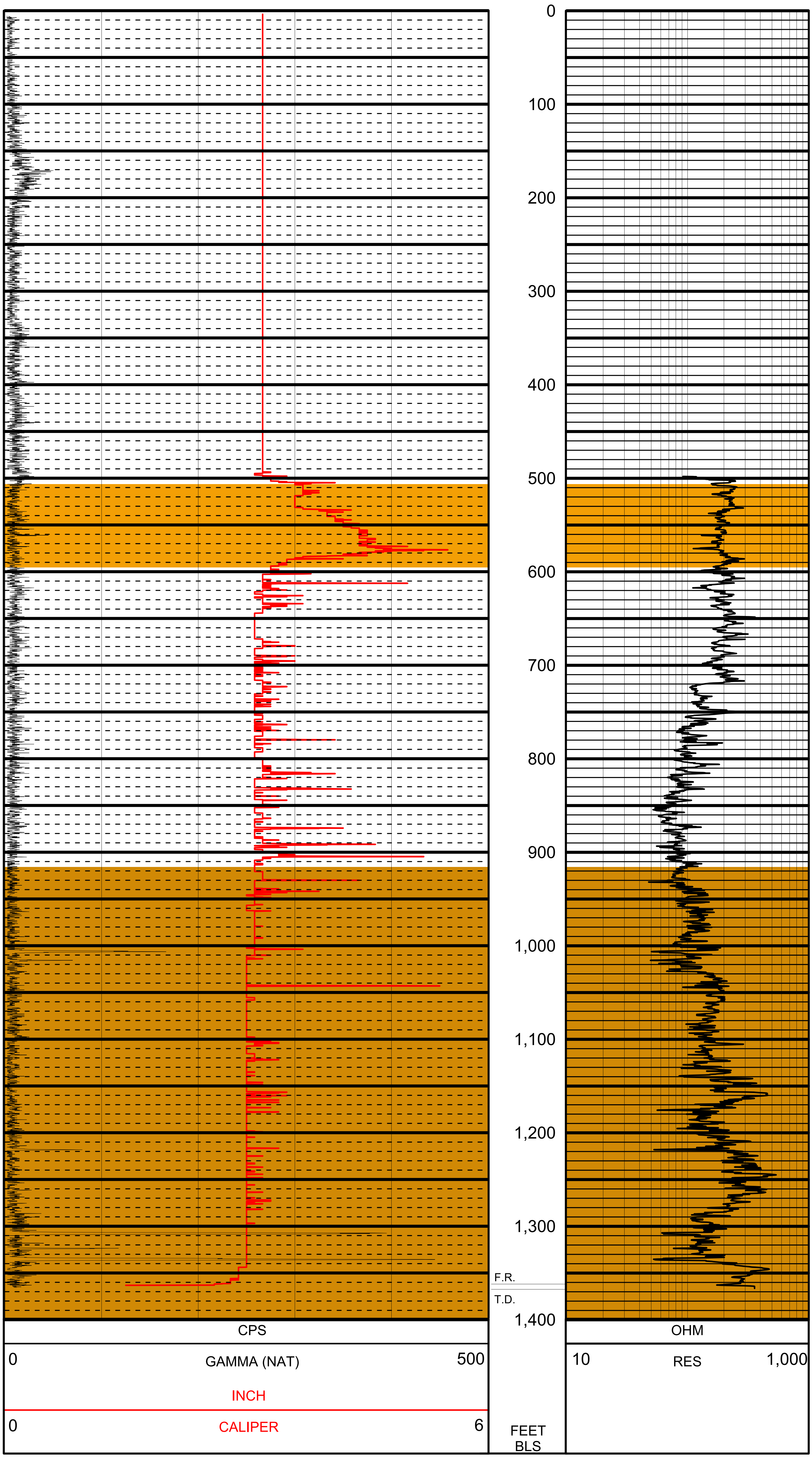
[BLS, below land surface; CPS, counts per second; DEG F, degrees in Fahrenheit; F.R., first reading above total depth a geophysical tool makes a measurement; M, meters; MV, millivolts; NAT, natural; RES, single-point resistance; RES (16N), short-normal resistivity; RES (64N), long-normal resistivity; SP, spontaneous potential; SP COND, specific conductance; T.D., total depth; TEMP, temperature; US/CM, microsiemens per centimeter]

Figure B2. Multifunction log for the U Fldn Aq (Avpk) Monitor well from land surface to 256.8 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on August 11, 2016, using the Century® 8044C (multifunction) tool. Four-inch polyvinyl casing was installed to 195 feet below land surface at time of logging. Log curves are clipped above 195 feet below land surface except for the caliper and gamma-ray curves because the data are valid inside the casing. The log scale is 2 inches per 100 feet. Tracks 1 and 3 are linearly scaled and track 2 is in logarithmic scale. The first reading is 248.8 feet below land surface.



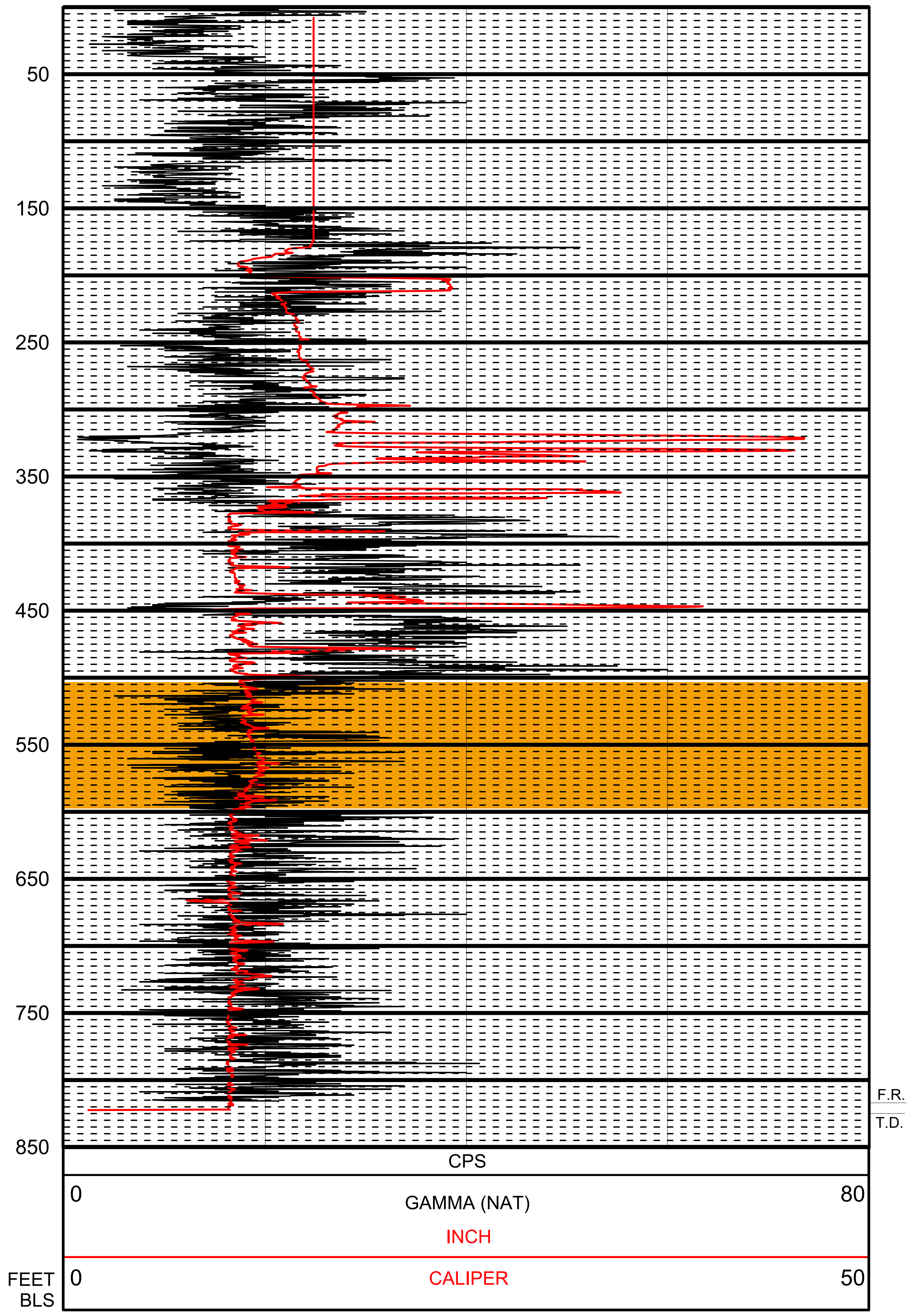
[BLS, below land surface; CPS, counts per second; DEG F, degrees in Fahrenheit; F.R., first reading above total depth a geophysical tool makes a measurement; M, meters; MV, millivolts; N, normal; NAT, natural; RES, single-point resistance; SP, spontaneous potential; SP COND, specific conductance; T.D., total depth; TEMP, temperature; US/CM, microsiemens per centimeter]

Figure B3. Caliper/gamma-ray and multifunction logs for core hole 2 from land surface to 437 and 437.2 feet below land surface, respectively, conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The logs were performed on March 02, 2017, using the Century® 9165C (caliper/gamma-ray) and 8044C (multifunction) tools. Four-inch inner diameter temporary steel casing (HWT) was installed to 91 feet below land surface at time of logging. Log curves are clipped above 91 feet below land surface except for the caliper and gamma-ray curves because the data are valid inside the casing. The log scale is 2 inches per 100 feet. Tracks 1 and 3 are linearly scaled and track 2 is in logarithmic scale. The first reading is 430.8 feet below land surface for the caliper/gamma-ray log and 429.8 feet below land surface for the multifunction tool.



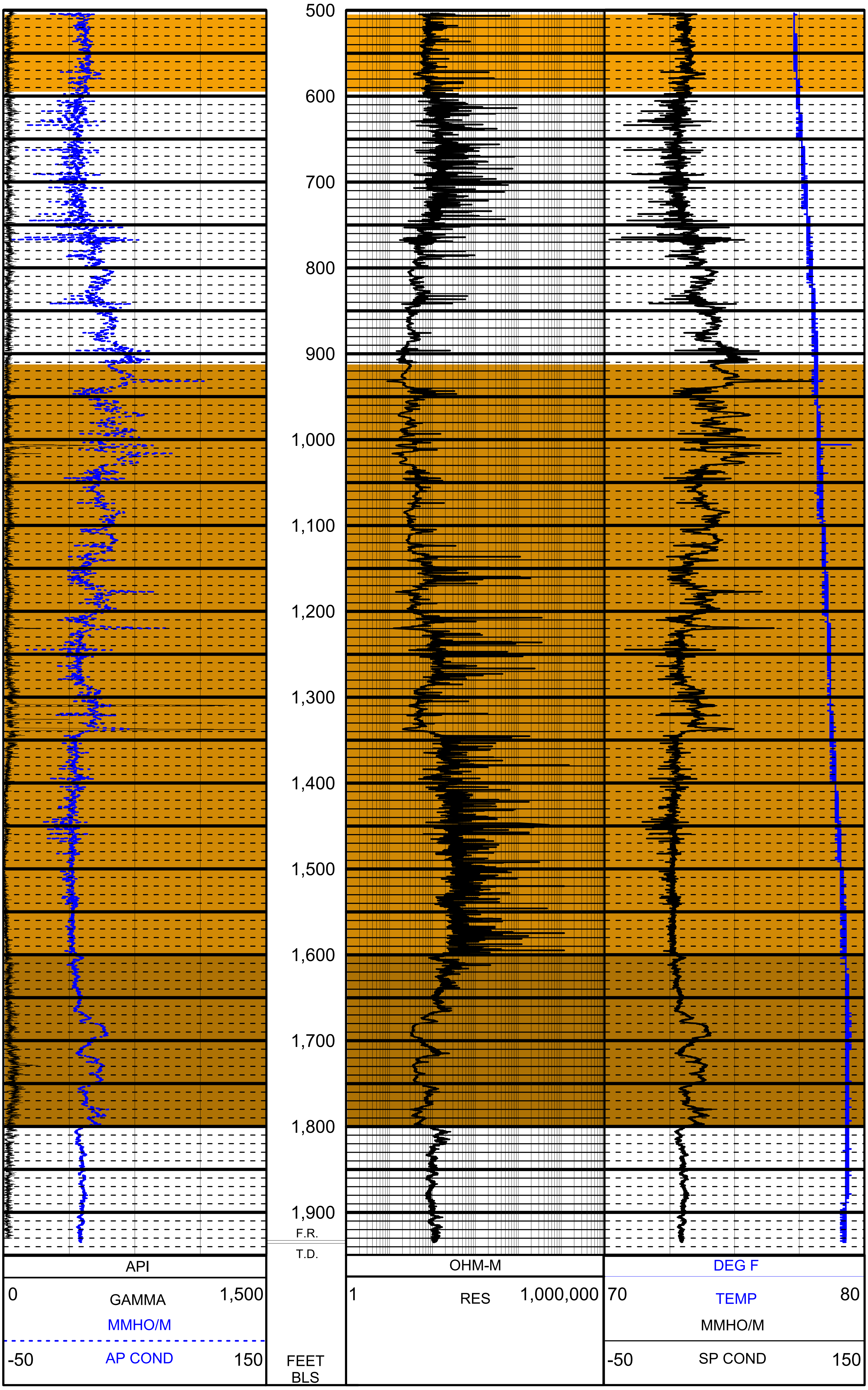
[BLS, below land surface; CPS, counts per second; F.R., first reading above total depth a geophysical tool makes a measurement; NAT, natural; RES, single-point resistance; T.D., total depth]

Figure B4. Caliper and multifunction logs for core hole 3 from near land surface to 1,363.2 and 1,366.4 feet below land surface, respectively, conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The logs were performed on June 01, 2018, using the Century® 9064A (caliper) and 9060C (multifunction) tools. HQ (3.06-inch inner diameter steel core drilling rods) were installed to 497 feet below land surface at time of logging. The resistance curve is clipped above 497 feet below land surface because the data are not valid inside the casing. The log scale is 1-inch per 100 feet. Track 1 is linearly scaled and track 2 is in logarithmic scale. The first reading is 1,363.2 feet below land surface for the caliper log and 1,365.6 feet below land surface for the multifunction log. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



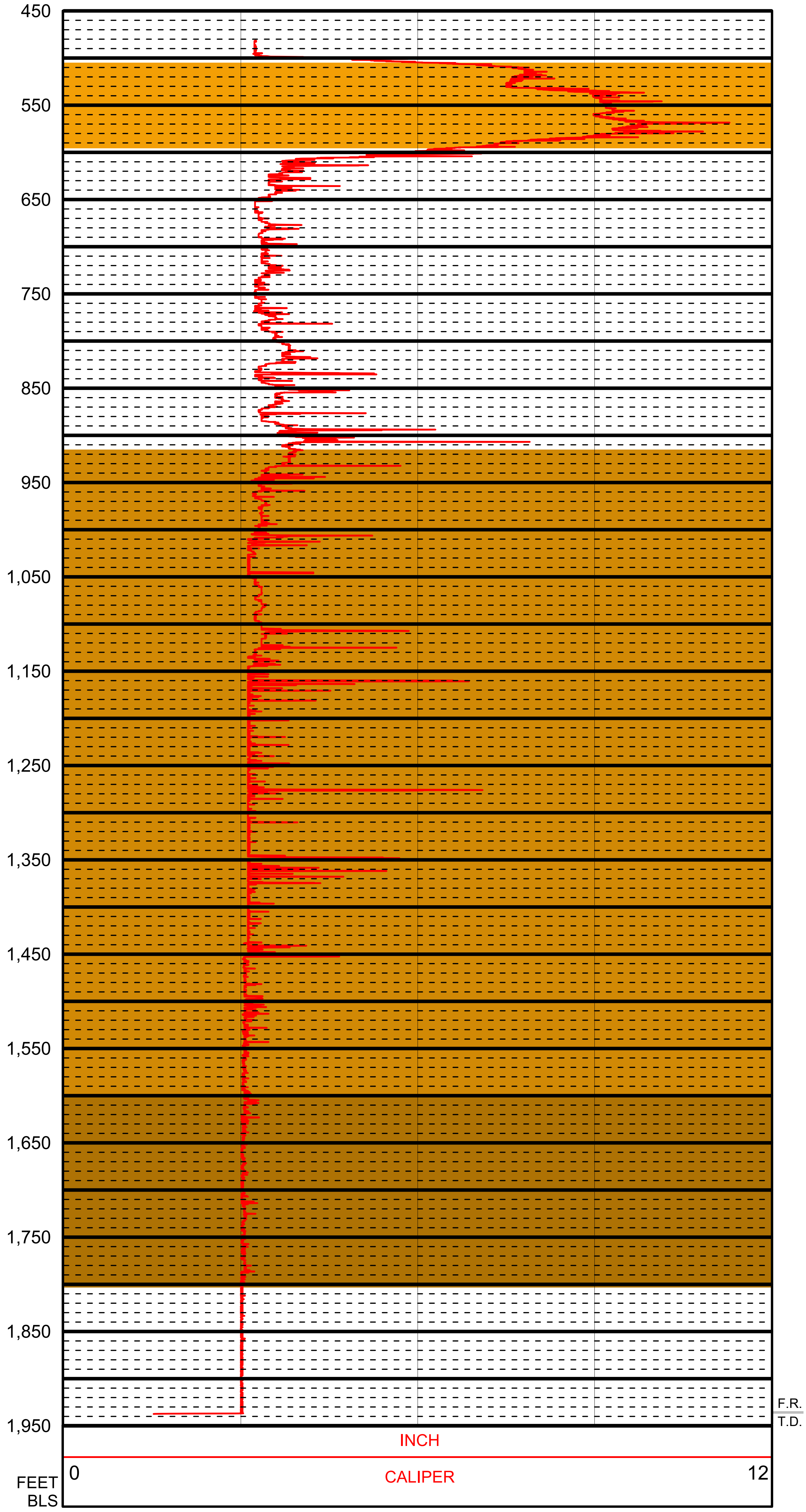
[BLS, below land surface; CPS, counts per second; F.R., first reading above total depth a geophysical tool makes a measurement; NAT, natural; T.D., total depth]

Figure B5. Caliper and gamma-ray log for the L Fldn Aq (bl MCU I) Prod Temp well from land surface to 822.4 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on January 17, 2019, using the Century® 9165C (caliper/gamma-ray) tool. Sixteen-inch steel casing was installed to 200 feet below land surface at time of logging. The log scale is 1-inch per 100 feet and is linearly scaled. The first reading is 816 feet below land surface. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



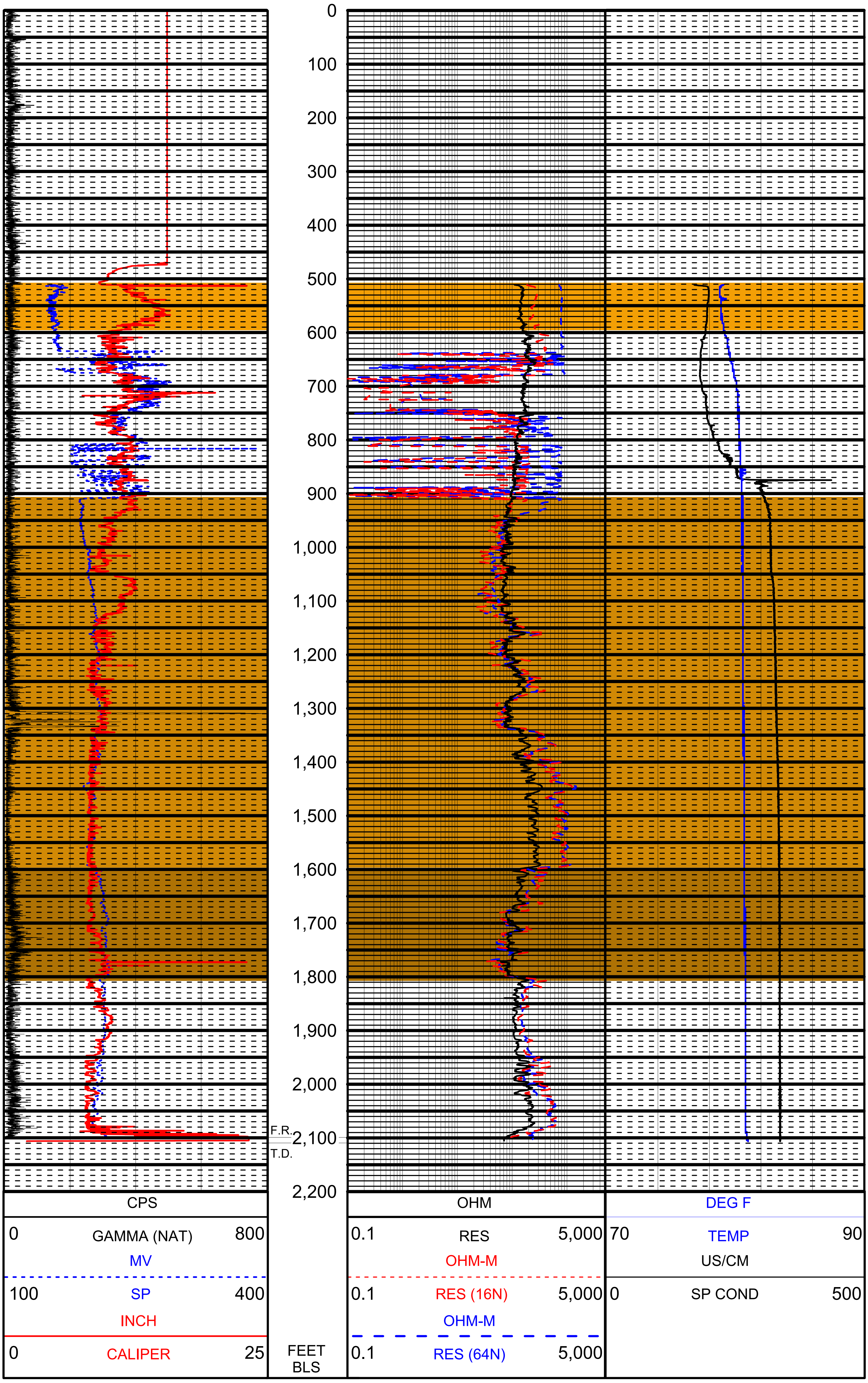
[AP COND, apparent conductivity; API, American Petroleum Institute units; BLS, below land surface; DEG F, degrees in Fahrenheit; F.R., first reading above total depth a geophysical tool makes a measurement; M, meters; MMHO/M, millimhos per meter; RES, single-point resistance; SP COND, specific conductance; T.D., total depth; TEMP, temperature]

Figure B6. Induction log for core hole 3 from 498.9 to 1,935 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on June 04, 2019, using the Century® 9511A (induction) tool. HQ (3.06-inch inner diameter steel core drilling rods) were installed to 497 feet below land surface at time of logging. The log scale is 1-inch per 125 feet. Tracks 1 and 3 are linearly scaled and track 2 is in logarithmic scale. The first reading is 1,930.6 feet below land surface. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



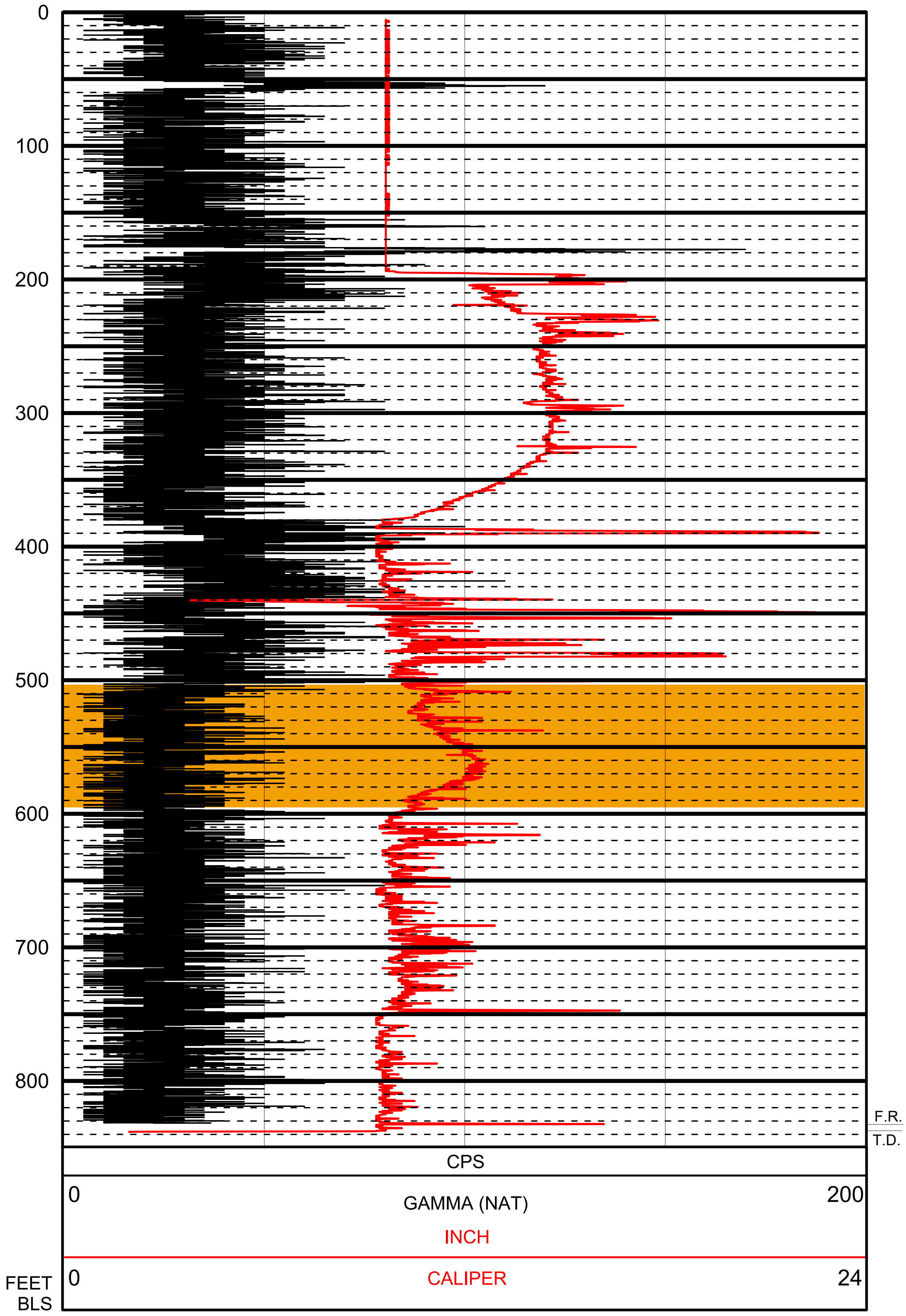
[BLS, below land surface; F.R., first reading above total depth a geophysical tool makes a measurement; T.D., total depth]

Figure B7. Caliper log for core hole 3 from 474.4 to 1,937.5 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on June 04, 2019, using the Century® 9165A (caliper) tool. HQ (3.06-inch inner diameter steel core drilling rods) were installed to 497 feet below land surface at time of logging. The log scale is 1-inch per 125 feet and is linearly scaled. The first reading is 1,937.4 feet below land surface. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



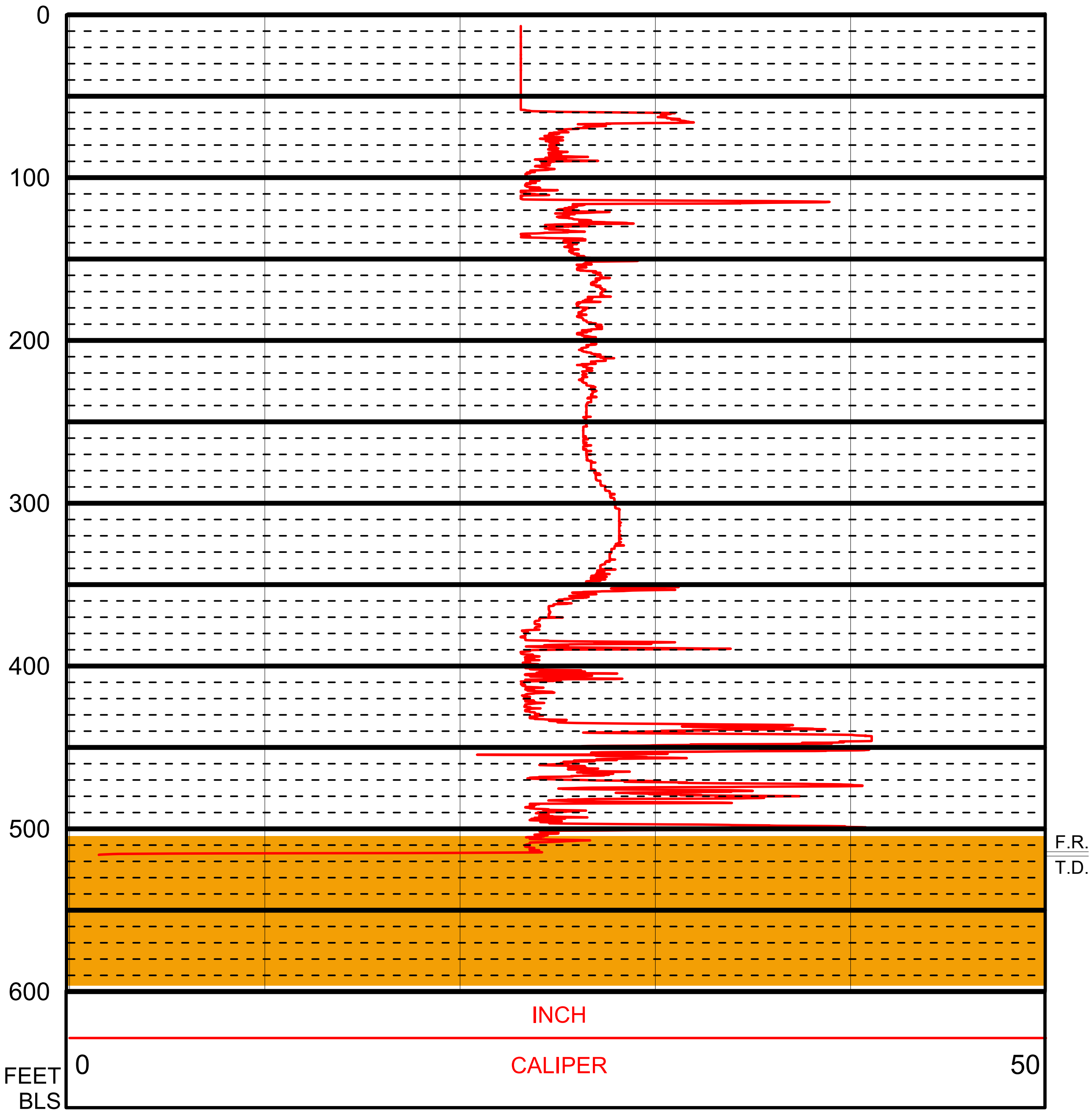
[BLS, below land surface; CPS, counts per second; DEG F, degrees in Fahrenheit; F.R., first reading above total depth a geophysical tool makes a measurement; M, meters; MV, millivolts; NAT, natural; RES, single-point resistance; RES (16N), short-normal resistivity; RES (64N), long-normal resistivity; SP, spontaneous potential; SP COND, specific conductance; T.D., total depth; TEMP, temperature; US/CM, microsiemens per centimeter]

Figure B8. Caliper/gamma-ray and multifunction logs for the L Fldn Aq (bl MCU VIII) Monitor well from 3.90 to 2,106.4 feet below land surface and 3.80 to 2,106.8 feet below land surface, respectively. The logs were conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida on October 24, 2019, using the Century® 9074C (caliper) and 8144C (multifunction) tools. Sixteen-inch steel casing was installed to 510 feet below land surface at time of logging. Cement was inside the casing from about 470 to 510 feet below land surface. Log curves are clipped above 510 feet below land surface except for the caliper and gamma-ray curves because the data are valid inside the casing. The log scale is 1-inch per 200 feet. Tracks 1 and 3 are linearly scaled and track 2 is in logarithmic scale. The first reading is 2,099.7 feet below land surface for the caliper/gamma-ray log and is 2,100 feet below land surface for the multifunction log. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



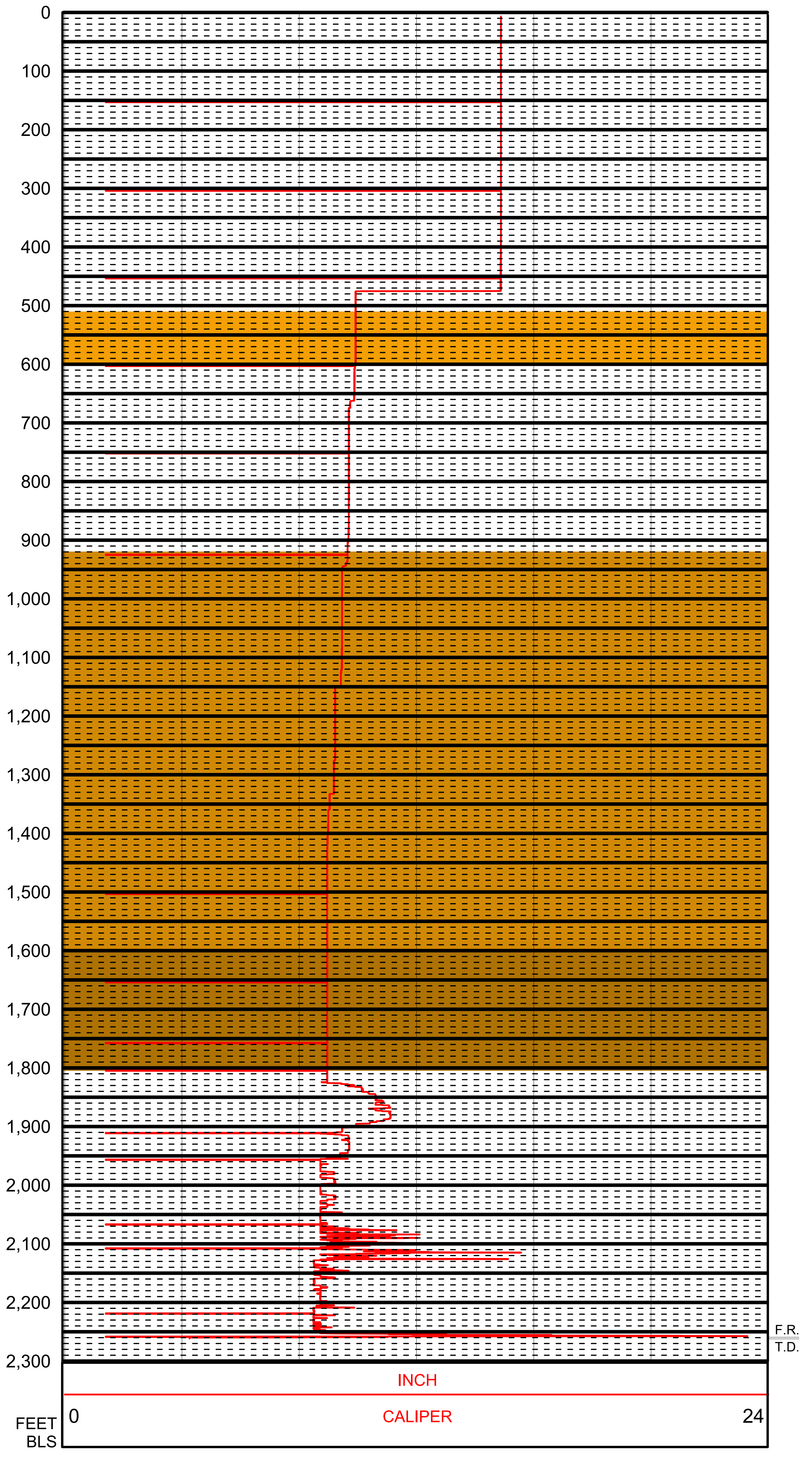
[BLS, below land surface; CPS, counts per second; F.R., first reading above total depth a geophysical tool makes a measurement; NAT, natural; T.D., total depth]

Figure B9. Caliper and gamma-ray log for the L Fldn Aq (bl MCU I) Monitor well from land surface to 838.3 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on December 12, 2019, using the Century® 9074C (caliper/gamma-ray) tool. Ten-inch steel casing was installed to 195 feet below land surface at time of logging. The log scale is 1-inch per 100 feet and is linearly scaled. The first reading is 831.6 feet below land surface. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



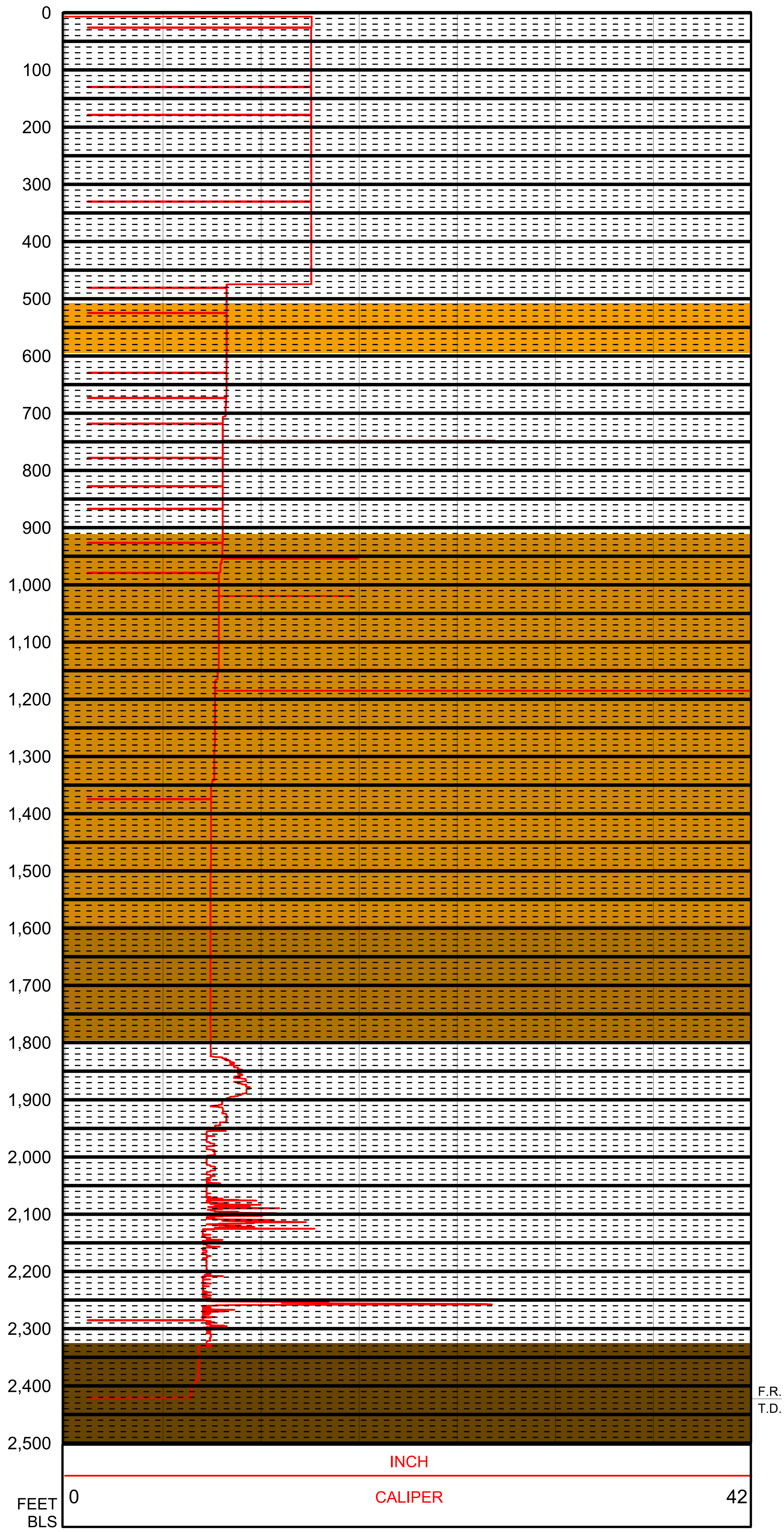
[BLS, below land surface; F.R., first reading above total depth a geophysical tool makes a measurement; T.D., total depth]

Figure B10. Caliper log for the L Fldn Aq (bl MCU VIII) Prod Temp well from 6.8 to 516.1 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on Febraury 18, 2020, using the Century® 9064A (caliper) tool. Twenty-four inch diameter steel casing was installed to 60 feet below land surface at time of logging. The log scale is 1-inch per 100 feet and is linearly scaled. The first reading is 516 feet below land surface. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



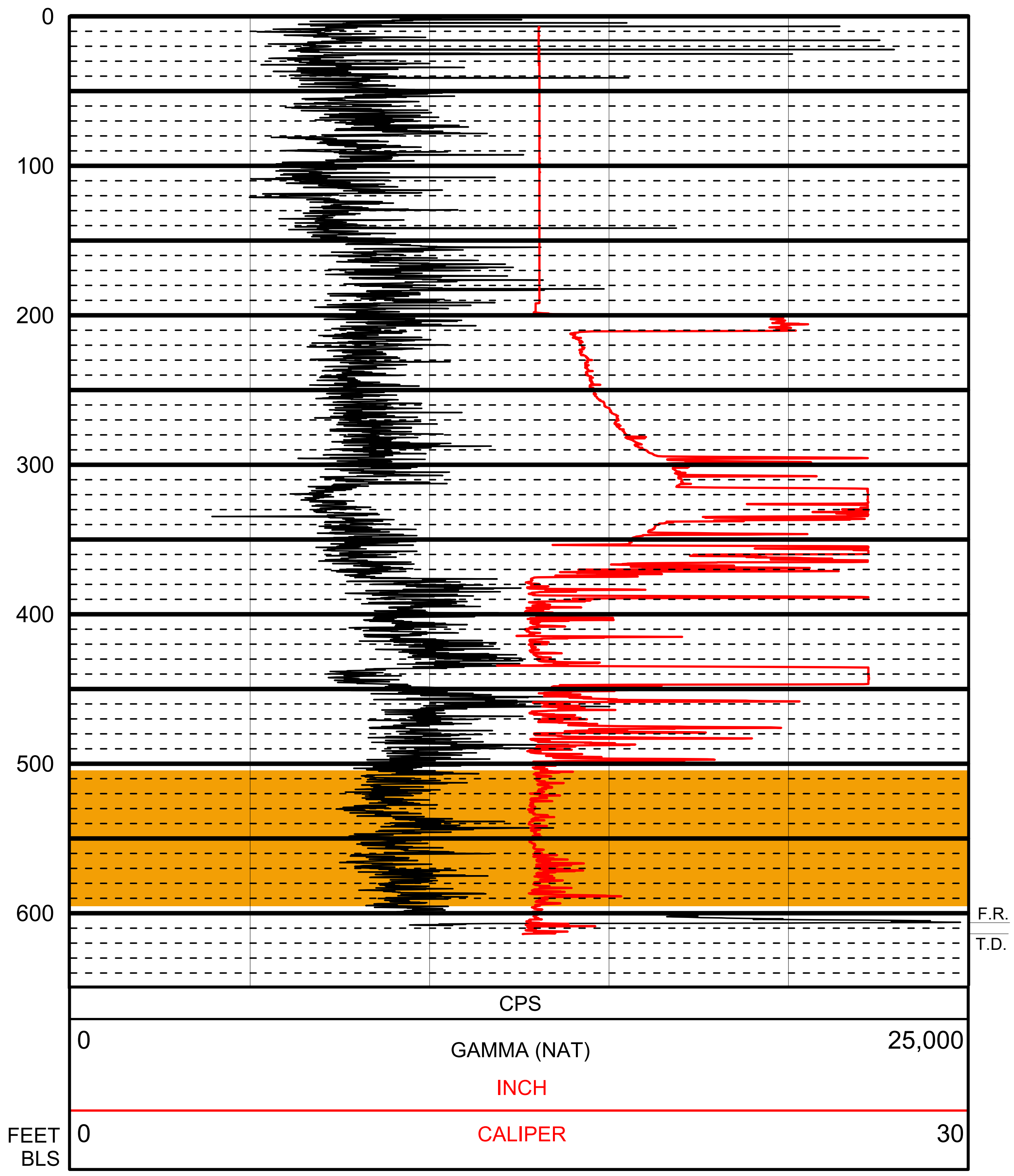
[BLS, below land surface; F.R., first reading above total depth a geophysical tool makes a measurement; T.D., total depth]

Figure B11. Caliper log for the L Fldn Aq (bl MCU VIII) Prod Temp well from 6.8 to 2,261.6 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on March 31, 2020, using the Century® 9064A (caliper) tool. Sixteen-inch diameter steel casing was installed to 510 feet below land surface and 10-inch steel casing was installed from 470 to 1,800 feet below land surface at time of logging. The log scale is 1-inch per 200 feet and is linearly scaled. The first reading is 2,261.5 feet below land surface. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



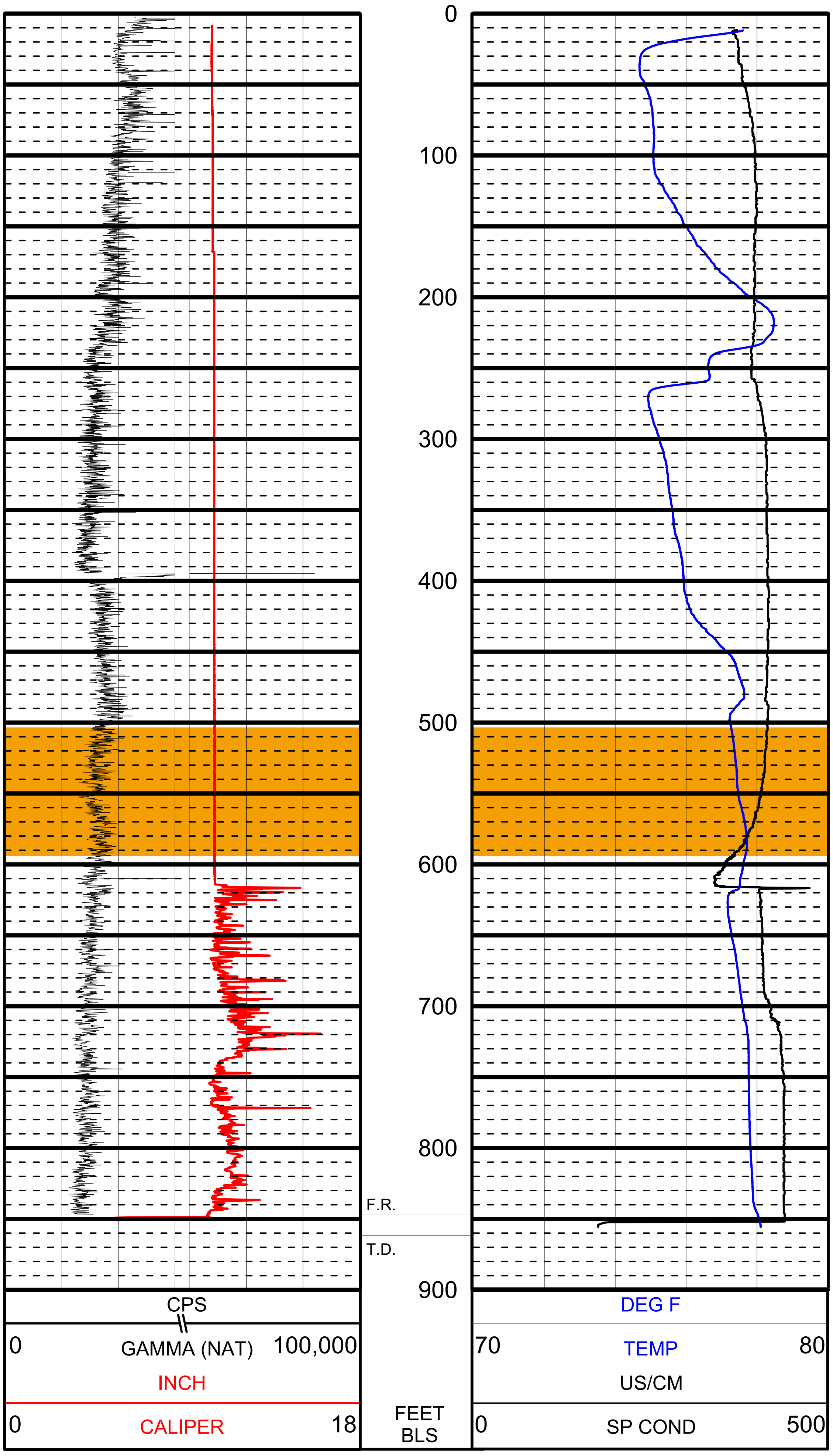
[BLS, below land surface; F.R., first reading above total depth a geophysical tool makes a measurement; T.D., total depth]

Figure B12. Caliper log for the L Fldn Aq (bl MCU VIII) Prod Temp well from 6.8 to 2,422 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on April 02, 2020, using the Century® 9064A (caliper) tool. Sixteen-inch diameter steel casing was installed to 510 feet below land surface and 10-inch steel casing was installed from 470 to 1,800 feet below land surface at time of logging. The log scale is 1-inch per 200 feet and is linearly scaled. The first reading is 2,421.9 feet below land surface. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



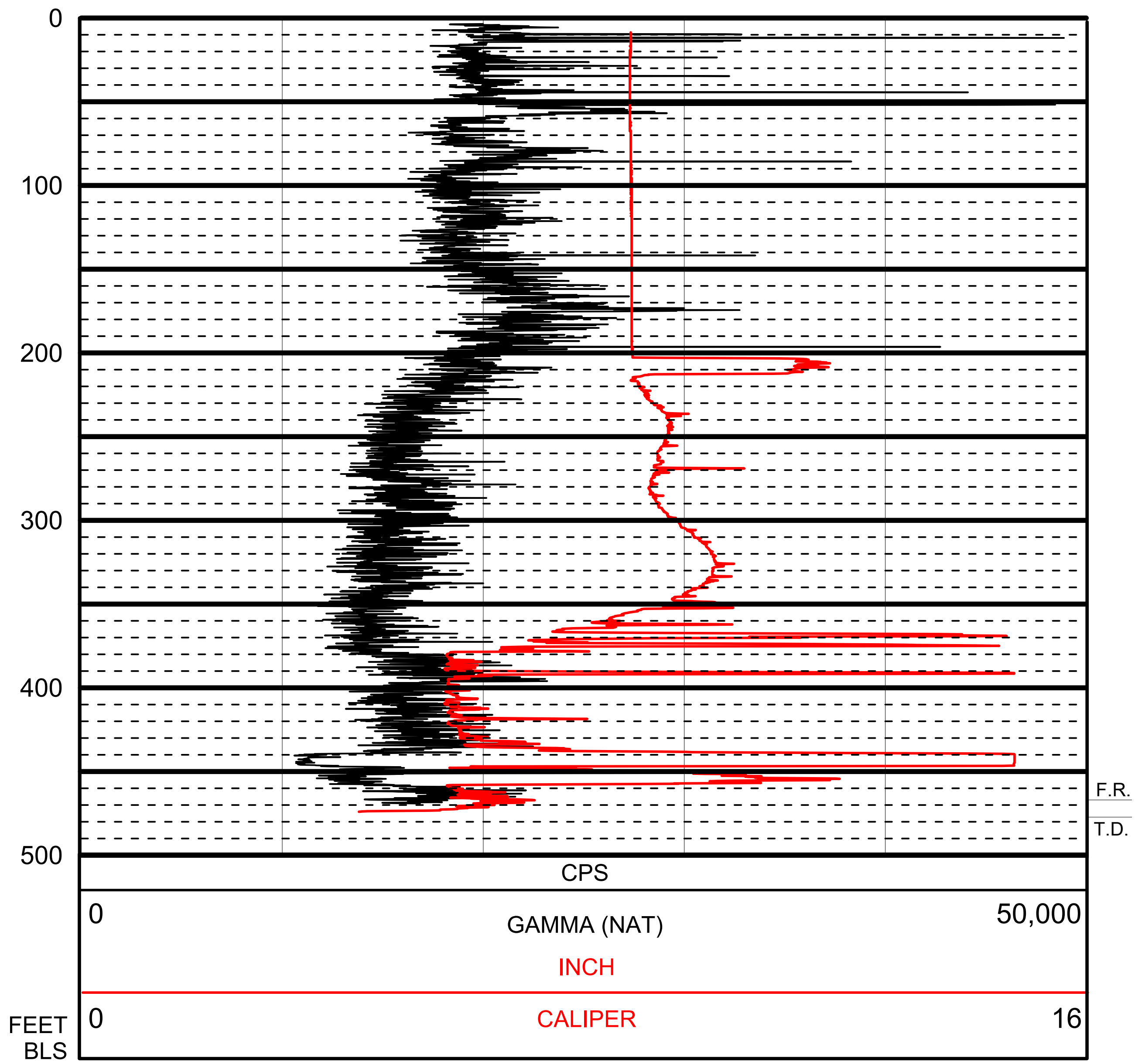
[BLS, below land surface; CPS, counts per second; F.R., first reading above total depth a geophysical tool makes a measurement; NAT, natural; T.D., total depth]

Figure B13. Caliper and gamma-ray log for the L Fldn Aq (bl MCU I) Prod Temp well from 1.3 to 614.1 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on July 21, 2022, using the Mount Sopris Instruments CAL-6724 (caliper) and GRA-6704 (gamma-ray) tools. Sixteen-inch diameter steel casing was installed to 200 feet below land surface at time of logging. The gamma-ray log counts per second are higher than expected because of a loose photo mulitplier or detector; however, the profile should be unaffected. The log scale is 1-inch per 100 feet and is linearly scaled. The first reading is 608.2 feet below land surface. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



[BLS, below land surface; CPS, counts per second; DEG F, degrees in Fahrenheit; F.R., first reading above total depth a geophysical tool makes a measurement; NAT, natural; SP COND, specific conductance; T.D., total depth; TEMP, temperature; US/CM, microsiemens per centimeter]

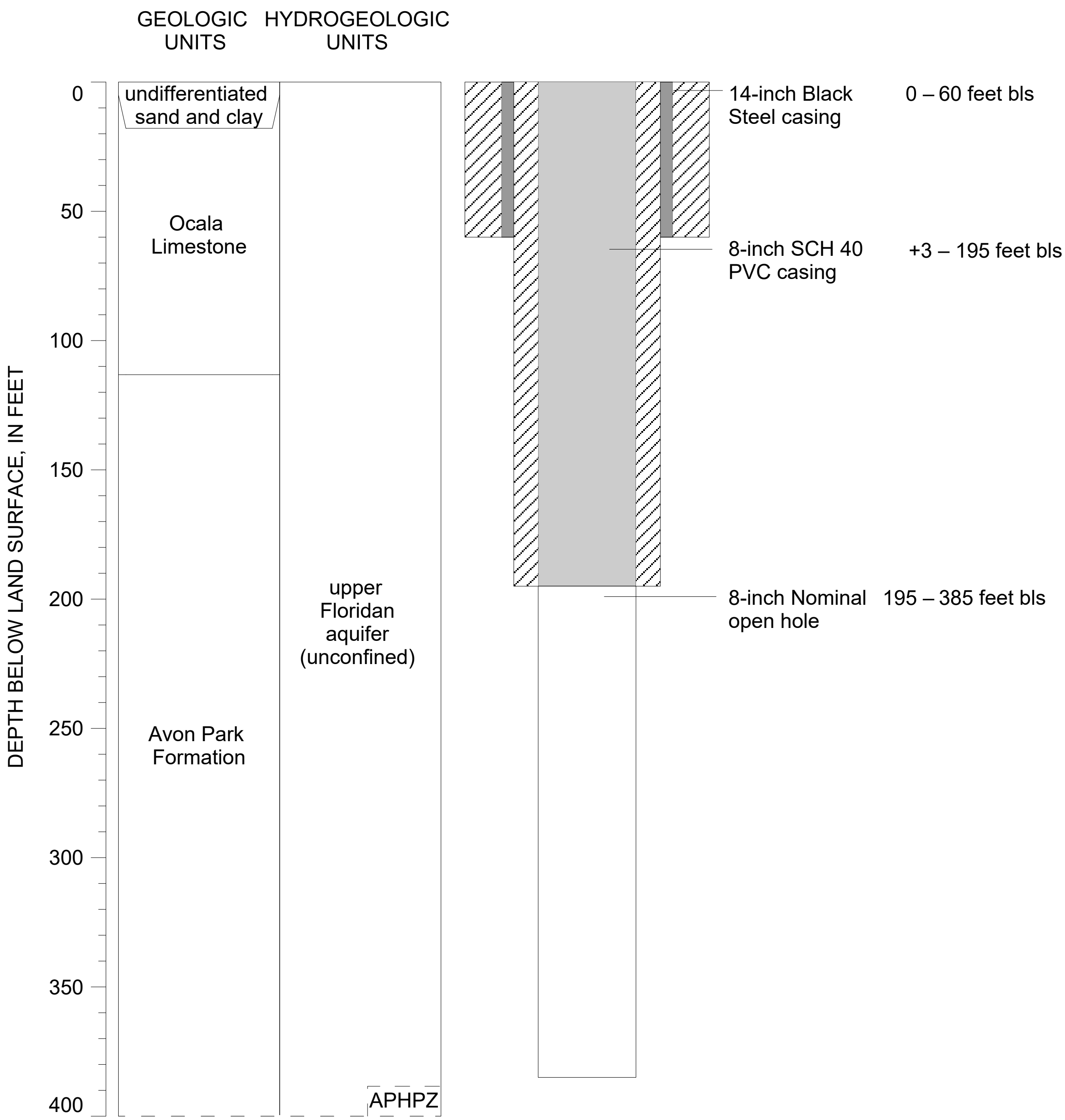
Figure B14. Caliper and gamma-ray, specific conductance, and temperature logs for the L Fldn Aq (bl MCU I) Prod Temp well from 2.7 to 855.9 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on August 22, 2022, using the Mount Sopris Instruments CAL-6724 (caliper), GRA-6704 (gamma-ray), and FTC-6692 (fluid, temperature, conductivity) tools. Ten-inch diameter steel casing was installed to 615 feet below land surface at time of logging. The gamma-ray log counts per second are higher than expected because of a loose photo mulitplier or detector; however, the profile should be unaffected. The log scale is 1-inch per 100 feet and is linearly scaled. The first reading is 608.2 feet below land surface. Shaded intervals indicate confining units and the depths are from the exploratory core hole, not the logged well.



[BLS, below land surface; CPS, counts per second; F.R., first reading above total depth a geophysical tool makes a measurement; NAT, natural; T.D., total depth]

Figure B15. Caliper and gamma-ray log for the U Fldn Aq Prod Temp well from 2.8 to 477.3 feet below land surface conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida. The log was performed on August 23, 2022, using the Mount Sopris Instruments CAL-6724 (caliper) and GRA-6704 (gamma-ray) tools. Sixteen-inch diameter steel casing was installed to 202 feet below land surface at time of logging. The gamma-ray log counts per second are higher than expected because of a loose photo mulitplier or detector; however, the profile should be unaffected. The log scale is 1-inch per 100 feet and is linearly scaled. The first reading is 469.1 feet below land surface.

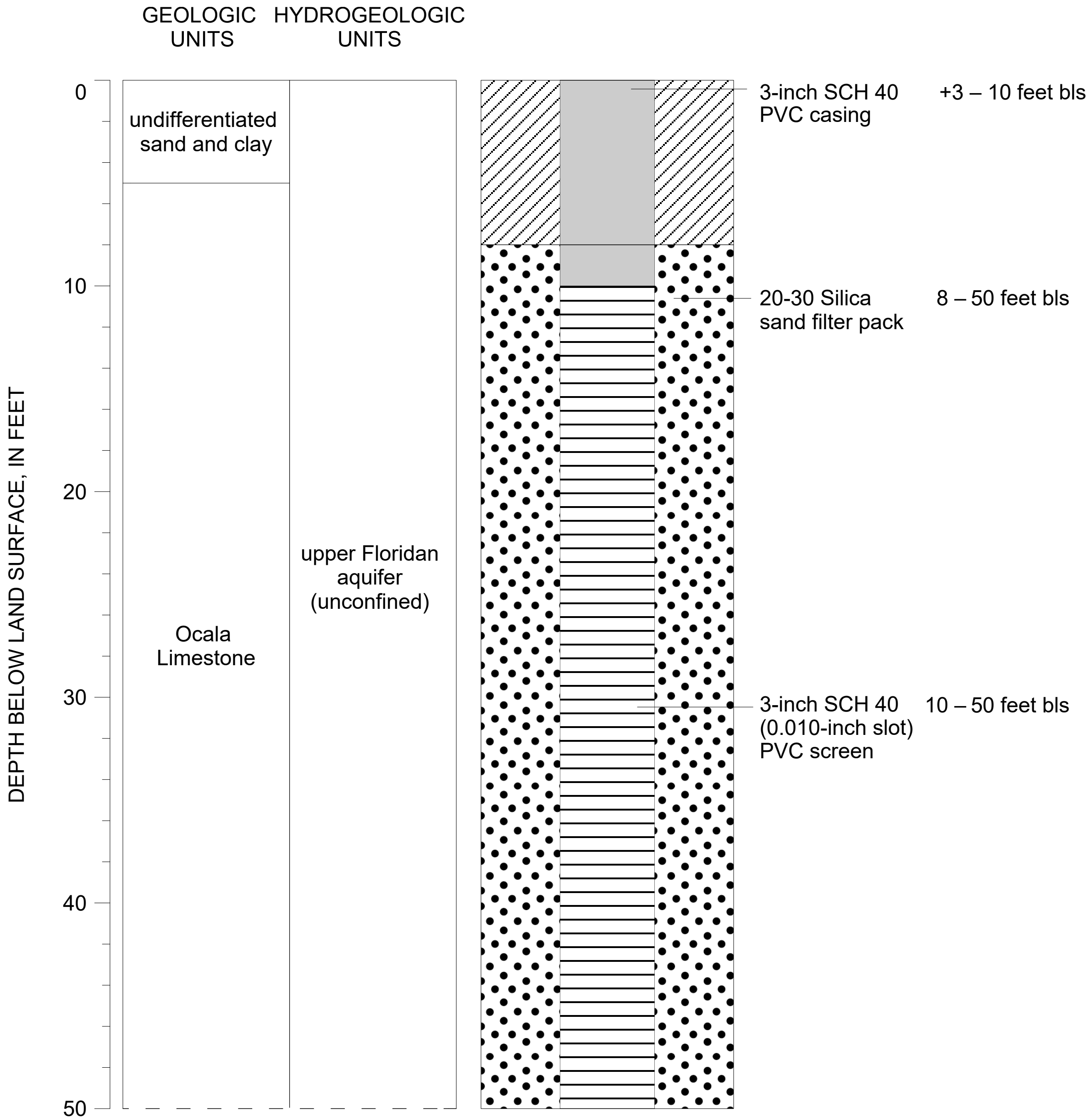
Appendix C. Well As-Built Diagrams for the ROMP 88 – Rock Ridge Well Site in Polk County, Florida



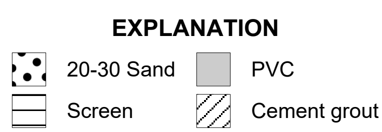
Well Name:	ROMP 88 U Fldn Aq (Avpk) Monitor
SID:	17708
WCP:	371680
S/T/R:	16/25S/24E
Latitude:	28° 18' 38.49" N
Longitude:	81° 54' 40.87" W
Reporting Category:	LWRK
Const. Began:	--
Const. Complete:	10/01/1982

[APHPZ, Avon Park high-permeability zone; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; Const., Construction; E, east; Fldn, Floridan; N, north; PVC, polyvinyl chloride; ROMP, Regional Observation and Monitor-well Program; S, south; SCH, schedule; SID, station identification; S/T/R, Section/Township/Range; U, upper; W, west; WCP, well construction permit number]

Figure C1. As-built diagram for the Avon Park Formation portion of the upper Floridan aquifer monitor well (Drilling Water Supply) at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

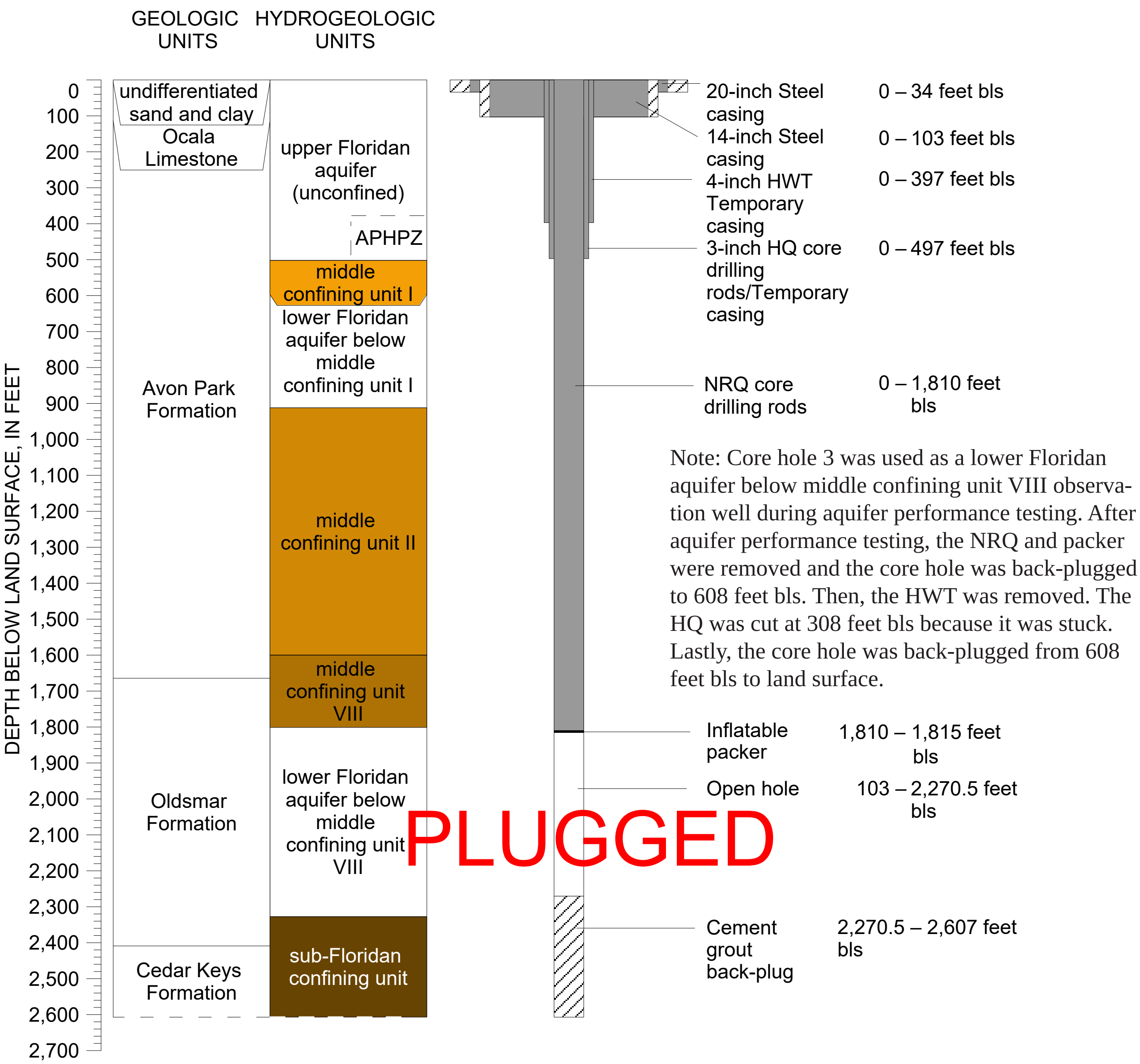


Well Name:	ROMP 88 U Fldn Aq (Ocala) Monitor
SID:	878906
WCP:	856831
S/T/R:	16/25S/24E
Latitude:	28° 18' 37.80" N
Longitude:	81° 54' 38.52" W
Reporting Category:	LWRK
Const. Began:	01/17/2017
Const. Complete:	01/18/2017



[Aq, aquifer; bls, below land surface; Const., Construction; E, east; Fldn, Floridan; N, north; PVC, polyvinyl chloride; ROMP, Regional Observation and Monitor-well Program; S, south; SCH, schedule; SID, station identification; S/T/R, Section/Township/Range; U, upper; W, west; WCP, well construction permit number]

Figure C2. As-built diagram for the Ocala Limestone portion of the upper Floridan aquifer monitor well at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



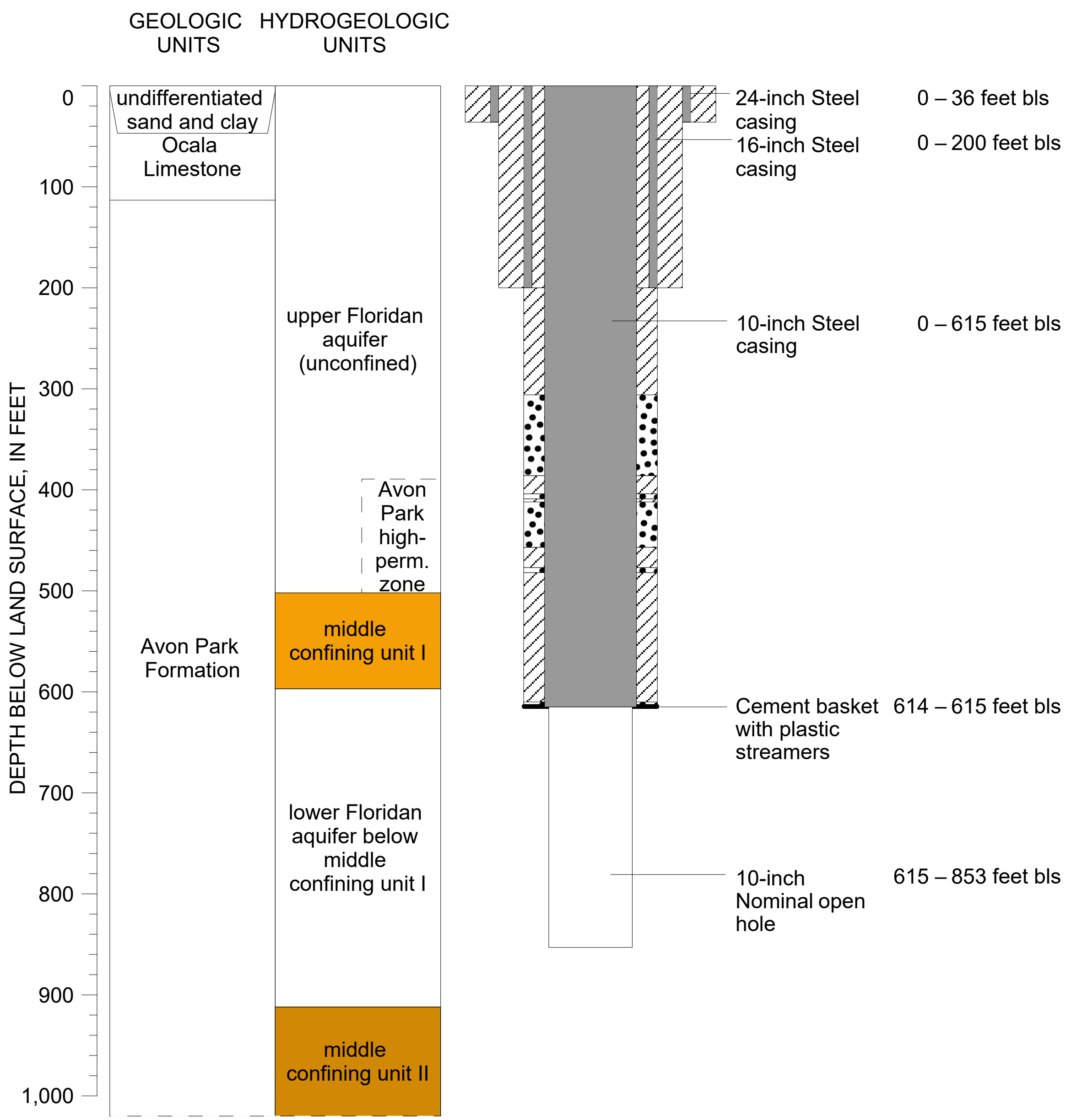
Well Name:	ROMP 88 Core Hole 3 (L Fldn Aq [bl MCU VIII]) OB
SID:	887169
WCP:	853409, 862560, 871393, 880933, 883878, 928603, 945269
S/T/R:	16/25S/24E
Latitude:	28° 18' 38.01" N
Longitude:	81° 54' 40.81" W
Reporting Category:	LWRK
Const. Began:	02/23/2017
Const. Complete:	12/06/2024

EXPLANATION

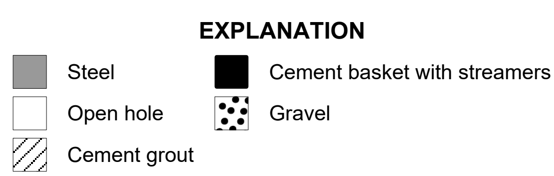
Steel
Cement grout
Open hole
Packer

[APHPZ, Avon Park high-permeability zone; Aq, aquifer; bl, below; bls, below land surface; Const., Construction; E, east; Fldn, Floridan; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; L, lower; MCU, middle confining unit; N, north; NRQ, 2.38-inch inner diameter steel core drilling rod; Ob, observation; ROMP, Regional Observation and Monitor-well Program; S, south; SID, station identification; S/T/R, Section/Township/Range; W, west; WCP, well construction permit number]

Figure C3. As-built diagram for core hole 3 (additional observation well during the lower Floridan aquifer below middle confinng unit VIII aquifer performance test) at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

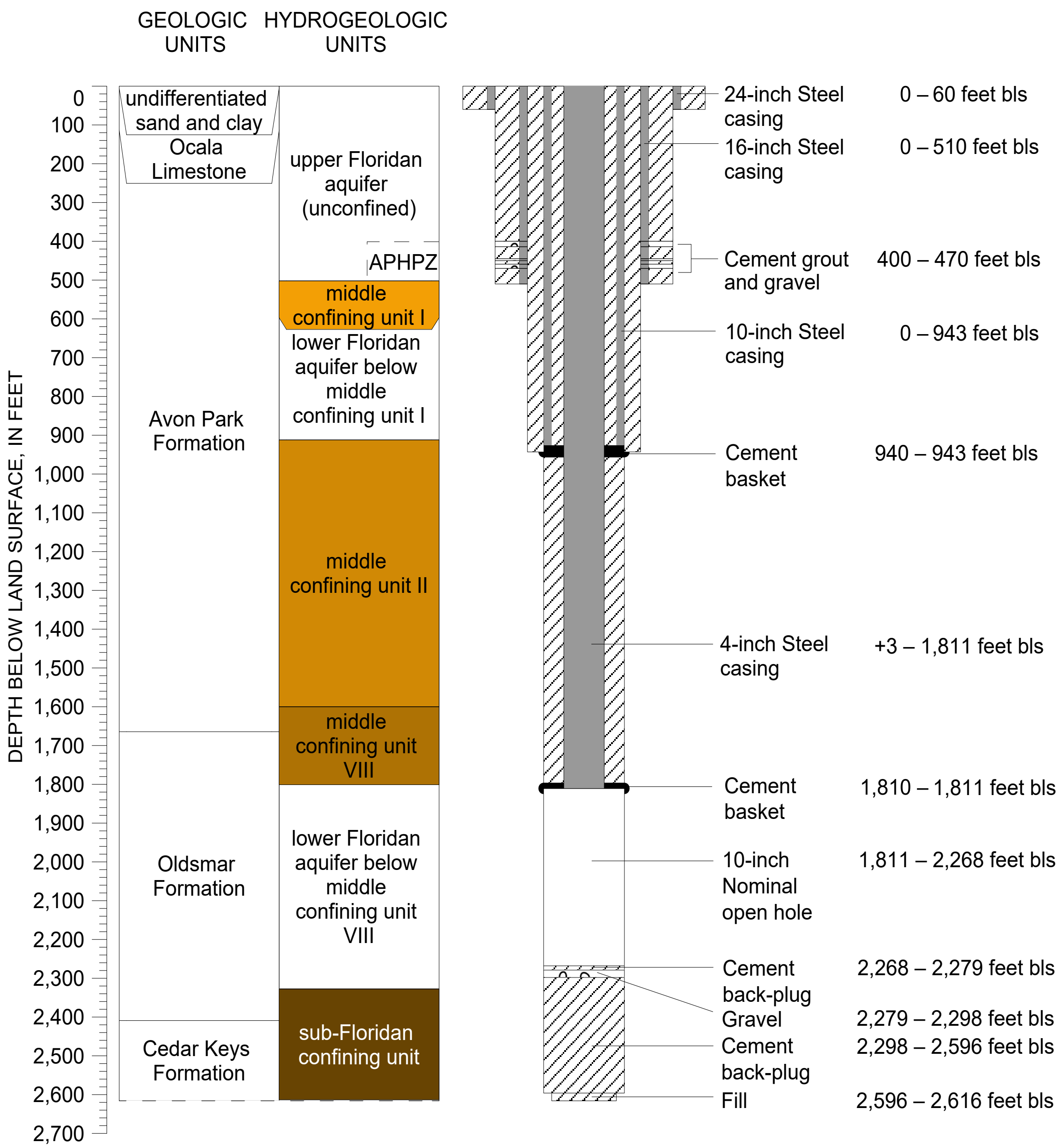


Well Name:	ROMP 88 L Fldn Aq (bl MCU I) Prod Temp
SID:	916330
WCP:	874833, 913454
S/T/R:	16/25S/24E
Latitude:	28° 18' 37.08" N
Longitude:	81° 54' 38.88" W
Reporting Category:	LWRK
Const. Began:	01/03/2019; 07/18/2022
Const. Complete:	01/17/2019; 08/24/2022



[Aq, aquifer; bl, below; bls, below land surface; Const., Construction; E, east; Fldn, Floridan; L, lower; MCU, middle confining unit; N, north; perm., permeability; Prod, Production; ROMP, Regional Observation and Monitor-well Program; S, south; SID, station identification; S/T/R, Section/Township/Range; Temp, Temporary; W, west; WCP, well construction permit number]

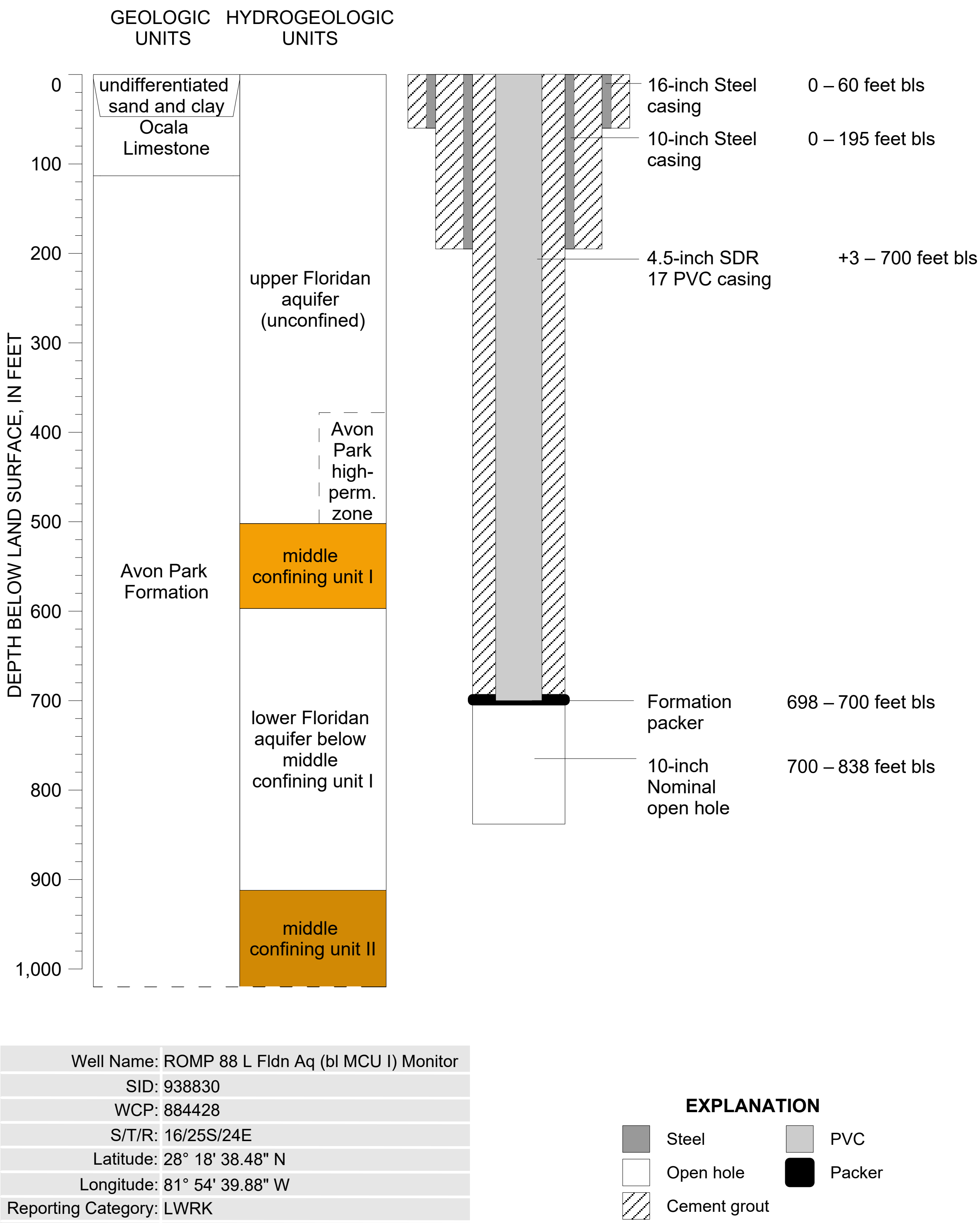
Figure C4. As-built diagram for the temporary lower Floridan aquifer below middle confining unit I production well at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



Well Name:	ROMP 88 L Fldn Aq (bl MCU VIII) Monitor
SID:	953548
WCP:	881334, 892878, 943803
S/T/R:	16/25S/24E
Latitude:	28° 18' 38.35" N
Longitude:	81° 54' 39.38" W
Reporting Category:	LWRK
Const. Began:	09/19/2019, 09/17/2020, 06/26/2024
Const. Complete:	11/22/2019, 09/29/2020, 08/14/2024

[APHPZ, Avon Park high-permeability zone; Aq, aquifer; bl, below; bls, below land surface; Const., Construction; E, east; Fldn, Floridan; L, lower; MCU, middle confining unit; N, north; ROMP, Regional Observation and Monitor-well Program; S, south; SID, station identification; S/T/R, Section/Township/Range; W, west; WCP, well construction permit number]

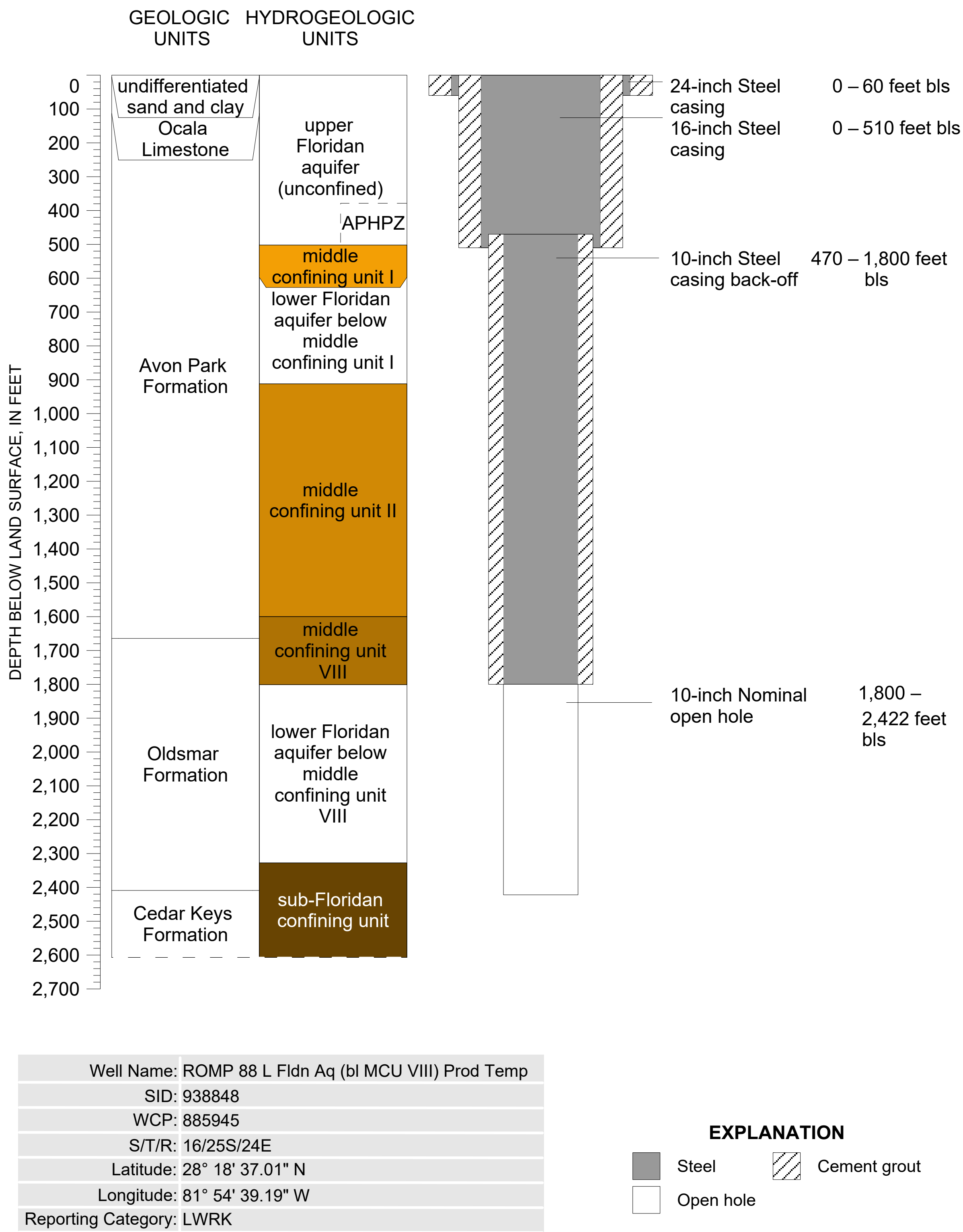
Figure C5. As-built diagram for the lower Floridan aquifer below middle confining unit VIII monitor well at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



Well Name:	ROMP 88 L Fldn Aq (bl MCU I) Monitor
SID:	938830
WCP:	884428
S/T/R:	16/25S/24E
Latitude:	28° 18' 38.48" N
Longitude:	81° 54' 39.88" W
Reporting Category:	LWRK
Const. Began:	12/06/2019
Const. Complete:	01/30/2020

[Aq, aquifer; bl, below; bls, below land surface; Const., Construction; E, east; Fldn, Floridan; L, lower; MCU, middle confining unit; N, north; perm., permeability; PVC, polyvinyl chloride; ROMP, Regional Observation and Monitor-well Program; S, south; SDR, standard dimension ratio; SID, station identification; S/T/R, Section/Township/Range; W, west; WCP, well construction permit number]

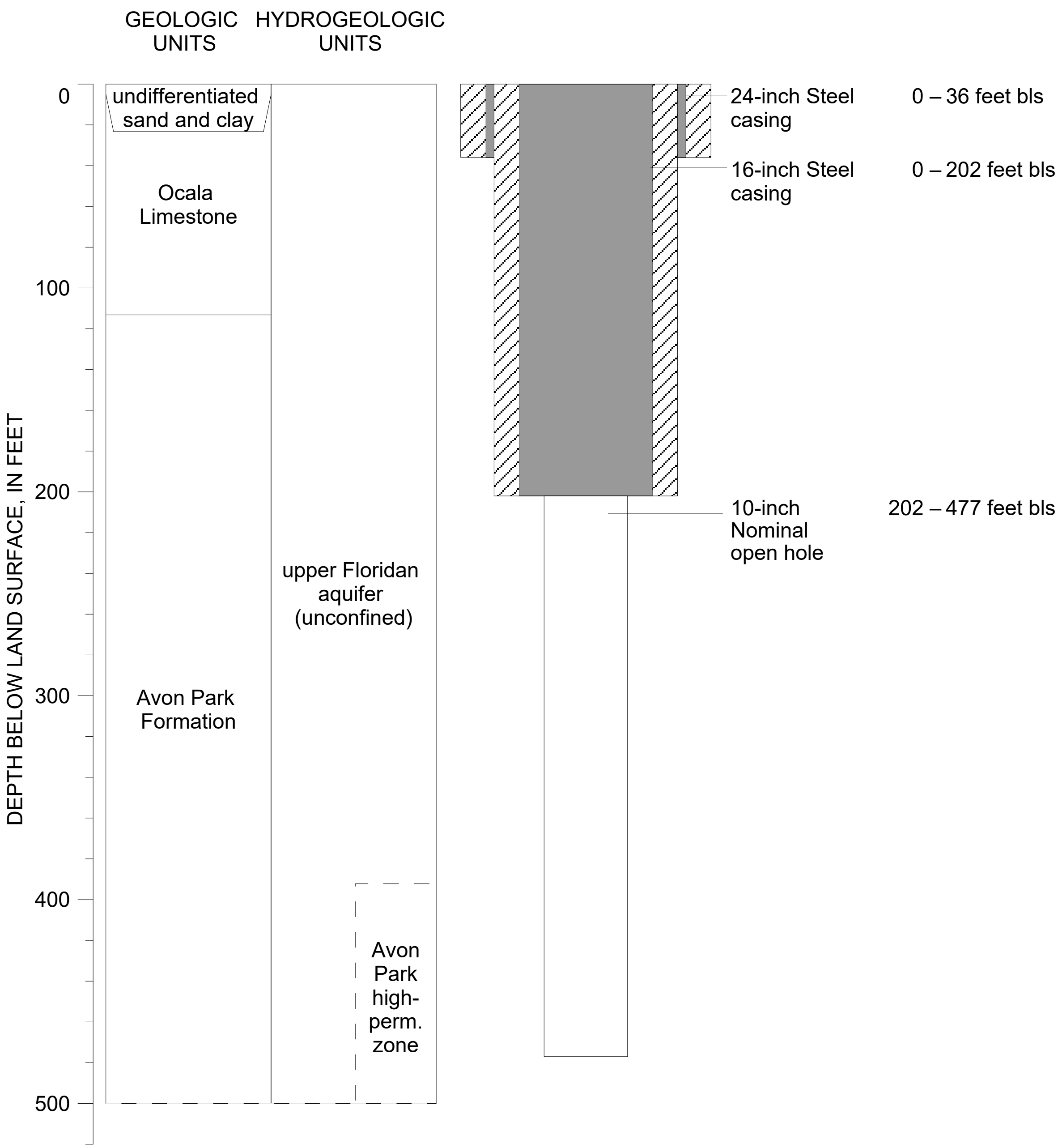
Figure C6. As-built diagram for the lower Floridan aquifer below middle confining unit I monitor well at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



Well Name:	ROMP 88 L Fldn Aq (bl MCU VIII) Prod Temp
SID:	938848
WCP:	885945
S/T/R:	16/25S/24E
Latitude:	28° 18' 37.01" N
Longitude:	81° 54' 39.19" W
Reporting Category:	LWRK
Const. Began:	02/10/2020
Const. Complete:	04/02/2020

[APHPZ, Avon Park high-permeability zone; Aq, aquifer; bl, below; bls, below land surface; Const., Construction; E, east; Fldn, Floridan; L, lower; MCU, middle confining unit; N, north; Prod, Production; ROMP, Regional Observation and Monitor-well Program; S, south; SID, station identification; S/T/R, Section/Township/Range; Temp, Temporary; W, west; WCP, well construction permit number]

Figure C7. As-built diagram for the temporary lower Floridan aquifer below middle confining unit VIII production well at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



Well Name:	ROMP 88 U Fldn Aq (Avpk) Prod Temp
SID:	986871
WCP:	913453
S/T/R:	16/25S/24E
Latitude:	28° 18' 37.18" N
Longitude:	81° 54' 38.97" W
Reporting Category:	LWRK
Const. Began:	08/15/2022
Const. Complete:	08/24/2022

[Aq, aquifer; bls, below land surface; Const., Construction; E, east; Fldn, Floridan; N, north; perm., permeability; Prod, Production; ROMP, Regional Observation and Monitor-well Program; S, south; SID, station identification; S/T/R, Section/Township/Range; Temp, Temporary; U, upper; W, west; WCP, well construction permit number]

Figure C8. As-built diagram for the temporary upper Floridan aquifer production well at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

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Appendix D. Lithologic Logs for the Samples Collected at the ROMP 88 – Rock Ridge Well Site in Polk County, Florida

Well Number: W-19709 (ROMP 88 - Rock Ridge CH-2)

XSR:
TOR:
SFrm: OCAL

Total Depth 437 feet **Elevation:** N/A

County: Polk
Location: T.25 R.24 S.16
Lat/Long: 28° 18’ 38.01” N; 81° 54’ 40.97” W
USGS Quad:

Verification:
C. Kromhout

Drill Completion Date:
Other Logs:
Owner/Driller: SWFWMD

Described by: BEN L. DAVIS in 2018 **Entered By** B.L. Davis
Comments: Continuous Core: 0’- 437’

Geological Formation Picks

0 - 5 ft	UDSC	Undifferentiated Sand and Clay
5 - 113.2 ft	OCAL	Ocala Limestone
113.2 - ? ft	AVPK	Avon Park Formation

0 - 1 ft No Sample;

1 - 1.7 ft Sand; Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular; Grain Size: Medium; Range: Medium to Fine; Roundness: Sub-angular to Sub-rounded; Low Sphericity; Unconsolidated; Accessory Minerals: Mica-4%, Organics-2%, Phosphatic Sand-<1%; Other Features: Friable; General Fossils: No Fossils; Near surface sample interval contained accessory muscovite mica (10YR 4/2).

1.7 - 2 ft Sand; Grayish Brown (10YR 6/2) to Light Brown (5YR 5/6); Porosity: Intergranular; Grain Size: Medium; Range: Medium to Coarse; Roundness: Sub-angular to Sub-rounded; Low Sphericity; Unconsolidated; Accessory Minerals: Iron Stain-6%, Organics-3%; Other Features: Friable; General Fossils: No Fossils; Sample interval is comprised of quartz sand grains with moderate iron staining.

2 - 4 ft Sand; Grayish Brown (10YR 6/2) to Light Brown (5YR 5/6); Porosity: Intergranular; Grain Size: Medium; Range: Medium to Coarse; Roundness: Sub-angular to Sub-rounded; Low Sphericity; Unconsolidated; Accessory Minerals: Iron Stain-5%, Organics-2%; Other Features: Friable; General Fossils: No Fossils; Sample interval is comprised of quartz sand grains with moderate iron staining.

4 - 5 ft Sand; Grayish Brown (10YR 6/2) to Light Brown (5YR 5/6); Porosity: Intergranular; Grain Size: Medium; Range: Medium to Coarse; Roundness: Sub-angular to Sub-rounded; Low Sphericity; Unconsolidated; Accessory Minerals: Iron Stain-5%, Organics-1%; Other Features: Friable; General Fossils: No Fossils; Sample interval is comprised of quartz sand grains with moderate iron staining.

5 - 6 ft Chert; Light Bluish Gray (5B 7/1) to Grayish Brown (10YR 6/2); Good Induration; Cement Type: Silicic; Accessory Minerals: Quartz Sand-6%, Silt-Size Dolomite-3%; General Fossils: Fossil Fragments; Sample interval consists of chert chips with significant quartz sand cavings. The interval has poor recovery consisting of only ~0.8 feet.

6 - 10 ft No Sample;

10 - 12 ft Mudstone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 2% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Quartz Sand-<1%; Other Features: Calcareous, Chalky; General Fossils: Fossil Fragments; Interval marks the top of Ocala Limestone. Abundant Lepidocyclina ocalana are present throughout the sample interval. Index Fossils: Lepidocyclina ocalana

12 - 15 ft Mudstone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 2% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Quartz Sand-<1%; Other Features: Calcareous, Chalky; General Fossils: Fossil Fragments; Abundant Ocala Limestone index fossils are present throughout the sample interval. Quartz sand are likely cavings from above. Index Fossils: Lepidocyclina ocalana

15 - 17.5 ft Mudstone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 2% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Quartz Sand-<1%; Other Features: Calcareous, Chalky; General Fossils: Fossil Fragments; Abundant Ocala Limestone index fossils are present throughout the sample interval. Quartz sand are likely cavings from above. Poor recovery consisting of only 1.5 feet. Index Fossils: Lepidocyclina ocalana

17.5 - 20 ft Mudstone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 2% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Quartz Sand-<1%; Other Features: Calcareous, Chalky; General Fossils: Fossil Fragments; Abundant Ocala Limestone index fossils are present throughout the sample interval. Quartz sand are likely cavings from above. Poor recovery consisting of only ~1.8 feet. Index Fossils: Nummulites ocalanus

20 - 22 ft Mudstone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 4% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Quartz Sand-<1%; Other Features: Calcareous, Chalky; General Fossils: Fossil Fragments; Abundant Ocala Limestone index fossils are present throughout the sample interval. Quartz sand are likely cavings from above. Poor recovery consisting of only ~1 foot. Index Fossils: Lepidocyclina ocalana

22 - 25 ft Mudstone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 4% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Chalky; General Fossils: Fossil Fragments; Abundant Ocala Limestone index fossils present throughout the interval. Poor recovery consisting of only ~2 feet. Index Fossils: Lepidocyclina ocalana

25 - 27 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 15% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Chalky; General Fossils: Benthic Foraminifera, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Noticeable increase in allochems. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

27 - 30 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 17% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Chalky; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Poor recovery consisting of only ~1 foot. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

30 - 32 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 20% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

32 - 33 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 20% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

33 - 35 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foramin-

ifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

35 - 37 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

37 - 39 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

39 - 40 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 48% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Very poor recovery consisting of only ~6 inches. Index Fossils: Lepidocyclina ocalana

40 - 42 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 40% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Index Fossils: Lepidocyclina ocalana

42 - 45 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 40% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Very poor recovery consisting of only ~4 inches. Index Fossils: Lepidocyclina ocalana

45 - 46 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 40% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Very poor recovery consisting of only ~3.5 inches. Index Fossils: Lepidocyclina ocalana

46 - 50 ft No Sample;

50 - 55 ft Wackestone; White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 40% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present throughout the interval. Very poor recovery consisting of only ~8 inches. Index Fossils: Lepidocyclina ocalana

55 - 57 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 35% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids; Abundant Ocala Limestone index fossils as well as soritids throughout the interval. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

57 - 59 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 35% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids; Abundant Ocala Limestone index fossils present. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

59 - 60 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 30% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks; Abundant Ocala Limestone index fossils present. Index Fossils: Lepidocyclina ocalana

60 - 62 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 30% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-3%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids; Abundant Ocala Limestone index fossils present. Index Fossils: Lepidocyclina ocalana

62 - 64 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 25% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

64 - 65 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 30% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-3%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids; Abundant Ocala Limestone index fossils present. Poor recovery consisting of only ~8.5 inches. Index Fossils: Lepidocyclina ocalana

65 - 67 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-3%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present. Index Fossils: Lepidocyclina ocalana

67 - 69 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 48% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present. Sample is wackestone to packstone based on amount of allochems present. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

69 - 70 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 48% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present. Sample is wackestone to packstone based on amount of allochems present. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

70 - 72 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 49% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present. Sample is wackestone to packstone based on amount of allochems present. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

72 - 75 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 49% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-3%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Abundant Ocala Limestone index fossils present. Sample is wackestone to packstone based on amount of allochems present. Poor recovery consisting of only ~1 foot. Index Fossils: Lepidocyclina ocalana, Nummulites ocalanus

75 - 77 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 55% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Noticeable change from wackestone to packstone. Ocala Limestone index fossils are present throughout the interval. Index Fossils: Lepidocyclina ocalana

77 - 80 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 55% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Ocala Limestone index fossils are present throughout the interval. Poor recovery consisting of only ~1.8 feet. Index Fossils: Lepidocyclina ocalana

80 - 85 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 60% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Sample interval had very poor recovery consisting of only ~1 foot.

85 - 86.5 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 65% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids;

86.5 - 90 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 75% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids; Sample interval had poor recovery consisting of only ~2 feet.

90 - 92 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 80% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids, Bryozoa;

92 - 95 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids, Bryozoa, Fossil Molds; Sample interval had poor recovery consisting of only ~8 inches.

95 - 97 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids, Bryozoa, Fossil Molds;

97 - 99 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids, Bryozoa, Fossil Molds;

99 - 100 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Gray (N8); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 82% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids, Bryozoa, Fossil Molds;

100 - 102 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Gray (N8); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%, Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids, Bryozoa, Fossil Molds;

102 - 104 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Gray (N8); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-1%, Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Mollusks, Miliolids, Bryozoa, Fossil Molds; Abundant miliolids present throughout the interval.

104 - 105 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Gray (N8); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 20% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds;

105 - 107 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Gray (N8); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 20% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds;

107 - 109.3 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Gray (N8); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 25% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-3%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds;

109.3 - 110 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Gray (N8); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 55% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%, Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds; Ocala Limestone index fossils are present throughout the interval. Index Fossils: Nummulites ocalanus

110 - 112 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Gray (N8); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; 55% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-2%, Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds; Ocala Limestone index fossils are present throughout the interval. Index Fossils: Nummulites ocalanus

112 - 113.2 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Gray (N8); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 50% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%, Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa;

113.2 - 117 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa; Very poor recovery consisting of only ~3 inches.

117 - 127 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa; Avon Park index fossils are present throughout this interval. Very poor recovery consisting of only ~1 foot. Index Fossils: Fabiania (Psuedorbitolina) cubensis

127 - 137 ft No Sample;

137 - 147 ft Silt-Size Dolomite; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Low (0-10%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Very Fine to Fine; Unconsolidated; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic, Friable; General Fossils: No Fossils;

147 - 157 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa, Cones; Avon Park index fossils are present throughout the sample interval. Very poor recovery consisting of only ~6 inches. Index Fossils: Cushmania (Dictyoconus) americana

157 - 167 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good

Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa, Cones; Avon Park index fossils are present throughout the sample interval. Very poor recovery consisting of only ~1 foot.Index Fossils: Cushmania (Dictyoconus) americana, Gunteria floridana

167 - 171 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa, Cones; Avon Park index fossils are present throughout the sample interval. Poor recovery consisting of only ~2 feet. Index Fossils: Cushmania (Dictyoconus) americana, Gunteria floridana

171 - 177 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 92% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa, Cones; Avon Park index fossils are present throughout the interval. Very poor recovery consisting of only ~2 feet. Index Fossils: Cushmania (Dictyoconus) americana

177 - 179 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa, Coral; Trace sulfide minerals, such as chalcopyrite, present throughout the interval.

179 - 181 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 80% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa, Coral; Accessory sulfide minerals, such as chalcopyrite, present throughout the interval.

181 - 183 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 80% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa; Accessory sulfide minerals, such as chalcopyrite, present throughout the interval.

183 - 184.2 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 80% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa; Accessory sulfide minerals, such as chalcopyrite, present throughout the interval.

184.2 - 187 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa, Coral; Accessory sulfide minerals, such as chalcopyrite, present throughout the interval.

187 - 189 ft Packstone; Yellowish Gray (5Y 8/1) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa;

189 - 191 ft Packstone; Yellowish Gray (5Y 8/1) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa;

191 - 193 ft Packstone; Yellowish Gray (5Y 8/1) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 80% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa;

193 - 197 ft Packstone; Yellowish Gray (5Y 8/1) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa;

197 - 198.3 ft Packstone; Yellowish Gray (5Y 8/1) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 82% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa;

198.3 - 200 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 75% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Bryozoa, Cones; Avon Park Formation index fossils present throughout the sample interval. Index Fossils: Cushmania (Dictyoconus) americana

200 - 202 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 80% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Cones; Avon Park Formation index fossils present throughout the sample interval. Index Fossils: Cushmania (Dictyoconus) americana

202 - 207 ft Mudstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 5% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Cones; Avon Park Formation index fossils present throughout the sample interval. Noticeable change from fossiliferous packstone to mudstone. Very poor recovery consisting of only ~8 inches. Index Fossils: Cushmania (Dictyoconus) americana

207 - 209 ft Grainstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Cones, Coral; Avon Park Formation index fossils present throughout the interval. Index Fossils: Cushmania (Dictyoconus) americana

209 - 217 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Echinoid; Very poor recovery consisting of only ~2 feet.

217 - 220 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 75% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Echinoid, Cones; Avon Park Formation index fossils present throughout the interval. Poor recovery consisting of only ~1.8 feet. Index Fossils: Cushmania (Dictyoconus) americana

220 - 222 ft Packstone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 75% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Echinoid, Coral; Avon Park Formation index fossils present throughout the interval. Trace heavy minerals present resembling chalcopyrite. Index Fossils: Spirolina coryensis

222 - 227 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Echinoid; Trace sulfide minerals present throughout the sample interval such as pyrite. Very poor recovery consisting of only ~1.8 feet.

227 - 229 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Echinoid; Avon Park Formation index fossils present throughout the sample interval. Index Fossils: Fabiania (Psuedorbitolina) cubensis

229 - 231 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Echinoid;

231 - 237 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 35% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds; Poor recovery consisting of only ~1 foot.

237 - 239 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 30% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Echinoid;

239 - 241 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 10% Allochemical Constituents; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids;

241 - 243 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 55% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Benthic Foraminifera, Miliolids, Echinoid;

243 - 247 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids, Echinoid; Poor recovery consisting of only ~1.9 feet.

247 - 249 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 65% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Echinoid;

249 - 251 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 65% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Benthic Foraminifera, Miliolids, Fossil Molds, Echinoid;

251 - 252.6 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids, Echinoid; Very poor recovery consisting of only ~2 inches.

252.6 - 254 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 40% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids;

254 - 257 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 35% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: No Fossils;

257 - 259 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 40% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: No Fossils;

259 - 261 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 40% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids;

261 - 267 ft Wackestone; Yellowish Gray (5Y 8/1) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids; Very poor recovery consisting of only ~1 foot.

267 - 268.8 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 55% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Cones; Avon Park Formation index fossils are present throughout the interval. Poor recovery consisting of only ~1.2 feet. Index Fossils: Lituonella floridana

268.8 - 270.2 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 35% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids, Echinoid;

270.2 - 272 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 55% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids, Echinoid; Avon Park Formation index fossils present throughout the interval. Index Fossils: Spirolina coryensis

272 - 277 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 35% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids, Echinoid; Very poor recovery consisting of only ~1 foot.

277 - 279 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; 35% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous; General Fossils: Miliolids, Echinoid;

279 - 287 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid; Avon Park Formation index fossils present throughout the interval. Very poor recovery consisting of only ~1 foot. Index Fossils: Spirolina coryensis

287 - 289 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid; Avon Park Formation index fossils present throughout the interval. Index Fossils: Spirolina coryensis

289 - 291 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 75% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds;

291 - 297 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds; Avon Park Formation index fossils present throughout the interval. Very poor recovery consisting of only ~1.6 feet. Index Fossils: Spirolina coryensis, Lituonella floridana

297 - 299 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds; Avon Park Formation index fossils present throughout the interval. Index Fossils: Spirolina coryensis, Lituonella floridana

299 - 301 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid; Avon Park Formation index fossils present throughout the interval. Index Fossils: Spirolina coryensis, Lituonella floridana

301 - 306 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid; Avon Park Formation index fossils present throughout the interval. Very poor recovery consisting of only ~1 foot. Index Fossils: Spirolina coryensis, Lituonella floridana

306 - 307 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Cones; Avon Park Formation index fossils present throughout the sample interval. Poor recovery consisting of ~8 inches. Index Fossils: Cushmania (Dictyoconus) americana

307 - 309 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Cones; Avon Park Formation index fossils are present throughout the sample interval. Index Fossils: Cushmania (Dictyoconus) americana

309 - 311 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid;

311 - 317 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds;

317 - 319 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds;

319 - 322 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds; Very poor recovery consisting of only ~9 inches.

322 - 324 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 75% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds;

324 - 327 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 97% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa, Cones; Avon Park Formation index fossils present throughout the sample interval. Index Fossils: Cushmania (Dictyoconus) americana

327 - 329 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa, Cones; Avon Park Formation index fossils present throughout the sample interval. Poor recovery consisting of only ~1.5 feet. Index Fossils: Cushmania (Dictyoconus) americana

329 - 331 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa, Cones; Avon Park Formation index fossils present throughout the sample interval. Index Fossils: Cushmania (Dictyoconus) americana

331 - 333 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa, Cones; Avon Park Formation index fossils present throughout the sample interval. Index Fossils: Cushmania (Dictyoconus) americana

333 - 334 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 90% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa, Cones; Avon Park Formation index fossils present throughout the sample interval. Very poor recovery consisting of only ~6 inches. Index Fossils: Cushmania (Dictyoconus) americana

334 - 336 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 85% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa;

336 - 337 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 80% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa; Very poor recovery consisting of only ~4 inches.

337 - 339 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 97% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa, Cones; Avon Park Formation index fossils present throughout the sample interval. Index Fossils: Cushmania (Dictyoconus) americana

339 - 341 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; 95% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa, Cones; Avon Park Formation index fossils present throughout the sample interval. Trace heavy minerals are present resembling pyrite. Index Fossils: Cushmania (Dictyoconus) americana

341 - 347 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 75% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa; Trace heavy minerals present resembling pyrite.

347 - 349 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 75% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa; Trace heavy minerals present resembling pyrite.

349 - 351 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous; General Fossils: Miliolids;

351 - 353 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 70% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa;

353 - 357 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 80% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds; Poor recovery consisting of only ~1.8 feet.

357 - 359 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 40% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous; General Fossils: Miliolids;

359 - 361 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 65% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa;

361 - 362 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 65% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds, Bryozoa; Very poor recovery consisting of ~3 inches.

362 - 364 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 40% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-<1%, Calcite-<1%; Other Features: Calcareous; General Fossils: Miliolids; Trace heavy minerals present resembling chalcopyrite.

364 - 366 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 65% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals-<1%, Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid; Trace heavy minerals present resembling chalcopyrite.

366 - 367 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 70% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid;

367 - 369 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 45% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous; General Fossils: Miliolids;

369 - 371 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 75% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid;

371 - 373 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 70% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Cones; Avon Park Formation index fossils are found throughout the sample interval. Very poor recovery consisting of only ~5 inches. Index Fossils: Cushmania (Dictyoconus) americana

373 - 377 ft Packstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 55% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil Molds; Poor recovery consisting of only ~1.9 feet.

377 - 379 ft Grainstone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; 60% Allochemical Constituents; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous, Fossiliferous; General Fossils: Miliolids, Echinoid, Fossil

379 - 381 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 30% Allochemical Constituents; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous; General Fossils: No Fossils;

381 - 382.2 ft Wackestone; Yellowish Gray (5Y 8/1) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; 25% Allochemical Constituents; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite-<1%; Other Features: Calcareous; General Fossils: No Fossils;

382.2 - 384 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint; Highly (50-90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%; Other Features: Dolomitic; General Fossils: No Fossils; Noticeable change from wackestone to dolostone.

384 - 386 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular; Highly (50-90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%; Other Features: Dolomitic; General Fossils: No Fossils; Poor recovery consisting of only ~1 foot.

386 - 387 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular; Highly (50-90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

387 - 388 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

388 - 390 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular; Highly (50-90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

390 - 392 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular; Highly (50-90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

392 - 394 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%, Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

394 - 395 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%, Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils; Poor recovery consisting of only ~5 inches.

395 - 396.5 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%, Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils; Poor recovery consisting of only ~1 foot.

396.5 - 398 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%, Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

398 - 400 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%, Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds;

400 - 402 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%, Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds;

402 - 404 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%, Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

404 - 407 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%, Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils; Poor recovery consisting of only ~4 inches.

407 - 409 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%, Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils; Poor recovery consisting of only ~1.6 feet.

409 - 411 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

411 - 413 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

413 - 415 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds;

415 - 417 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds; Poor recovery consisting of only ~6 inches.

417 - 419 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds;

419 - 420.5 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

420.5 - 422 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds;

422 - 424 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds;

424 - 426 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Moldic; Highly (50-90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

426 - 428 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Moldic; Highly (50-90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Moderate Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

428 - 430 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint; Highly (50-90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Silt-Size Dolomite-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

430 - 432 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular; Highly (50-90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: No Fossils;

432 - 434 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Moderate Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds;

434 - 436 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Moderate Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds;

436 - 437 ft Dolostone; Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Vugular, Moldic; Highly (50- 90%) Altered; Anhedral Crystals; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Spar-<1%; Other Features: Dolomitic; General Fossils: Fossil Molds; Total Depth of Romp 88 Rock Ridge Core Hole 2.

Florida Department of Environmental Protection

Florida Geological Survey GEODES

Well Number: W-19710 (SWFWMD_ROMP 88 - Rock Ridge CH-3)

Total Depth 2607 feet

Elevation: 109 feet (Ground)

County: Polk

Location: Sec 16 T.25S.,R.24E.

Drill Completion Date: 03/11/2019

Other Logs:

USGS Quad:

Lat/Long: 28° 18’ 38.01” N; 81° 54’ 40.97” W

Owner/Driller: SWFWMD

Comments: Well description completed and compiled from three separate deliveries. This is a combined description. 387’-1286’ described September 2018, 1286’-1526.7’ described Summer 2019, 1526.7’- 1887’ described November 2019. Total of 147 boxes of continuous core. Continuous Core 1887’-2607’. Core was good quality and covers the LFA transition from Oldsmar Formation into Cedar Keys Formation. This core was used in a workshop training event held in Tampa at SWFWMD in December 2021. Refer to Benjamin Davis for more information. This core description was made from 73 boxes which brings the total box count for W19710 to 220 boxes.

Described by: BEN L. DAVIS/ WILLIAM C. GLADWIN

Verified By PG: ALBRITTON_C

Verification: Is Verified

Geological Formation Picks

0 - 387 ft	NOSM	No Samples
387 - 1664.3 ft	AVPK	Avon Park Formation
1664.3 - 2245 ft	OLDM	Oldsmar Formation
2245 - ft	CDRK	Cedar Keys Formation

387 - 389 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

389 - 390 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Heavy Minerals - <1%, Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Trace heavy minerals present resembling pyrite.

390 - 391 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Organics - 1%, Spar - <1%; Other

Features: Sucrosic, High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: This sample interval had faint (10YR 4/2) laminations throughout the interval.

391 - 393 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Sucrosic, High Recrystallization, Dolomitic; General Fossils: No Fossils

393 - 394 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

394 - 397 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

397 - 398 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

398 - 400 ft Dolostone; Color: Moderate Yellowish Brown (10YR 5/4) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Vugular, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Sucrosic, Medium Recrystallization, Dolomitic; General Fossils: No Fossils

400 - 402 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Vugular, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Sucrosic, Medium Recrystallization, Dolomitic; General Fossils: No Fossils

402 - 404 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Vugular, Moldic; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

404 - 405.8 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

405.8 - 407 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Sucrosic, Medium Recrystallization, Dolomitic; General Fossils: No Fossils

407 - 409 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

409 - 411 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - 2%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

411 - 412 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

412 - 413 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - 2%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Mottled areas of the sample interval contain more pinpoint vugs than other areas of the core.

413 - 414 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

414 - 416 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

416 - 417 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

417 - 419 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

419 - 421 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

421 - 421.8 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

421.8 - 423.5 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

423.5 - 425.5 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

425.5 - 427 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

427 - 429 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

429 - 431 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

431 - 433 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

433 - 434.6 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

434.6 - 435.3 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

435.3 - 436 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

436 - 437 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Moderate Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Sample interval contained abundant fossil molds.

437 - 438.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Moderate Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

438.5 - 439.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

439.5 - 447 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Poor recovery consisting of only ~2 feet.

447 - 449 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

449 - 451 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration;

Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

451 - 453 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

453 - 457 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Poor recovery consisting of only ~4 inches.

457 - 459 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

459 - 461 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

461 - 462 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

462 - 464 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

464 - 466 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

466 - 467 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~5 inches.

467 - 469 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

469 - 471 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

471 - 471.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

471.5 - 473.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

473.5 - 477 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

477 - 479 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

479 - 481 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

481 - 482.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

482.5 - 484.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

484.5 - 487 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Poor recovery consisting of only ~8 inches.

487 - 489 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

489 - 491 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

491 - 492 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Iron Stain - 2%, Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

492 - 493.2 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Dark Yellowish Brown (10YR 4/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Iron Stain - 1%, Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

493.2 - 495 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration;

Cement Type: Dolomite; Accessory Minerals: Iron Stain - 1%, Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

495 - 497 ft Dolostone; Color: Dark Yellowish Brown (10YR 4/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Iron Stain - 1%, Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Poor recovery consisting of only ~1 foot.

497 - 499 ft Dolostone; Color: Dark Yellowish Brown (10YR 4/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Iron Stain - 1%, Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

499 - 501 ft Dolostone; Color: Dark Yellowish Brown (10YR 4/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Iron Stain - 1%, Organics - <1%; Other Features: Medium Recrystallization, Dolomitic; General Fossils: No Fossils

501 - 503 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 10%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%; Other Features: Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Change from dolostone to wackestone. Trace heavy minerals present resembling pyrite.

503 - 505 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 10%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%; Other Features: Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Trace heavy minerals present resembling pyrite.

505 - 507 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous; General Fossils: Fossil Molds, Fossil Fragments, Miliolids; Comments: Poor recovery consisting of only ~1.5 feet.

507 - 509 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous; General Fossils: Fossil Molds, Fossil Fragments

509 - 511 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%, Spar - <1%; Other Features: Calcareous; General Fossils: Fossil Molds; Comments: Trace heavy minerals present resembling chalcopyrite.

511 - 517 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%; Other Features: Calcareous; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~2 feet. Trace heavy minerals present resembling chalcopyrite.

517 - 519 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%; Other Features: Calcareous; General Fossils: Fossil Molds; Comments: Trace heavy minerals present resembling chalcopyrite.

519 - 522 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine;

Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%; Other Features: Calcareous; General Fossils: Fossil Molds; Comments: Trace heavy minerals present resembling chalcopyrite.

522 - 527 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~2 feet. Trace heavy minerals present resembling chalcopyrite.

527 - 529 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Trace heavy minerals present resembling chalcopyrite.

529 - 531 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Trace heavy minerals present resembling chalcopyrite.

531 - 537 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~2 feet. Trace heavy minerals present resembling chalcopyrite.

537 - 544 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Heavy Minerals - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~2 feet. Trace heavy minerals present resembling chalcopyrite.

544 - 547 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Very poor recovery consisting of only ~4 inches.

547 - 549 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous; General Fossils: No Fossils

549 - 557 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Spar - <1%; Other Features: Calcareous; General Fossils: No Fossils; Comments: Poor recovery consisting of only ~1.2 feet.

557 - 559 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Spar - <1%; Other Features: Calcareous; General Fossils: Fossil Molds

559 - 567 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1.6 feet.

567 - 577 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Spar - <1%; Other Features: Calcareous; General Fossils: No Fossils; Comments: Very poor recovery consisting of only ~1.4 feet.

577 - 580 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Spar - <1%; Other Features: Calcareous; General Fossils: No Fossils; Comments: Very poor recovery consisting of only ~9 inches.

580 - 581 ft Wackestone; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Organics - <1%; Other Features: Calcareous; General Fossils: No Fossils

581 - 587 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Miliolids; Comments: Poor recovery consisting of only ~1 foot.

587 - 588 ft Wackestone; Color: White (N9) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Miliolids

588 - 597 ft Mudstone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Organics - <1%; Other Features: Calcareous; General Fossils: No Fossils; Comments: Very poor recovery consisting of only ~1 foot.

597 - 599 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

599 - 601 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

601 - 603 ft Dolostone; Color: Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

603 - 605 ft Dolostone; Color: Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

605 - 607 ft Dolostone; Color: Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

607 - 609 ft Dolostone; Color: Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

609 - 611 ft Dolostone; Color: Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

611 - 613 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - 1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

613 - 615 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Spar - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

615 - 617 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Spar - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1 foot.

617 - 619 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - 2%, Silt-Size Dolomite - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

619 - 621 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - 2%, Silt-Size Dolomite - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

621 - 622 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - 2%, Silt-Size Dolomite - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

622 - 624 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

624 - 626 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

626 - 627.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

627.5 - 629.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 7%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

629.5 - 632 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

632 - 634 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

634 - 636 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 3%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

636 - 638 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

638 - 640 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 3%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

640 - 644 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 3%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

644 - 646 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 3%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

646 - 648 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 3%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

648 - 650 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

650 - 652 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

652 - 653.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

653.5 - 655.3 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 7%; Grain Size: Very Fine; Range: Very Fine to Fine; Good

Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

655.3 - 657 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

657 - 659 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 7%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

659 - 661 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

661 - 663 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

663 - 665 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 7%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

665 - 667 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 7%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

667 - 669 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Miliolids

669 - 671 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Organics - 3%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Miliolids; Comments: Small areas of this interval ranging in size from cm to 1 inch are laminated with organics.

671 - 673 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Organics - 2%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Miliolids; Comments: Small areas of this interval ranging in size from cm to 1 inch are laminated with organics.

673 - 675 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 20%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Miliolids

675 - 677 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine;

Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Organics - 3%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Miliolids; Comments: Small areas of this interval ranging in size from 0.5 cm to 2 cm are laminated with organics.

677 - 679 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Organics - 3%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Miliolids; Comments: Small areas of this interval ranging in size from 0.5 cm to 2.5 cm are laminated with organics. Small slicken lines are present in various sections of the sample interval.

679 - 681 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Miliolids; Comments: Fossil molds of cones were found throughout the interval.

681 - 685 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 8%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous; General Fossils: Fossil Molds, Miliolids; Comments: Very poor recovery consisting of only ~1.6 feet.

685 - 687 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1.6 feet.

687 - 689 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

689 - 691 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

691 - 693 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

693 - 695 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

695 - 695.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

695.5 - 697 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1 foot.

697 - 699 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

699 - 701 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

701 - 703 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

703 - 705 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

705 - 707 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%, Spar - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

707 - 709 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

709 - 711 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

711 - 713 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

713 - 715 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

715 - 717 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1 foot.

717 - 718 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

718 - 720 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine;

Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

720 - 722 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 50%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

722 - 727 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Very poor recovery consisting of only ~2 feet.

727 - 729 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

729 - 731 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

731 - 733 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

733 - 735 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

735 - 737 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~9 inches.

737 - 739 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

739 - 741 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Iron Stain - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

741 - 744 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

744 - 747 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 50%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1.7 feet.

747 - 747.4 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Organics - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: No Fossils

747.4 - 749 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous; General Fossils: No Fossils

749 - 751 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

751 - 753 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

753 - 755 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

755 - 757 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

757 - 759 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 8%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

759 - 761 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

761 - 763 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

763 - 765 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 3%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

765 - 767 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils; Comments: Poor recovery consisting of only ~1.2 feet.

767 - 769 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to

Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

769 - 771 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

771 - 773 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

773 - 775 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

775 - 776 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils; Comments: Poor recovery consisting of only ~8 inches.

776 - 777 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

777 - 779 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 7%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

779 - 781 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

781 - 783 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

783 - 785 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

785 - 787 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils; Comments: Poor recovery consisting of only ~1 foot.

787 - 789 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

789 - 791 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - 2%, Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

791 - 793 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

793 - 795 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - 2%, Organics - 3%; Other Features: Calcareous, Low Recrystallization; General Fossils: No Fossils

795 - 797 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 3%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are present throughout the interval.

797 - 797.3 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are present throughout the interval.

797.3 - 799 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Bryozoa

799 - 801 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - 5%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Thin (0.5 - 3.0 cm) laminations of organics. Also present are vugs filled with anhydrite crystals throughout the interval.

801 - 803 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Bryozoa

803 - 805 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 3%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Bryozoa

805 - 807 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - 2%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

807 - 809 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 7%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

809 - 811 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 9%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - <1%, Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are present throughout the interval.

811 - 813 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - 3%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are present throughout the interval.

813 - 815 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Bryozoa

815 - 816.9 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

816.9 - 817 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~2 inches.

817 - 819 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are present throughout the interval.

819 - 821 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are present throughout the interval.

821 - 823 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

823 - 827 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 3%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds; Comments: Very poor recovery consisting of only ~10 inches.

827 - 829 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 80%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are present throughout the interval.

829 - 830 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 80%; Grain Size: Fine; Range: Fine to Very

Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are present throughout the interval.

830 - 832 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

832 - 834 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 80%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

834 - 837 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 80%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1.5 feet.

837 - 839 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

839 - 841 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

841 - 842 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~4.5 inches.

842 - 844 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

844 - 846 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

846 - 847 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~7.5 inches.

847 - 849 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

849 - 851 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very

Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

851 - 854.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Very poor recovery consisting of only ~1.4 feet.

854.5 - 856.5 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

856.5 - 858 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

858 - 861 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

861 - 863 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

863 - 864 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

864 - 865 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

865 - 867 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1.5 feet.

867 - 869 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

869 - 871 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

871 - 873 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pin-point, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - 2%; Other Features:

Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Interval exhibits organic (5YR 2/1) laminations ranging from 0.5 cm to 2 cm in size.

873 - 877 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - <1%, Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Very poor recovery consisting of only ~3 inches.

877 - 879 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

879 - 881 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - %, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids

881 - 883 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 78%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids

883 - 885 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval.

885 - 887 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 95%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval. Poor recovery consisting of only ~1 foot.

887 - 889 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids

889 - 890 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids

890 - 891.2 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

891.2 - 891.6 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Medium; Range: Medium to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Calcite - 8%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils; Comments: This interval consists of a medium recrystallized packstone with abundant calcite crystals.

891.6 - 897 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

897 - 899 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

899 - 901 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments; Comments: This interval contained a thin (0.5 mm) layer of organics resembling peat (5Y 2/1).

901 - 907 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

907 - 909 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Fine; Range: Fine to Medium; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

909 - 911 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids, Bryozoa

911 - 913 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids

913 - 915 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 8%, Spar - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids, Bryozoa; Comments: This interval contained pods (1.5-2.0 cm thick) of white (N9) gypsum.

915 - 917 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 6%, Spar - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids, Bryozoa; Comments: This interval contained pods (1.0-1.4 cm thick) of white (N9) gypsum.

917 - 919 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids; Comments: This interval contained pods (1.5-2.0 cm thick) of white (N9) gypsum.

919 - 921 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%, Spar - <1%; Other Features:

Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids; Comments: This interval contained a pod (2.0 cm thick) of white (N9) gypsum.

921 - 923 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids

923 - 925 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Spar - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids

925 - 927 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids; Comments: Poor recovery consisting of only ~1 foot.

927 - 929 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Spar - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids

929 - 929.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Miliolids

929.5 - 931.2 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

931.2 - 931.6 ft Mudstone; Color: Moderate Dark Gray (N4) to White (N9); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 2%; Grain Size: Medium; Range: Medium to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 12%, Spar - 3%; Other Features: Calcareous; General Fossils: No Fossils; Comments: This interval consists mainly of glauconite. Bound above and below by limestones this interval is still very calcareous.

931.6 - 933 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Noticeable increase in accessory gypsum.

933 - 935 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

935 - 937 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

937 - 939 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very

Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

939 - 940 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

940 - 941.8 ft Grainstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 90%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

941.8 - 942.2 ft Gypsum; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - 3%; Other Features: Crystalline; General Fossils: No Fossils; Comments: This interval consists entirely of white (N9) gypsum.

942.2 - 944 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - 2%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

944 - 944.5 ft Gypsum; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - 3%; Other Features: Crystalline; General Fossils: No Fossils; Comments: This interval consists entirely of white (N9) gypsum.

944.5 - 945.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

945.2 - 945.9 ft Gypsum; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils; Comments: This interval consists entirely of white (N9) gypsum.

945.9 - 947 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

947 - 949 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

949 - 951 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Sample intervals ranging from 949'-958.4' have abundant white (N9) gypsum inclusions throughout. Sizes range from small pinpoint vugs (0.5-2.0 cm) to larger vugs (2.0-6 cm).

951 - 953 ft Wackestone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

953 - 955 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

955 - 957 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

957 - 958.4 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

958.4 - 959 ft Wackestone; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Similar to the previous descriptions these sample intervals from 958.4'-967' have abundant gypsum inclusions throughout. Gypsum sizes range from 0.5 mm - 3.0 cm.

959 - 961 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 55%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

961 - 962 ft Packstone; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

962 - 964 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 65%; Grain Size: Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

964 - 965 ft Wackestone; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

965 - 966 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

966 - 967 ft Wackestone; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intergranular, Vugular; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

967 - 969 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 85%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Gastropods, Echinoid, Miliolids

969 - 971 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 80%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Gastropods

971 - 973 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 85%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Echinoid

973 - 975 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 85%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Gastropods, Miliolids

975 - 976.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 80%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Gastropods

976.5 - 977 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

977 - 979 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones, Bryozoa; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval. Vugs filled with gypsum throughout sample.

979 - 980 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones, Bryozoa; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval. Vugs filled with gypsum throughout sample similar to above but smaller in size.

980 - 982 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

982 - 984 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

984 - 985.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

985.5 - 987 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Majority of vugs are gypsum-filled.

987 - 989 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

989 - 991 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: The vugs are gypsum-filled and range in size from 0.5 mm - 4.5 cm.

991 - 993 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: The vugs are gypsum-filled and range in size from 0.5 mm - 3.0 cm.

993 - 994.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 7%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: The vugs are gypsum-filled and range in size from 0.5 mm - 5.0 cm.

994.5 - 996 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

996 - 997 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~8.0 inches. Fossil molds found throughout the interval are much smaller in size than previously identified molds.

997 - 999 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Fossil molds found throughout the interval are much smaller in size than previously identified molds.

999 - 1001 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1001 - 1003 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1003 - 1004 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1004 - 1006 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very

Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%, Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1006 - 1006.8 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils; Comments: Interval consists of white-ish gray gypsum with trace organic matter.

1006.8 - 1008 ft Peat; Color: Black (N1) to Greenish Black (5GY 2/1); Porosity: Intergranular; Poor Induration; Cement Type: Organic Matrix; Sedimentary Structures: Fissile; Accessory Minerals: Glauconite - <1%; Other Features: Platy; General Fossils: No Fossils; Comments: Interval consists of fissile blackish-colored peat.

1008 - 1010 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1010 - 1012 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1012 - 1012.8 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1012.8 - 1013.5 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils; Comments: Interval consists of whiteish gray gypsum with trace organic matter.

1013.5 - 1015.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%, Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1015.5 - 1016.2 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1016.2 - 1016.5 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Peat - <1%; Other Features: Crystalline; General Fossils: No Fossils

1016.5 - 1017 ft Peat; Color: Black (N1) to Greenish Black (5GY 2/1); Porosity: Intergranular; Poor Induration; Cement Type: Organic Matrix; Sedimentary Structures: Fissile; Accessory Minerals: Glauconite - <1%; Other Features: Platy; General Fossils: No Fossils

1017 - 1019 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1019 - 1020 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1020 - 1020.8 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Very Fine; Range: Very Fine to Fine; Poor Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1020.8 - 1022.7 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1022.7 - 1024.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1024.5 - 1026.3 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1026.3 - 1027 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1027 - 1029 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1029 - 1031 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1031 - 1032.3 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1032.3 - 1034 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1034 - 1036 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1036 - 1038 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1038 - 1040 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range:

Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1040 - 1041.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1041.5 - 1043.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1043.5 - 1045 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1045 - 1047 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1 foot.

1047 - 1049 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%, Peat - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: A thin (~3 cm) band of black-colored (5Y 2/1) peat is found at the top of this sample interval.

1049 - 1051 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are found throughout the interval.

1051 - 1052 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1052 - 1054 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1054 - 1056 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1056 - 1057 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1057 - 1059 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1059 - 1061.2 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils are found throughout the interval.

1061.2 - 1063 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1063 - 1065 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1065 - 1067 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1067 - 1069 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1069 - 1071 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1071 - 1073 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1073 - 1075 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1075 - 1077 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1 foot.

1077 - 1079 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1079 - 1080.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1080.5 - 1082.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1082.5 - 1084.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1084.5 - 1086 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

1086 - 1088 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

1088 - 1089.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Gastropods, Fossil Fragments

1089.5 - 1091.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

1091.5 - 1093.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments, Cones; Index Fossils: Cushmania (Dictyoconus) americana, Spirolina coryensis; Comments: Various Avon Park index fossils present throughout the sample interval.

1093.5 - 1095.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

1095.5 - 1097 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

1097 - 1099 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

1099 - 1101 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

1101 - 1103 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1103 - 1105 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

1105 - 1107 ft Wackestone; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Gypsum content increased noticeably.

1107 - 1108 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - <1%; Other Features: Crystalline; General Fossils: No Fossils; Comments: Gypsum core with accessory glauconite present.

1108 - 1108.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1108.5 - 1109 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1109 - 1109.8 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils; Comments: Gypsum core with trace amounts of anhydrite present.

1109.8 - 1111.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1111.5 - 1113.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1113.2 - 1115 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1115 - 1117 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1117 - 1118 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1118 - 1120 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1120 - 1122 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1122 - 1124 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1124 - 1124.8 ft Gypsum; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils; Comments: Gypsum core with trace amounts of anhydrite present.

1124.8 - 1125.2 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1125.2 - 1126 ft Gypsum; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils; Comments: Gypsum core with trace amounts of anhydrite present.

1126 - 1127.4 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1127.4 - 1129 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Peat - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Thin (~1.0 cm) layer of brown-colored (10YR 2/2) peat interlayered with the medium recrystallized mudstone.

1129 - 1131 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1131 - 1133 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1133 - 1135 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 3%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 8%; Other Features:

Calcareous, Medium Recrystallization; General Fossils: No Fossils; Comments: Medium recrystallized mudstone mottled with gypsum.

1135 - 1136.6 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 3%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 8%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils; Comments: Medium recrystallized mudstone mottled with gypsum.

1136.6 - 1137 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 3%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 7%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Medium recrystallized mudstone mottled with gypsum.

1137 - 1139 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 2%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 8%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Medium recrystallized mudstone mottled with gypsum.

1139 - 1141 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 4%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Medium recrystallized mudstone mottled with gypsum.

1141 - 1143 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 8%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Medium recrystallized mudstone mottled with gypsum.

1143 - 1145 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 8%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Medium recrystallized mudstone mottled with gypsum.

1145 - 1146 ft Wackestone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Medium recrystallized mudstone mottled with gypsum.

1146 - 1148 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1148 - 1150 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 8%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1150 - 1152 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Small amount of Avon Park index fossils present throughout this interval.

1152 - 1154 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1154 - 1154.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1154.5 - 1157 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~1.6 feet.

1157 - 1159 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 7%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1159 - 1161 ft Gypsum; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - 3%; Other Features: Crystalline; General Fossils: No Fossils; Comments: Interval consists of 2 feet of gypsum core.

1161 - 1163 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Noticeable increase in fossil molds present throughout this interval. Black-colored (5Y 2/1) organics surround (rim) the vugs filled with gypsum.

1163 - 1163.8 ft Gypsum; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils

1163.8 - 1164 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1164 - 1164.3 ft Gypsum; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils

1164.3 - 1164.8 ft Gypsum; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils

1164.8 - 1166.3 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1166.8 - 1167.8 ft Gypsum; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils

1167.8 - 1169 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1169 - 1170 ft Gypsum; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils

1170 - 1172 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1172 - 1173.3 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1173.3 - 1175 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1175 - 1177 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1177 - 1179 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1179 - 1180.6 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1180.6 - 1181 ft Gypsum; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils

1181 - 1183 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1183 - 1185 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1185 - 1187 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1187 - 1189 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1189 - 1194.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Very poor recovery consisting of only ~2 feet.

1194.5 - 1194.9 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1194.9 - 1196.2 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1196.2 - 1197 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1197 - 1199 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1199 - 1201 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1201 - 1202 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1202 - 1202.5 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Other Features: Crystalline; General Fossils: No Fossils

1202.5 - 1204 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 8%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1204 - 1206 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1206 - 1207 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Noticeable increase in organics present throughout the interval.

1207 - 1207.6 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Other Features: Crystalline; General Fossils: No Fossils

1207.6 - 1208 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1208 - 1209 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1209 - 1210.7 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1210.7 - 1212 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 15%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones, Gastropods; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval.

1212 - 1214 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones, Gastropods; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval.

1214 - 1216 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1216 - 1217 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~5.0 inches.

1217 - 1219 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones, Gastropods; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval.

1219 - 1219.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1219.5 - 1219.8 ft Peat; Color: Black (N1) to Greenish Black (5GY 2/1); Porosity: Intergranular; Poor Induration; Cement Type: Organic Matrix; Sedimentary Structures: Fissile; Accessory Minerals: Glauconite - <1%; Other Features: Platy; General Fossils: No Fossils

1219.8 - 1220 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 2%, Organics - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1220 - 1222 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1222 - 1224 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1224 - 1226 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1226 - 1227 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery consisting of only ~0.5 feet.

1227 - 1229 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval.

1229 - 1229.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1229.5 - 1231.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval.

1231.5 - 1233.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval.

1233.5 - 1235 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1235 - 1235.5 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline; General Fossils: No Fossils

1235.5 - 1237 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds, Cones; Index Fossils: Cushmania (Dictyoconus) americana; Comments: Avon Park index fossils present throughout the interval.

1237 - 1239 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1239 - 1239.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1239.5 - 1240 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Organics - 3%; Other Features: Crystalline; General Fossils: No Fossils

1240 - 1242 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1242 - 1244 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1244 - 1244.4 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Organics - 4%; Other Features: Crystalline; General Fossils: No Fossils

1244.4 - 1245 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1245 - 1245.4 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Organics - 3%; Other Features: Crystalline; General Fossils: No Fossils

1245.4 - 1247 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1247 - 1247.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1247.5 - 1248.4 ft Gypsum; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Organics - 4%; Other Features: Crystalline; General Fossils: No Fossils

1248.4 - 1250 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1250 - 1251 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1251 - 1251.5 ft Gypsum; Color: White (N9) to Brownish Gray (5YR 4/1); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Organics - 5%; Other Features: Crystalline; General Fossils: No Fossils

1251.5 - 1253 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1253 - 1255 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1255 - 1257 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1257 - 1257.6 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1257.6 - 1258.4 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Although there are no index fossils present there are abundant fossil molds of cones present throughout the interval.

1258.4 - 1258.6 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 3%; Other Features: Crystalline; General Fossils: No Fossils

1258.6 - 1259 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1259 - 1261 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1261 - 1263 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1263 - 1265 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1265 - 1267 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1267 - 1267.1 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 3%; Other Features: Crystalline; General Fossils: No Fossils

1267.1 - 1267.3 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 7%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Gypsum has noticeably increased.

1267.3 - 1269 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1269 - 1271 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1271 - 1273 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1273 - 1275 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1275 - 1275.3 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1275.3 - 1276.4 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 3%; Other Features: Crystalline; General Fossils: No Fossils

1276.4 - 1277 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1277 - 1277.4 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 2%; Other Features: Crystalline; General Fossils: No Fossils

1277.4 - 1279 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range:

Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1279 - 1279.5 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 2%; Other Features: Crystalline; General Fossils: No Fossils

1279.5 - 1281.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1281.5 - 1283.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1283.5 - 1284.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1284.5 - 1286 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 2%; Other Features: Crystalline; General Fossils: No Fossils; Comments: Poor recovery consisting of only ~8.0 inches.

1286 - 1287.7 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 13%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Noticeable increase in evaporite content throughout Box 83. Gypsum is abundant and occurs as crystals ranging in size from 2.0 cm to 0.2 cm.

1287.7 - 1289 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 15%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1289 - 1290 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 15%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1290 - 1291.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 15%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1291.5 - 1293 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Very Fine to Microcrystalline; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 12%, Peat - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Same as above intervals but contains a small fraction of black (N1) peat layers ranging in thickness from 0.3 cm to 0.5 cm.

1293 - 1294.7 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Very Fine to Microcrystalline; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 10%, Peat - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Same as above.

1294.7 - 1296.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Very Fine to Microcrystalline; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 8%, Peat - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1296.5 - 1297 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Very Fine to Microcrystalline; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 8%, Peat - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1297 - 1298 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Very Fine to Microcrystalline; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 10%, Peat - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Same as above with less organic matter present throughout.

1298 - 1298.3 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline

1298.3 - 1300 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Very Fine to Microcrystalline; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 9%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1300 - 1300.6 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline

1300.6 - 1302 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Very Fine to Microcrystalline; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 9%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1302 - 1304 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Very Fine to Microcrystalline; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 8%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1304 - 1306 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 7%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1306 - 1307 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 7%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1307 - 1308.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 5%, Organics - 4%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1308.5 - 1310 ft Peat; Color: Black (N1) to Greenish Black (5G 2/1); Porosity: Intergranular; Moderate Induration; Cement Type: Organic Matrix; Sedimentary Structures: Fissile; Accessory Minerals: Gypsum - <1%; Other Features: Platy; General Fossils: No Fossils; Comments: Noticeable increase in organics throughout the core box as evident by this Peat interval.

1310 - 1312 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 5%, Organics - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1312 - 1313.4 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 5%, Organics - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1313.4 - 1315 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 5%, Organics - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1315 - 1317 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 5%, Organics - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Ambiguous fossil molds present throughout but at least two cone molds present within this interval.

1317 - 1319 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 4%, Organics - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1319 - 1319.8 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 4%, Organics - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1319.8 - 1321.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 8%, Organics - 4%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds; Comments: Same as above with noticeable increase in gypsum and organic content.

1321.5 - 1322 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 5%, Organics - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1322 - 1324 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1324 - 1325 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 4%, Organics - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1325 - 1325.5 ft Peat; Color: Black (N1) to Greenish Black (5G 2/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Organic Matrix; Sedimentary Structures: Fissile; Accessory Minerals: Gypsum - 2%; Other Features: Platy; General Fossils: No Fossils

1325.5 - 1327 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%, Organics - 4%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1327 - 1329 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 4%, Organics - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1329 - 1331 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 5%, Organics - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1331 - 1332 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 4%, Organics - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1332 - 1334 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 5%, Organics - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1334 - 1336 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 6%, Organics - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1336 - 1336.5 ft Peat; Color: Black (N1) to Greenish Black (5G 2/1); Porosity: Intergranular; Good Induration; Cement Type: Organic Matrix; Sedimentary Structures: Fissile; Accessory Minerals: Gypsum - <1%; Other Features: Platy; General Fossils: No Fossils

1336.5 - 1337 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%, Organics - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1337 - 1338 ft Peat; Color: Black (N1) to Greenish Black (5G 2/1); Porosity: Intergranular; Good Induration; Cement Type: Organic Matrix; Sedimentary Structures: Fissile; Accessory Minerals: Gypsum - <1%; Other Features: Platy; General Fossils: No Fossils

1338 - 1340 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1340 - 1341 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1341 - 1343 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Change from dolostone to dolomitic limestone. There are fossil molds of ambiguous cones throughout the interval. Gypsum content is increasing at depth.

1343 - 1345 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

1345 - 1345.6 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline, Medium Recrystallization; General Fossils: Fossil Molds

1345.6 - 1347 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

1347 - 1349.4 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1349.4 - 1350 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Accessory Minerals: Gypsum - 5%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization, Dolomitic; General Fossils: Fossil Molds

1350 - 1350.2 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1350.2 - 1350.6 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Accessory Minerals: Gypsum - 5%, Organics - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Molds

1350.6 - 1352 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1352 - 1354 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1354 - 1355.9 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1355.9 - 1356.3 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1356.3 - 1357.6 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration;

Cement Type: Dolomite; Accessory Minerals: Gypsum - 5%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1357.6 - 1358.4 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1358.4 - 1358.8 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 6%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1358.8 - 1359.1 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1359.1 - 1360 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1360 - 1361 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1361 - 1362 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1362 - 1364 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1364 - 1364.4 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1364.4 - 1364.8 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1364.8 - 1366 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1366 - 1367 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1367 - 1368 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1368 - 1370 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1370 - 1370.2 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1370.2 - 1370.5 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1370.5 - 1372 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1372 - 1373.8 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1373.8 - 1374 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1374 - 1374.4 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1374.4 - 1375.2 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%, Organics - <1%; Other Features: Crystalline; General Fossils: No Fossils

1375.2 - 1377 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1377 - 1379.4 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Molds

1379.4 - 1381 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1381 - 1383 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - 4%; Other Features: Dolomitic, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Noticeable increase in fossil content. Nothing diagnostic of Avon Park Formation index fossils though.

1383 - 1385 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - 2%; Other Features: Dolomitic, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Molds, Fossil Fragments

1385 - 1387 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1387 - 1388.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds

1388.5 - 1390 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1390 - 1392 ft Dolostone; Color: Moderate Yellowish Brown (10YR 5/4) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

1392 - 1394 ft Dolostone; Color: Moderate Yellowish Brown (10YR 5/4) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic, Fossiliferous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Similar fossil content as described above with a noticeable increase in gypsum.

1394 - 1396 ft Dolostone; Color: Moderate Yellowish Brown (10YR 5/4) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic, Fossiliferous; General Fossils: Fossil Molds, Fossil Fragments

1396 - 1397 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Fracture; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 8%, Organics - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils; Comments: Dolostone dominated by gypsum.

1397 - 1399 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils; Comments: In Box 95 there is a noticeable change in the manner in which gypsum occurs. Instead of being massive it is filling vugs.

1399 - 1401 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1401 - 1403 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1403 - 1405 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - 1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Molds, Fossil Fragments

1405 - 1406.4 ft Dolostone; Color: Moderate Yellowish Brown (10YR 5/4) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%, Organics - 2%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic, Fossiliferous; General Fossils: Fossil Molds, Fossil Fragments

1406.4 - 1407 ft Dolostone; Color: Moderate Yellowish Brown (10YR 5/4) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic, Fossiliferous; General Fossils: Fossil Fragments

1407 - 1409 ft Dolostone; Color: Moderate Yellowish Brown (10YR 5/4) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Fragments

1409 - 1411 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Fragments

1411 - 1412.6 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Fragments

1412.6 - 1413 ft Gypsum; Color: White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Other Features: Crystalline; General Fossils: No Fossils

1413 - 1415 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic, Fossiliferous; General Fossils: Fossil Fragments

1415 - 1415.8 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Dark Yellowish Orange (10YR 6/6); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic, Fossiliferous; General Fossils: Fossil Fragments

1415.8 - 1416.8 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: No Fossils

1416.8 - 1417.6 ft Gypsum; Color: White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Other Features: Crystalline; General Fossils: No Fossils

1417.6 - 1419 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration;

Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: No Fossils

1419 - 1421 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: No Fossils

1421 - 1423 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Fragments

1423 - 1425.1 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: Fossil Fragments

1425.1 - 1427 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 2%, Gypsum - 4%; Other Features: Calcareous, High Recrystallization, Brown Anhydrite Crystals; General Fossils: No Fossils; Comments: Noticeable change from dominantly dolostone to highly recrystallized limestone with ambiguous fossil fragments.

1427 - 1429 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 2%, Gypsum - 4%; Other Features: Calcareous, High Recrystallization, Brown Anhydrite Crystals; General Fossils: No Fossils

1429 - 1431 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, High Recrystallization; General Fossils: No Fossils

1431 - 1433 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, High Recrystallization, Fossiliferous; General Fossils: Fossil Molds, Fossil Fragments

1433 - 1434.3 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, High Recrystallization, Fossiliferous; General Fossils: Fossil Molds, Fossil Fragments

1434.3 - 1436 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils; Comments: Switch back to sucrosic dolostone from limestone. Noticeable increase in evaporite content throughout the intervals in Box 99.

1436 - 1436.9 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1436.9 - 1437 ft Gypsum; Color: White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline, Brown Anhydrite Crystals; General Fossils: No Fossils

1437 - 1439 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1439 - 1440.6 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1440.6 - 1441.3 ft Gypsum; Color: White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - <1%; Other Features: Crystalline, Brown Anhydrite Crystals; General Fossils: No Fossils

1441.3 - 1443.4 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1443.4 - 1445.2 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 1%, Gypsum - 4%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1445.2 - 1447 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 1%, Gypsum - 4%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1447 - 1449 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 2%, Gypsum - 6%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1449 - 1451 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 2%, Gypsum - 6%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1451 - 1451.6 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 1%, Gypsum - 4%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1451.6 - 1452.2 ft Gypsum; Color: White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - 3%; Other Features: Crystalline, Brown Anhydrite Crystals; General Fossils: No Fossils

1452.2 - 1454 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1454 - 1456 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration;

Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1456 - 1457 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1457 - 1459 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic, Fossiliferous; General Fossils: Fossil Fragments

1459 - 1459.8 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic, Fossiliferous; General Fossils: Fossil Fragments

1459.8 - 1461 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Vugular; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1461 - 1463 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1463 - 1465 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1465 - 1467 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: No Fossils

1467 - 1469 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Fragments

1469 - 1470.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Fragments

1470.5 - 1472.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils; Comments: Noticeable change from medium recrystallized sucrosic dolostones to highly recrystallized dolostone.

1472.5 - 1474.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine;

Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1474.5 - 1476.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1476.5 - 1478 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1478 - 1480 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1480 - 1481.6 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1481.6 - 1481.9 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - 5%; Other Features: Crystalline, Brown Anhydrite Crystals; General Fossils: No Fossils

1481.9 - 1483.9 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1483.9 - 1486 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1486 - 1488 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1488 - 1489.3 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1489.3 - 1491 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1491 - 1493 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1493 - 1494 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1494 - 1496 ft Gypsum; Color: White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - 3%; Other Features: Crystalline; General Fossils: No Fossils

1496 - 1497 ft Gypsum; Color: White (N9); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - 1%; Other Features: Crystalline; General Fossils: No Fossils

1497 - 1499 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1499 - 1501 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1501 - 1503 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1503 - 1505 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1505 - 1507 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1507 - 1508.4 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1508.4 - 1510 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1510 - 1512 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1512 - 1514 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Accessory Minerals: Anhydrite - <1%, Gypsum - 6%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1514 - 1516 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Accessory Minerals: Anhydrite - <1%, Gypsum - 6%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1516 - 1518 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite, Gypsum; Accessory Minerals: Anhydrite - <1%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1518 - 1520 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1520 - 1522 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1522 - 1524 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1524 - 1526 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1526 - 1526.7 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1526.7 - 1527.4 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

1527.4 - 1527.8 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Anhydrite - 2%; Other Features: Crystalline; General Fossils: No Fossils

1527.8 - 1528 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

1528 - 1530 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments; Comments: Unidentifiable fossil fragments present throughout interval. Switch from dolostones to wackestone.

1530 - 1532 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range:

Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1532 - 1534 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1534 - 1535 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds; Comments: Large increase in fossil fragment content throughout the interval.

1535 - 1537 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1537 - 1539 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds; Comments: Presence of accessory glauconite indicates this interval may be near the Avon Park-Oldsmar contact.

1539 - 1541 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1541 - 1543 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 4%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds; Comments: Increase in gypsum filled vugs and glauconite throughout the interval.

1543 - 1544.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 4%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments

1544.5 - 1546 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 4%, Gypsum - 6%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids; Comments: Interval consists of highly recrystallized packstone with gypsum filled vugs. Glauconite is found sporadically throughout in clusters.

1546 - 1546.5 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 3%; Other Features: Crystalline; General Fossils: No Fossils

1546.5 - 1548 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 4%, Gypsum - 4%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids

1548 - 1550 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids

1550 - 1552 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 6%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids

1552 - 1553 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 6%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids

1553 - 1555 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids

1555 - 1557 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids

1557 - 1559 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids

1559 - 1561 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 4%, Gypsum - 4%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids

1561 - 1563 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 6%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids

1563 - 1564.2 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 6%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Miliolids; Comments: Poor recovery consisting of only 5.0” of core.

1564.2 - 1566 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 1%, Gypsum - 5%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1566 - 1568 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1568 - 1570 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Subhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Glauconite - 6%, Gypsum - 7%; Other Features: Dolomitic, High Recrystallization; General Fossils: Fossil Fragments

1570 - 1572 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Subhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Glauconite - 4%, Gypsum - 5%; Other Features: Dolomitic, High Recrystallization; General Fossils: Fossil Fragments

1572 - 1572.8 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 3%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1572.8 - 1574 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 3%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1574 - 1574.3 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments

1574.3 - 1575.6 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 3%; Other Features: Crystalline; General Fossils: No Fossils

1575.6 - 1577 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments

1577 - 1579 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 7%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments

1579 - 1581 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 6%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments

1581 - 1581.8 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 7%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments

1581.8 - 1583 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 7%; Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1583 - 1585 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 80%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 10%;

Other Features: Calcareous, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Throughout this interval is a large increase in gypsum from previous intervals.

1585 - 1587 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1587 - 1589 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 7%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1589 - 1590.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 7%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1590.5 - 1592 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Intercrystalline; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Gypsum; Accessory Minerals: Anhydrite - 2%, Glauconite - <1%; Other Features: Calcareous, Crystalline, Medium Recrystallization; General Fossils: Fossil Fragments; Comments: This interval marks the beginning of Box 116 which, throughout, has a major increase in gypsum compared to previous boxes.

1592 - 1594 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1594 - 1596 ft Packstone; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intergranular, Intercrystalline; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Gypsum; Accessory Minerals: Anhydrite - 3%, Glauconite - <1%; Other Features: Calcareous, Crystalline, Medium Recrystallization; General Fossils: No Fossils

1596 - 1598 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Intercrystalline; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Gypsum; Accessory Minerals: Anhydrite - 2%, Glauconite - <1%; Other Features: Calcareous, Crystalline, Medium Recrystallization; General Fossils: No Fossils

1598 - 1600 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1600 - 1602 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 4%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils; Comments: Noticeable change from medium-high recrystallized packstones to medium recrystallized wackestones.

1602 - 1604 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1604 - 1604.4 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to

Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1604.4 - 1605 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 2%; Other Features: Crystalline; General Fossils: No Fossils

1605 - 1606 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1606 - 1607 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 3%; Other Features: Crystalline; General Fossils: No Fossils

1607 - 1607.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1607.5 - 1608.5 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 2%; Other Features: Crystalline; General Fossils: No Fossils

1608.5 - 1609.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1609.2 - 1611 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1611 - 1612 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1612 - 1613.3 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 2%; Other Features: Crystalline; General Fossils: No Fossils

1613.3 - 1615 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - <1%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1615 - 1617 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1617 - 1618.3 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix, Gypsum; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - <1%, Gypsum - 8%; Other Features: Calcareous, Crystalline, Medium Recrystallization; General Fossils: No Fossils

1618.3 - 1620 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to

Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1620 - 1622 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1622 - 1622.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1622.2 - 1623 ft Gypsum; Color: White (N9) to Very Light Gray (N8); Porosity: Intercrystalline; Good Induration; Cement Type: Gypsum; Accessory Minerals: Glauconite - 4%; Other Features: Crystalline; General Fossils: No Fossils

1623 - 1625 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - <1%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1625 - 1627 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1627 - 1627.4 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 1%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1627.4 - 1629 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1629 - 1631 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1631 - 1633 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1633 - 1635 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1635 - 1636.6 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1636.6 - 1638.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1638.2 - 1640 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1640 - 1642 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1642 - 1644 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1644 - 1646 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1646 - 1648 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 4%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1648 - 1650 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1650 - 1651.8 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1651.8 - 1653 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 4%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1653 - 1655 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 4%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1655 - 1657 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1657 - 1659 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1659 - 1661 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1661 - 1663 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 3%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: No Fossils

1663 - 1664.3 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1664.3 - 1666.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Oldsmar Formation index fossils were found throughout this interval.

1666.2 - 1668 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1668 - 1670 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - <1%, Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1670 - 1672 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - <1%, Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1672 - 1673.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - 2%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1673.5 - 1675.5 ft Wackestone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis

1675.5 - 1677 ft Packstone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to

Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Increase in fossil content throughout this interval.

1677 - 1679 ft Packstone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1679 - 1681 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis

1681 - 1682.9 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Glauconite - <1%, Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis

1682.9 - 1684.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Chert - 3%, Glauconite - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Thin chert layers (1.0-2.0 cm thick) are mixed throughout the interval.

1684.5 - 1686.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Chert - 2%, Glauconite - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1686.5 - 1688.3 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Chert - 2%, Glauconite - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1688.3 - 1690 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Chert - 3%, Glauconite - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Helicostegina gyralis

1690 - 1692.2 ft Packstone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 4%, Glauconite - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Helicostegina gyralis; Comments: Noticeable increase in the amount of thin chert layers and fossils present throughout the interval.

1692.2 - 1694 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa

1694 - 1696 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 1%, Glauconite - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Coskinolina elongata; Comments: Oldsmar Formation index fossils were found throughout this interval.

1696 - 1697.5 ft Packstone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - <1%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Coskinolina elongata; Comments: Same as above.

1697.5 - 1699.3 ft Packstone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1699.3 - 1701.4 ft Packstone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1701.4 - 1703.2 ft Wackestone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 4%, Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds; Comments: Less fossils than in previous intervals. Also, an increase in evaporite content is noted.

1703.2 - 1705 ft Wackestone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - 1%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1705 - 1707 ft Wackestone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds; Comments: Abundant Orbitolites soritids throughout this interval.

1707 - 1709 ft Wackestone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 4%, Glauconite - 2%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds; Comments: Same as above.

1709 - 1711.3 ft Wackestone; Color: Grayish Brown (10YR 6/2) to Very Light Orange (10YR 8/2); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1711.3 - 1713 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - 2%, Gypsum - 7%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds; Comments: Evaporite and chert are found interlayed throughout this interval.

1713 - 1715 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - 2%, Gypsum - 6%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1715 - 1717 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Grayish Brown (10YR 6/2); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1717 - 1719 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - 3%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Oldsmar Formation index fossils are found throughout this interval. Noticeable increase in overall fossil content.

1719 - 1720.6 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1720.6 - 1722 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Chert - 3%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1722 - 1724 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Abundant Oldsmar Formation index fossils present and Orbitolites soritids as well.

1724 - 1726 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Chert - 1%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1726 - 1728 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1728 - 1729.7 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 1%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1729.7 - 1731.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Chert - 2%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Noticeable increase in the amount of Oldsmar Formation index fossils present throughout this interval.

1731.5 - 1733 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Chert - 2%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Abundant Oldsmar Formation index fossils present and Orbitolites soritids as well.

1733 - 1735 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 80%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 1%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1735 - 1737 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 85%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Chert - 2%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1737 - 1739.4 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 1%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1739.4 - 1741 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 55%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1741 - 1743 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - <1%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Abundant fossils found throughout this interval.

1743 - 1745 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1745 - 1747 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - <1%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1747 - 1748.6 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - <1%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1748.6 - 1750 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1750 - 1752 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - 2%, Gypsum - 5%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Coral; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above with an increase in gypsum content.

1752 - 1754 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - 2%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Coral; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Noticeable amount of gypsum present yet still quite fossiliferous.

1754 - 1756 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 3%, Glauconite - 2%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1756 - 1757.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Chert - 2%, Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1757.5 - 1759 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa, Mollusks; Comments: Abundant fossils present throughout this box but no identifiable index fossils present.

1759 - 1761 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 85%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa, Coral

1761 - 1763 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 85%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa, Coral

1763 - 1765 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 85%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa, Mollusks

1765 - 1767 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 80%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa, Mollusks

1767 - 1769 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa, Mollusks

1769 - 1771 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa, Mollusks

1771 - 1772 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Bryozoa, Mollusks

1772 - 1774 ft Peat; Color: Brownish Gray (5YR 4/1) to Greenish Black (5GY 2/1); Porosity: Intergranular; Good Induration; Cement Type: Organic Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - 4%; Other Features: Platy; General Fossils: No Fossils; Comments: Approximately 2.0' long section of peat with smaller clusters of gypsum present throughout.

1774 - 1776.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1776.2 - 1778 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1778 - 1779.6 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1779.6 - 1780.5 ft Chert; Color: Brownish Gray (5YR 4/1) to Very Light Gray (N8); Porosity: Intergranular; Poor Induration; Cement Type: Silica, Calcilutite Matrix; Sedimentary Structures: Brecciated; Accessory Minerals: Peat - 5%; Other Features: Friable, Poor Sample; General Fossils: No Fossils; Comments: This interval consisted of a chert breccia within a carbonate matrix. Sample quality was poor.

1780.5 - 1782.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1782.5 - 1784.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Very Light Gray (N8); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1784.5 - 1785.1 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1785.1 - 1785.9 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1785.9 - 1787 ft Chert; Color: Brownish Gray (5YR 4/1) to Very Light Gray (N8); Porosity: Intergranular; Poor Induration; Cement Type: Silica, Calcilutite Matrix; Sedimentary Structures: Brecciated; Accessory Minerals: Peat - 3%; Other Features: Friable, Poor Sample; General Fossils: No Fossils; Comments: This interval consisted of a chert breccia in a carbonate matrix to a more massive, silicified chert section. This interval was quite poor compared to the surrounding intervals.

1787 - 1789 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1789 - 1791 ft Wackestone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 15%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1791 - 1793 ft Wackestone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 15%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1793 - 1794.3 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Moldic, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1794.3 - 1796 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1796 - 1798 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1798 - 1800 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1800 - 1802 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1802 - 1804 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1804 - 1806 ft Dolostone; Color: Light Brownish Gray (5YR 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: No Fossils; Comments: Noticeable change from predominantly limestones to dolostone. No identifiable fossils present throughout interval.

1806 - 1807.3 ft Dolostone; Color: Light Brownish Gray (5YR 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: No Fossils; Comments: Same as above.

1807.3 - 1809.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1809.5 - 1811 ft Dolostone; Color: Light Brownish Gray (5YR 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: No Fossils

1811 - 1812.8 ft Dolostone; Color: Light Brownish Gray (5YR 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Moderate Induration; Cement Type: Dolomite; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Dolomitic, Medium Recrystallization; General Fossils: No Fossils

1812.8 - 1814.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 5%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1814.5 - 1816.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds

1816.5 - 1818.3 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1818.3 - 1820.4 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1820.4 - 1822.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 15%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1822.2 - 1824 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds

1824 - 1826 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Oldsmar Formation index fossils present throughout this interval.

1826 - 1828 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1828 - 1830 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1830 - 1831.6 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1831.6 - 1833.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1833.5 - 1835 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Oldsmar Formation index fossils present throughout this interval.

1835 - 1837 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Fine; Range: Fine to Very Fine;

Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1837 - 1839 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Fine; Range: Fine to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids; Index Fossils: Coskinolina elongata, Helicostegina gyralis; Comments: Same as above.

1839 - 1841.1 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1841.1 - 1843 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1843 - 1845 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1845 - 1846.8 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids; Index Fossils: Coskinolina elongata; Comments: Oldsmar Formation index fossils present throughout this interval.

1846.8 - 1848 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1848 - 1850.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 40%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1850.2 - 1852 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds

1852 - 1854 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1854 - 1856 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 45%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1856 - 1857.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1857.5 - 1859.2 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1859.2 - 1861 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 15%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1861 - 1863 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 15%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Glauconite - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1863 - 1865 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 20%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1865 - 1867 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 25%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Glauconite - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1867 - 1868.3 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 3%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1868.3 - 1870 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1870 - 1872 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 30%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1872 - 1874 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 35%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - 1%, Gypsum - 4%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments

1874 - 1876 ft Packstone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 70%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Coskinolina elongata; Comments: Oldsmar Formation index fossils present throughout this interval.

1876 - 1877.8 ft Packstone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 60%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 3%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1877.8 - 1879.6 ft Packstone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1879.6 - 1881.4 ft Packstone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1881.4 - 1883.3 ft Packstone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1883.3 - 1885 ft Packstone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 75%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 2%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1885 - 1887 ft Packstone; Color: Very Light Orange (10YR 8/2) to Moderate Yellowish Brown (10YR 5/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Allochemical Constituents: 65%; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Glauconite - <1%, Gypsum - 1%; Other Features: Calcareous, Medium Recrystallization, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Index Fossils: Helicostegina gyralis; Comments: Same as above.

1887 - 1888.7 ft Wackestone; Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Pellet, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1888.7 - 1890.7 ft Packstone; Porosity: Intergranular, Pinpoint; Grain Type: Pellet, Biogenic; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1890.7 - 1892.7 ft Packstone; Porosity: Intergranular, Pinpoint; Grain Type: Pellet, Biogenic; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Same as above.

1892.7 - 1894.5 ft Packstone; Porosity: Intergranular, Pinpoint; Grain Type: Pellet, Biogenic; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Same as above.

1894.5 - 1896.3 ft Packstone; Porosity: Intergranular, Pinpoint; Grain Type: Pellet, Biogenic; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory

Minerals: Gypsum - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Same as above.

1896.3 - 1898 ft Packstone; Porosity: Intergranular, Pinpoint; Grain Type: Pellet, Biogenic; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Same as above.

1898 - 1900 ft Packstone; Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Pellet, Biogenic; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1900 - 1901 ft Wackestone; Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Pellet, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Organic laminae near bottom of interval. (<1%)

1901 - 1902 ft Mudstone; Porosity: Intergranular, Pinpoint; Grain Type: Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

1902 - 1904.3 ft Mudstone; Porosity: Intergranular, Pinpoint; Grain Type: Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Molds

1904.3 - 1905.3 ft Packstone; Color: Very Light Orange (10YR 8/2) to Very Light Gray (N8); Porosity: Fracture, Intercrystalline; Grain Type: Crystals, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 8%; Other Features: Medium Recrystallization; General Fossils: No Fossils

1905.3 - 1907 ft Mudstone; Color: White (N9); Porosity: Intergranular; Grain Type: Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous; General Fossils: No Fossils; Comments: Interval consists of well-defined mudstone with trace organics near top.

1907 - 1909 ft Mudstone; Color: White (N9); Porosity: Intergranular; Grain Type: Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous; General Fossils: No Fossils; Comments: Same as above. Organic laminae (<1%)

1909 - 1911 ft Mudstone; Color: White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1911 - 1913 ft Mudstone; Color: White (N9); Porosity: Intergranular; Grain Type: Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1913 - 1914.7 ft Mudstone; Color: White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Calcilutite, Biogenic; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1914.7 - 1915.4 ft Mudstone; Color: White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Same as above. Organic laminae (<1%)

1915.4 - 1916.5 ft Wackestone; Color: White (N9) to Light Gray (N7); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera, Miliolids

1916.5 - 1918 ft Mudstone; Color: White (N9); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Calcilutite, Biogenic; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1918 - 1920 ft Mudstone; Color: White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1920 - 1922 ft Mudstone; Color: White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1922 - 1922.7 ft Mudstone; Color: White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1922.7 - 1924.9 ft Mudstone; Color: White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1924.9 - 1927 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Pellet, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Medium Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1927 - 1929 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Light Olive Gray (5Y 6/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1929 - 1931 ft Mudstone; Color: White (N9) to Light Olive Gray (5Y 6/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera; Comments: Same as previous, with laminated organics (<1%) and interspersed layers of carbonate mud.

1931 - 1932.8 ft Mudstone; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intergranular, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - <1%, Heavy Minerals - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Trace heavy minerals present resembling chalcopyrite.

1932.8 - 1934.8 ft Mudstone; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1934.8 - 1936.8 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - <1%, Gypsum - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1936.8 - 1938 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

1938 - 1940 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Interval alternates from a mudstone to a wackestone throughout.

1940 - 1942.1 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1942.1 - 1944.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

1944.5 - 1945.2 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: This interval consists of a low recrystallized mudstone with abundant gypsum crystals.

1945.2 - 1946 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils; Comments: This interval consists of highly recrystallized sucrosic dolostone.

1946 - 1947 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 5%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: This interval consists of a low recrystallized mudstone with abundant gypsum crystals.

1947 - 1947.5 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - 2%, Organics - 5%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera; Comments: This interval has a large amount of laminated organics with gypsum crystals growing along their edges.

1947.5 - 1950.1 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 7/2); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Interval alternates from a mudstone to a wackestone throughout.

1950.1 - 1952 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 7/2); Porosity: Intergranular, Moldic, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Finely laminated organics present throughout. (<1%)

1952 - 1954.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera; Comments: This interval consists of a low recrystallized mudstone with abundant gypsum crystals.

1954.5 - 1956.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Other Features: Dolomitic, Sucrosic, Medium Recrystallization; General Fossils: No Fossils; Comments: This interval consists of medium recrystallized dolostone with intermittent sucrosic layers throughout.

1956.5 - 1958.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Other Features: Dolomitic, Sucrosic, Medium Recrystallization; General Fossils: No Fossils; Comments: This interval consists of medium recrystallized dolostone with intermittent sucrosic layers throughout.

1958.5 - 1959.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Other Features: Dolomitic, Sucrosic, Medium Recrystallization; General Fossils: No Fossils; Comments: This interval consists of medium recrystallized dolostone with intermittent sucrosic layers throughout.

1959.5 - 1960.2 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular; Grain Type: Calcilutite, Biogenic, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera; Comments: Thin beds of laminated organics near top of interval. (<1%)

1960.2 - 1962 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera; Comments: Thin beds of laminated organics near bottom of interval. (<1%)

1962 - 1963 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera; Comments: This interval consists of a low recrystallized mudstone with abundant gypsum crystals.

1963 - 1965 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils; Comments: This interval consists of highly recrystallized dolostone with intermittent sucrosic layers throughout.

1965 - 1967 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Other Features: Dolomitic, Sucrosic, Medium Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1967 - 1969 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

1969 - 1970 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

1970 - 1971 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera; Comments: Thin beds of laminated organics. (<1%)

1971 - 1973 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1973 - 1975 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular, Pinpoint; Grain Type: Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1975 - 1977.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Moldic, Vugular; Alteration: Medium (10-50%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Medium; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Other Features: Dolomitic, Medium Recrystallization, Sucrosic; General Fossils: Fossil Fragments, Benthic Foraminifera; Comments: This interval consists of a moldic dolostone with medium to low recrystallization throughout.

1977.5 - 1978.5 ft Mudstone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intergranular, Pinpoint; Grain Type: Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 4%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1978.5 - 1980 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Medium (10-50%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Other Features: Dolomitic, Sucrosic, Medium Recrystallization; General Fossils: No Fossils

1980 - 1981 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Organics - <1%; Other Features: Medium Recrystallization, Dolomitic, Sucrosic; General Fossils: No Fossils; Comments: Finely laminated organics present near top of interval.

1981 - 1982 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Light Olive Gray (5Y 6/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - 3%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera; Comments: Finely laminated organics present throughout. (<1%)

1982 - 1984 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1984 - 1986 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1986 - 1987.7 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Vugular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1987.7 - 1990 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1990 - 1991 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - 2%, Organics - <1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera

1991 - 1992.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Calcite - <1%, Gypsum - 2%, Organics - 1%; Other Features: Calcareous, Low Recrystallization; General Fossils: Fossil Fragments, Benthic Foraminifera; Comments: Thinly laminated organics and mottled texture in last 8". (organics <1%) Dolomitic recrystallization begins to appear at bottom of interval.

1992.5 - 1994.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intercrystalline, Vugular; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Other Features: Medium Recrystallization, Sucrosic, Dolomitic; General Fossils: Fossil Molds

1994.5 - 1996.6 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intercrystalline, Vugular; Alteration: Medium (10-50%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%; Other Features: Medium Recrystallization, Sucrosic, Dolomitic; General Fossils: No Fossils

1996.6 - 1997 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intercrystalline, Pinpoint; Alteration: Medium (10-50%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - 2%; Other Features: Medium Recrystallization, Sucrosic, Dolomitic; General Fossils: No Fossils; Comments: This interval consists of a medium recrystallized dolostone with abundant gypsum crystals throughout. (gypsum <2%)

1997 - 1999 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Accessory Minerals: Calcite - 2%, Gypsum - <1%; Other Features: Low Recrystallization, Calcareous; General Fossils: Miliolids; Comments: This interval is a mudstone with low to very low degrees of dolomitic recrystallization.

1999 - 2000 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%; Other Features: High Recrystallization, Sucrosic, Dolomitic; General Fossils: No Fossils

2000 - 2001 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Accessory Minerals: Calcite - 2%, Gypsum - <1%; Other Features: Low Recrystallization, Calcareous; General Fossils: Fossil Fragments; Comments: Interval is a mudstone with low to very low degrees of dolomitic recrystallization.

2001 - 2002 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%; Other Features: High Recrystallization, Sucrosic, Dolomitic; General Fossils: No Fossils

2002 - 2003 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Grayish Orange (10YR 7/4); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Accessory Minerals: Calcite - 2%, Gypsum - <1%; Other Features: Low Recrystallization, Calcareous; General Fossils: Fossil Fragments; Comments: Interval is a mudstone with low to very low degrees of dolomitic recrystallization.

2003 - 2006 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%; Other Features: High Recrystallization, Sucrosic, Dolomitic; General Fossils: No Fossils; Comments: Interval starts to decrease from highly recrystallized to medium towards the bottom. (Last 5.0 inches)

2006 - 2008 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intercrystalline, Pinpoint, Moldic; Alteration: Medium (10-50%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Other Features: Medium Recrystallization, Sucrosic, Dolomitic; General Fossils: Coral, Fossil Molds, Fossil Fragments

2008 - 2009 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Grayish Orange (10YR 7/4); Porosity: Intercrystalline, Pinpoint; Alteration: Medium (10-50%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Other Features: Medium Recrystallization, Sucrosic, Dolomitic; General Fossils: No Fossils

2009 - 2010.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Calcite - 2%, Gypsum - <1%, Organics - <1%; Other Features: Low Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids; Index Fossils: Helicostegina gyralis; Comments: Interval consists of a mudstone with thin beds of laminated organics that quickly gradates to a fossiliferous packstone. Oldsmar index fossils present.

2010.5 - 2012 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - <1%, Gypsum - <1%; Other Features: Low Recrystallization, Calcareous, Dolomitic; General Fossils: Coral, Benthic Foraminifera

2012 - 2013.3 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - <1%, Gypsum - <1%; Other Features: Low Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Molds, Coral, Miliolids

2013.3 - 2015.4 ft Mudstone; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Low Recrystallization, Calcareous; General Fossils: Fossil Molds, Miliolids

2015.4 - 2016.4 ft Mudstone; Color: Very Light Orange (10YR 8/2) to White (N9); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Low Recrystallization, Calcareous; General Fossils: Fossil Molds

2016.4 - 2017 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Calcite - <1%, Organics - <1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments:This interval consists of a calcareous wacke to mudstone with low recrystallization and thin beds of laminated organics throughout.

2017 - 2019.3 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - <1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds

2019.3 - 2021.3 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%; Other Features: High Recrystallization, Dolomitic, Sucrosic, Calcareous; General Fossils: No Fossils; Comments: This interval contains a highly recrystallized sucrosic dolostone, with varying amounts of calcilutite matrix.

2021.3 - 2021.7 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - <1%, Organics - <1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils

2021.7 - 2023.8 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%; Other Features: High Recrystallization, Dolomitic, Sucrosic; General Fossils: No Fossils

2023.8 - 2024.4 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - <1%; Other Features: Low Recrystallization, Calcareous; General Fossils: No Fossils

2024.4 - 2026 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: Low Recrystallization, Calcareous; General Fossils: Fossil Fragments, Miliolids

2026 - 2027.6 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Low Recrystallization, Calcareous; General Fossils: Fossil Molds, Fossil Fragments, Miliolids; Comments: Thin beds of laminated organics near top of interval. (<1%)

2027.6 - 2028.7 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - <1%, Gypsum - <1%, Organics - <1%; Other Features: Low Recrystallization, Calcareous; General Fossils: Fossil Molds, Fossil Fragments, Miliolids, Benthic Foraminifera; Comments: This interval consists of a lowly recrystallized, vuggy packstone, with pore-filling gypsum or brown anhydrite crystals growing in the larger vugs. (3.0-6.0 cm) Numerous Miliolids present.

2023.8 - 2031.8 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: This interval consists of a highly recrystallized dolostone, separated from the sample above by thin beds of laminated organics.

2031.8 - 2032.6 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%, Organics - <1%; Other Features: Medium Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments, Miliolids, Planktonic Foraminifera; Comments: This interval contains a variably recrystallized wackestone-mudstone, with thin beds of laminated organics. Pore-filling gypsum and anhydrite crystals are present throughout.

2032.6 - 2034 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - <1%, Gypsum - <1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Fragments

2034 - 2036 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%; Other Features: High Recrystallization, Dolomitic, Sucrosic; General Fossils: No Fossils

2036 - 2037.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%; Other Features: Medium Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2037.5 - 2039 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2039 - 2042.2 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2042.2 - 2043.7 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2043.7 - 2046 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Calcite - 3%, Gypsum - <1%, Organics - <1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Fragments, Miliolids; Comments: Thin beds of laminated organics. (<1%)

2046 - 2047.7 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Calcite - 3%, Gypsum - <1%, Organics - <1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Fragments, Miliolids; Comments: Thin beds of laminated organics. (<1%)

2047.7 - 2049 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

2049 - 2050.8 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Calcite - 2%, Gypsum - 1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils; Comments: Consists of a very fine grained mudstone with abundant calcite and gypsum crystals.

2050.8 - 2052 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Calcite - 3%, Gypsum - 1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils

2052 - 2053.5 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Calcite - 2%, Gypsum - 1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils

2053.5 - 2056 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2056 - 2058 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2058 - 2060 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Fracture; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils; Comments: Well-preserved pore-filling gypsum in vugs at top of interval. (vugs 2.0 cm-6.0 cm)

2060 - 2062.5 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2062.5 - 2065 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Gypsum - <1%, Organics - <1%, Spar - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils; Comments: Poor recovery, only 2.0ft of sample recovered.

2065 - 2067 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils; Comments: Moderate recovery. Only 1.5 ft of sample recovered.

2067 - 2069 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

2069 - 2071 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils; Comments: Grain size changes from microcrystalline to fine at 2070 ft. Extends for 1.0 ft

2071 - 2073 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2073 - 2073.1 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intergranular; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite

Matrix; Accessory Minerals: Calcite - <1%, Gypsum - 1%; Other Features: Low Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils

2073.1 - 2076 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2076 - 2077 ft No Sample; Comments: No Sample. Interval labeled “VOID”

2077 - 2079.5 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2079.5 - 2083 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils; Comments: Poor recovery. Only 1.5 ft of sample recovered.

2083 - 2085 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Grayish Brown (10YR 6/2); Porosity: Intercrystalline; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils; Comments:

2085 - 2087 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Olive Gray (5Y 4/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization, Sucrosic; General Fossils: No Fossils

2087 - 2089 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Olive Gray (5Y 4/1); Porosity: Intercrystalline, Fracture; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

2089 - 2091 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Olive Gray (5Y 4/1); Porosity: Intercrystalline; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

2091 - 2094 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Olive Gray (5Y 4/1); Porosity: Intercrystalline, Fracture; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Iron Stain - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils

2094 - 2097.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Intercrystalline; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2097.5 - 2102 ft Dolostone; Color: Light Olive Gray (5Y 6/1) to Olive Gray (5Y 4/1); Porosity: Fracture, Intercrystalline; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2102 - 2107 ft No Sample; Comments: Labeled “VOID”

2107 - 2109 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Moldic, Vugular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Sucrosic; General Fossils: No Fossils; Comments: Abundant thin laminated organics near top of interval (<1%). Poor recovery, 1.5 ft recovered.

2109 - 2111 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Fracture, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Thin black laminated hardground.

2111 - 2113 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Fracture, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Thin black laminated hardground.

2113 - 2115.5 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Fracture, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Poor recovery, only 1.5 ft recovered.

2115.5 - 2117 ft Dolostone; Color: Dark Gray (N3) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Vugular, Intercrystalline; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2117 - 2120.2 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Intercrystalline; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Sparry Calcite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - <1%, Spar - <1%; Other Features: High Recrystallization, Dolomitic, Sucrosic, Calcareous; General Fossils: No Fossils; Comments: Thin bands of gypsum. Powdered dolomite/dolosilt present at bottom of interval.

2120.2 - 2123.1 ft Dolostone; Color: Dark Gray (N3) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Vugular, Intercrystalline; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2123.1 - 2124 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Grayish Brown (10YR 6/2); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Sparry Calcite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds; Comments: This interval consists of a calcareous dolostone separated from above sample by thin sections of hardground and laminated organics.

2124 - 2127 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Sparry Calcite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Spar - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils

2127 - 2128.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2128.5 - 2130.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2130.5 - 2132 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2132 - 2134 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2134 - 2136 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Poor recovery, only 1.5 ft recovered.

2136 - 2137 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2137 - 2139 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Increase in gypsum growths compared to recent previous intervals.

2139 - 2141 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Increase in gypsum growths compared to recent previous intervals.

2141 - 2144.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Increase in gypsum growths compared to recent previous intervals.

2144.5 - 2147 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2147 - 2148.5 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Moldic, Fracture, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Very moldic. Large vugs filled with abundant dolomite crystals. (vugs: pinpoint-15.0 cm)

2148.5 - 2150 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2150 - 2152 ft Dolostone; Color: Yellowish Gray (5Y 8/1) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2152 - 2154 ft Dolostone; Color: Yellowish Gray (5Y 8/1) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic, Sucrosic; General Fossils: No Fossils

2154 - 2156.4 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic, Sucrosic; General Fossils: No Fossils

2156.4 - 2157.6 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Moldic, Vugular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic, Sucrosic; General Fossils: No Fossils

2157.6 - 2159.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Moldic, Vugular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%, Spar - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils; Comments: Fine lines of disseminated organics scattered throughout.

2159.5 - 2160 ft Dolostone; Color: Grayish Brown (10YR 6/2) to Light Olive Gray (5Y 6/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2160 - 2162 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Moldic, Vugular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Sparry Calcite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - 4%, Spar - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils; Comments: This interval consists of a highly recrystallized dolostone with abundant laminated organic beds throughout. (~4%)

2162 - 2163.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Moldic, Vugular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Sparry Calcite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%, Spar - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Miliolids

2163.5 - 2165.8 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Olive Gray (5Y 4/1); Porosity: Moldic, Vugular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%, Spar - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Miliolids; Comments: Layer of dark organics at top of interval, numerous miliolids present in this organic layer.

2165.8 - 2167 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Light Gray (N7); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%, Pyrite - <1%; Other Features: Dolomitic, High Recrystallization; General

Fossils: No Fossils; Comments: This is a light tan to gray highly recrystallized dolostone with thin bands of black organics (peat/lignite <1%). Trace amounts of chalcopyrite are located within organics.

2167 - 2169 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Light Gray (N7); Porosity: Intercrystalline, Moldic, Vugular; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%, Pyrite - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: Fossil Fragments; Comments: Thin bands of black organics (peat/lignite (<1%)) containing chalcopyrite (<1%)

2169 - 2171 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Light Gray (N7); Porosity: Intercrystalline, Moldic, Vugular; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: Fossil Fragments; Comments: Thin beds of laminated organics near bottom of interval. (<1%)

2171 - 2173 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Fracture, Moldic, Vugular; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: Fossil Fragments, Fossil Molds

2173 - 2177.4 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Completely (90-100%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: Fossil Molds; Comments: Poor recovery, only 2.0 ft recovered.

2177.4 - 2179 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Light Gray (N7); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%, Pyrite - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: Fossil Molds; Comments: Laminated beds of black organics containing trace chalcopyrite. Hardground beds near bottom of interval.

2179 - 2181 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Light Gray (N7); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics throughout interval. (<1%)

2181 - 2183 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Light Gray (N7); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%, Pyrite - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: No Fossils; Comments: Well defined bed of lignite at 2181.5 containing trace chalcopyrite.

2183 - 2185 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: Dolomitic, High Recrystallization; General Fossils: Fossil Molds

2185 - 2187 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Light Gray (N7); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Sparry Calcite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - 2%, Spar - <1%; Other Features: Dolomitic, High Recrystallization, Calcareous; General Fossils: Fossil Fragments; Comments: Thin beds of disseminated organics throughout interval. (2%) Organics increase in abundance with depth.

2187 - 2189 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Thin beds of laminated organics. (<1%)

2189 - 2191 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Moldic; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Laminated organics increase in abundance towards bottom of interval. (<1%). Poor recovery (1.0 ft)

2191 - 2192 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin lines of laminated organics. (<1%)

2192 - 2194 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin lines of laminated organics. (<1%)

2194 - 2195.5 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Thin lines of laminated organics. (<1%)

2195.5 - 2196.8 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Disseminated organics occurring in thin lines or streaks. (<1%) Thin black laminated hardground.

2196.8 - 2197.5 ft Dolostone; Color: Light Yellowish Orange (10YR 8/6) to Moderate Light Gray (N6); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Changes to a medium gray Dolostone with well defined fossil molds. This sample is separated from the next interval by a layer of black hardground.

2197.5 - 2202 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics. (<1%) Poor recovery. Only 2.0 ft recovered.

2202 - 2204 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics. (<1%) Moldic porosity increases dramatically.

2204 - 2207 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics. (<1%) Poor recovery. Only 1.3 ft recovered.

2207 - 2209.6 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics. (<1%)

2209.6 - 2212 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Fracture, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Medium; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics. (<1%)

2212 - 2213.5 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Fracture, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Medium; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics. (<1%)

2213.5 - 2215 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Fracture, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of disseminated organics. (<1%)

2215 - 2217 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Heavy Minerals - <1%, Organics - <1%, Spar - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: “Chalky” dolostone appearance and texture. Trace heavy minerals resembling chalcopyrite.

2217 - 2219 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Fracture, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments; Comments: At 2217.5-2217.7 sample changes to first appearance of a cryptocrystalline, very moldic, dark gray dolostone.

2219 - 2221 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Cryptocrystalline; Range: Cryptocrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments

2221 - 2223 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments

2223 - 2225 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Very Light Gray (N8); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals:

Anhydrite - <1%, Gypsum - <1%, Heavy Minerals - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Trace heavy minerals resembling chalcopyrite.

2225 - 2227 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Very Light Gray (N8); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Heavy Minerals - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Trace heavy minerals resembling chalcopyrite.

2227 - 2229 ft Dolostone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Fracture; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Heavy Minerals - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments; Comments: Trace heavy minerals resembling chalcopyrite.

2229 - 2231 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Fracture; Alteration: Completely (90- 100%); Crystallinity: Anhedral; Grain Size: Cryptocrystalline; Range: Cryptocrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Heavy Minerals - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Trace heavy minerals resembling chalcopyrite.

2231 - 2237 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Moldic, Fracture; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Heavy Minerals - <1%, Organics - <1%, Spar - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Trace heavy minerals resembling chalcopyrite. Very poor recovery, only 1.5 ft recovered.

2237 - 2243 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Moldic, Fracture; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Heavy Minerals - <1%, Organics - <1%, Spar - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Trace heavy minerals resembling chalcopyrite. Very poor recovery, only 2.3 ft recovered.

2243 - 2245.3 ft Dolostone; Color: Grayish Orange (10YR 7/4) to Light Olive Gray (5Y 6/1); Porosity: Intercrystalline, Moldic, Fracture; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments

2245.3 - 2246 ft Dolostone; Color: Olive Gray (5Y 4/1) to Greenish Gray (5GY 6/1); Porosity: Intergranular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Moderate Induration; Cement Type: Dolomite; Sedimentary Structures: Nodular; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%, Heavy Minerals - <1%, Organics - 4%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments; Comments: This interval contains a dark brown moderately indurated dolostone with abundant gypsum and organics. Gypsum occurs in well defined bladelike crystals. Abundant black nodular oncoids filled with trace heavy minerals resembling chalcopyrite occur throughout. (Oncoid size, 1.0 cm-3.0 cm)

2246 - 2248 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds

2248 - 2250 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Light Gray (N7); Porosity: Intercrystalline, Moldic, Vugular; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Medium; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Grain size changes to predominantly medium and color to Very Light Orange at halfway point of sample.

2250 - 2257 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Light Gray (N7); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Medium; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Very poor recovery. Only 2.5 ft recovered.

2257 - 2259 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Potential valvulammina nassauensis mold.

2259 - 2261 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds

2261 - 2263 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils; Comments: Poor recovery. Only 1.6 ft recovered.

2263 - 2267 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils; Comments: Poor recovery. Only 2.0 ft recovered. Thin hardground bedding.

2267 - 2269 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds

2269 - 2271 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds

2271 - 2272.5 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds

2272.5 - 2274.5 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds

2274.5 - 2277 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Heavy Minerals - <1%, Iron Stain - <1%, Organics - <1%; Other Features: High

Recrystallization, Dolomitic; General Fossils: Fossil Fragments; Comments: Thin beds of laminated organics. (<1%). Trace heavy minerals resembling chalcopyrite.

2277 - 2279 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments

2279 - 2282.5 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Dark black layer of laminated organics (<1%) containing gypsum overgrowths.

2282.5 - 2284 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Poor recovery, only 1.2 ft recovered.

2284 - 2286.3 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Thin layers of laminated organics. (<1%)

2286.3 - 2288 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments

2288 - 2290 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin layers of laminated organics. (<1%)

2290 - 2293 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds; Comments: Thin layers of laminated organics. (<1%)

2293 - 2295 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Gypsum - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds

2295 - 2297 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds; Comments: Thin layers of laminated organics. (<1%)

2297 - 2299 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very

Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments

2299 - 2301 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Thin layers of laminated organics. (<1%) Poor recovery, only 1.5 ft recovered. Gypsum overgrowth present in organic layers.

2301 - 2303 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds

2303 - 2305 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds

2305 - 2307 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments

2307 - 2309 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments

2309 - 2311 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments

2311 - 2313 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments

2313 - 2315 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments; Comments: Poor recovery. Only 1.5ft recovered.

2315 - 2317 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics. (<1%)

2317 - 2319 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Moderate Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics. (<1%)

2319 - 2322 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Moderate Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Thin beds of laminated organics. (<1%)

2322 - 2324 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments

2324 - 2326 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Poor recovery. Only 1.6 ft recovered.

2326 - 2327.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds, Fossil Fragments; Comments: Interval Labeled: “Base hi K zone of WLU #2”

2327.5 - 2329 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 1%, Gypsum - 3%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments; Comments: Large increase in pore-filling gypsum and anhydrite compared to previous intervals. (nodules length 0.5 cm-6.0 cm)

2329 - 2331.5 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Moldic, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 1%, Gypsum - 2%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds, Fossil Fragments; Comments: Layers of disseminated organics. (<1%)

2331.5 - 2333.5 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - 1%, Gypsum - 2%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds

2333.5 - 2335 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - 1%, Gypsum - 3%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds

2335 - 2337 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - 1%, Gypsum - 2%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2337 - 2339 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Thin beds of disseminated organics. (<1%)

2339 - 2341.4 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Thin beds of disseminated organics. (<1%)

2341.4 - 2343 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Thin beds of disseminated organics. (<1%)

2343 - 2345.4 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds

2345.4 - 2347 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Thin hardground beds containing organics. (<1%)

2347 - 2349 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - 1%, Gypsum - 2%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Thin beds of laminated organics (<1%)

2349 - 2350.9 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils; Comments: Thin beds of laminated organics (<1%)

2350.9 - 2353 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 2%, Gypsum - 15%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: This interval consists of a highly recrystallized dolostone with large sections containing pore-filling gypsum. Gypsum sections occur intermittently and range up to 6.0 inches in length.

2353 - 2355 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - 1%, Gypsum - 8%, Heavy Minerals - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: No Fossils; Comments: As above, but includes a layer of black laminated organics resembling peat. (2.0 cm) Organics contain trace heavy minerals resembling chalcopyrite.

2355 - 2357 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds

2357 - 2359 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Mottled; Accessory Minerals:

Anhydrite - <1%, Gypsum - 1%, Organics - 1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Molds; Comments: Thin beds of laminated and disseminated organics. (1%)

2359 - 2360.8 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Crystals, Biogenic; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: No Fossils; Comments: Thin beds of laminated organics. (<1%)

2360.8 - 2363 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - 2%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Miliolids, Fossil Molds; Comments: Thin beds of laminated organics. (<1%)

2363 - 2365 ft Packstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - 3%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Gastropods, Benthic Foraminifera; Index Fossils: Borelis gunteri, Valvulamina nassauensis; Comments: Increase in laminated organic layers. Potential Borelis Gunteri and Valvulamina Nassauensis, Cedar Keys index fossils.

2365 - 2368 ft Packstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - 2%; Other Features: High Recrystallization, Fossiliferous, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Gastropods, Benthic Foraminifera; Index Fossils: Borelis gunteri; Comments: Potential Borelis Gunteri Cedar Keyss index fossils.

2368 - 2369.2 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: No Fossils; Comments: Marked disappearance of fossils. Very highly recrystallized.

2369.2 - 2371 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Molds; Comments: Hardground present in interval change.

2371 - 2373 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Crystals, Biogenic; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds; Comments: Burrows filled with clean white calcite crystals.

2373 - 2375 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Burrowed, Bioturbated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds; Comments: Disturbed beds indicative of bioturbation.

2375 - 2377 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments

2377 - 2378.21 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Thin beds of laminated organics. (<1%)

2378.21 - 2380 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Thin beds of laminated organics. (<1%)

2380 - 2382 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated, Bioturbated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Index Fossils: Haplophragmoides bushnellensis; Comments: Potential Haplophragmoides bushnellensis

2382 - 2384 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated, Bioturbated, Cross Bedded; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Comments: Disturbed beds indicative of bioturbation.

2384 - 2386 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated, Bioturbated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Comments: Abundance of bioturbated beds. Bottom of interval is carbonate clay layer. (2.0 inches)

2386 - 2387.5 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera

2387.5 - 2389.5 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Comments: Thin beds of disseminated organics. (<1%)

2389.5 - 2391.5 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Comments: Thin beds of disseminated organics (<1%). Cedar Keys index fossils present.

2391.5 - 2393.5 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated, Bioturbated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Laminated and disseminated organics (<1%). Disturbed beds indicative of bioturbation.

2393.5 - 2395.5 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated, Bioturbated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Laminated and disseminated organics (<1%). Disturbed beds indicative of bioturbation.

2395.5 - 2397 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite, Calcilutite Matrix; Sedimentary Structures: Bioturbated, Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: This interval contains a calcareous dolostone with fossil fragments and disseminated organics (<1%).

2397 - 2399 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Mottled, Laminated, Bioturbated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Laminated and disseminated organics (<1%). Disturbed beds indicative of bioturbation.

2399 - 2401 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Crystals, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Thin beds of disseminated organics (<1%).

2401 - 2403 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Thin beds of disseminated organics (<1%).

2403 - 2405 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Mollusks; Comments: Thin beds of disseminated organics (<1%).

2405 - 2406.6 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Thin beds of disseminated organics (<1%).

2406.6 - 2408 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Thin beds of disseminated organics (<1%). Sulfur mineralization preferentially growing on organics.

2408 - 2410 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Thin beds of disseminated organics (<1%).

2410 - 2412 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments; Comments: Thin beds of disseminated organics (<1%). Burrows infilled with calcite.

2412 - 2414 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Mollusks; Comments: Thin beds of disseminated organics (<1%). Sulfur mineralization preferentially growing on organics.

2414 - 2416.3 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Laminated, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Gastropods; Comments: Thin beds of disseminated organics (<1%). Sulfur mineralization preferentially growing on organics.

2416.3 - 2418.3 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix, Dolomite; Sedimentary Structures: Bioturbated, Burrowed, Mottled; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments

2418.3 - 2420 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Bioturbated, Burrowed; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2420 - 2422 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Bioturbated, Burrowed, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2422 - 2424 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Bioturbated, Burrowed, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2424 - 2425.5 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Bioturbated, Burrowed, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - 1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Mollusks, Gastropods; Comments: Sulfur growth present preferential on organics. Bottom 3.0 inches of interval is highly fossiliferous with abundance of molds and fragments.

2425.5 - 2427 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Bioturbated, Burrowed, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Mollusks, Gastropods

2427 - 2429 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Burrowed, Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - 3%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

2429 - 2431 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Burrowed, Mottled, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - 2%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids

2431 - 2433 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Burrowed, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids

2433 - 2434.7 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Burrowed, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids; Comments: Burrows increase in abundance.

2434.7 - 2437 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Burrowed, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2437 - 2439 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - 1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2439 - 2441.5 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - 1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2441.5 - 2444 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Bioturbated, Burrowed, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Gastropods, Miliolids, Mollusks

2444 - 2446 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Burrowed, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Mollusks

2446 - 2447.5 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Mollusks, Gastropods

2447.5 - 2449 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Mollusks, Gastropods

2449 - 2451.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Comments: This interval contains a highly recrystallized packstone with numerous miliolid and foraminifera fossil fragments and molds.

2451.5 - 2453.5 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Index Fossils: Haplophragmoides bushnellensis; Comments: Gradates to a mudstone at 2452.5 ft.

2453.5 - 2455.5 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera

2455.5 - 2457 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Comments: Thin beds of laminated organics.

2457 - 2459 ft Packstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds; Comments: Thin beds of laminated organics. Most all fossils have been recrystallized.

2459 - 2460.5 ft Grainstone; Color: Grayish Brown (10YR 6/2) to Yellowish Gray (5Y 7/2); Porosity: Intercrystalline, Pinpoint, Vugular; Grain Type: Biogenic, Crystals, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Gypsum - <1%, Organics - <1%; Other Features: Fossiliferous, Calcareous, Dolomitic, High Recrystallization; General Fossils: Benthic Foraminifera, Miliolids, Fossil Fragments, Fossil Molds; Comments: Layer of laminated organics marks change in interval from above. Changes to a fossiliferous grainstone almost entirely recrystallized into dolomite.

2460.5 - 2463.1 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds

2463.1 - 2465 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Comments: Thin beds of laminated organics.

2465 - 2467 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features:

High Recrystallization, Calcareous, Fossiliferous, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds, Miliolids; Comments: Highly recrystallized dolomitic wackestone containing numerous fossil fragments and miliolids.

2467 - 2469 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments; Comments: Thin beds of laminated organics.

2469 - 2471 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments; Comments: Thin beds of laminated organics.

2471 - 2472.6 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Gastropods, Fossil Molds; Comments: Thin beds of laminated and desseminated organics.

2472.6 - 2474 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Gastropods, Fossil Molds, Miliolids, Mollusks

2474 - 2475 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Moldic; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Gastropods, Fossil Molds, Miliolids, Mollusks

2475 - 2477 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Gastropods, Fossil Molds, Miliolids, Mollusks; Comments: Poor recovery. Only 1.5ft recovered.

2477 - 2479 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids; Index Fossils: Haplophragmoides bushnellensis; Comments: Thin layers of laminated organic hardground near top 3.0 inches of interval. Potential Haplophragmoides bushnellensis present.

2479 - 2482 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera; Index Fossils: Haplophragmoides bushnellensis; Comments: Thin laminated organic hardground separates this interval from the one above.

2482 - 2484 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera, Gastropods, Mollusks

2484 - 2486 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera, Gastropods, Mollusks

2486 - 2488 ft Wackestone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera, Gastropods, Mollusks; Index Fossils: Haplophragmoides bushnellensis; Comments: 2486.8-2487.6: Alternating layers of deposition separated by laminated hardground. Composition remains the same but color changes to pale yellow orange. Cedar keys index fossils present.

2488 - 2490 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Fragments, Fossil Molds, Miliolids, Benthic Foraminifera

2490 - 2491.6 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds; Comments: Pore-filling gypsum in vugs, (1.0-1.5 cm across).

2491.6 - 2493.6 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments

2493.6 - 2495.6 ft Mudstone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Benthic Foraminifera, Fossil Molds

2495.6 - 2497 ft Mudstone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Benthic Foraminifera, Fossil Molds; Comments: Thin beds of laminated organics

2497 - 2499 ft Wackestone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Benthic Foraminifera, Fossil Molds, Mollusks, Gastropods; Comments: At 2498.1 interval changes to a very fine grey mudstone with no discernible fossils. Changes back to described interval (wackestone) at 2498.7

2499 - 2501 ft Wackestone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Benthic Foraminifera, Fossil Molds, Mollusks, Gastropods

2501 - 2503 ft Wackestone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Benthic Foraminifera, Fossil Molds, Mollusks, Gastropods; Comments: Thin beds of disseminated organics.

2503 - 2504.6 ft Wackestone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Benthic Foraminifera, Fossil Molds, Mollusks, Gastropods; Comments: Thin beds of disseminated organics.

2504.6 - 2507 ft Packstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - 2%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Benthic Foraminifera, Fossil Molds, Mollusks, Miliolids; Index Fossils: Haplophragmoides bushnellensis; Comments: Thin beds of disseminated and laminated organics.

2507 - 2509 ft Packstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Fracture; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Very Fine; Range: Very Fine to Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids; Comments: Pore-filling gypsum in larger vugs.

2509 - 2511 ft Wackestone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Fracture; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2511 - 2513 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2513 - 2515 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

2515 - 2517 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera

2517 - 2519 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Gastropods, Miliolids; Comments: Top 3.0 inches contains abundance of laminated and disseminated organics.

2519 - 2521 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2521 - 2523 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2523 - 2525 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Benthic Foraminifera, Miliolids

2525 - 2527 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Bioturbated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2527 - 2529 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds, Gastropods; Comments: Thin beds of disseminated organics.

2529 - 2532 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Mottled, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds; Comments: Thin beds of desseminated organics.

2532 - 2534 ft Mudstone; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: No Fossils

2534 - 2536 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Fracture; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: No Fossils

2536 - 2538 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Fracture; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Fragments

2538 - 2540 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Fracture; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated, Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: No Fossils; Comments: Thin beds of laminated organics.

2540 - 2542 ft Dolostone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Fracture; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Thin beds of laminated organics. Pore-filling gypsum.

2542 - 2544 ft Mudstone; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: No Fossils

2544 - 2546 ft Mudstone; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2546 - 2548 ft Mudstone; Color: White (N9) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Fracture; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Dolomitic; General Fossils: Fossil Molds; Comments: Poor recovery. Only 1.6 ft recovered.

2548 - 2550 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Fracture; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous, Fossiliferous; General Fossils: Fossil Molds, Mollusks, Fossil Fragments, Gastropods; Comments: At 2549.2 sample changes to a very fossiliferous and moldic wackestone. Continues for 6.0 inches then back to mudstone.

2550 - 2551.7 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Grain Type: Biogenic, Calcilutite, Crystals; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: No Fossils; Comments: Thin beds of laminated organics.

2551.7 - 2554 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Moldic; Grain Type: Biogenic, Calcilutite, Pellet; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: Fossil Fragments, Fossil Molds

2554 - 2556 ft Mudstone; Color: Moderate Dark Gray (N4) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - 1%; Other Features: High Recrystallization, Calcareous; General Fossils: No Fossils; Comments: This interval is a mudstone containing large amounts of organic bedding and numerous burrows.

2556 - 2557.3 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: No Fossils; Comments: Thin beds of laminated organics.

2557.3 - 2559 ft Mudstone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture; Grain Type: Biogenic, Calcilutite; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Calcilutite Matrix; Sedimentary Structures: Laminated, Bioturbated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Calcareous; General Fossils: No Fossils; Comments: Thin beds of laminated organics. 3.0 inches of hardground separates this interval from the one above.

2559 - 2561 ft Dolostone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2561 - 2563 ft Dolostone; Color: Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2563 - 2564 ft Dolostone; Color: Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2564 - 2567 ft Dolostone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Coarse; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Bioturbated, Laminated, Burrowed; Accessory Minerals: Anhydrite - 1%, Gypsum - 3%, Organics - 3%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Interval is separated from above sample by 1.0 inch of hardground. Stark change to highly bioturbated dolostone, poorly sorted grains ranging in size from very fine - coarse. Numerous burrows, vugs, and pore-filling gypsum throughout.

2567 - 2569.5 ft Dolostone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Coarse; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Bioturbated, Laminated, Burrowed; Accessory Minerals: Anhydrite - 1%, Gypsum - 2%, Organics - 2%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Chicken wire appearance. Brecciated grains due to gypsum infill.

2569.5 - 2571 ft Dolostone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Coarse; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2571 - 2573 ft Dolostone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Vugular, Pinpoint; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Very Fine; Range: Very Fine to Coarse; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2573 - 2575 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Pinpoint; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Fissile; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2575 - 2577 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Fissile, Laminated; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Thin beds of laminated organics.

2577 - 2580.1 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 2%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Molds; Comments: Thin beds of laminated organics. Brecciated due to gypsum infill. Poor recovery, only 2.3 ft recovered.

2580.1 - 2582 ft Gypsum; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Dolomite - 10%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: This interval contains large sections of gypsum interspersed with small sections of dolostone. Brecciated dolostone due to gypsum infill.

2582 - 2584 ft Gypsum; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture; Good Induration; Cement Type: Dolomite, Gypsum; Accessory Minerals: Anhydrite - <1%, Dolomite - 10%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: This interval contains large sections of gypsum interspersed with small sections of dolostone. Brecciated dolostone due to gypsum infill.

2584 - 2586 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 4%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2586 - 2588 ft Dolostone; Color: Yellowish Gray (5Y 8/1) to Olive Gray (5Y 4/1); Porosity: Intercrystalline, Fracture; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 15%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2588 - 2590.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Olive Gray (5Y 4/1); Porosity: Intercrystalline, Fracture; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 3%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2590.5 - 2592.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Olive Gray (5Y 4/1); Porosity: Intercrystalline, Fracture; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - <1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Recrystallized burrows filled with gypsum.

2592.5 - 2594.5 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Olive Gray (5Y 4/1); Porosity: Intercrystalline, Fracture; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Recrystallized burrows filled with gypsum.

2594.5 - 2597 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Olive Gray (5Y 4/1); Porosity: Intercrystalline, Fracture; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2597 - 2599.7 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Olive Gray (5Y 4/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Mottled; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils; Comments: Poor recovery. Only 2.2 ft recovered.

2599.7 - 2602 ft Dolostone; Color: Light Gray (N7) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Fissile; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2602 - 2604 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Fissile, Bioturbated, Burrowed; Accessory Minerals: Anhydrite - <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: No Fossils

2604 - 2605.7 ft Dolostone; Color: Very Light Orange (10YR 8/2) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50-90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Sedimentary Structures: Fissile; Accessory Minerals: Anhydrite

- <1%, Gypsum - 1%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Fragments, Fossil Molds

2605.7 - 2607 ft Dolostone; Color: Very Light Gray (N8) to Yellowish Gray (5Y 8/1); Porosity: Intercrystalline, Fracture, Vugular; Alteration: Highly (50- 90%); Crystallinity: Anhedral; Grain Size: Microcrystalline; Range: Microcrystalline to Very Fine; Good Induration; Cement Type: Dolomite; Accessory Minerals: Anhydrite - <1%, Gypsum - 10%, Organics - <1%; Other Features: High Recrystallization, Dolomitic; General Fossils: Fossil Fragments

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Appendix E. Digital Photographs of Core Samples Retrieved at the ROMP 88 – Rock Ridge Well Site in Polk County, Florida

Begin core hole 2 sample photographs. Core depths below land surface are labeled on the wood blocks in the boxes.


R88
65'
77'
75'
70'
72'
80'
GSA
CM
IN


R88
80'
95'
85'
90'
86.5
99'
GSA
CM
IN


R88
99'
105'
100'
104'
109.3'
GSA
CM
IN


R88
109.3'
117'
147'
110'
157'
127'
No Recovery
137'
No Recovery
167'
171'
GSA
CM
IN


R88
184.2
GSA
CM
IN


R88
184.2'
187'
197'
198.3'
GSA
CM
IN


R88
198.3'
207'
219'
220'
GSA
CM
IN


R88
220'
227'
237'
239
GSA
CM
IN


RBB
239
247'
252.6
GSA
CM
IN


RBB
252.6
257'
267'
268.8'
GSA
CM
IN


RBB
268.8
277'
287
289'
GSA
CM
IN


RBB
289'
297'
306'
GSA
CM
IN


R88
307'
317'
322'
GSA
CM
IN


R88
322'
327'
334'
GSA
CM
IN


R88
334'
339'
347'
GSA
CM
IN

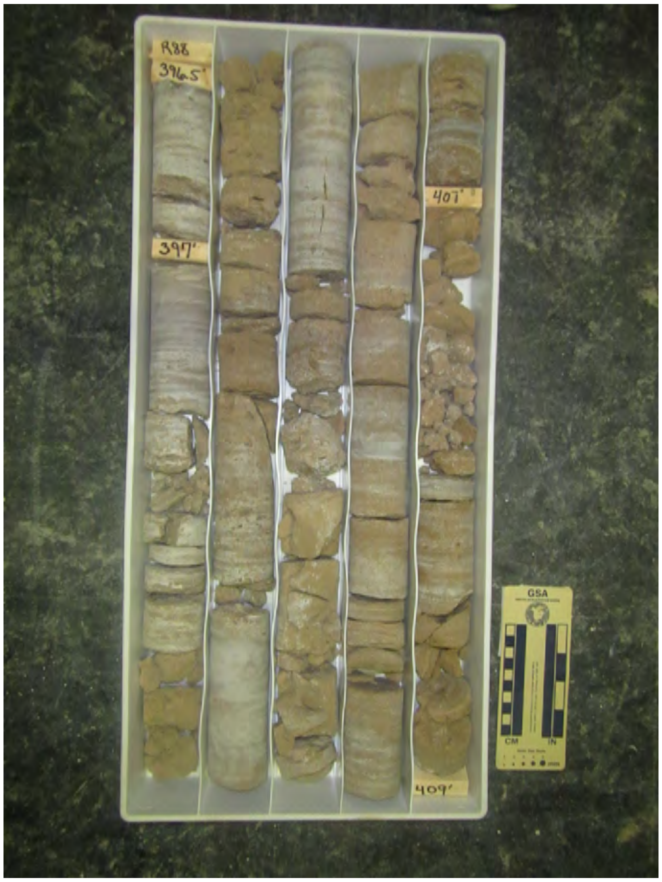

R88
334'
339'
347'
GSA
CM
IN


R88
349'
357
362'
GSA
CM
IN


R88
362'
367'
373'
GSA
CM
IN


R88
373'
377'
386'
GSA
CM
IN


R88
386'
387'
395
396.5'
GSA
CM
IN

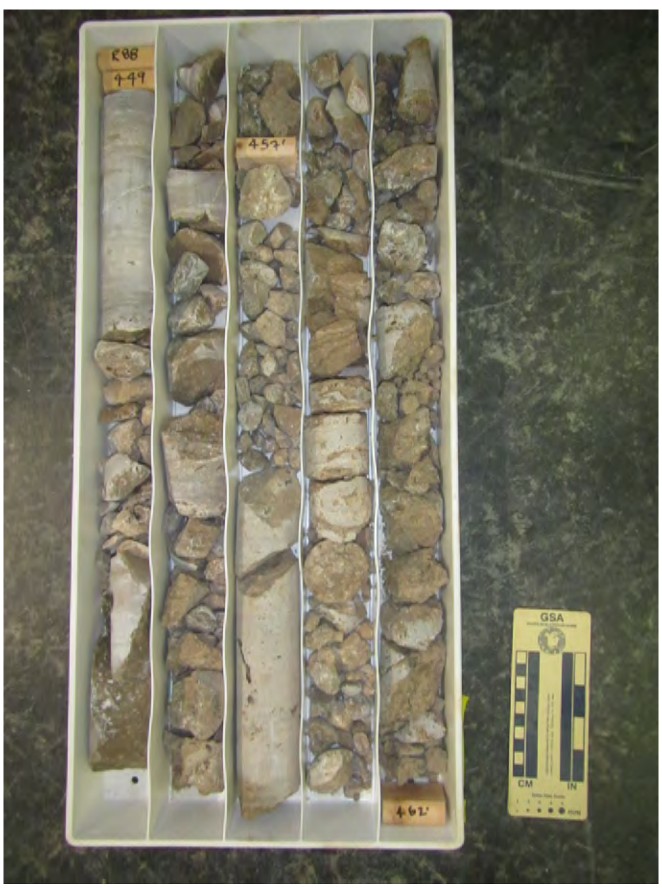

R88
396.5'
397'
407'
409'
GSA
CM
IN


R88
409'
417'
420.5
GSA
CM
IN


R88
427'
430'
GSA
CM
IN


R88
430'
437'
GSA
CM
IN

Begin core hole 3 sample photographs.




R88
471.5
477'
482.5'
GSA
CM
IN


R88
482.5'
487'
493.2'
GSA
CM
IN


R88
493.2'
497'
505'
GSA
CM
IN


R88
505'
507'
517'
522'
GSA
CM
IN


R88
522'
537'
527'
544'
GSA
CM
IN


R88
544'
547'
577'
567'
557'
580'
GSA
CM
IN


R88
580'
587'
597'
601'
GSA
CM
IN


R88
601'
607'
611'
GSA
CM
IN


R88
611'
622'
GSA
CM
IN


R88
622'
627'
632'
GSA
CM
IN


R88
637'
644'
GSA
CM
IN


R88
647'
647'
653.5'
GSA
CM
IN


R88
659.5
657'
663
GSA
CM
IN


R-88
663
667
673
GSA
CM
IN


R-88
673
677
685'
GSA
CM
IN

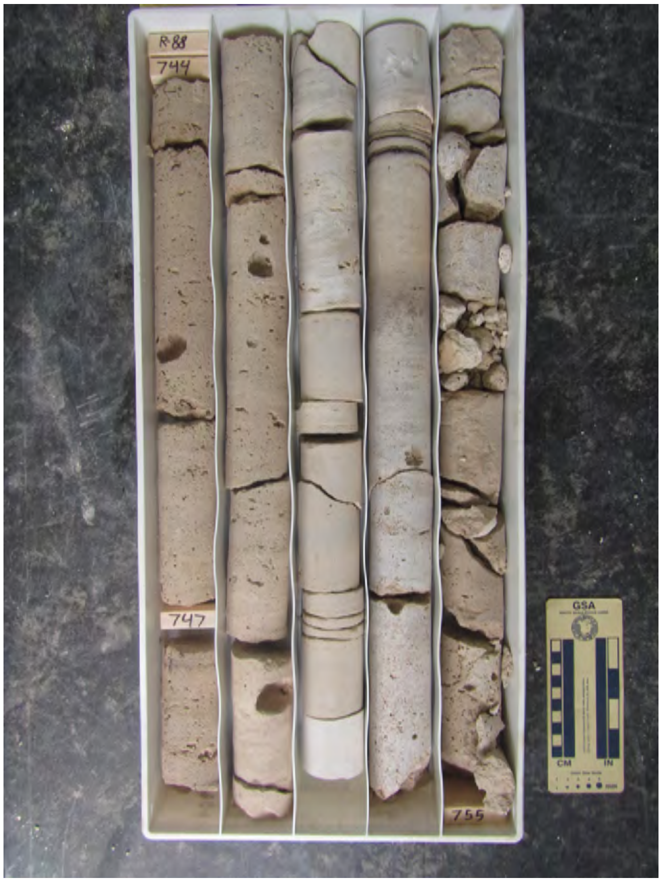

R-88
685'
687
695.5
GSA
CM
IN


R88
695.5'
697'
707
GSA
IN
CM

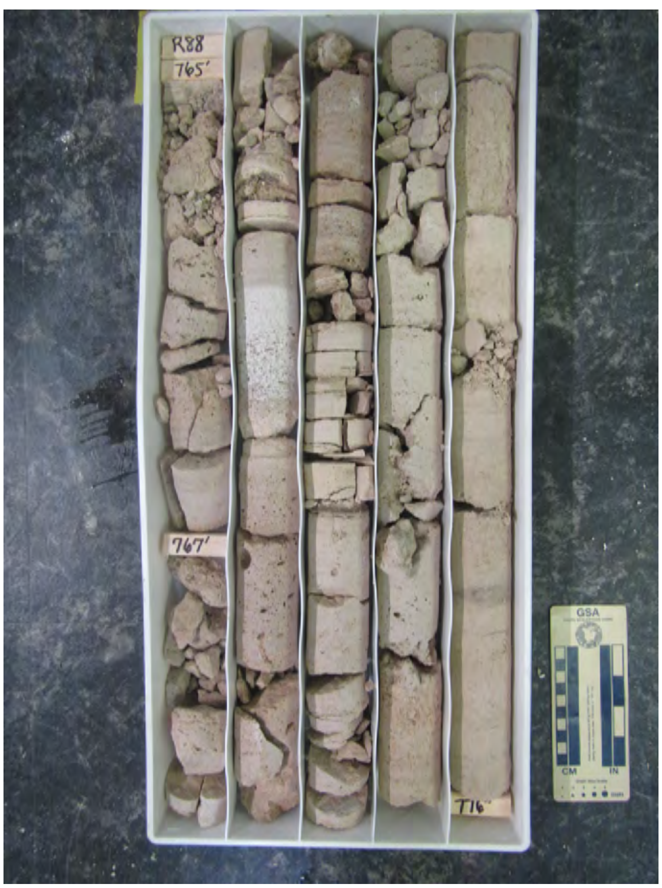

R88
707
714
717
718
GSA
IN
CM


R-88
718
727
731
GSA
CM
IN


R-88
731
737
744
GSA
CM
IN


R-88
744
747
755
GSA
CM
IN


R-88
755
757
765'
GSA
CM
IN


R88
765'
767'
776"
GSA
CM
IN


R88
776'
777
GSA
CM
IN


R88
787'
797
797.3'
GSA
CM
IN

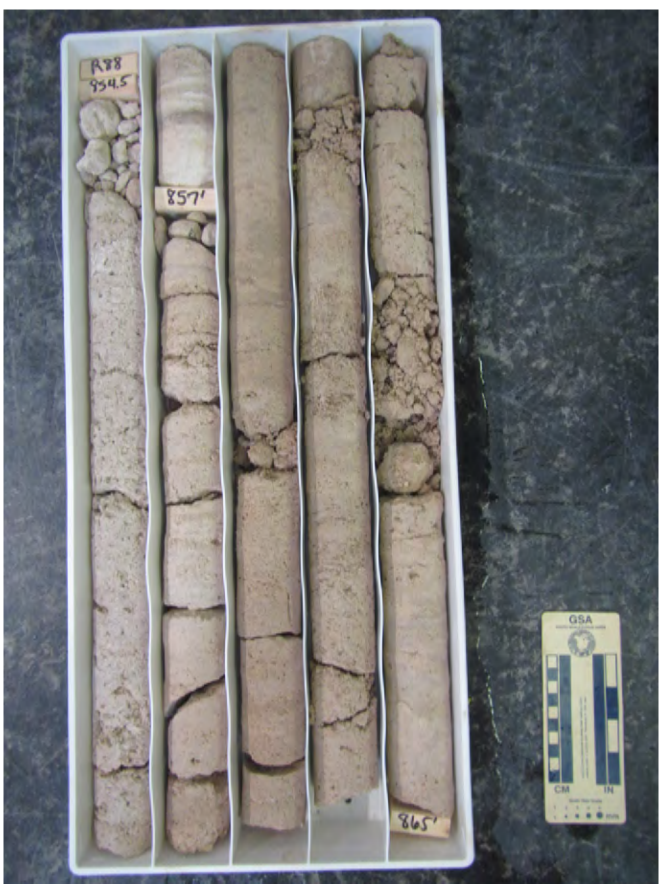

R88
797.3
807'
GSA
CM
IN

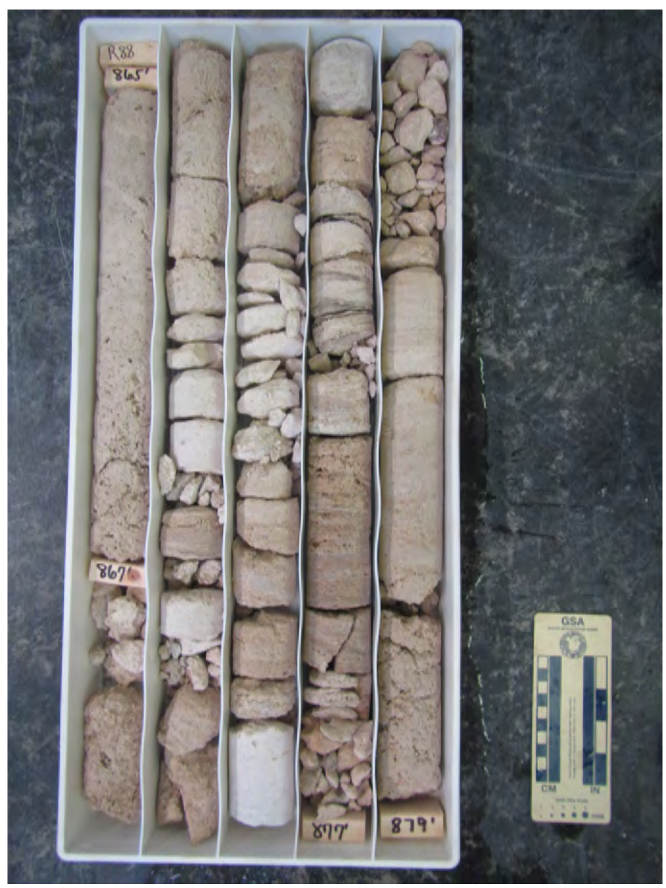

R88
807'
816.9'
GSA
CM
IN


R88
816.9'
817
827
830
GSA
CM
IN

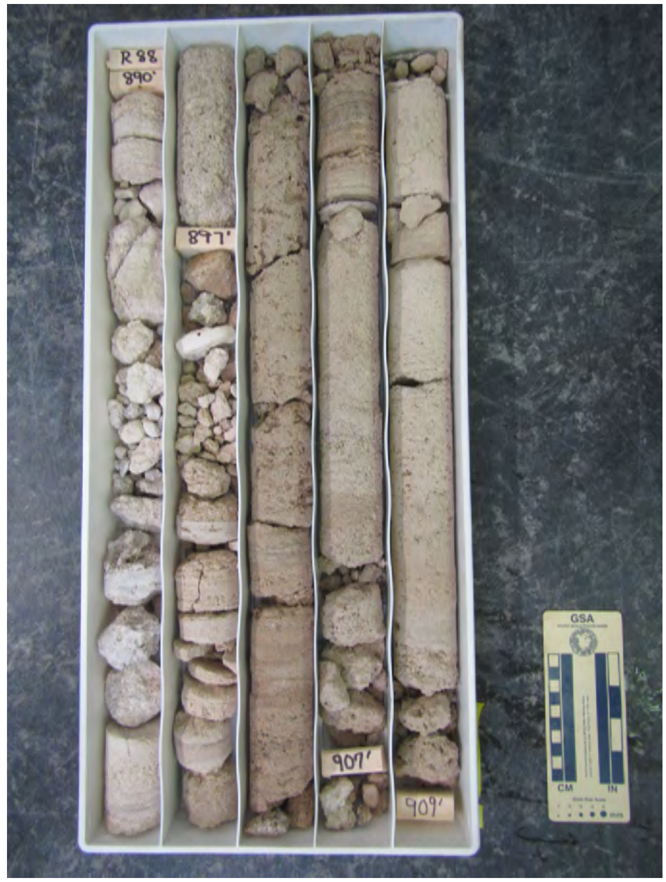

R-88
830
837
842'
GSA
CM
IN

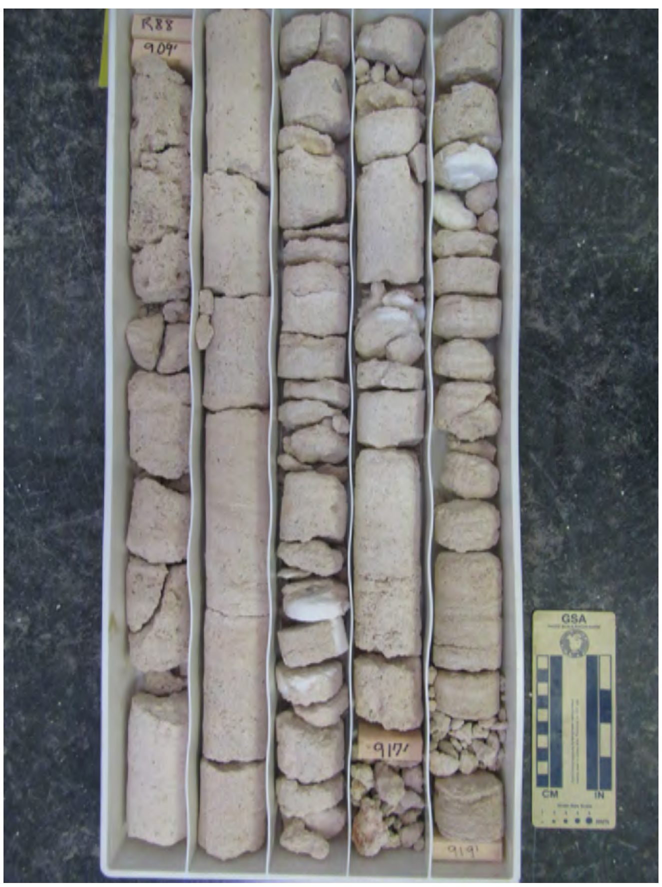

R88
842'
847'
854.5'
GSA
CM
IN


R88
854.5
857'
865'
GSA
CM
IN


R88
865'
867'
877
879'
GSA
CM
IN


R88
879'
887'
890'
GSA
CM
IN


R88
890'
897'
907'
909'
GSA
CM
IN


R88
909'
917'
919'
GSA
CM
IN


R88
919'
927'
929.5
GSA
CM
IN


R88
937'
940'
GSA
CM
IN


R88
940'
947'
949'
GSA
CM
IN


R88
949'
957'
958.4'
GSA
CM
IN


R88
958.4'
967
GSA
CM
IN


R88
967'
976.5
GSA
CM
IN


R88
976.5'
985.5'
GSA
CM
IN


R88
985.5
987'
994.5'
GSA
CM
IN


R88
994.6'
997'
1004
GSA
CM
IN


R88
1,004'
1,067'
GSA
CM
IN


R88
1,017
GSA
CM
IN


R88
1,027
GSA
CM
IN


R88
GSA
CM
IN


R88
1041.5
1,047
1052
GSA
CM
IN


R88
1052
1,057
1061.2
GSA
CM
IN


R88
1061.2
1069'
GSA
CM
IN


R88
1069'
1077'
1080.5'
GSA
CM
IN


R88
1080.5'
1087'
1089.5'
GSA
CM
IN


R88
1097'
1099'
GSA
CM
IN


R88
1099'
1107'
1108.5'
GSA
CM
IN


R88
1108.5'
1117'
1118'
GSA
CM
IN


R88
1118'
1127'
1127.4'
GSA
CM
IN


R88
1127.4'
1136.6'
GSA
CM
IN


R88
1136.6'
1137'
1146'
GSA
CM
IN


R88
1147'
1154.5'
GSA
CM
IN


R-88"
1154.5
1157
GSA
CM
IN


R-88
1164.3
1167
1173.3
GSA
CM
IN


R88
1173.3'
1177'
1183'
GSA
CM
IN


R88
1183'
1187'
1194.5
GSA
CM
IN


R88
1194.5'
1197'
1203'
GSA
CM
IN


R88
1202'
1207'
1210.7'
GSA
CM
IN


R88
1210.7'
1217'
1220'
GSA
CM
IN


R88
1220'
1222'
1227'
1229.5
GSA
CM
IN


R88
1229.5'
1237'
1239'
GSA
CM
IN


R88
1239'
1247'
1248.4
GSA
CM
IN


R88
1248.4
1257'
1257.6
GSA
CM
IN


R88
1257.6'
1267'
1267.3
GSA
CM
IN


R88
1267.3'
GSA
CM
IN


R88
1276.4
1277'
1286'
GSA
CM
IN


R88
1286'
1287.7
1294.7
GSA
CM
IN


R88
1297'
1304'
GSA
CM
IN


R-88
1304"
1307"
1313.4"
GSA
CM
IN


R-88
1313.4"
1317'
GSA
CM
IN


R88
1322'
1327'
1332'
GSA
CM
IN


R88
1332'
1337'
1341'
GSA
CM
IN


R88
1347'
1350.6
GSA
CM
IN

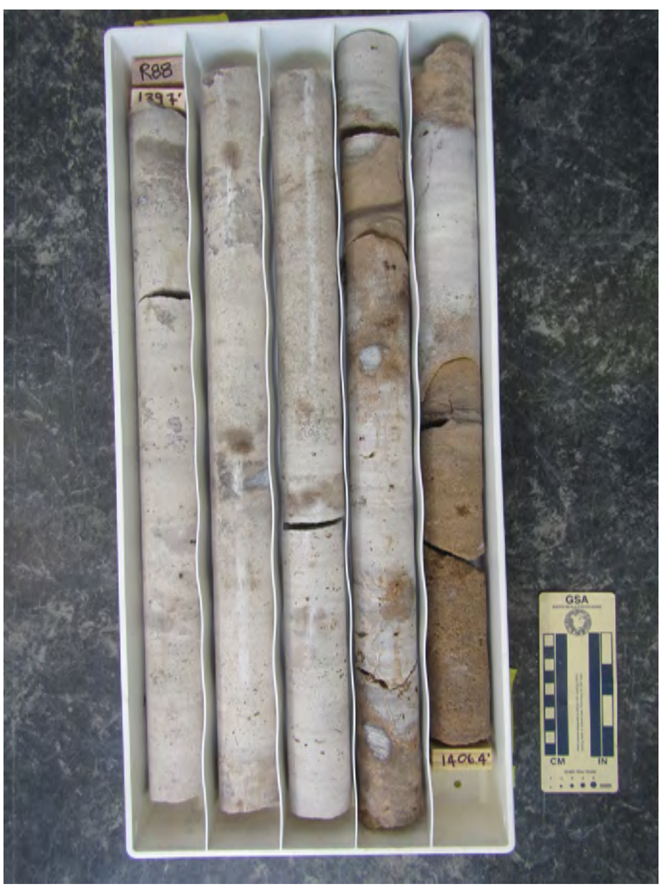

R88
1350.6
1357'
1360'
GSA
CM
IN


R-88
1367'
1370
GSA
CM
IN


R-88
1370
1377'
GSA
CM
IN


R88
1387'
1388.5
GSA
CM
IN


R88
1388.5
1397
GSA
CM
IN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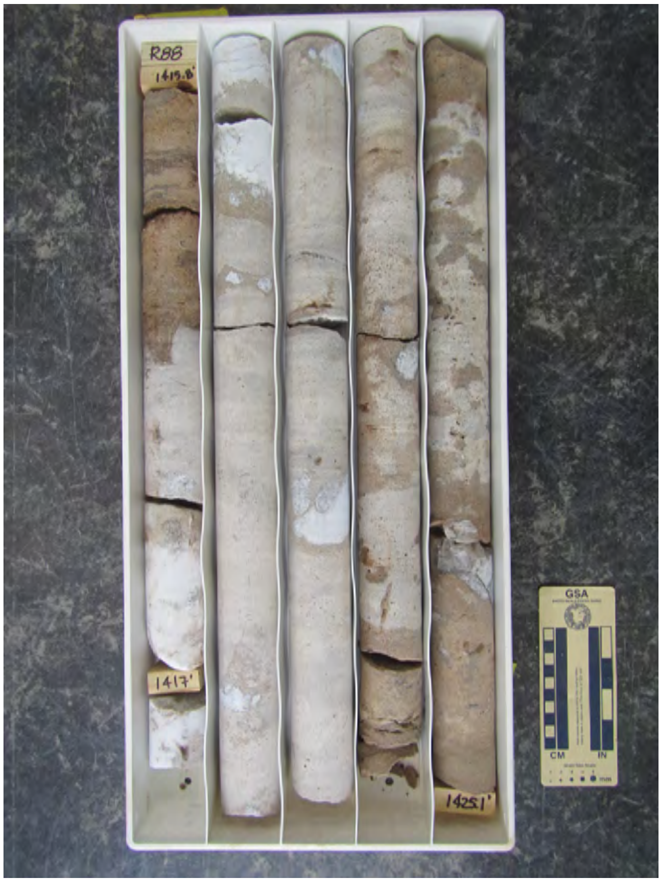
1397'
1406.4'
GSA
CM
IN


R88
1406.4'
1407'
1415.8'
GSA
CM
IN


R88
1417'
1425.1'
GSA
CM
IN


R88
1425.1'
1427'
1434.3'
GSA
CM
IN


R88
1437'
1443.4'
GSA
CM
IN


R88
1443.4'
1447'
1452.2'
GSA
CM
IN


R88
1452.2
1457'
1459.8

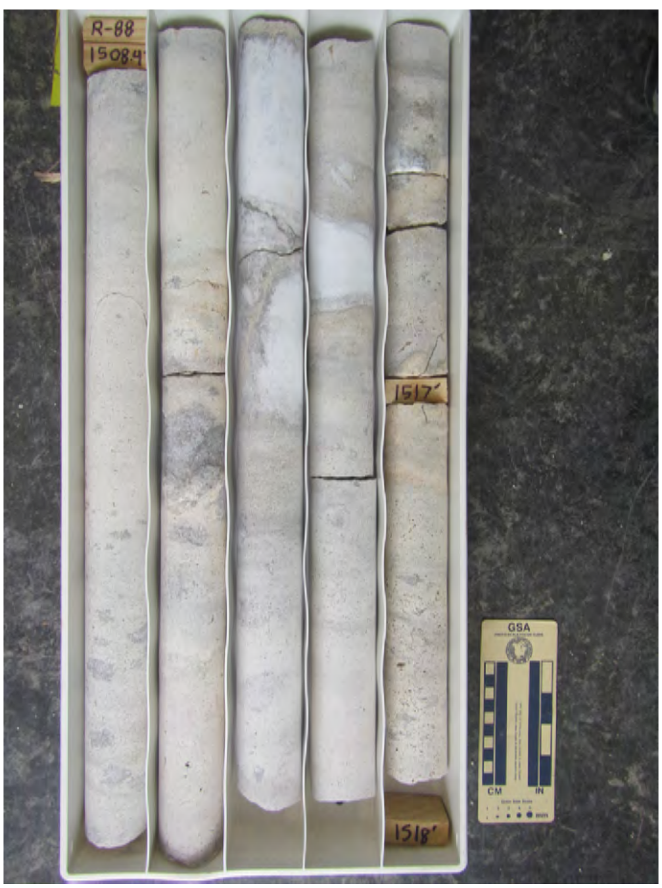

R88
1459.8
1467'
1470.5


R-88
1470.5
1477
1480'


R88
1487'
1489.3


R88
1492'
1499
GSA
CM
IN


R-88
1499'
1507
1508.4
GSA
CM
IN


R-88
1508.4'
1517'
1518'
GSA
CM
IN


R-88
1518'
GSA
CM
IN


R88
1526.7'
1527'
1535'
GSA
CM
IN


R-88
1535'
1537'
1544.5'
GSA
CM
IN


R88
1544.5
1547'
1553
GSA
CM
IN


1557
1564.2
GSA
CM
IN


R-88
1564.2
1577.8
GSA
CM
IN

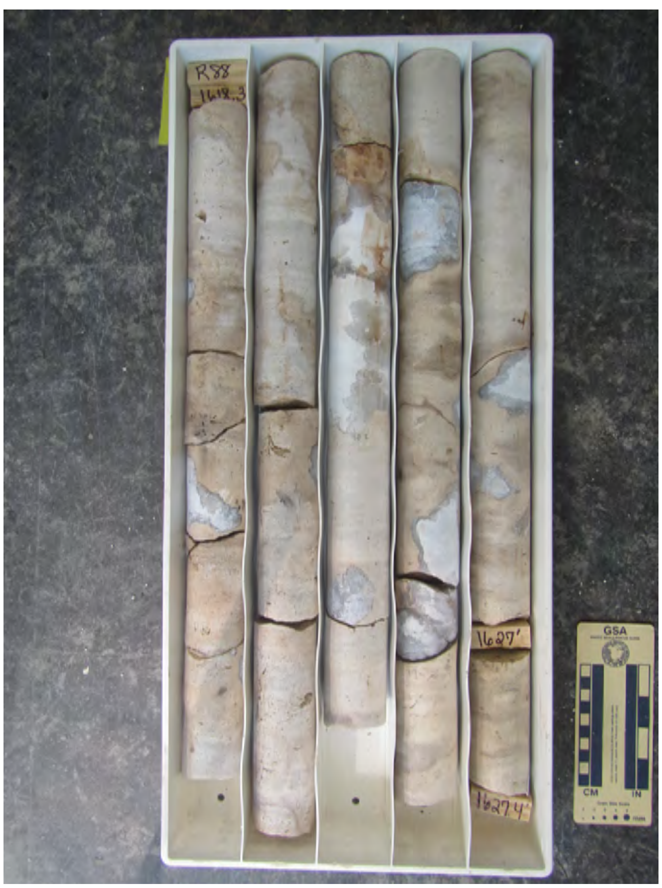

R-88
1572.8
1573.1'
1577'
1581.8'
GSA
CM
IN


R88
1581.8'
1587'
1590.5
GSA
CM
IN

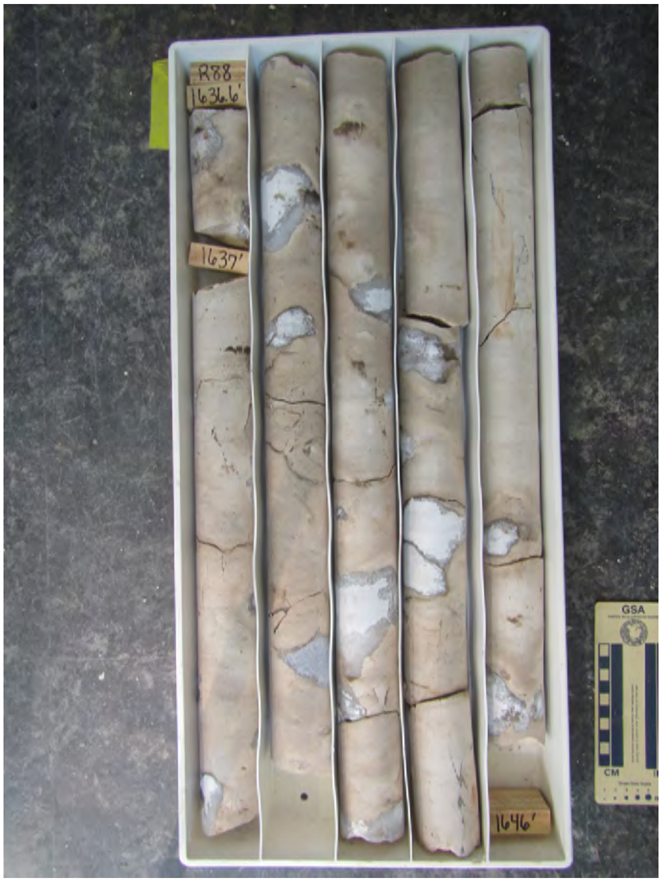

R88
1590.5
1597'
1600'
GSA
CM
IN


R88
1600'
1607'
1608'
1609.2'


R88
1609.2'
1617'
1618.3'


R88
1618.3
1627'
1627.4'


R88
1627.4
1636.6'


R88
1636.6'
1637'
1646'
GSA
CM
IN

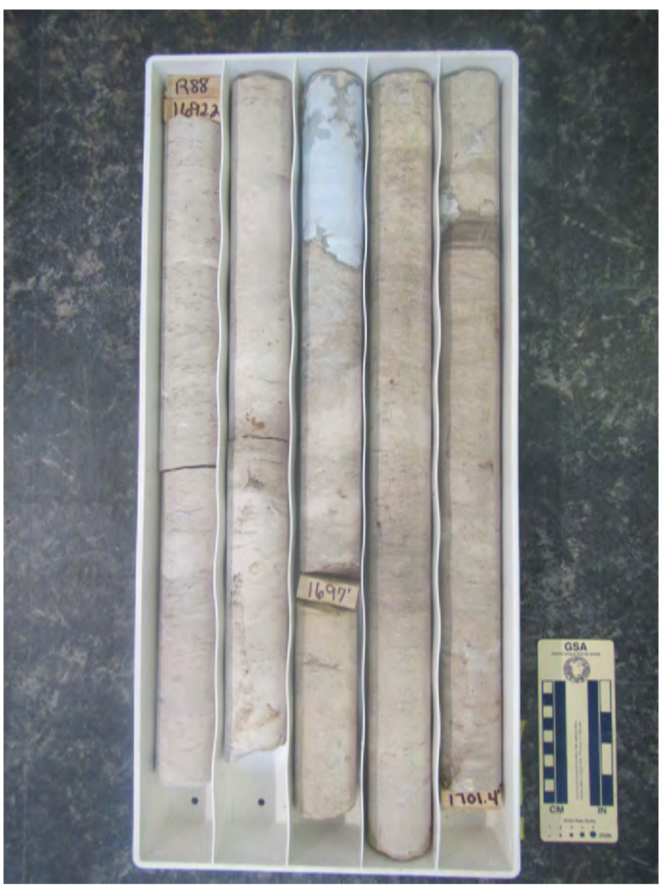

R88
1646'
1647'
1655'
GSA
CM
IN


R88
1655'
1657'
1664.3
GSA
CM
IN


R88
1664.3
1667
1673.5'
GSA
CM
IN

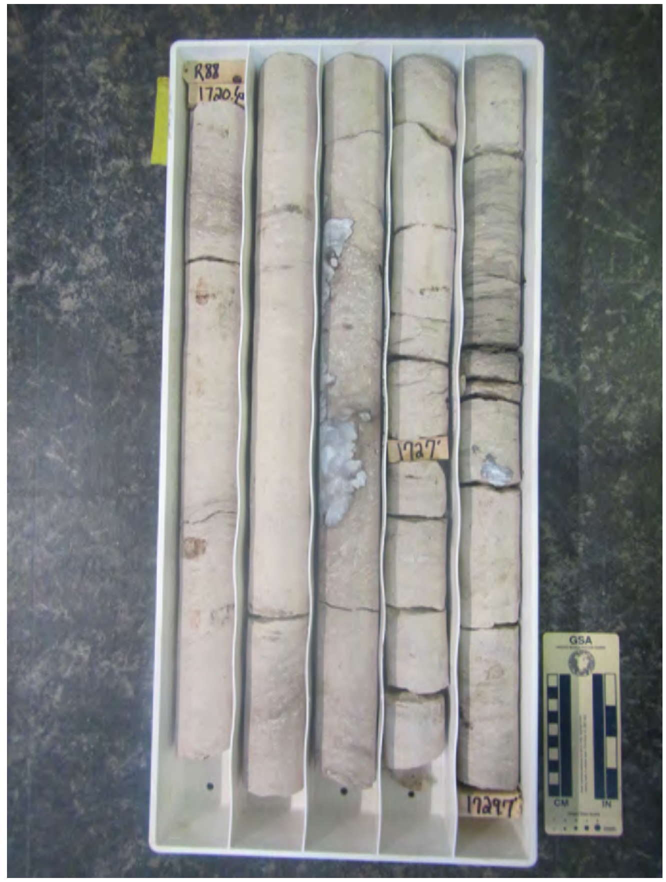

R88
1673.5
1677'
1682.9
GSA
CM
IN

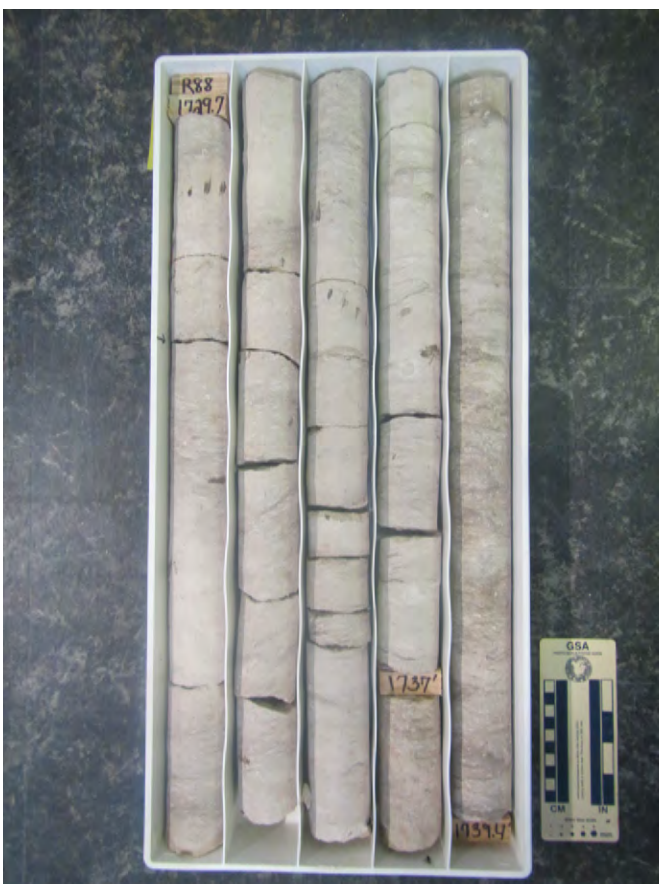

1687'
1692.2
GSA
CM
IN


R88
1692.2
1697'
1701.4'
GSA
CM
IN


R88
1701.4'
1707'
1711.3
GSA
CM
IN


R88
1717'
1720.6
GSA
CM
IN


R88
1720.6
1727'
1729.7'
GSA
CM
IN


R88
1729.7
1737'
1739.4
GSA
CM
IN


R88
1739.4
1747'
1748.6
GSA
CM
IN


R88
1748.6
1759'
1757.5
GSA
CM
IN


R88
1757.5
1767'
GSA
CM
IN


R88
1767'
1776.2
GSA
CM
IN


R88
1776.2
1777
1785.1'
GSA
CM
IN


R88
1787'
1794.3'
GSA
CM
IN


R88
1797'
1804'
GSA
CM
IN


1807'
GSA
CM
IN


R88
1817'
1822.2'
GSA
CM
IN


R88
1822.2'
1827'
1831.6'
GSA
CM
IN


R88
1831.6'
1837'
1841.1
GSA
CM
IN

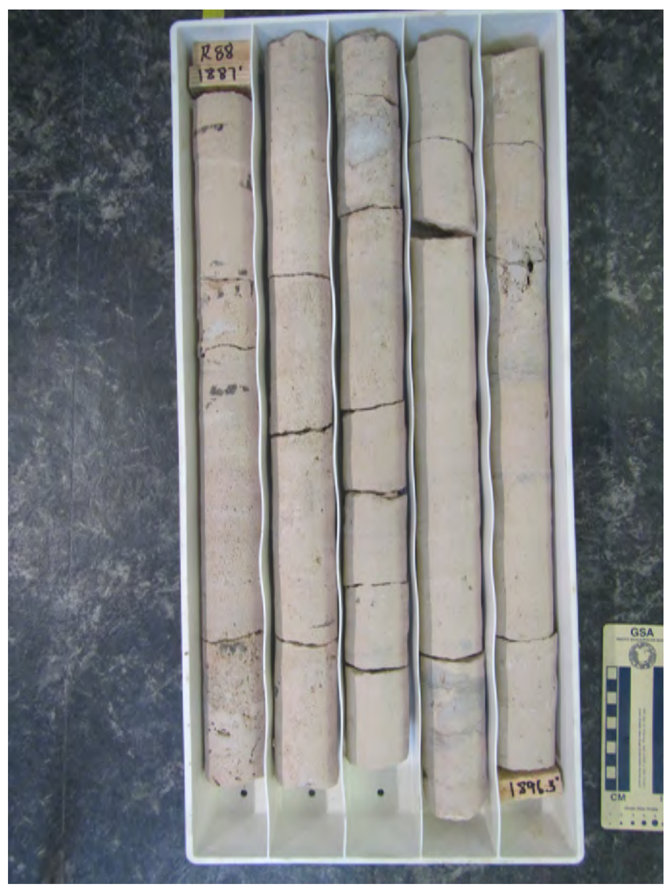

R88
1841.1
1847'
1850.2
GSA
CM
IN

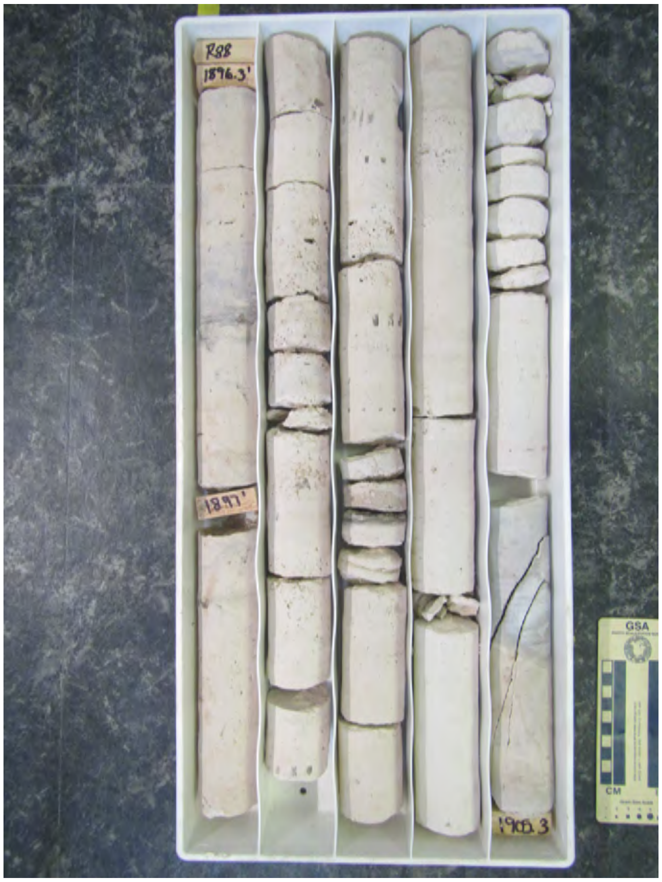

R88
1850.2
1857'
1859.3'
GSA
CM


R88
1859.2'
1867'
1868.5'
GSA
CM

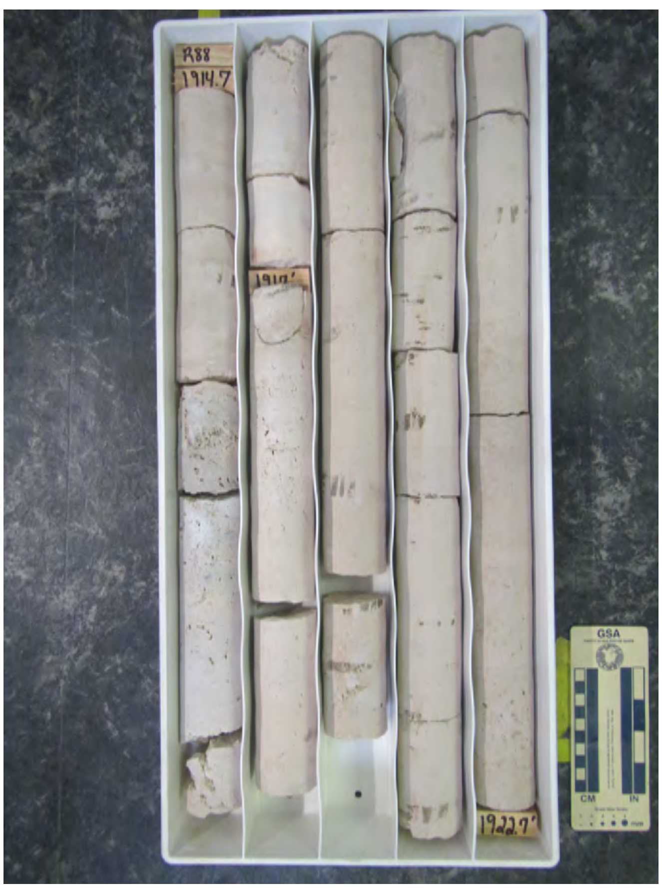

R88
1868.3'
1877'
1877.8'
GSA
CM


R88
1877.8
1887
GSA
CM


R88
1887'
1896.3'
GSA
CM


R88
1896.3'
1897'
1905.3
GSA
CM
IN


R88
1905.3'
1907'
1914.7
GSA
CM
IN


R88
1914.7
1922.7'
GSA
CM
IN

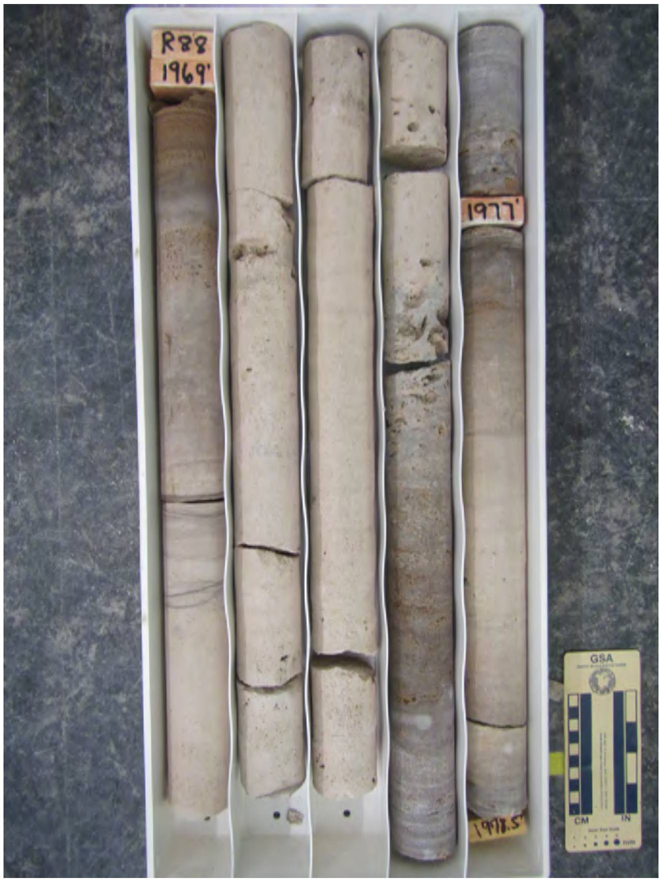

R88
1922.7
1927'
1932.8
GSA
CM
IN


R88
1932.8
1937'
1942.1'
GSA
CM
IN


R 88
1942.1
1947'
1950.1'
GSA
CM
IN


R88
1950.1'
1957'
1960.2
GSA
CM
IN


R 88
1960.2
1967'
1969'
GSA
CM
IN


R88
1969'
1977'
1978.5'
GSA
CM
IN


R88
1978.5'
1987'
1987.7'
GSA
CM
IN


R88
1987.7'
1996.6'
GSA
CM
IN


R88
1996.6'
1997'
2006'
GSA
CM
IN


R88
2006'
2007'
2015.4'
GSA


R88
2015.4'
2017'
2024.4
GSA


R88
2024.4'
2027'
2032.6'
GSA

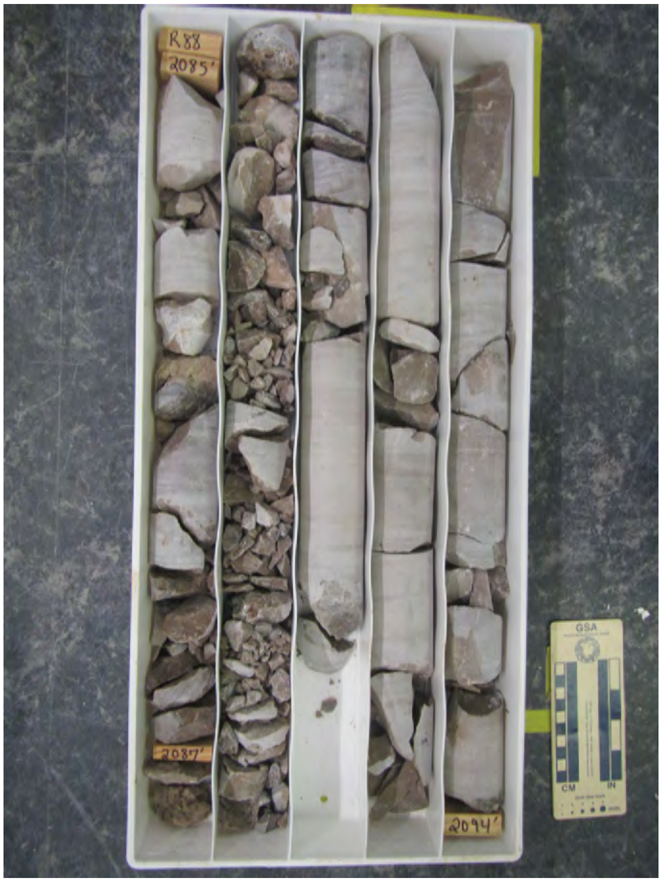

R88
2032.6
2037'
2042.2
GSA


R88
2042.2'
2047'
2052'
GSA
CM
IN


R88
2052'
2057'
2062.5'
GSA
CM
IN

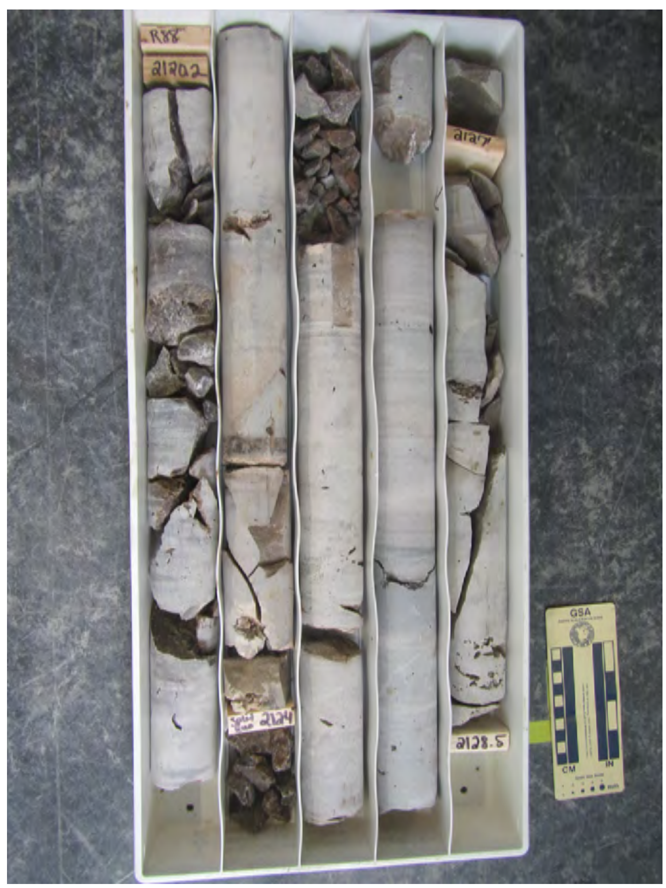

R88
2062.5'
2067'
2073'
GSA
CM
IN


R88
2073'
2076'
VOID
2077'
2085'
GSA
CM
IN


R88
2085'
2087'
2094'
GSA
CM
IN


R88
2094'
2097'
2102'
2107'
2109'
GSA
CM
IN


R88
2109'
2117'
2116'
2120.2
GSA
CM
IN


R88
2120.2
2128.5
GSA
CM
IN


R88
2128.5
2136'
2137'
GSA
CM
IN


R88
2137'
2147'
2148.5'
GSA
CM
IN


R88
2148.5'
2156'
2156.4'
GSA
CM
IN


R88
2156.4
2157'
GSA
CM
IN


R88
2165.8'
2167'
2177'
2177.4'
GSA
CM
IN


R88
2177.4
2187'
GSA
CM
IN


R88
2187'
2195.5'
GSA
CM
IN


R88
2195.5'
2196'
2197'
2207'
2209.6'
GSA
CM
IN


R88
2209.6'
2217'
2219'
GSA


R88
2219'
2227
2229'
GSA


R88
2229'
2239'
2246.3
GSA


R88
2246.3'
2247'
2257'
2261'
GSA


R88
2261'
2267'
2272.5'
GSA
CM
IN


R88
2272.5
2277'
2282.5
GSA
CM
IN

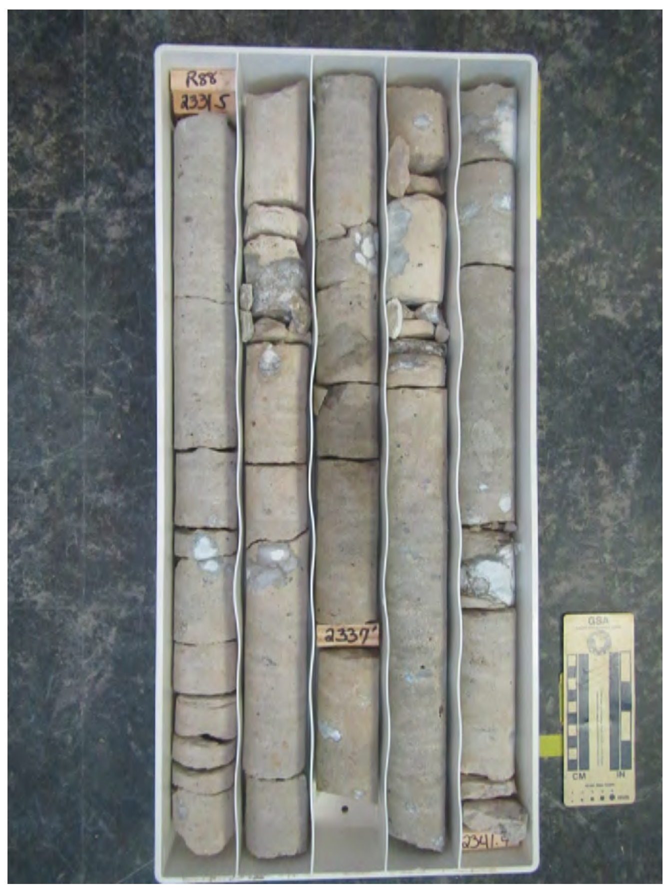

R88
2282.5
2287'
2293'
GSA
CM
IN


R88
2293'
2297'
2303'
GSA
CM
IN


R88
2303'
2307'
2313'
GSA
CM
IN

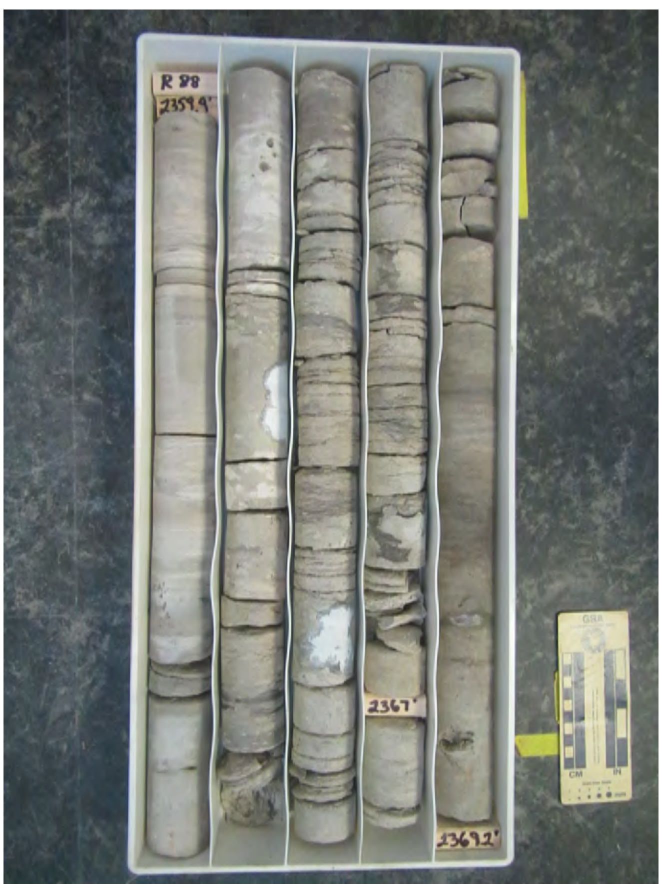

R88
2313
2317'
2322'
GSA
CM
IN

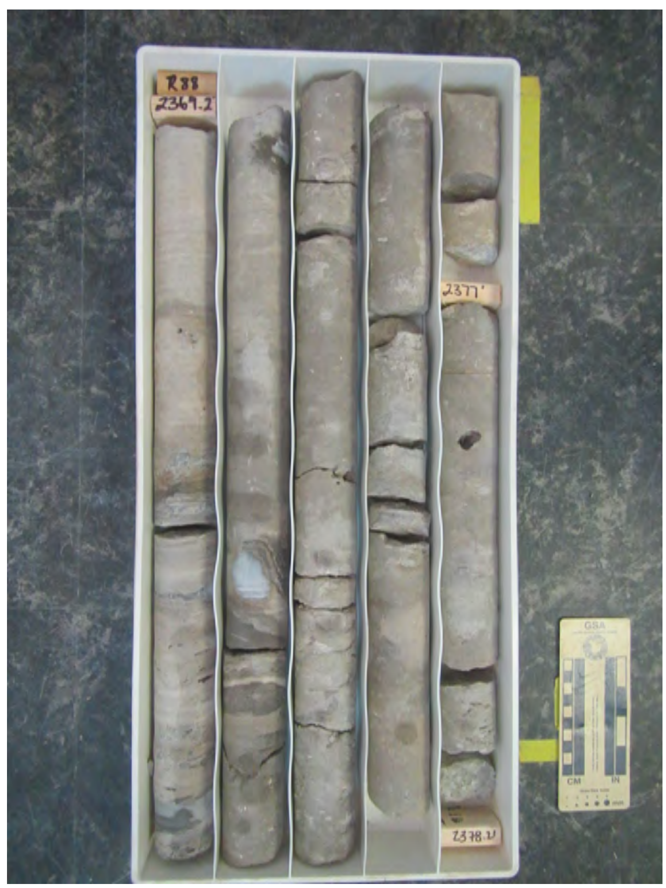

R88
2327'
CM
IN


R88
2337'
GSA
CM
IN

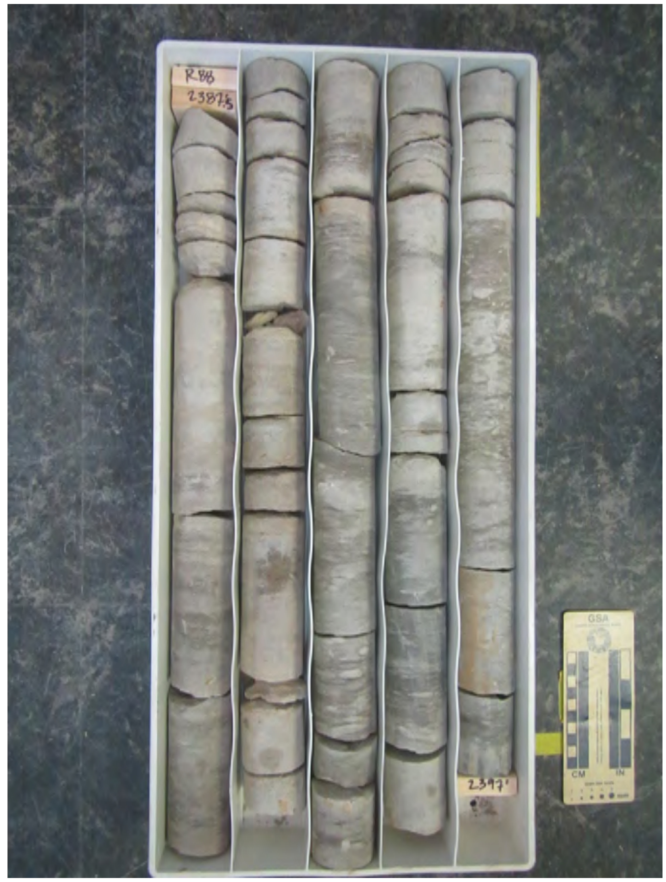

R88
2341.4
2347'
2350.4'
GSA
CM
IN


R88
2350.9
2357'
2359.9
GSA
CM
IN


R 88
2359.9'
2367'
2369.2'
GSA
CM
IN


R88
2369.2
2377'
2378.2
GSA
CM
IN


R88
2387'
2387.5

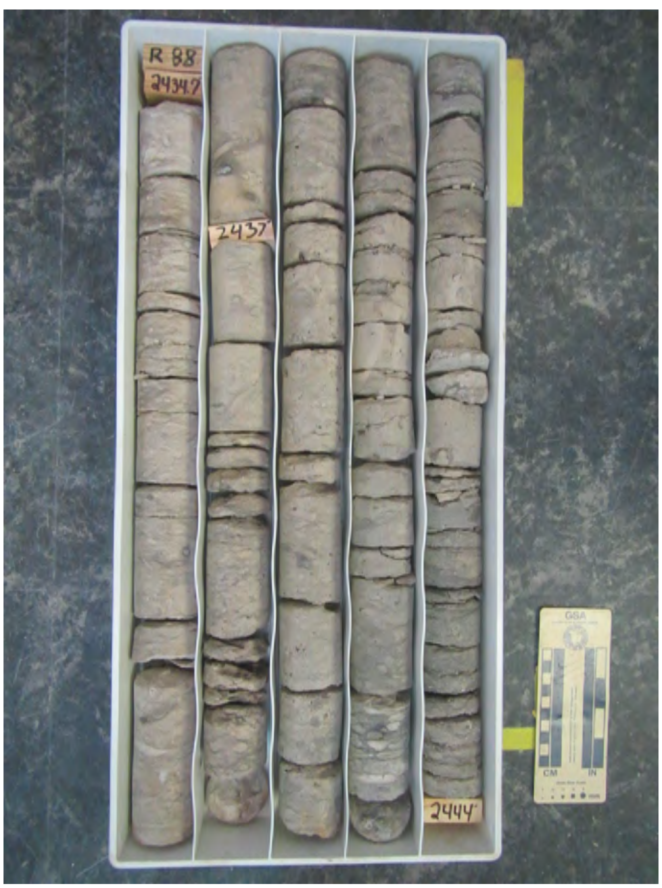

R88
2387.5
2397'

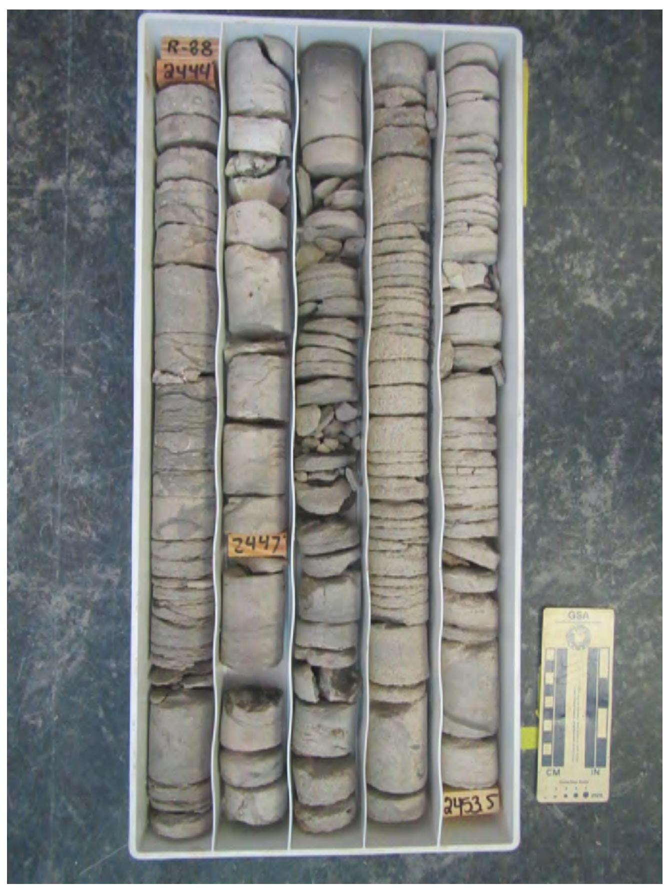

R-88
2397
2406.6'


R-88
2406.6
2407'
2416.3

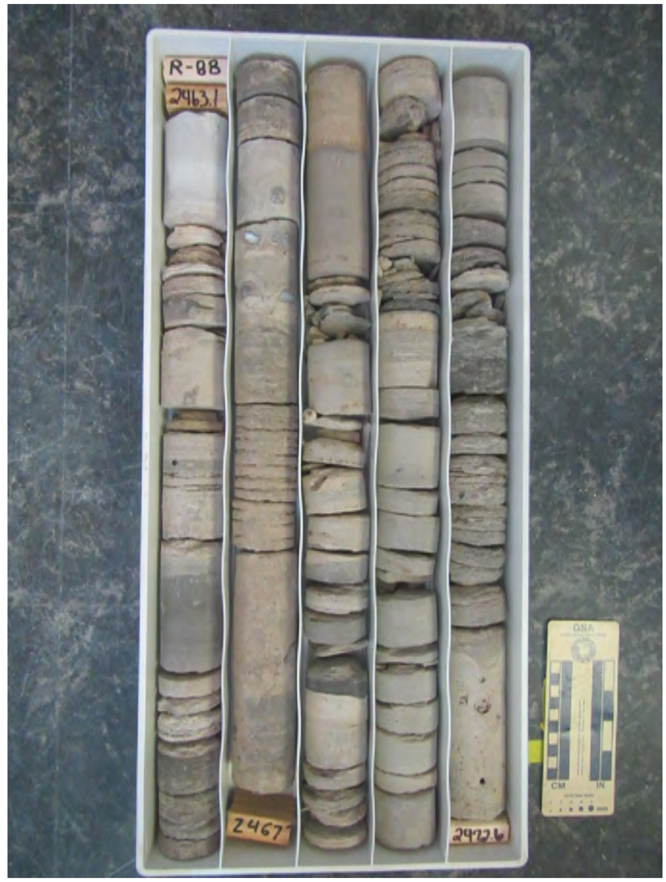

R-88
2416.3
2417'
2425.5'
GSA
CM
IN


R-88
2425.5
2427
2434.7
GSA
CM
IN

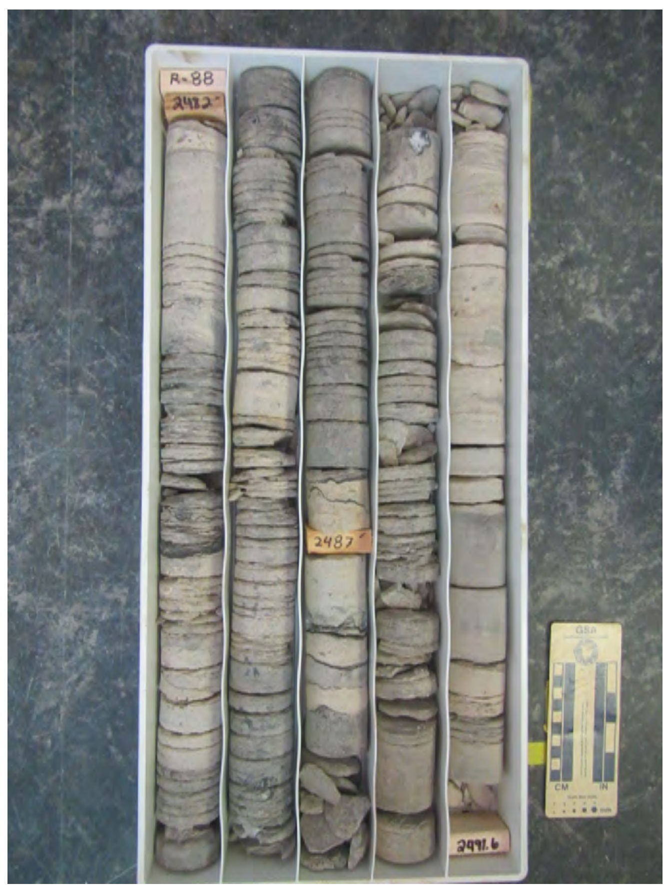

R 88
2434.7
2437'
2444'
GSA
CM
IN

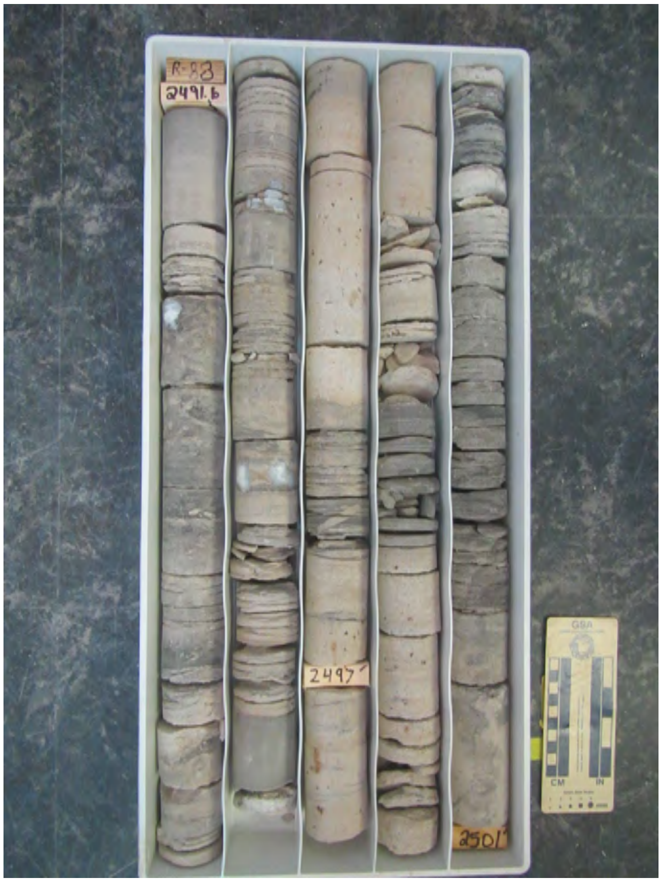

R-88
2444
2447'
2453.5
GSA
CM
IN


R-88
2455.5
2457'
2463.1
GSA
CM
IN


R-88
2463.1
2467'
2472.6
GSA
CM
IN


R-88
2472.6
2477
2482'
GSA
CM
IN


R-88
2482'
2487'
2491.6
GSA
CM
IN

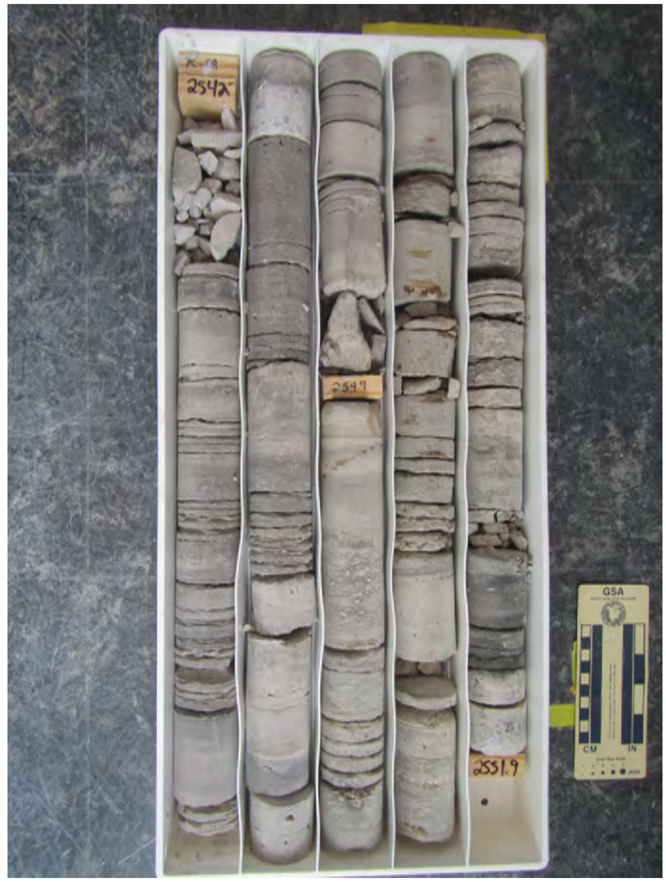

R-88
2491.6
2497'
2501'
GSA
CM
IN


R-88
2501
2507'
2511'
GSA
CM
IN


R-88
2511'
2517'
2521'
GSA
CM
IN


R-88
2521'
2527
2532'
GSA
CM
IN


R-88
2532'
2537'
2542'
GSA
CM
IN

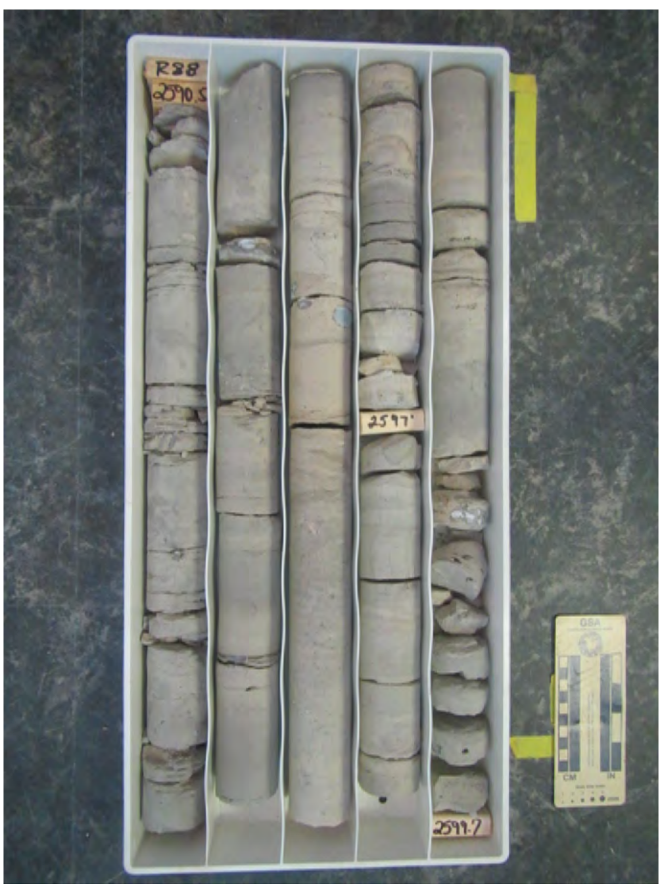

2542'
2547
2551.9
GSA
CM
IN


R-88
2551.9
2557
2561'
GSA
CM
IN


R-88
2561'
2567
2571'
GSA
CM
IN


R-88
2580.1
GSA
CM
IN


R-88
2580.1
2587
2590.5
GSA
CM
IN


R88
2590.5
2597'
2599.7


R88
2599.7
2607'
TD

Appendix F. Correlation Charts

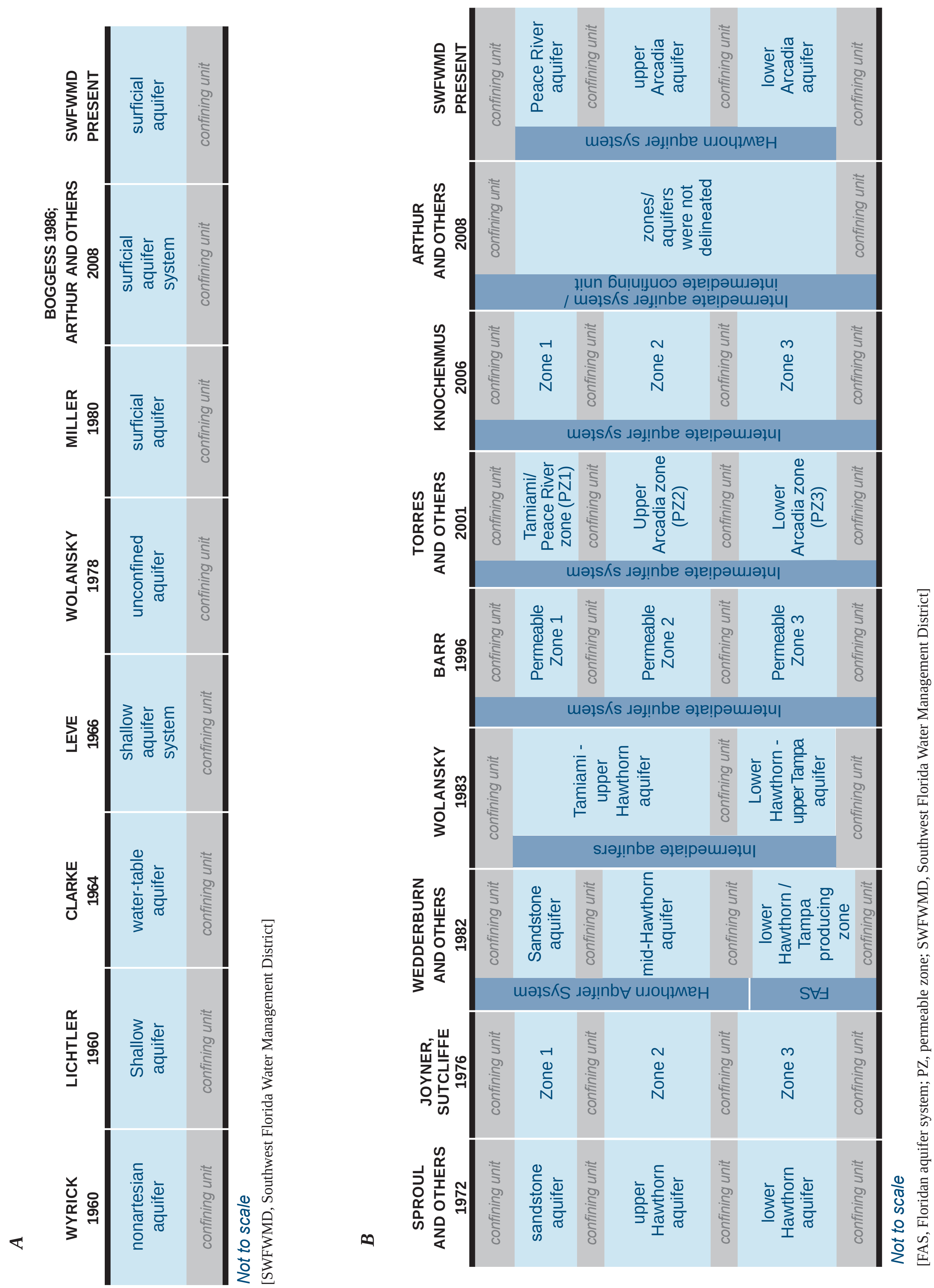
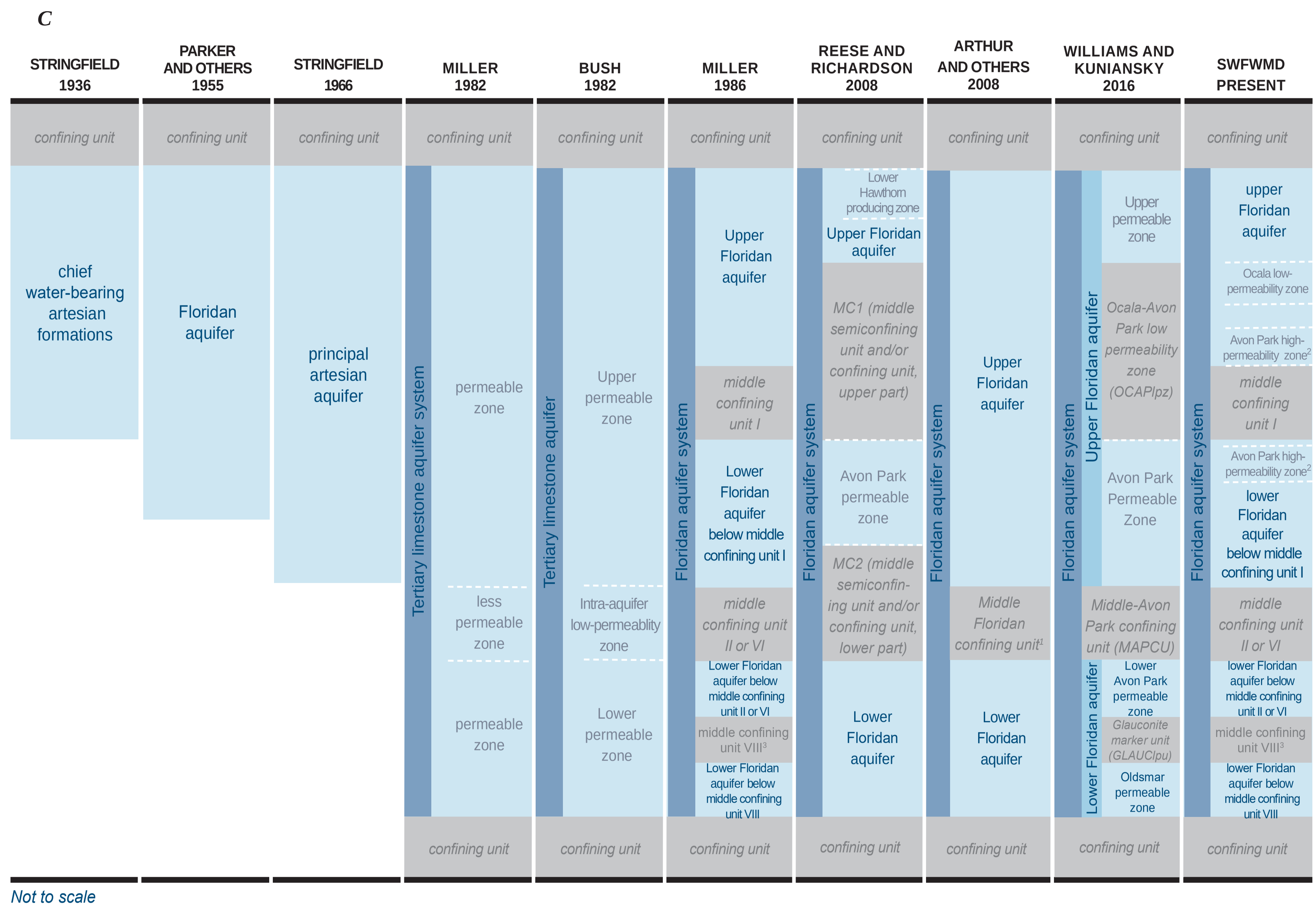


Figure F1. Nomenclature of (*A*), the surficial aquifer, (*B*), the Hawthorn aquifer system, and (*C*), the Floridan aquifer system used for the ROMP 88 – Rock Ridge well site compared to nomenclature in previously published reports.



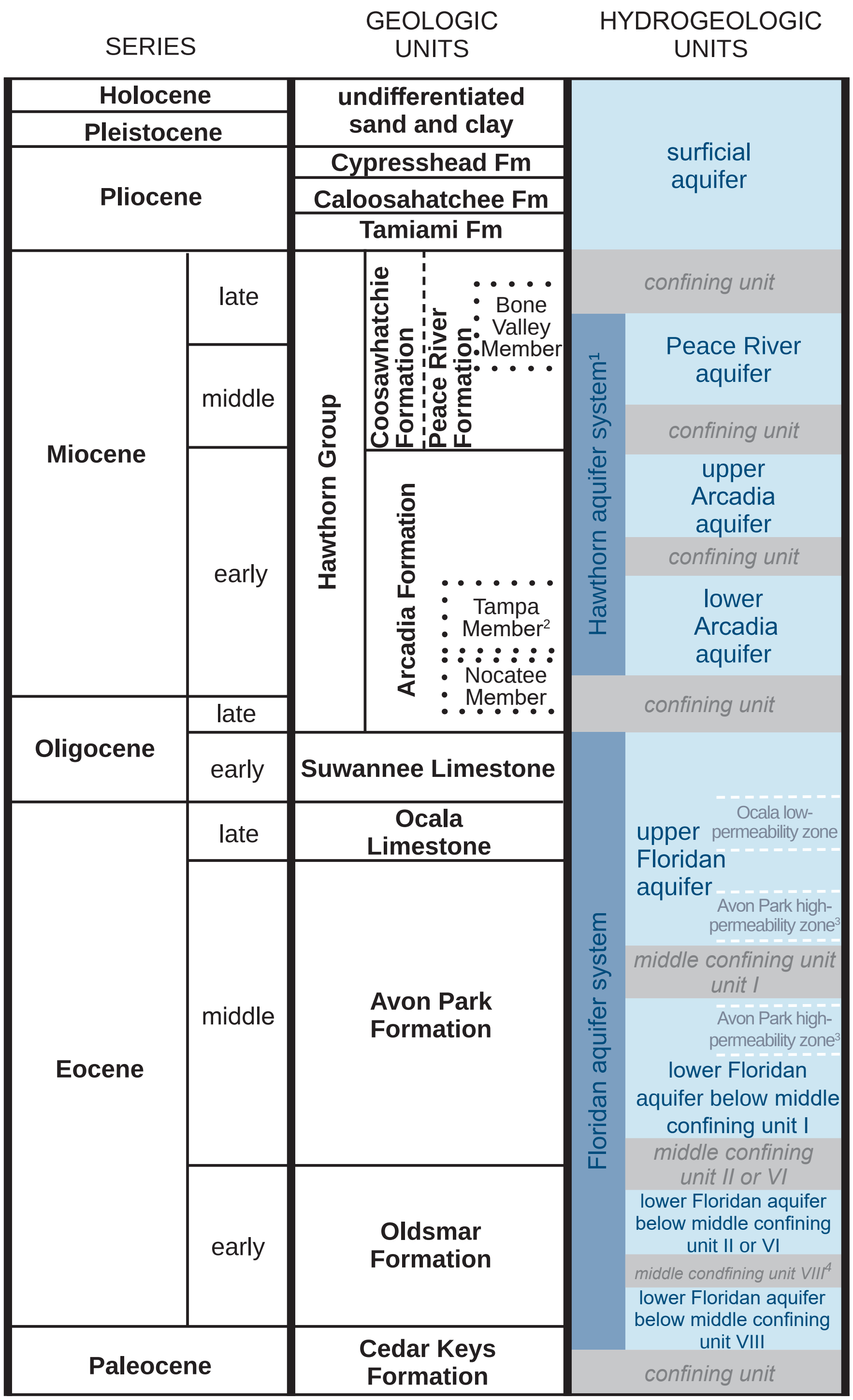
[Terms shown are for hydrogeologic units present within the Southwest Florida Water Management District (SWFWMD)]

[1]Arthur and others acknowledge existence of the middle confining unit I within the Southwest Florida Water Management but do not map it for Special Publication 68.

[2]The Avon Park high-permeability zone (SWFWMD fracture zone) crosses middle confining unit I in central Polk County; therefore, it is present above the middle confining unit I in northern Polk and below the middle confining unit I in southern Polk.

[3]The middle confining unit VIII of Miller (1986) in south Florida was extended across the entire peninsula as the Glauconite marker unit based on new data in Williams and Kuniansky (2016).

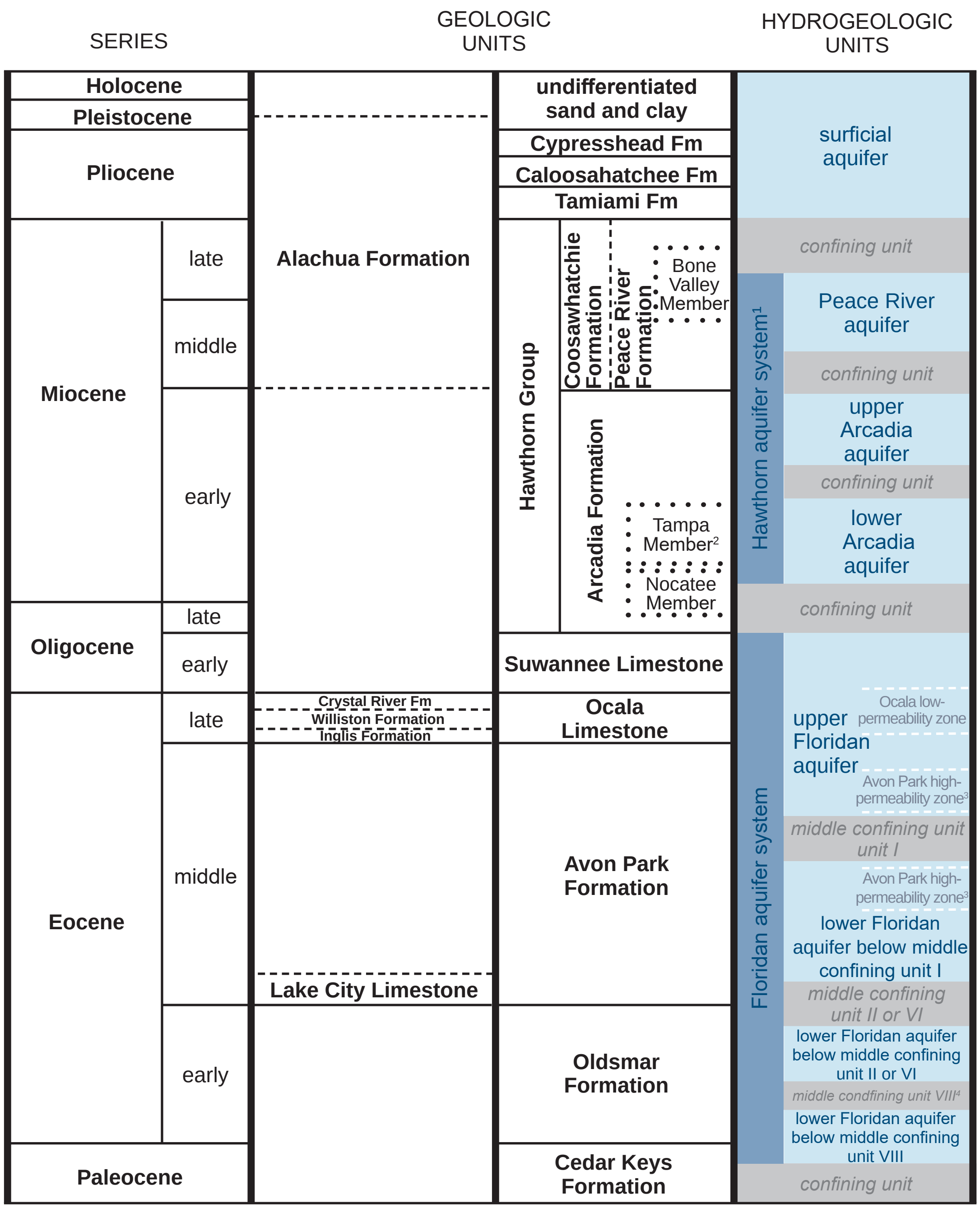
Figure F1. (Continued) Nomenclature of (*A*), the surficial aquifer, (*B*), the Hawthorn aquifer system, and (*C*), the Floridan aquifer system used for the ROMP 88 – Rock Ridge well site compared to nomenclature in previously published reports.



Not to scale

This chart may be used to correlate the chronostratigraphic and lithostratigraphic units of the current hydrogeologic framework model of the Southwest Florida Water Management District.
Note: [1]The Hawthorn aquifer system was previously referred to as the intermediate aquifer system. It is present only in the southern part of the District and pinches out north of central Hillsborough County. Where no aquifers are present, the Hawthorn sediments are confining and pinch out north of central Pasco County. [2]The upper Floridan aquifer includes the Tampa Limestone where confinement is not present. [3]The Avon Park high-permeability zone (SWFWMD fracture zone) crosses middle confining unit I in central Polk County; therefore, it is present above the middle confining unit I in northern Polk and below the middle confining unit I in southern Polk. [4]The middle confining unit VIII of Miller (1986) was extended beyond the original extent in south Florida based on new data (collected after 1986).

Figure F2. Chart correlating chronostratigraphic and lithostratigraphic units to the current (2025) hydrogeologic framework of the Southwest Florida Water Management District.



Not to scale

This chart may be used to correlate the chronostratigraphic and lithostratigraphic units of the current hydrogeologic framework model of the Southwest Florida Water Management District.
Note: [1]The Hawthorn aquifer system was previously referred to as the intermediate aquifer system. It is present only in the southern part of the District and pinches out north of central Hillsborough County. Where no aquifers are present, the Hawthorn sediments are confining and pinch out north of central Pasco County. [2]The upper Floridan aquifer includes the Tampa Limestone where confinement is not present. [3]The Avon Park high-permeability zone (SWFWMD fracture zone) crosses middle confining unit I in central Polk County; therefore, it is present above the middle confining unit I in northern Polk and below the middle confining unit I in southern Polk. [4]The middle confining unit VIII of Miller (1986) was extended beyond the original extent in south Florida based on new data (collected after 1986).

Figure F3. Chart correlating lithostratigraphic units used in past reports to current (2025) lithostratigraphic units and the current hydrogeologic framework of the Southwest Florida Water Management District.

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surficial aquifer (in chronological order):

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Appendix G. Slug Test Data Acquisition Sheets for the ROMP 88 – Rock Ridge Well Site in Polk County, Florida

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	1B
Site Name:	ROMP 88 - Rock Ridge	Date:	11/16/2016
Well:	CH2	Performed by:	T. Horstman
Well Depth (ft bls)	100	Test Interval (ft - ft bls)	73.2 - 100
Test Casing Height (ft als)	8.77	Date of Last Development	11/15/2016
Test Casing Diameter (in)	~4	Initial Static WL (ft btoc/bls)	14.06 / 5.29
Test Casing Type	HWT	Final Static WL (ft btoc/bls)	14.1 / 5.33
Test Interval Length (ft)	26.8	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	--	Initial Annulus WL (ft btoc)	--

Set-up Information

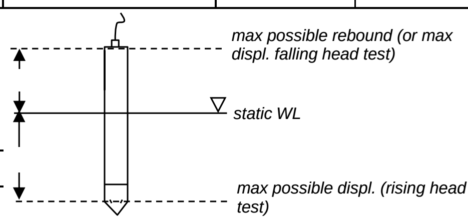
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
--	--	--	--	--	--	--
Pressure Head CH 2 (Red)	15 psi	1415642	NA	0.099	NA	NA
Test Interval CH 3 (Blue)	20 psi	0809061	18	0.1276	3.94	4.04

Data Logger: Rafael

Spacer Length (ft): N/A

Spacer OD. (inches): N/A

Comments: used HWT to isolate interval



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	Pneumatic	Pneumatic	Pneumatic	Pneumatic
Rising/Falling head	Rising	Rising	Rising	Rising
Pre-test Sub. Test_Int	4.05	4.05	4.03	4.03
Pre-test Sub. Annulus	--	--	--	--
Expected Displacement (P_Head) (ft)	1.854	0.938	0.476	1.942
Observed Displacement (Test_Int) (ft)	1.875	0.962	0.491	1.894
Slug Discrepancy (%)	1.1%	2.6%	3.2%	3.0%
Max Rebound above Static				
Post-test Sub. Test_Int	4.04	4.03	4.03	4.03
Residual Dev. from H_o (%)	0.2%	0.5%	0.0%	0.0%
Data Logger File Name	R88_ST1B_73.2-100_A	R88_ST1B_73.2-100_B	R88_ST1B_73.2-100_C	R88_ST1B_73.2-100_D
Specific Conductance (uS)	606			
Temperature °C	21.89			
Lithology				
Other				
K_h (ft/day)				

Comments:

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	2
Site Name:	ROMP 88 - Rock Ridge	Date:	12/20/2016
Well:	CH2	Performed by:	T. Horstman, J. Zydek
Well Depth (ft bls)	167	Test Interval (ft - ft bls)	120 - 167
Test Casing Height (ft als)	4.41	Date of Last Development	12/19/2016
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	10.18 (5.77 ft bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	10.16
Test Interval Length (ft)	47	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.24	Initial Annulus WL (ft btoc)	8.02 (5.78 ft bls)

Set-up Information

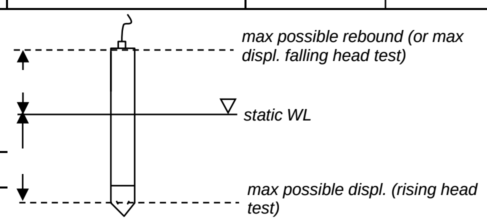
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi		13.18	0.019	3	
Pressure Head CH 2 (Red)	15 psi	1415642	NA	0..004	NA	NA
Annulus CH 3 (Yellow)	20 psi		11	0.09	2.98	

Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	Pneumatic	Pneumatic	Pneumatic	Pneumatic
Rising/Falling head	Rising	Rising	Rising	Rising
Pre-test Sub. Test_Int	3.00	3.00	3.00	3.00
Pre-test Sub. Annulus	2.98	2.99	2.99	2.99
Expected Displacement (P_Head) (ft)	-2.023	-1.011	-0.498	-2.052
Observed Displacement (Test_Int) (ft)	-2.059	-0.967	-0.513	-2.008
Slug Discrepancy (%)	1.78%	4.40%	3.00%	2.10%
Max Rebound above Static	0.198	0.061	0.086	0.22
Post-test Sub. Test_Int	3.00	3.00	3.00	3.00
Residual Dev. from H_o (%)	0%	0%	0%	0%
Data Logger File Name	R88_ST2_120-167_A	R88_ST2_120-167_B	R88_ST2_120_167_C	R88_ST2_120-167_D
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments: Some dependence on slug magnitude.

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

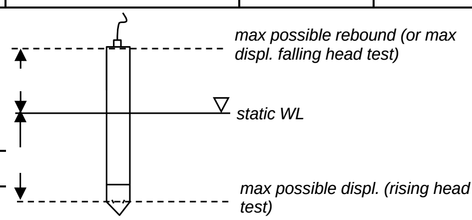
General Information

		Slug Test No.:	3
Site Name:	ROMP 88 - Rock Ridge	Date:	1/31/2017
Well:	CH2	Performed by:	J. Zydek, T. Horstman
Well Depth (ft bls)	267	Test Interval (ft - ft bls)	246 - 267
Test Casing Height (ft als)	6.28	Date of Last Development	1/30/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	12.36
Test Casing Type	NRQ	Final Static WL (ft btoc)	12.32
Test Interval Length (ft)	21	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.07	Initial Annulus WL (ft btoc)	7.99

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi		15.5	0.02	3.14	3.11
Pressure Head CH 2 (Red)	15 psi	0608164	NA	0.03	NA	NA
Annulus CH 3 (Yellow)	20 psi		11	0.1	3.01	3.1

Data Logger	Rafael
Spacer Length (ft)	5
Spacer OD. (inches)	1.66
Comments:	tried setting packer several depths but would not seat until 246 ft (bit at 245 ft)



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.12	3.13	3.124	3.124
Pre-test Sub. Annulus	3.10	3.10	3.10	3.10
Expected Displacement (P_Head) (ft)	-2.038	-1.188	-0.491	-2.433
Observed Displacement (Test_Int) (ft)	-2.376	-0.990	-0.491	-2.096
Slug Discrepancy (%)	16.5%	16.7%	0.0%	13.9%
Max Rebound above Static				
Post-test Sub. Test_Int	3.11	3.124	3.124	3.123
Residual Dev. from H_o (%)	0.3%	0.2%	0%	0.03%
Data Logger File Name	R88_ST3_246-267_A	R88_ST3_246-267_B	R88_ST3_246-267_C	R88_ST3_246-267_D
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				
Comments				

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

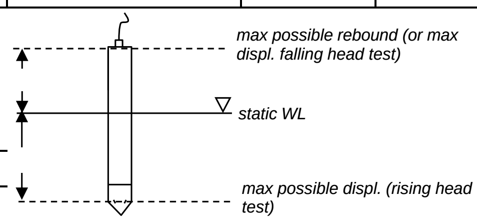
General Information

		Slug Test No.:	3 continued
Site Name:	ROMP 88 - Rock Ridge	Date:	1/31/2017
Well:	CH2	Performed by:	J. Zydek, T. Horstman
Well Depth (ft bls)	267	Test Interval (ft - ft bls)	246 - 267
Test Casing Height (ft als)	6.28	Date of Last Development	1/30/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	12.36
Test Casing Type	NRQ	Final Static WL (ft btoc)	12.32
Test Interval Length (ft)	21	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.07	Initial Annulus WL (ft btoc)	7.99

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi		15.5	0.02	3.14	3.11
Pressure Head CH 2 (Red)	15 psi	0608164	NA	0.03	NA	NA
Annulus CH 3 (Yellow)	20 psi		11	0.1	3.01	3.1

Data Logger	Rafael
Spacer Length (ft)	5
Spacer OD. (inches)	1.66
Comments:	tried setting packer several depths but would not seat until 246 ft (bit at 245 ft)



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test E			
Target Displacement (ft)	0.5			
Initiation method	pneumatic			
Rising/Falling head	rising			
Pre-test Sub. Test_Int	3.13			
Pre-test Sub. Annulus	3.09			
Expected Displacement (P_Head) (ft)	-0.476			
Observed Displacement (Test_Int) (ft)	-0.476			
Slug Discrepancy (%)	0.00%			
Max Rebound above Static				
Post-test Sub. Test_Int	3.12			
Residual Dev. from H_o (%)	0.32%			
Data Logger File Name	R88_ST3_246-267_E			
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

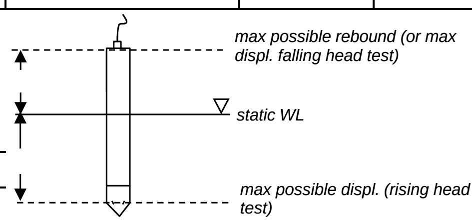
General Information

		Slug Test No.:	4
Site Name:	ROMP 88 - Rock Ridge	Date:	2/22/2017
Well:	CH2	Performed by:	T. Horstman
Well Depth (ft bls)	367	Test Interval (ft - ft bls)	327-367
Test Casing Height (ft als)	5.27	Date of Last Development	2/21/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	11.77 (6.5 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	11.77
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.07	Initial Annulus WL (ft btoc)	8.55

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	Spacer	15	0.01	3.23	3.21
Pressure Head CH 2 (Red)	15 psi	0608164	NA	0.004	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	12	0.11	3.45	3.54

Data Logger	Rafael
Spacer Length (ft)	5
Spacer OD. (inches)	1.66
Comments:	Raining



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.22	3.22	3.22	3.24
Pre-test Sub. Annulus	3.55	3.55	3.55	3.57
Expected Displacement (P_Head) (ft)	1.994	1.004	0.66	1.987
Observed Displacement (Test_Int) (ft)	1.950	0.982	0.704	1.943
Slug Discrepancy (%)	2.2%	2.2%	6.7%	2.2%
Max Rebound above Static				
Post-test Sub. Test_Int	3.22	3.22	3.22	3.25
Residual Dev. from H_o (%)	0.00%	0.00%	0.00%	0.30%
Data Logger File Name	R88_ST4_327-367_A	R88_ST4_327-367_B	R88_ST4_327_346_C	R88_ST4_327-367_D
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				
Comments				

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	4 continued
Site Name:	ROMP 88 - Rock Ridge	Date:	2/22/2017
Well:	CH2	Performed by:	T. Horstman
Well Depth (ft bls)	367	Test Interval (ft - ft bls)	327-367
Test Casing Height (ft als)	5.27	Date of Last Development	2/21/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	11.77 (6.5 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	11.77
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.07	Initial Annulus WL (ft btoc)	8.55

Set-up Information

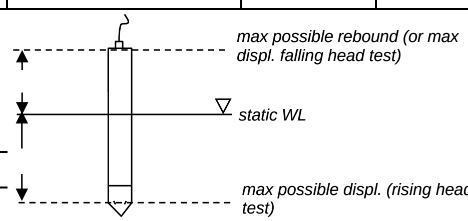
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	Spacer	15	0.01	3.23	3.21
Pressure Head CH 2 (Red)	15 psi	0608164	NA	0.004	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	12	0.11	3.45	3.54

Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments: Raining



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test E	Test F	Test G	Test H
Target Displacement (ft)	2	2	1	0.5
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.22	3.22	3.22	3.22
Pre-test Sub. Annulus	3.59	3.60	3.60	3.61
Expected Displacement (P_Head) (ft)	2.001	1.994	0.997	0.506
Observed Displacement (Test_Int) (ft)	2.038	1.942	0.960	0.469
Slug Discrepancy (%)	1.8%	2.6%	3.7%	7.3%
Max Rebound above Static				
Post-test Sub. Test_Int	3.22	3.22	3.22	3.22
Residual Dev. from H_o (%)	0%	0%	0%	0%
Data Logger File Name	R88_ST4_327-367_E	R88_ST4_327-367_F	R88_ST4_327-367_G	R88_ST4_327-367_H
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments: Best packer set was tests F, G, H, I

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	4 continued
Site Name:	ROMP 88 - Rock Ridge	Date:	2/22/2017
Well:	CH2	Performed by:	T. Horstman
Well Depth (ft bls)	367	Test Interval (ft - ft bls)	327-367
Test Casing Height (ft als)	5.27	Date of Last Development	2/21/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	11.77 (6.5 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	11.77
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.07	Initial Annulus WL (ft btoc)	8.55

Set-up Information

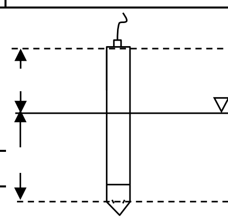
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	Spacer	15	0.01	3.23	3.21
Pressure Head CH 2 (Red)	15 psi	0608164	NA	0.004	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	12	0.11	3.45	3.54

Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments: Raining



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test I			
Target Displacement (ft)	2			
Initiation method	pneumatic			
Rising/Falling head	rising			
Pre-test Sub. Test_Int	3.19			
Pre-test Sub. Annulus	3.59			
Expected Displacement (P_Head) (ft)				
Observed Displacement (Test_Int) (ft)				
Slug Discrepancy (%)				
Max Rebound above Static				
Post-test Sub. Test_Int				
Residual Dev. from H_o (%)				
Data Logger File Name	R99_ST4_327-367_I			
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments: Best packer set was tests F, G, H, I

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	5
Site Name:	ROMP 88- Rock Ridge	Date:	6/7/2017
Well:	CH3	Performed by:	T. Horstman, J. Zydek
Well Depth (ft bls)	437	Test Interval (ft - ft bls)	398 - 437
Test Casing Height (ft als)	6.27	Date of Last Development	6/5/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	15.55 on 6/6/2017(14.33 on 6/7/17)
Test Casing Type	NRQ	Final Static WL (ft btoc)	14.06
Test Interval Length (ft)	39	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.23	Initial Annulus WL (ft btoc)	11.25 6/6/2017 (10.32 on 6/7/2017)

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	Spacer	18.55	0.00296		4.24
Pressure Head CH 2 (Red)	15 psi	0608164	NA	-0.04107	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	14.25	0.1122	3.00	3.93

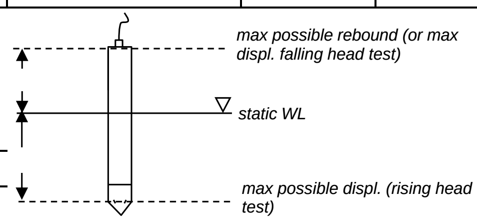
Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments: Set transducers on 6-6-2017 but could not perform tests due to storm and fuse on data logger burnt out.

Raining - rec'd ~ 4 inches today/yesterday



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	4.26	4.36	4.40	4.43
Pre-test Sub. Annulus	3.94	4.03	4.07	4.09
Expected Displacement (P_Head) (ft)	1.993	0.996	0.498	2.008
Observed Displacement (Test_Int) (ft)	2.008	1.04	0.535	1.905
Slug Discrepancy (%)	0.8%	4.4%	7.4%	5.1%
Max Rebound above Static				
Post-test Sub. Test_Int	4.35	4.38	4.41	4.45
Residual Dev. from H_o (%)	2.1%	0.5%	0.2%	0.5%
Data Logger File Name	R88_ST5_398-437_A	R88_ST5_398-437_B	R88_ST5_398-437_C	R88_ST5_398-437_D
Specific Conductance (uS)	519	519	519	519
Temperature °C	24.11	24.11	24.11	24.11
Lithology	dolostone			
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	6
Site Name:	ROMP 88 - Rock Ridge	Date:	6/22/2017
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	457 (rocks up to 452 ft)	Test Interval (ft - ft bls)	437-457
Test Casing Height (ft als)	6.4	Date of Last Development	6/21/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	9.93 (3.53 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	9.92
Test Interval Length (ft)	20	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.32	Initial Annulus WL (ft btoc)	5.32

Set-up Information

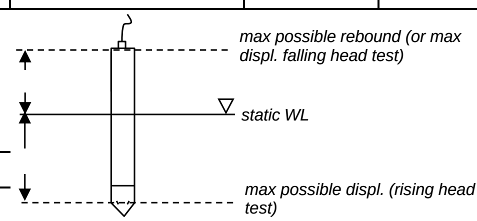
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	Spacer	13	0.009	3.07	3.14
Pressure Head CH 2 (Red)	15 psi	0608164	NA	-0.03	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	8.3	0.07	2.98	2.88

Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.14	3.13	3.13	3.13
Pre-test Sub. Annulus	2.88	2.87	2.87	2.87
Expected Displacement (P_Head) (ft)	-2.059	-1.092	-0.601	-2.096
Observed Displacement (Test_Int) (ft)	-1.934	-1.026	-0.571	-1.978
Slug Discrepancy (%)	6.1%	6%	5%	5.6%
Max Rebound above Static				
Post-test Sub. Test_Int	3.13	3.13	3.13	3.14
Residual Dev. from H_o (%)	0.3%	0%	0%	0.3%
Data Logger File Name	R88_ST6_437-457_A	R88_ST6_437-457_B	R88_ST6_437-457_C	R88_ST6_437-457_D
Specific Conductance (uS)	491			
Temperature °C	26.24			
Lithology	fractured sucrosic dolostone			
Other				
K_h (ft/day)				
Comments				

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

Site Name:	ROMP 88 Rock Ridge	Slug Test No.:	7
		Date:	8/1/2017
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	597	Test Interval (ft - ft bls)	562-597
Test Casing Height (ft als)	5.29	Date of Last Development	8/1/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	8.30 (3.01 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	8.17
Test Interval Length (ft)	35	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.23	Initial Annulus WL (ft btoc)	5.12 (2.89 bls)

Set-up Information

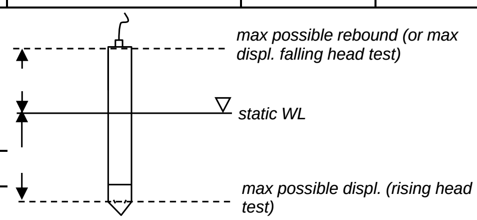
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	Spacer	1404390	11.54	0.04	3.2	3.26
Pressure Head CH 2 (Red)	15 psi	0608164	NA	-0.02	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	8.5	0.07	3.38	3.31

Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.35	3.39	3.35	3.40
Pre-test Sub. Annulus	3.37	3.38	3.36	3.38
Expected Displacement (P_Head) (ft)	1.997	0.982	0.520	2.014
Observed Displacement (Test_Int) (ft)	1.912	1.012	0.506	2.988
Slug Discrepancy (%)	4.3%	3.1%	2.7%	1.13%
Max Rebound above Static				
Post-test Sub. Test_Int	3.34	3.37	3.32	3.34
Residual Dev. from H_o (%)	0.3%	0.59%	0.9%	1.76%
Data Logger File Name	R88_ST7_562-596_A	R88_ST7_562-596_B	R88_ST7_562-596_C	R88_ST7_562-596_D
Specific Conductance (uS)				
Temperature °C				
Lithology	friable sucrosic dolostone			
Other				
K_h (ft/day)				

Comments:

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION
SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	8
Site Name:	ROMP 88 - Rock Ridge	Date:	8/9/2017
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	697	Test Interval (ft - ft bls)	657 - 697
Test Casing Height (ft als)	5.35	Date of Last Development	8/9/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	8.03 (2.68 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	8.03
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.23	Initial Annulus WL (ft btoc)	4.94 (2.71 bls)

Set-up Information

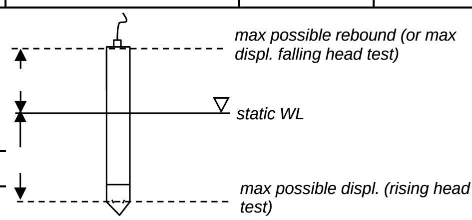
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	Spacer	1404390	11	0.03	2.97	3.01
Pressure Head CH 2 (Red)	15 psi	0608164	NA	-0.08	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	8	0.07	3.06	3.11

Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.06	3.02	3.02	3.03
Pre-test Sub. Annulus	3.13	3.11	3.11	3.11
Expected Displacement (P_Head) (ft)	2.081	0.989	0.608	2.118
Observed Displacement (Test_Int) (ft)	2.011	0.91	0.572	2.055
Slug Discrepancy (%)	3.4%	8%	5.9%	3%
Max Rebound above Static				
Post-test Sub. Test_Int	3.06	3.07	3.01	3.02
Residual Dev. from H_o (%)	0%	-1.66%	0.33%	0.33%
Data Logger File Name	R88_ST8_657-697_A	R88_ST8_657-697_B	R88_ST8_657-697_C	R88_ST8_657-697_D
Specific Conductance (uS)	416			
Temperature °C	25.29			
Lithology				
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	9
Site Name:	ROMP 88 - Rock Ridge	Date:	8/16/2019
Well:		Performed by:	T. Horstman
Well Depth (ft bls)	817	Test Interval (ft - ft bls)	766 - 817
Test Casing Height (ft als)	5.34	Date of Last Development	8/16/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	8.21
Test Casing Type	NRQ	Final Static WL (ft btoc)	8.14
Test Interval Length (ft)	41	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.23	Initial Annulus WL (ft btoc)	4.99

Set-up Information

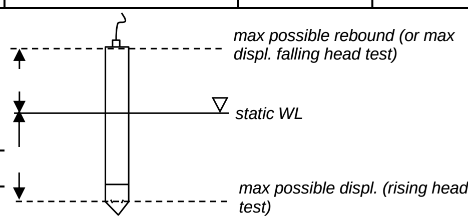
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	Spacer	1404390	11.5	0.04	3.29	3.36
Pressure Head CH 2 (Red)	15 psi	0608164	NA	-0.06	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	8	0.05	3.01	3.07

Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.37	3.37	3.39	3.36
Pre-test Sub. Annulus	3.08	3.08	3.08	3.07
Expected Displacement (P_Head) (ft)	2.067	1.077	0.55	2.066
Observed Displacement (Test_Int) (ft)	2.018	1.152	0.543	2.003
Slug Discrepancy (%)	2.4%	7%	1.3%	3%
Max Rebound above Static				
Post-test Sub. Test_Int	3.37	3.37	3.39	3.36
Residual Dev. from H_o (%)	0%	0%	0%	0%
Data Logger File Name	R88_ST9_766-817_A	R88_ST9_766-817_B	R88_ST9_766-817_C	R88_ST9_766-817_D
Specific Conductance (uS)	1,227			
Temperature °C	25.05			
Lithology	Dolostone - weathered			
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

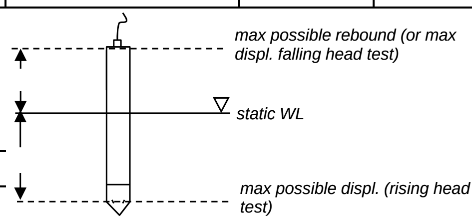
General Information

		Slug Test No.:	10
Site Name:	ROMP 88 - Rock Ridge	Date:	8/23/2017
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	917	Test Interval (ft - ft bls)	877-917
Test Casing Height (ft als)	5.24	Date of Last Development	8/22/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	10.04
Test Casing Type	NRQ	Final Static WL (ft btoc)	10.08
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.23	Initial Annulus WL (ft btoc)	5.74

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	Spacer/5 psi	1708846	13	0.02	2.96	2.83
Pressure Head CH 2 (Red)	15 psi	0608164	NA	-0.07	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	8.7	0.07	2.96	2.88

Data Logger	Rafael
Spacer Length (ft)	5
Spacer OD. (inches)	1.66
Comments:	



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	2.83	2.83	2.86	2.87
Pre-test Sub. Annulus	2.89	2.89	2.91	2.91
Expected Displacement (P_Head) (ft)	2.052	1.048	0.572	2.044
Observed Displacement (Test_Int) (ft)	2.007	1.013	0.542	2.061
Slug Discrepancy (%)	2.2%	3.3%	5.2%	0.8%
Max Rebound above Static				
Post-test Sub. Test_Int	2.83	2.83	2.86	2.86
Residual Dev. from H_o (%)	0%	0%	0%	0%
Data Logger File Name	R88_ST10_877-917_A	R88_ST10_877-917_B	R88_ST10_877-917_C	R88_ST10_877-917_D
Specific Conductance (uS)	2,733			
Temperature °C	25.97			
Lithology				
Other				
K_h (ft/day)				
Comments				

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

Slug Test No.: 11

Site Name:	ROMP 88 - Rock Ridge	Date:	8/30/2017
Well:	CH3	Performed by:	J. Zydek
Well Depth (ft bls)	957	Test Interval (ft - ft bls)	940 - 957
Test Casing Height (ft als)	5.21	Date of Last Development	8/29/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	9.79
Test Casing Type	NRQ	Final Static WL (ft btoc)	9.64
Test Interval Length (ft)	17	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.23	Initial Annulus WL (ft btoc)	4.95

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0809061	13	0.076	3.21	3.35
Pressure Head CH 2 (Red)	15 psi		NA		NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	8	0.0688	3.05	3.11

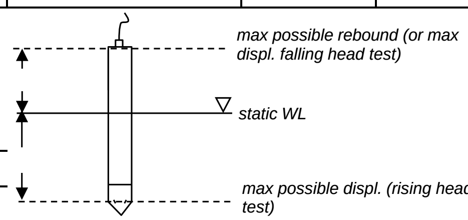
Data Logger: Rafael

Spacer Length (ft): NA

Spacer OD. (inches): NA

Comments: used packer to isolate interval

spacer not needed due to low k formation



values for Test C (8-31-19) given in parentheses if different

Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B		Test D
Target Displacement (ft)	5.7	1		
Initiation method	drop - water	drop - water		
Rising/Falling head	falling	falling		
Pre-test Sub. Test_Int	3.35	3.45		
Pre-test Sub. Annulus	3.11	3.11		
Expected Displacement (P_Head) (ft)	5.740	1		
Observed Displacement (Test_Int) (ft)	5.714	0.952		
Slug Discrepancy (%)	0.5%	4.8%		
Max Rebound above Static				
Post-test Sub. Test_Int	3.48	3.58		
Residual Dev. from H_o (%)	3.8%	3.7%		
Data Logger File Name	R88_ST11_940-957_A	R88_ST11_940-957_B		
Specific Conductance (uS)	2,887			
Temperature °C	26.39			
Lithology				
Other				
K_h (ft/day)				

Comments: mistakenly calculated a 2 foot slug using HW volume of 0.6528 gal/ft instead of NRQ volume of 2.301 gal/ft and it equaled a 5.7 ft slug. 2 ft -> 0.6528 gal/ft = 1.3056 gal/ft -> 4942 mL

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

Slug Test No.: 11 continued

Site Name:	ROMP 88 - Rock Ridge	Date:	8/31/2017
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	957	Test Interval (ft - ft bls)	940 - 957
Test Casing Height (ft als)	5.21	Date of Last Development	8/29/2017
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	9.79
Test Casing Type	NRQ	Final Static WL (ft btoc)	9.64
Test Interval Length (ft)	17	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.23	Initial Annulus WL (ft btoc)	4.95

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0809061	11	0.09	1.41	1.5
Pressure Head CH 2 (Red)	15 psi	--	NA	--	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	8	0.1	2.95	3

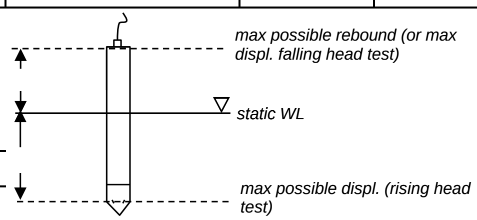
Data Logger: Rafael

Spacer Length (ft): NA

Spacer OD. (inches): NA

Comments: used packer to isolate interval

spacer not needed due to low k formation



Continuation of slug testing from 8/30/2017

Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C (8-31-19)	Test D
Target Displacement (ft)			1	
Initiation method			drop	
Rising/Falling head			falling	
Pre-test Sub. Test_Int			1.5	
Pre-test Sub. Annulus			3.0	
Expected Displacement (P_Head) (ft)			1	
Observed Displacement (Test_Int) (ft)			0.903	
Slug Discrepancy (%)			9.7%	
Max Rebound above Static				
Post-test Sub. Test_Int			1.56	
Residual Dev. from H_o (%)			4%	
Data Logger File Name			R88_ST11_940-957_C	
Specific Conductance (uS)			2,887	
Temperature °C			26.39	
Lithology				
Other				
K_h (ft/day)				

Comments: 1 foot slug -> 0.2301 gal/ft -> 871 mL

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

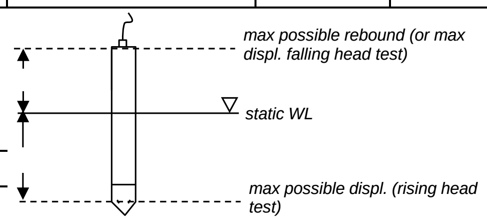
Slug Test No.: 12

Site Name:	ROMP 88 - Rock Ridge	Date:	3/20/2018
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	1,067	Test Interval (ft - ft bls)	1,027 - 1,067
Test Casing Height (ft als)	5.09	Date of Last Development	3/14/2018
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	21.26 (16.17 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	20.15 (16.23 bls)
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.07	Initial Annulus WL (ft btoc)	8.51 (6.44 bls)

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0809061	24	0.11	2.74	2.8
Pressure Head CH 2 (Red)	15 psi		NA		NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	11.5	0.11	2.99	2.98

Data Logger	Rafael
Spacer Length (ft)	NA
Spacer OD. (inches)	NA
Comments:	



for test D - subtract 1.17 from stick up for final water level because the valve apparatus was removed to see

is causing water loss in slugs

Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1	1	1	1
Initiation method	drop slug	drop slug	drop slug	drop slug
Rising/Falling head	falling	falling	falling	falling
Pre-test Sub. Test_Int	2.80	2.78	2.78	2.76
Pre-test Sub. Annulus	2.98	2.96	2.96	2.96
Expected Displacement (P_Head) (ft)	1	1	1	1
Observed Displacement (Test_Int) (ft)	0.687	0.687	0.727	0.717
Slug Discrepancy (%)	31%	31%	29%	28%
Max Rebound above Static				
Post-test Sub. Test_Int	2.78	2.78	2.78	2.78
Residual Dev. from H_o (%)	0.7%	0%	0%	0.7%
Data Logger File Name	R88_ST12_1027-1067_A	R88_ST12_1027-1067_B	R88_ST12_1027-1067_C	R88_ST12_1027-1067_D
Specific Conductance (uS)	2,277			
Temperature °C	23.14			
Lithology				
Other				
K_h (ft/day)				

Comments 1 foot slug -> 0.2301 gal/ft -> 871 mL

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION
SLUG TEST - DATA ACQUISITION SHEET

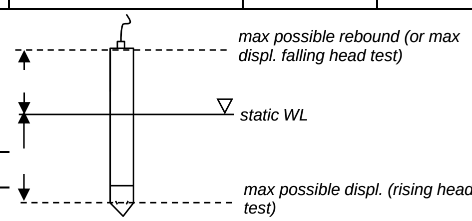
General Information

		Slug Test No.:	13
Site Name:	ROMP 88 - Rock Ridge	Date:	4/5/2018
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	1,227	Test Interval (ft - ft bls)	1,187-1,227
Test Casing Height (ft als)	5.41	Date of Last Development	4/4/2018
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	22.77 (17.36 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	22.74 (17.33)
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.07	Initial Annulus WL (ft btoc)	7.92 (5.85 bls)

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0809061	26	0.12	3.23	3.38
Pressure Head CH 2 (Red)	15 psi		NA		NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	11	0.12	3.08	3.09

Data Logger	Rafael
Spacer Length (ft)	NA
Spacer OD. (inches)	NA
Comments:	



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1			
Initiation method	drop/water			
Rising/Falling head	falling			
Pre-test Sub. Test_Int	3.38			
Pre-test Sub. Annulus	3.09			
Expected Displacement (P_Head) (ft)	1			
Observed Displacement (Test_Int) (ft)	0.884			
Slug Discrepancy (%)	11.6%			
Max Rebound above Static				
Post-test Sub. Test_Int	3.46			
Residual Dev. from H_o (%)	2%			
Data Logger File Name	R88_ST13_1187-1227_A			
Specific Conductance (uS)	2,897			
Temperature °C	24.52			
Lithology	dolomitic limestone/dolostone w/evaporites			
Other				
K_h (ft/day)				
Comments				

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	14
Site Name:	ROMP 88 - Rock Ridge	Date:	4/19/2018
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	1,357	Test Interval (ft - ft bls)	1,317 - 1,357
Test Casing Height (ft als)	5.38	Date of Last Development	4/18/2018
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	23.40 (18.02 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	23.4
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	2.07	Initial Annulus WL (ft btoc)	7.22 (5.15 bls)

Set-up Information

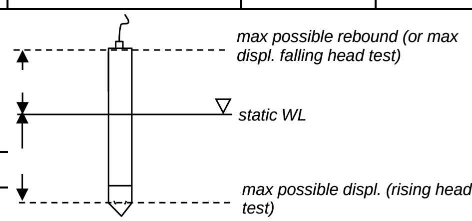
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0809061	26.5	0.12	3.1	3.23
Pressure Head CH 2 (Red)	15 psi	--	NA	--	NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	10.5	0.11	3.28	3.32

Data Logger: Rafael

Spacer Length (ft): NA

Spacer OD. (inches): NA

Comments:



temp is 15° C (59° F) during reading in air which results in a ± of 0.25

Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1	0.5		
Initiation method	drop/water	drop/water		
Rising/Falling head	falling	falling		
Pre-test Sub. Test_Int	3.23	3.27		
Pre-test Sub. Annulus	3.32	3.31		
Expected Displacement (P_Head) (ft)	1	0.5		
Observed Displacement (Test_Int) (ft)	0.865	0.472		
Slug Discrepancy (%)	13.5%	5.6%		
Max Rebound above Static				
Post-test Sub. Test_Int	3.27	3.28		
Residual Dev. from H_o (%)	1.23%	38%		
Data Logger File Name	R88_ST14_1317-1357_A	R88_ST14_1317-1357_B		
Specific Conductance (uS)	2,769			
Temperature °C	25.44			
Lithology	dolostone w/evaporites			
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

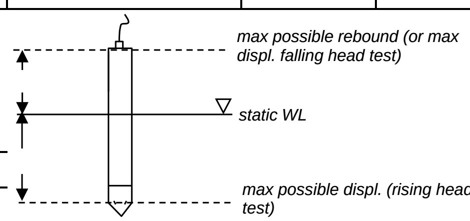
General Information

		Slug Test No.:	15
Site Name:	ROMP 88 - Rock Ridge	Date:	8/16/2018
Well:	CH3	Performed by:	T. Horstman, J. Zydek
Well Depth (ft bls)	1,457	Test Interval (ft - ft bls)	1,417-1,457
Test Casing Height (ft als)	3.91	Date of Last Development	8/15/2018
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	24.09 (20.18 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	23.71
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	0.76	Initial Annulus WL (ft btoc)	4.99 (4.23 bls)

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0809061	27	0.1032009	3	2.9
Pressure Head CH 2 (Red)	15 psi		NA		NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	8	0.115571	3	3.1

Data Logger	Rafael
Spacer Length (ft)	NA
Spacer OD. (inches)	NA
Comments:	Spacer not used for pour-in slug test



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1	0.5		
Initiation method	drop/water	drop/water		
Rising/Falling head	falling	falling		
Pre-test Sub. Test_Int	2.91	3.3		
Pre-test Sub. Annulus	3.10	2.86		
Expected Displacement (P_Head) (ft)	1	0.5		
Observed Displacement (Test_Int) (ft)	0.894	0.412		
Slug Discrepancy (%)	10.6%	17.6%		
Max Rebound above Static				
Post-test Sub. Test_Int	3.28	3.398		
Residual Dev. from H_o (%)	-12.6%	-2.97%		
Data Logger File Name	R88_ST15_1417-1457_A	R88_ST15_1417-1457_B		
Specific Conductance (uS)				
Temperature °C				
Lithology	Dolostone w/evaporites			
Other				
K_h (ft/day)				

Comments: Test A - switched the test int. transducer cable with the annulus transducer cable; therefore CH3 is test int. and CH1 is annulus. Corrected for Test B

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	16
Site Name:	ROMP 88 - Rock Ridge	Date:	3/26/2019
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	1,557	Test Interval (ft - ft bls)	1,517 - 1,557
Test Casing Height (ft als)	4.11	Date of Last Development	3/25/2019
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	28.84 (24.13 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	28.03
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	0.76	Initial Annulus WL (ft btoc)	6.94

Set-up Information

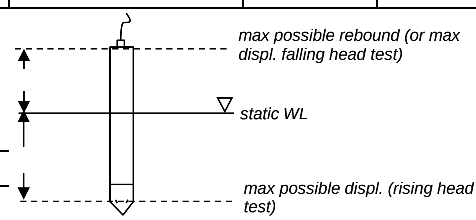
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0901237	31.25	0.09	3.01	2.88
Pressure Head CH 2 (Red)	15 psi		NA		NA	NA
Annulus CH 3 (Yellow)	20 psi	0809063	10	0.11	3.06	3.13

Data Logger: Rafael

Spacer Length (ft): NA

Spacer OD. (inches): NA

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1	0.5		
Initiation method	drop/water	drop/water		
Rising/Falling head	falling	falling		
Pre-test Sub. Test_Int	2.88	2.94		
Pre-test Sub. Annulus	3.13	3.15		
Expected Displacement (P_Head) (ft)	1	0.5		
Observed Displacement (Test_Int) (ft)	0.804	0.451		
Slug Discrepancy (%)	19.6%	9.8%		
Max Rebound above Static				
Post-test Sub. Test_Int	2.94	2.98		
Residual Dev. from H_o (%)	2%	1.4%		
Data Logger File Name	R88_ST16_1517-1557_A	R88_ST16_1517-1557_B		
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments: Cooper-Jacob is too low

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	17
Site Name:	ROMP 88 - Rock Ridge	Date:	4/30/2019
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	1,657	Test Interval (ft - ft bls)	1,617 - 1,657
Test Casing Height (ft als)	5.04	Date of Last Development	4/24/2019
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	23.76 (18.72 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	23.88
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

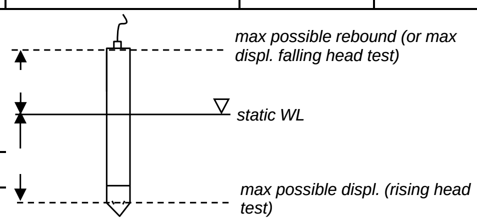
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0901237	27.0	0.01	3.24	3.24
Pressure Head CH 2 (Red)	15 psi		NA		NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger: Rafael

Spacer Length (ft): NA

Spacer OD. (inches): NA

Comments: Cannot monitor annulus because HQ broke at 26 ft bls



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1	0.5		
Initiation method	drop/water	drop/water		
Rising/Falling head	falling	falling		
Pre-test Sub. Test_Int	3.23	3.34		
Pre-test Sub. Annulus	NA	NA		
Expected Displacement (P_Head) (ft)	NA	NA		
Observed Displacement (Test_Int) (ft)	0.96	0.431		
Slug Discrepancy (%)	4%	14%		
Max Rebound above Static				
Post-test Sub. Test_Int	3.35	--		
Residual Dev. from H_o (%)	3.7%	--		
Data Logger File Name	R88_ST17_1617-1657_A	R88_ST17_1617-1657_B		
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

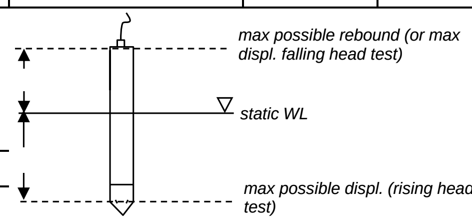
Slug Test No.: 18

Site Name:	ROMP 88 - Rock Ridge	Date:	5/8/2019
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	1,777	Test Interval (ft - ft bls)	1,737 - 1,777
Test Casing Height (ft als)	5.03	Date of Last Development	5/8/2019
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	37.89 (32.86 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	37.84
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0809063	40.5	0.107	2.61	2.65
Pressure Head CH 2 (Red)	15 psi		NA		NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger	Rafael
Spacer Length (ft)	NA
Spacer OD. (inches)	NA
Comments:	



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1	1		
Initiation method	drop/water	drop/water		
Rising/Falling head	falling	falling		
Pre-test Sub. Test_Int	2.65	2.67		
Pre-test Sub. Annulus	NA	NA		
Expected Displacement (P_Head) (ft)	NA	NA		
Observed Displacement (Test_Int) (ft)	0.667	0.746		
Slug Discrepancy (%)	33%	25%		
Max Rebound above Static				
Post-test Sub. Test_Int	2.67	--		
Residual Dev. from H_o (%)	0.75%	--		
Data Logger File Name	R88_ST18_1737-1777_A	R88_ST18_1737-1777_B		
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION
SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	19
Site Name:	ROMP 88 - Rock Ridge	Date:	5/20/2019
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	1,857	Test Interval (ft - ft bls)	1,810 - 1,857
Test Casing Height (ft als)	5.07	Date of Last Development	5/20/2019
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	37.39 (32.32 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	37.39
Test Interval Length (ft)	47	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

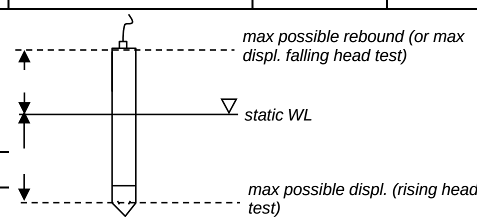
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	1708846	40.4	0.007	3.01	3.03
Pressure Head CH 2 (Red)	15 psi	1601014	NA	-0.01	NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments: Can't monitor annulus because HQ broke at ~26 ft bls



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.05	3.07	3.05	3.06
Pre-test Sub. Annulus	--	--	--	--
Expected Displacement (P_Head) (ft)	-1.974	-0.899	-0.508	-1.937
Observed Displacement (Test_Int) (ft)	-2.002	-0.835	-0.503	-1.812
Slug Discrepancy (%)	1.4%	7.1%	1%	6.5%
Max Rebound above Static				
Post-test Sub. Test_Int	3.04	3.06	3.06	3.06
Residual Dev. from H_o (%)	0.33%	0.33%	0.33%	0%
Data Logger File Name	R88_ST19_1810-1857_A	R88_ST19_1810-1857_B	R88_ST19_1810-1857_C	R88_ST19_1810-1857_D
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	20
Site Name:	ROMP 88 - Rock Ridge	Date:	5/29/2019
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	1,937	Test Interval (ft - ft bls)	1,897 - 1,937
Test Casing Height (ft als)	5.14	Date of Last Development	5/28/2019
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	38.21 (33.07 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	38.23
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

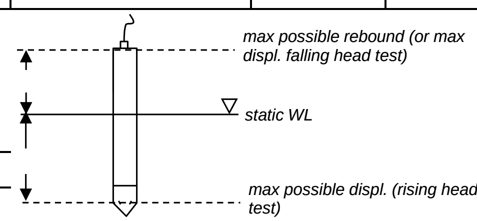
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	1708846	41.25	0.005	3.04	3.15
Pressure Head CH 2 (Red)	15 psi	1601014	NA	0.01	NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger: Rafael

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.15	3.16	3.16	3.16
Pre-test Sub. Annulus	--	--	--	--
Expected Displacement (P_Head) (ft)	-2.019	-1.002	-0.553	-1.982
Observed Displacement (Test_Int) (ft)	-1.912	-0.914	-0.515	-1.885
Slug Discrepancy (%)	5.3%	6.2%	6.9%	4.9%
Max Rebound above Static				
Post-test Sub. Test_Int	3.15	3.16	3.16	3.16
Residual Dev. from H_o (%)	0%	0%	0%	0%
Data Logger File Name	R88_ST20_1897-1937_A	R88_ST20_1897-1937_B	R88_ST20_1897-1937_C	R88_ST20_1897-1937_D
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION
SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	21 - drop slug
Site Name:	ROMP 88 - Rock Ridge	Date:	11/21/2019
Well:	CH3	Performed by:	J. LaRoche
Well Depth (ft bls)	2,047	Test Interval (ft - ft bls)	2,007 - 2,047
Test Casing Height (ft als)	6.12	Date of Last Development	11/20/2019
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	37.43 (31.31 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	37.44
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

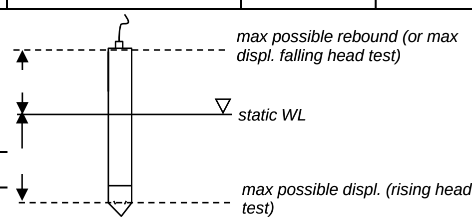
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0809063	41.0	0.14	3.57	3.64
Pressure Head CH 2 (Red)	15 psi	NA	NA	NA	NA	NA
Annulus CH 3 (Yellow)	20 psi					

Data Logger: Splinter

Spacer Length (ft): NA

Spacer OD. (inches): NA

Comments: cannot monitor annulus because HQ broke at 26 ft bls
NRQ rods w/ packer = 0.213 gal/ft = 0.806 L/ft
PVC funnel used as slug release apparatus



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1			
Initiation method	water (pour-in)			
Rising/Falling head	faling			
Pre-test Sub. Test_Int	3.64			
Pre-test Sub. Annulus	NA			
Expected Displacement (P_Head) (ft)	NA			
Observed Displacement (Test_Int) (ft)	0.496			
Slug Discrepancy (%)	50.4%			
Max Rebound above Static				
Post-test Sub. Test_Int	3.64			
Residual Dev. from H_o (%)	0%			
Data Logger File Name	R88_ST21_2007-2047_DropSlug			
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments: Test more permeable than expected - install pneumatic head and run 4 tests

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

Slug Test No.: 21 - pneumatic

Site Name:	ROMP 88 - Rock Ridge	Date:	11/21/2019
Well:	CH3	Performed by:	J. LaRoche
Well Depth (ft bls)	2,047	Test Interval (ft - ft bls)	2,007 - 2,047
Test Casing Height (ft als)	6.12	Date of Last Development	11/20/2019
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	37.44 (31.32 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	37.34
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

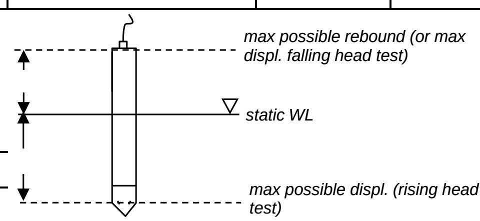
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	1708846	41.0	0.02	3.56	3.50
Pressure Head CH 2 (Red)	15 psi	1601014	NA	0.05	NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger: Splinter

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments: Cannot monitor annulus because HQ broke at 26 ft bls



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.52	3.58	3.58	3.56
Pre-test Sub. Annulus	--	--	--	--
Expected Displacement (P_Head) (ft)	1.971	0.949	0.452	1.934
Observed Displacement (Test_Int) (ft)	1.928	0.909	0.426	1.92
Slug Discrepancy (%)	2.2%	4.2%	5.8%	0.7%
Max Rebound above Static	0.099	0.068	0.034	
Post-test Sub. Test_Int	3.53	3.58	3.58	3.56
Residual Dev. from H_o (%)	0.2%	0%	0%	0%
Data Logger File Name	R88_ST21_2007-2047_A	R88_ST21_2007-2047_B	R88_ST21_2007-2047_C	R88_ST21_2007-2047_D
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

Slug Test No.: 22

Site Name:	ROMP 88 - Rock Ridge	Date:	2/12/2020
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	2,177	Test Interval (ft - ft bls)	2,134 - 2,177
Test Casing Height (ft als)	5.95	Date of Last Development	1/27/2020
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	37.49
Test Casing Type	NRQ	Final Static WL (ft btoc)	37.55
Test Interval Length (ft)	43	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

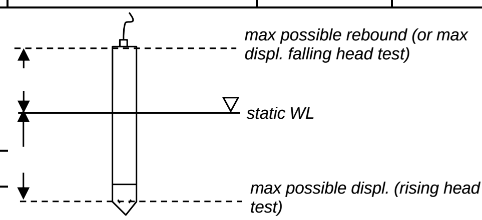
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	1708846	40.5	0.01	3.01	3.13
Pressure Head CH 2 (Red)	15 psi	1601014	NA	0.02	NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger: Splinter

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.13	3.12	3.12	3.12
Pre-test Sub. Annulus	--	--	--	--
Expected Displacement (P_Head) (ft)	-1.971	-1.014	-0.474	-1.948
Observed Displacement (Test_Int) (ft)	-1.899	-1.006	-0.486	-1.930
Slug Discrepancy (%)	3.71%	0.8%	2.5%	0.9%
Max Rebound above Static				
Post-test Sub. Test_Int	3.13	3.12	3.12	3.12
Residual Dev. from H_o (%)	0%	0%	0%	0%
Data Logger File Name	R88_ST22_2134-2177_A	R88_ST22_2134-2177_B	R88_ST22_2134-2177_C	R88_ST22_2134-2177_D
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	23.1 (repeat)
Site Name:	ROMP 88 - Rock Ridge	Date:	2/18/2020
Well:	CH3	Performed by:	J. LaRoche
Well Depth (ft bls)	2,177	Test Interval (ft - ft bls)	2,109 - 2,177
Test Casing Height (ft als)	5.92	Date of Last Development	2/12/2020
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	37.17 (31.25 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	37.12
Test Interval Length (ft)	68	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

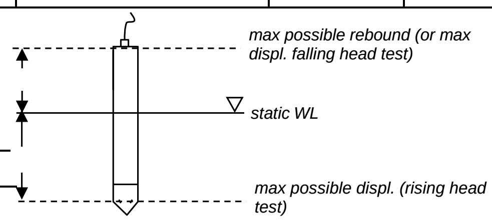
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	1708846	40.2	0.01	3.03	3.16
Pressure Head CH 2 (Red)	15 psi	1601014	NA	0.03	NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger: Splinter

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	0.5	1	2	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	3.21	3.22	3.22	3.24
Pre-test Sub. Annulus	NA	NA	NA	NA
Expected Displacement (P_Head) (ft)	-0.423	-1.000	-1.992	-1.985
Observed Displacement (Test_Int) (ft)	-0.476	-1.004	-1.963	-1.961
Slug Discrepancy (%)	12.5%	0.4%	1.5%	1.2%
Max Rebound above Static	0.351	0.767	1.446	1.451
Post-test Sub. Test_Int	3.21	3.22	3.23	3.25
Residual Dev. from H_o (%)	0%	0%	0.3%	0.3%
Data Logger File Name	R88_ST23.1_2109-2177_A.1	R88_ST23.1_2109-2177_B.1	R88_ST23.1_2109-2177_C.1	R88_ST23.1_2109-2177_D.1
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments: Re-ran battery of tests for ST23 due to electrical connection problems w/ Bernie cord (repaired now)

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION
SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	24
Site Name:	ROMP 88 - Rock Ridge	Date:	3/9/2020
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	2,277	Test Interval (ft - ft bls)	2,220 - 2,277
Test Casing Height (ft als)	6.09	Date of Last Development	3/4/2020
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	37.75 (31.66 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	37.74
Test Interval Length (ft)	57	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

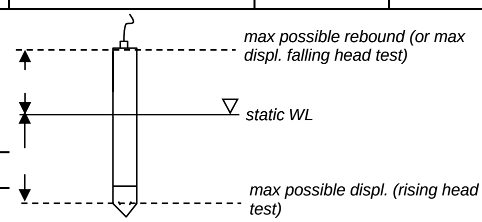
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	5 psi	1708846	40.5	0.001	2.75	2.62
Pressure Head CH 2 (Red)	15 psi	1601014	NA	0.006	NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger: Splinter

Spacer Length (ft): 5

Spacer OD. (inches): 1.66

Comments:



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	2	1	0.5	2
Initiation method	pneumatic	pneumatic	pneumatic	pneumatic
Rising/Falling head	rising	rising	rising	rising
Pre-test Sub. Test_Int	2.62	2.63	2.63	2.63
Pre-test Sub. Annulus	NA	NA	NA	NA
Expected Displacement (P_Head) (ft)	-2.022	-1.131	-0.584	-2.0
Observed Displacement (Test_Int) (ft)	-1.957	-1.110	-0.583	-1.974
Slug Discrepancy (%)	3.2	1.9	0.2	1.3
Max Rebound above Static				
Post-test Sub. Test_Int	2.62	2.63	2.63	2.66
Residual Dev. from H_o (%)	0%	0%	0%	1.1%
Data Logger File Name	R88_ST24_2220-2277_A	R88_ST24_2220-2277_B	R88_ST24_2220-2277_C	R88_ST24_2220-2277_D
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	25
Site Name:	ROMP 88 - Rock Ridge	Date:	3/19/2020
Well:	CH3	Performed by:	J. Zydek
Well Depth (ft bls)	2,397	Test Interval (ft - ft bls)	2,357 - 2,397
Test Casing Height (ft als)	5.47	Date of Last Development	3/18/2020
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	39.26 (33.79 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	38.98
Test Interval Length (ft)	40	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

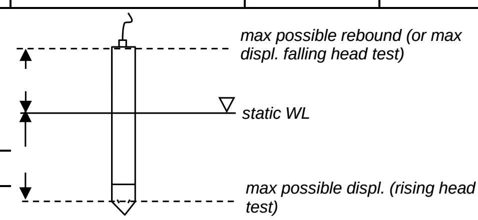
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	901327	42.3	0.046	3.04	3.2
Pressure Head CH 2 (Red)	15 psi	--	NA	--	NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger: Splinter

Spacer Length (ft): NA

Spacer OD. (inches): NA

Comments: Cannot monitor annulus because HQ broke at 26' bls



NRQ rocks w/ packer = 0.213 gal/ft = 0.806 L/ft

PVC funnel used as slug release apparatus

Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1			
Initiation method	drop/water (pour in)			
Rising/Falling head	falling			
Pre-test Sub. Test_Int	3.2			
Pre-test Sub. Annulus	NA			
Expected Displacement (P_Head) (ft)	NA			
Observed Displacement (Test_Int) (ft)	0.924			
Slug Discrepancy (%)	7.6%			
Max Rebound above Static				
Post-test Sub. Test_Int	3.54			
Residual Dev. from H_o (%)	10.6%			
Data Logger File Name	R88_ST25_2357-2397_A			
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments: Let test run for 5 hours

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

GEOHYDROLOGIC DATA SECTION

SLUG TEST - DATA ACQUISITION SHEET

General Information

		Slug Test No.:	26
Site Name:	ROMP 88 - Rock Ridge	Date:	4/8/2020
Well:	CH3	Performed by:	T. Horstman
Well Depth (ft bls)	2,607	Test Interval (ft - ft bls)	2,547 - 2,607
Test Casing Height (ft als)	5.64	Date of Last Development	4/7/2020
Test Casing Diameter (in)	~3	Initial Static WL (ft btoc)	44.37 (38.73 bls)
Test Casing Type	NRQ	Final Static WL (ft btoc)	44.29
Test Interval Length (ft)	60	Slot Size & Filter Pack Type	NA
Annulus Casing Height (ft als)	NA	Initial Annulus WL (ft btoc)	NA

Set-up Information

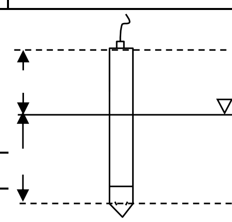
Transducer	Type	Serial No.	Depth (ft)	Reading in Air (ft)	Expected Sub. (ft)	Observed Sub. (ft)
Test Interval CH 1 (Blue)	20 psi	0901327	47	0.06	2.63	2.63
Pressure Head CH 2 (Red)	15 psi	--	NA	--	NA	NA
Annulus CH 3 (Yellow)	20 psi	--	--	--	--	--

Data Logger: Splinter

Spacer Length (ft): NA

Spacer OD. (inches): NA

Comments: Cannot monitor annulus because HQ broke at 26' bls



Note: Reading in Air of the Transducer should be < +/-0.05% of the Full Scale of the Transducer (KPSI 735 and 335 series)

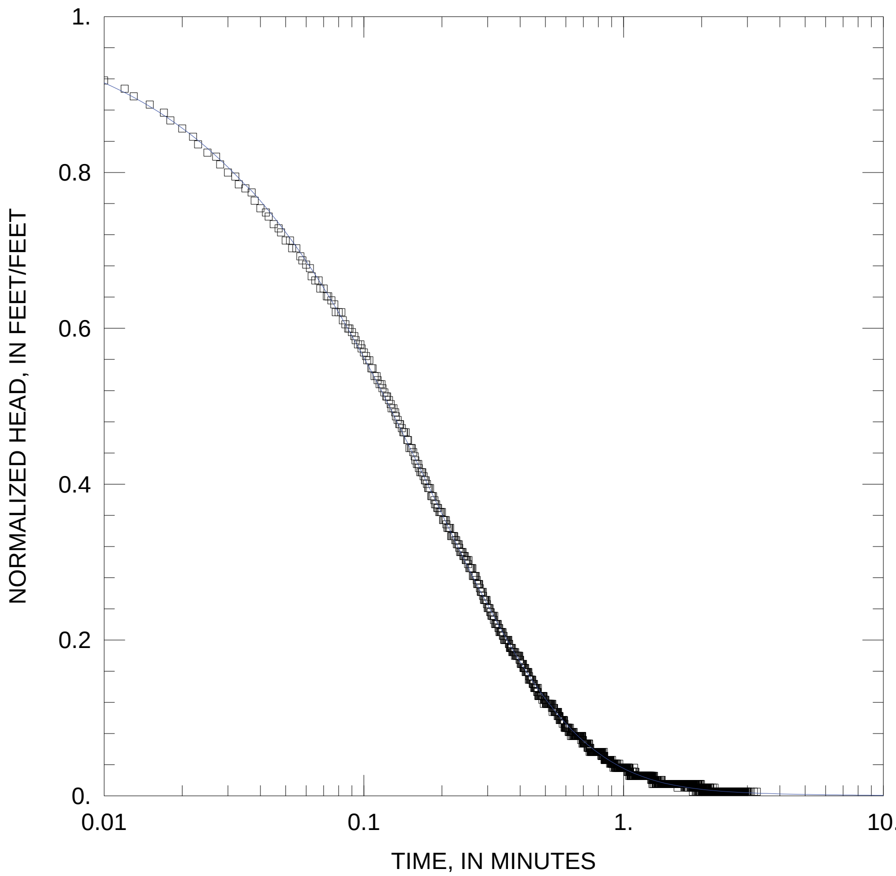
Test Data

	Test A	Test B	Test C	Test D
Target Displacement (ft)	1			
Initiation method	drop/water			
Rising/Falling head	falling			
Pre-test Sub. Test_Int	2.63			
Pre-test Sub. Annulus	NA			
Expected Displacement (P_Head) (ft)	NA			
Observed Displacement (Test_Int) (ft)	0.787			
Slug Discrepancy (%)	21%			
Max Rebound above Static				
Post-test Sub. Test_Int	2.70			
Residual Dev. from H_o (%)	2.7%			
Data Logger File Name	R88_ST26_2547-2607_A			
Specific Conductance (uS)				
Temperature °C				
Lithology				
Other				
K_h (ft/day)				

Comments:

Notes: Slug Discrepancy <10%; Residual Deviation from H_o < 5%; and Maximum Rebound < Spacer Placement above Static

Appendix H. Slug Test Curve-Match Analyses for the ROMP 88 – Rock Ridge Well Site in Polk County, Florida



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 1B 73.2-100A_KGS.aqt
Date: 12/13/22 Time: 12:49:54

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 2
Test Date: 11/15/2016

AQUIFER DATA

Saturated Thickness: 496.7 ft

WELL DATA (CORE HOLE 2)

Initial Displacement: -1.914 ft
Total Well Penetration Depth: 94.71 ft
Casing Radius: 0.1652 ft

Static Water Column Height: 115.3 ft
Screen Length: 26.8 ft
Well Radius: 0.1263 ft

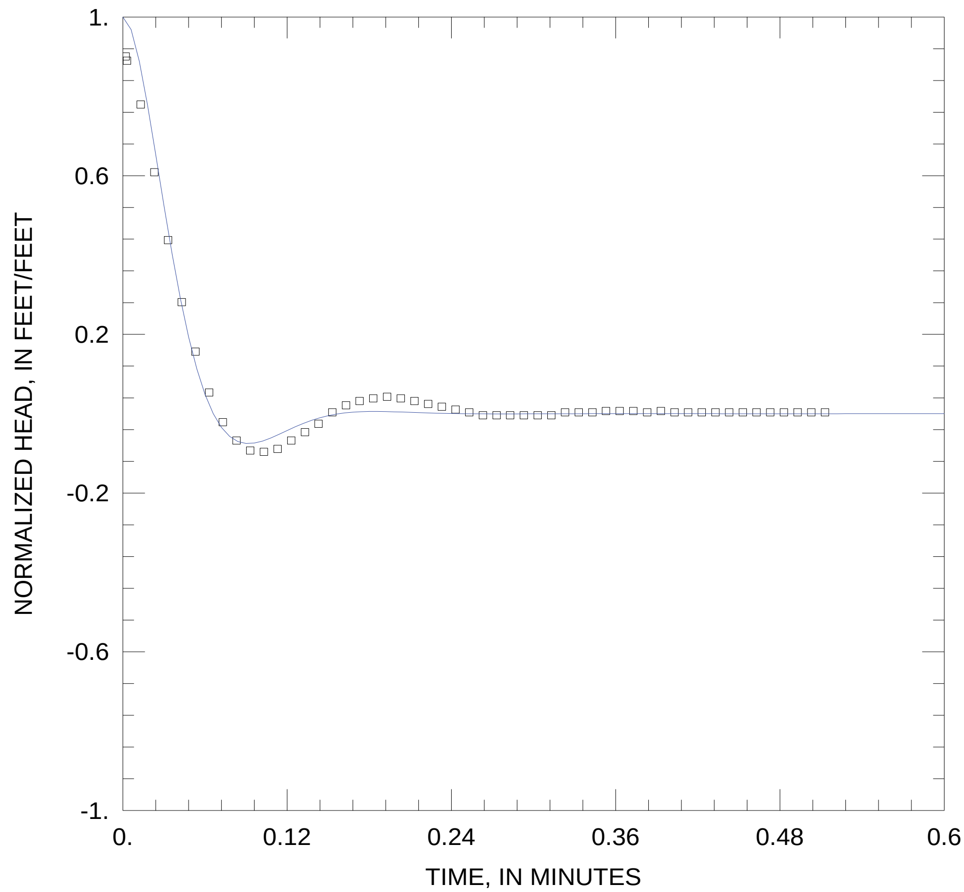
SOLUTION

Aquifer Model: Unconfined

Solution Method: KGS Model

Kr = 14.09 ft/day
Kz/Kr = 1.

Ss = 7.763E-5 ft^{-1}



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 2 120-167A SG.aqt
Date: 12/13/22 Time: 17:24:51

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 2
Test Date: 12/20/2016

AQUIFER DATA

Saturated Thickness: 496.2 ft Anisotropy Ratio (Kz/Kr): 1.

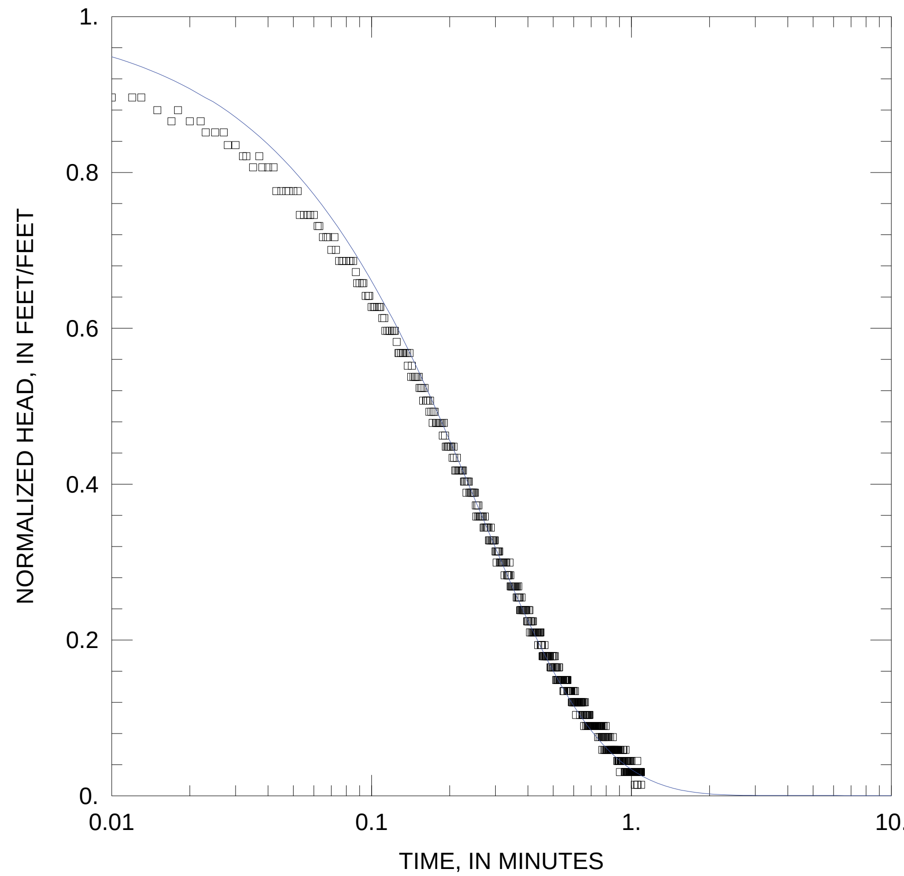
WELL DATA (CORE HOLE 2)

Initial Displacement: -2.059 ft Static Water Column Height: 161.2 ft
Total Well Penetration Depth: 161.2 ft Screen Length: 47. ft
Casing Radius: 0.06723 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 12.4 ft/day Le = 58.92 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 3 246-267 C_KGS.aqt
Date: 12/13/22 Time: 17:26:03

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 2
Test Date: 1/31/2017

AQUIFER DATA

Saturated Thickness: 495.9 ft

WELL DATA (CORE HOLE 2)

Initial Displacement: -0.491 ft
Total Well Penetration Depth: 260.9 ft
Casing Radius: 0.06723 ft

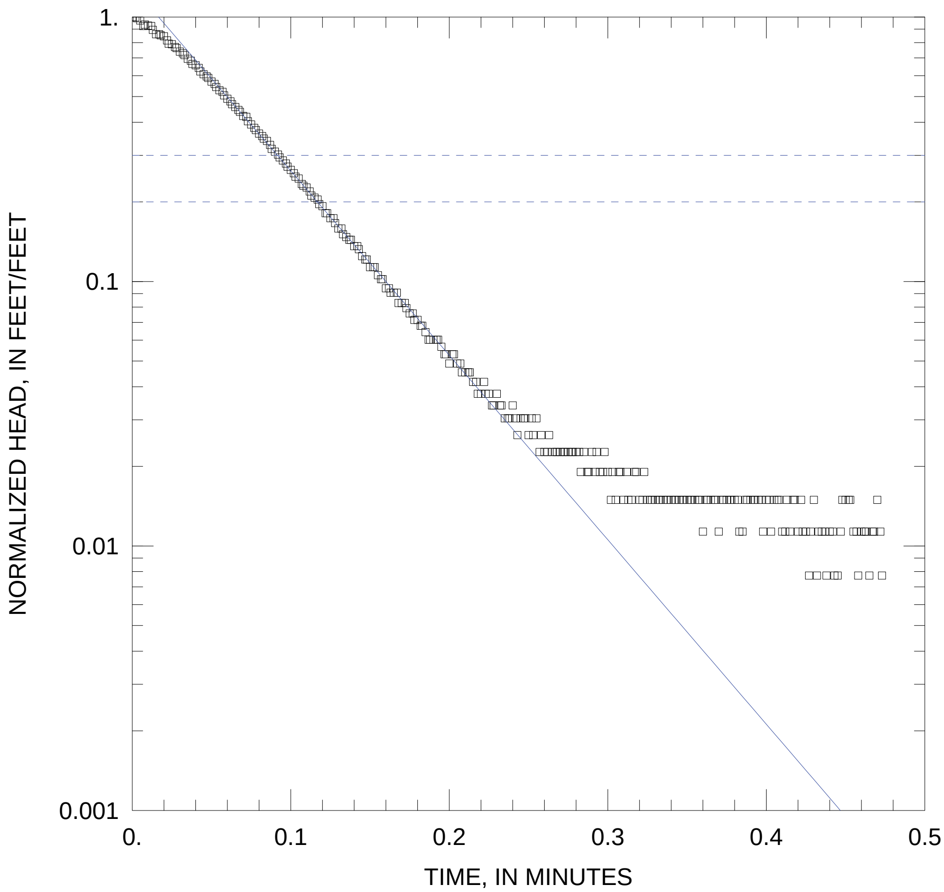
Static Water Column Height: 260.9 ft
Screen Length: 21. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Unconfined
Solution Method: KGS Model

Kr = 2.669 ft/day
Kz/Kr = 1.

Ss = 1.0E-6 ft^{-1}



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 4 327-367 F_BR.aqt
Date: 12/13/22 Time: 17:26:54

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 2
Test Date: 2/22/2017

AQUIFER DATA

Saturated Thickness: 495.5 ft Anisotropy Ratio (Kz/Kr): 1.

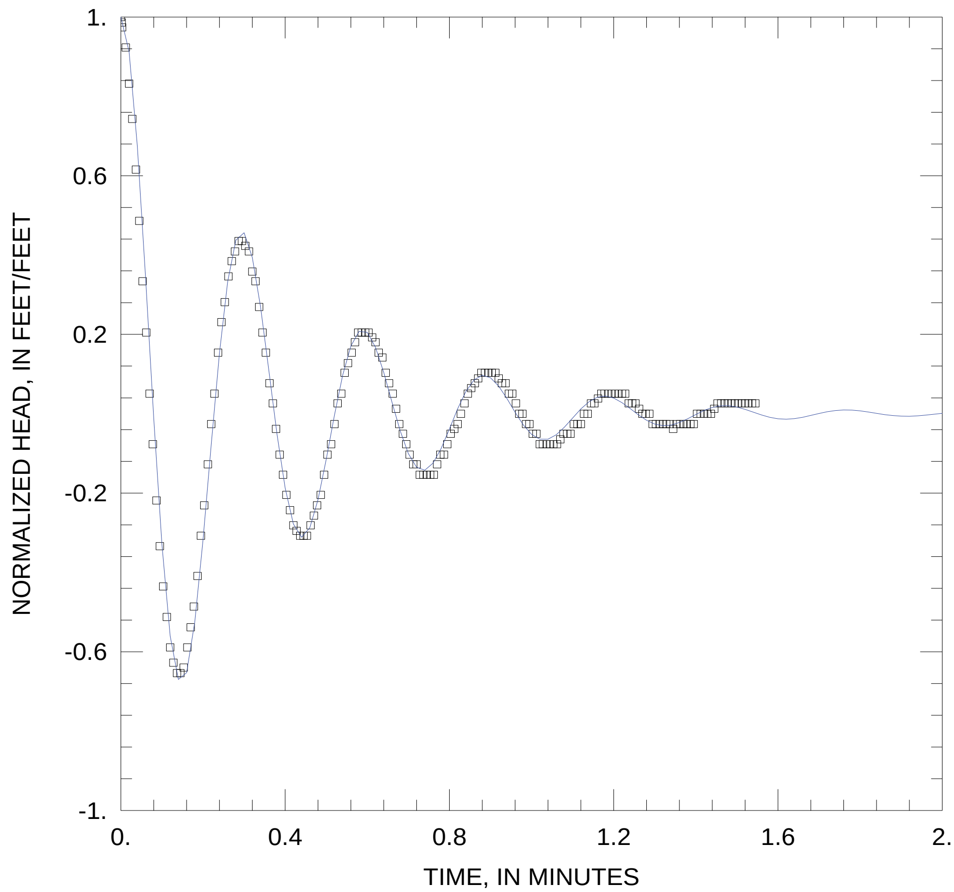
WELL DATA (CORE HOLE 2)

Initial Displacement: -1.942 ft Static Water Column Height: 360.5 ft
Total Well Penetration Depth: 360.5 ft Screen Length: 40. ft
Casing Radius: 0.06723 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Bouwer-Rice

K = 6.836 ft/day y0 = -2.534 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 5 398-437 B_translated SG.aqt
Date: 12/13/22 Time: 17:27:37

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 6/7/2017

AQUIFER DATA

Saturated Thickness: 115. ft Anisotropy Ratio (Kz/Kr): 1.

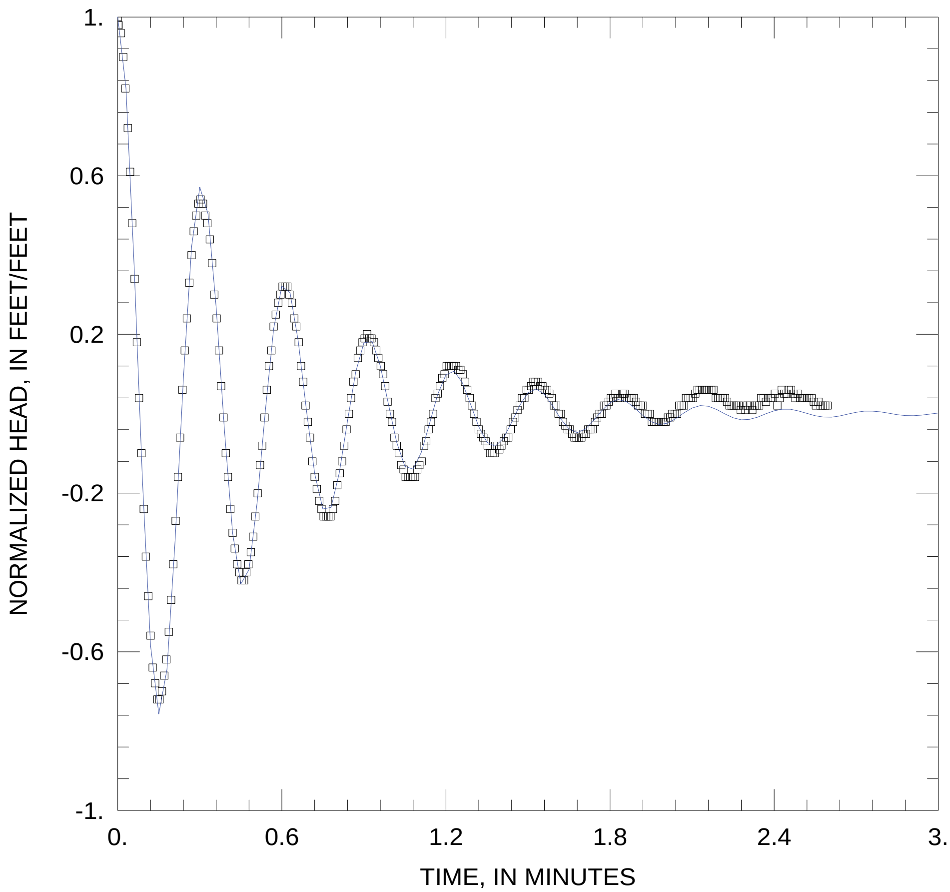
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.572 ft
Total Well Penetration Depth: 50. ft
Casing Radius: 0.06723 ft
Static Water Column Height: 428.9 ft
Screen Length: 39. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 44.78 ft/day Le = 250.2 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 6 437-457 B_trans_SG.aqt
Date: 12/13/22 Time: 17:28:13

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 6/22/2017

AQUIFER DATA

Saturated Thickness: 115. ft Anisotropy Ratio (Kz/Kr): 0.3954

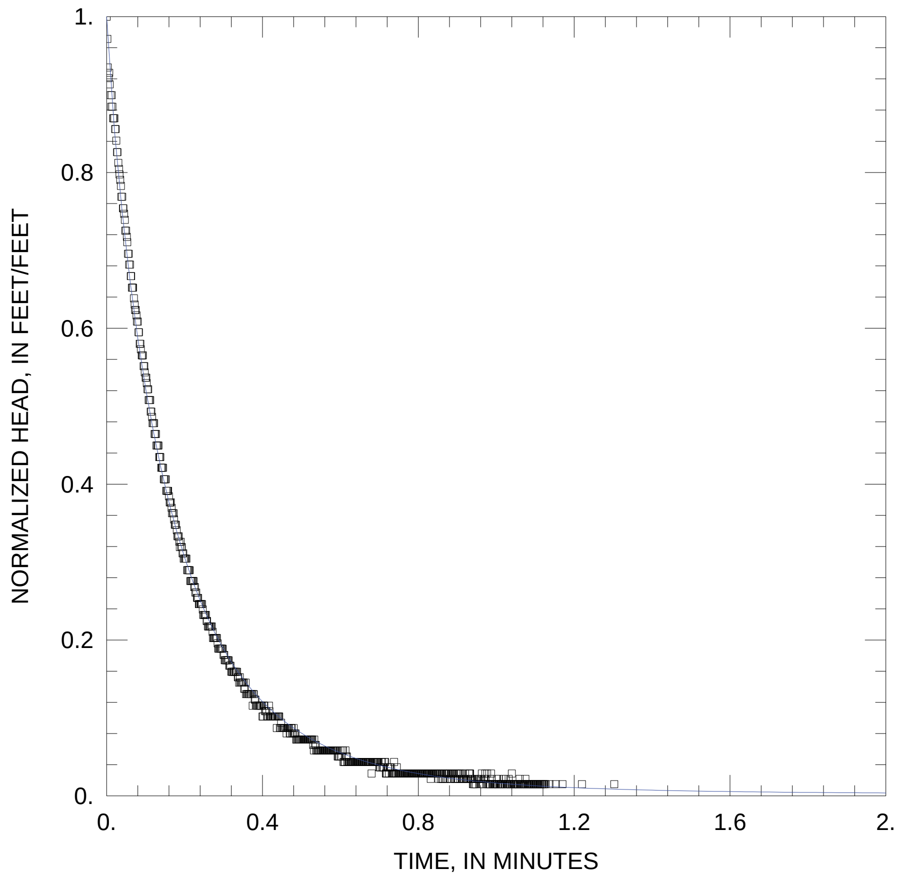
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.733 ft Static Water Column Height: 453.5 ft
Total Well Penetration Depth: 70. ft Screen Length: 20. ft
Casing Radius: 0.06723 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Unconfined Solution Method: Springer-Gelhar

K = 155.6 ft/day Le = 271.5 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 7 562-597 B.aqt
Date: 12/13/22 Time: 17:28:47

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 8/1/2017

AQUIFER DATA

Saturated Thickness: 95. ft

WELL DATA (CORE HOLE 3)

Initial Displacement: -1.012 ft
Total Well Penetration Depth: 95. ft
Casing Radius: 0.06723 ft

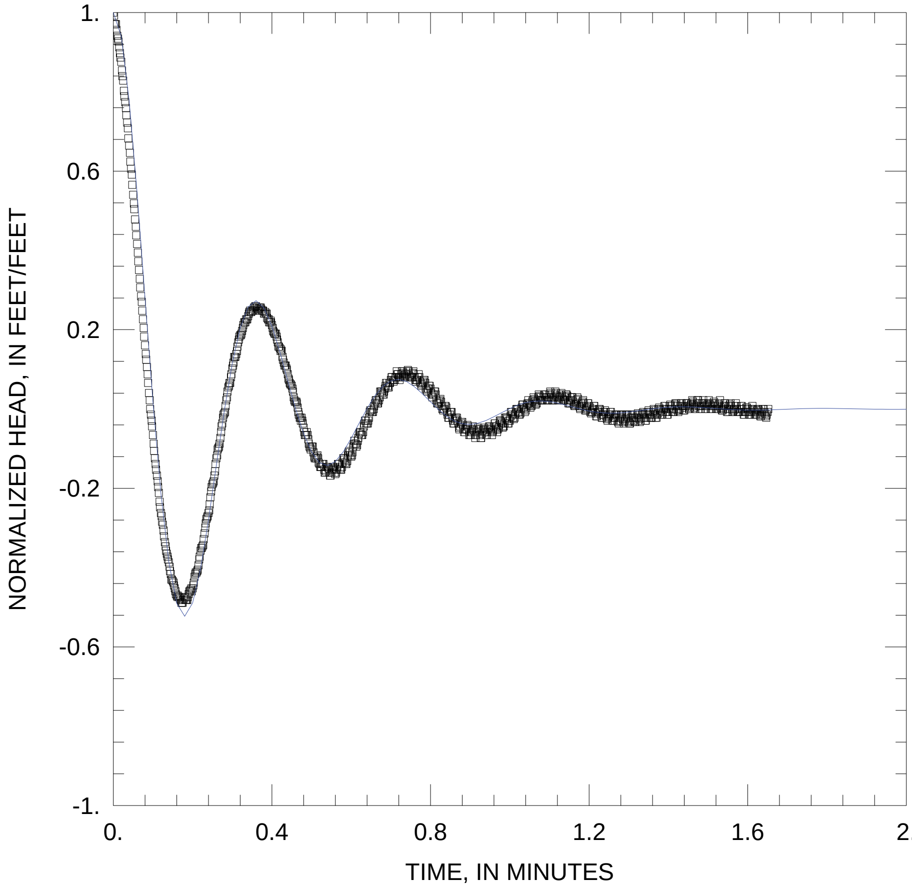
Static Water Column Height: 594. ft
Screen Length: 35. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 2.806 ft/day
Kz/Kr = 1.

Ss = 1.0E-6 ft^{-1}



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 8 657-697 A.aqt
Date: 12/13/22 Time: 17:29:26

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 8/9/2017

AQUIFER DATA

Saturated Thickness: 315. ft Anisotropy Ratio (Kz/Kr): 1.

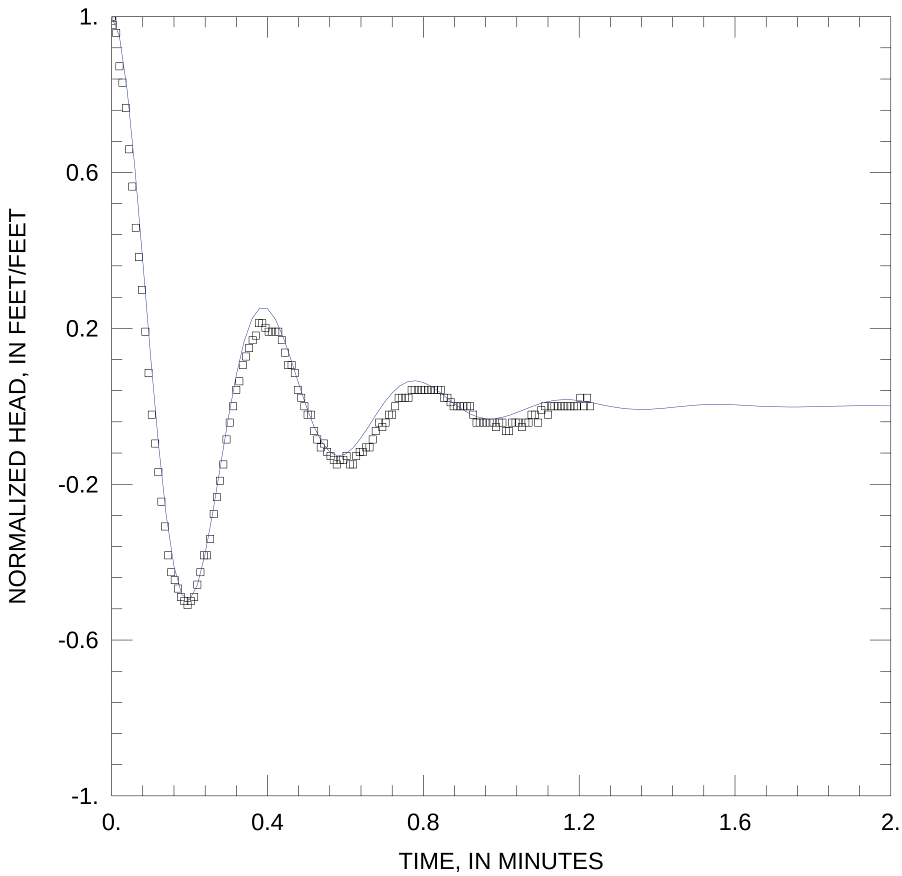
WELL DATA (CORE HOLE 3)

Initial Displacement: -2.011 ft Static Water Column Height: 694.3 ft
Total Well Penetration Depth: 100. ft Screen Length: 40. ft
Casing Radius: 0.06723 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 27.95 ft/day Le = 361.9 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 9 766-817 A translated BZ.aqt
Date: 12/13/22 Time: 17:38:14

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 8/16/2017

AQUIFER DATA

Saturated Thickness: 315. ft Anisotropy Ratio (Kz/Kr): 1.

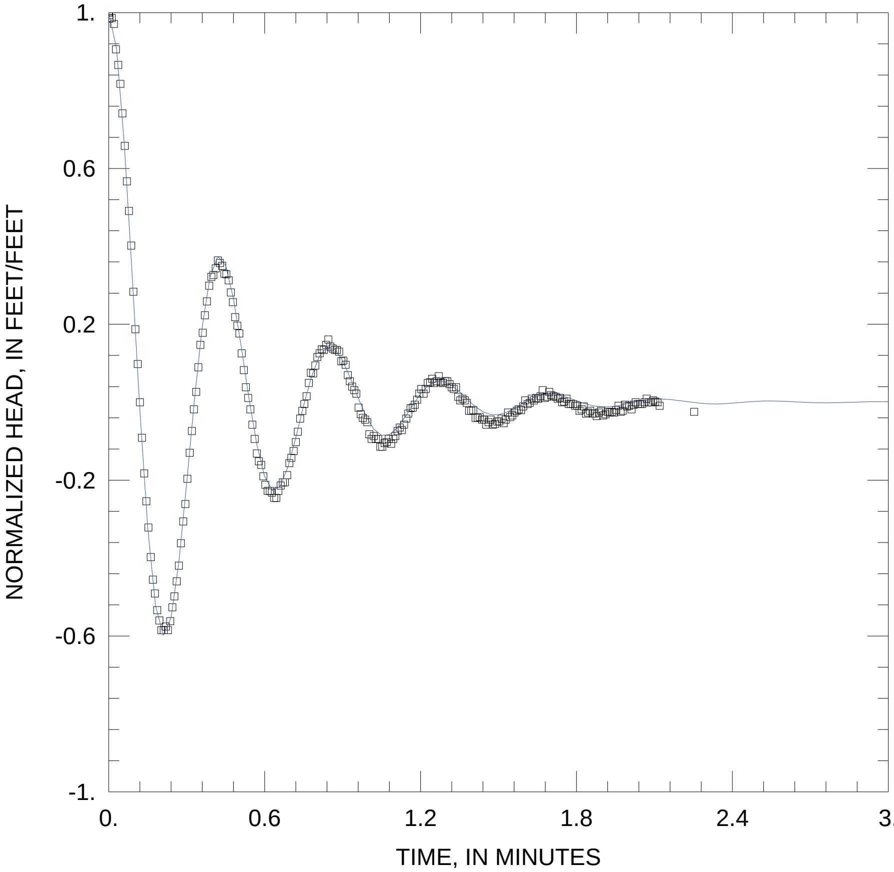
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.69 ft Static Water Column Height: 814.1 ft
Total Well Penetration Depth: 210. ft Screen Length: 41. ft
Casing Radius: 0.06723 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler-Zhan

Kr = 20.98 ft/day Ss = 1.0E-6 ft^{-1}
Kz/Kr = 1. Le = 433.4 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 10 877-917 A translated BZ.aqt
Date: 12/13/22 Time: 17:43:29

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 8/16/2017

AQUIFER DATA

Saturated Thickness: 315. ft
Anisotropy Ratio (Kz/Kr): 1.

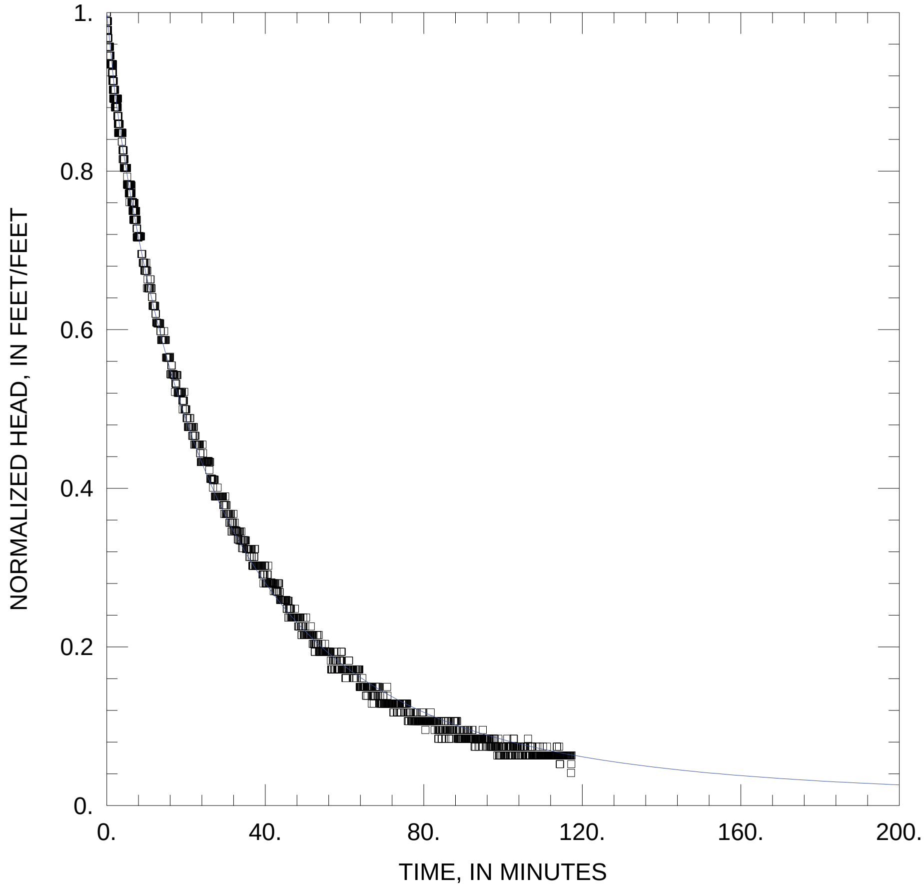
WELL DATA (CORE HOLE 3)

Initial Displacement: 1.094 ft
Total Well Penetration Depth: 320. ft
Casing Radius: 0.06723 ft
Static Water Column Height: 912.2 ft
Screen Length: 40. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler-Zhan

Kr = 30.42 ft/day
Kz/Kr = 1.
Ss = 3.026E-5 ft^{-1}
Le = 535.8 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 11 940-957 C.aqt
Date: 12/12/22 Time: 16:10:35

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 8/30/2017-8/31/2017

AQUIFER DATA

Saturated Thickness: 889. ft Anisotropy Ratio (Kz/Kr): 1.

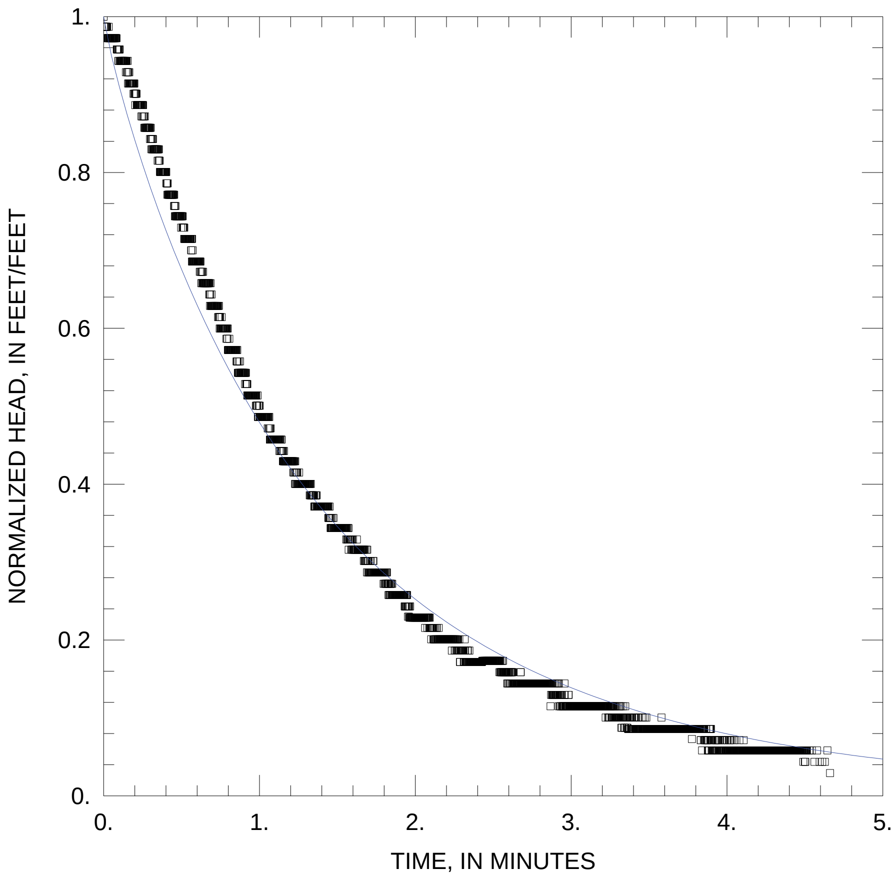
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.903 ft Static Water Column Height: 952.6 ft
Total Well Penetration Depth: 45. ft Screen Length: 17. ft
Casing Radius: 0.09652 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Bredehoeft-Papadopulos

T = 1.033 ft^2/day S = 0.0002513



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 12 1027-1067 A_KGS.aqt
Date: 12/12/22 Time: 14:26:30

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 8/30-31/2017

AQUIFER DATA

Saturated Thickness: 889. ft

WELL DATA (CORE HOLE 3)

Initial Displacement: 0.687 ft
Total Well Penetration Depth: 155. ft
Casing Radius: 0.09652 ft

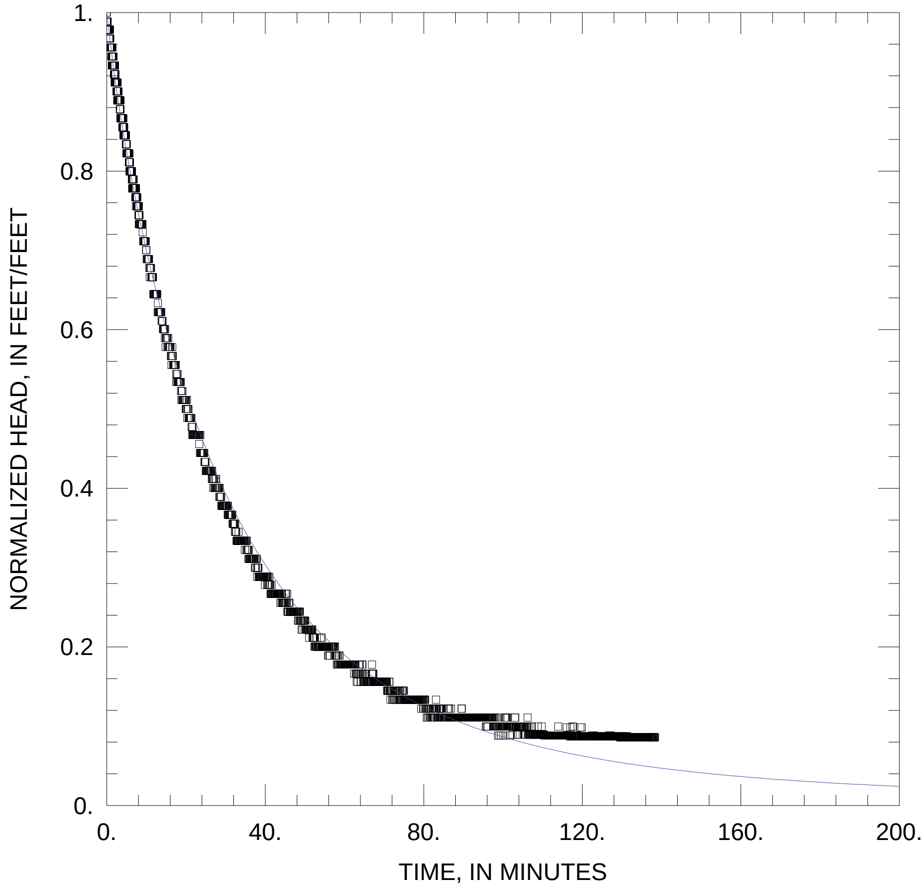
Static Water Column Height: 1050.8 ft
Screen Length: 40. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.5863 ft/day
Kz/Kr = 1.

Ss = 1.0E-6 ft^{-1}



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 13 1187-1227 A.aqt
Date: 12/12/22 Time: 14:30:27

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 4/5/2018

AQUIFER DATA

Saturated Thickness: 889. ft Anisotropy Ratio (Kz/Kr): 1.

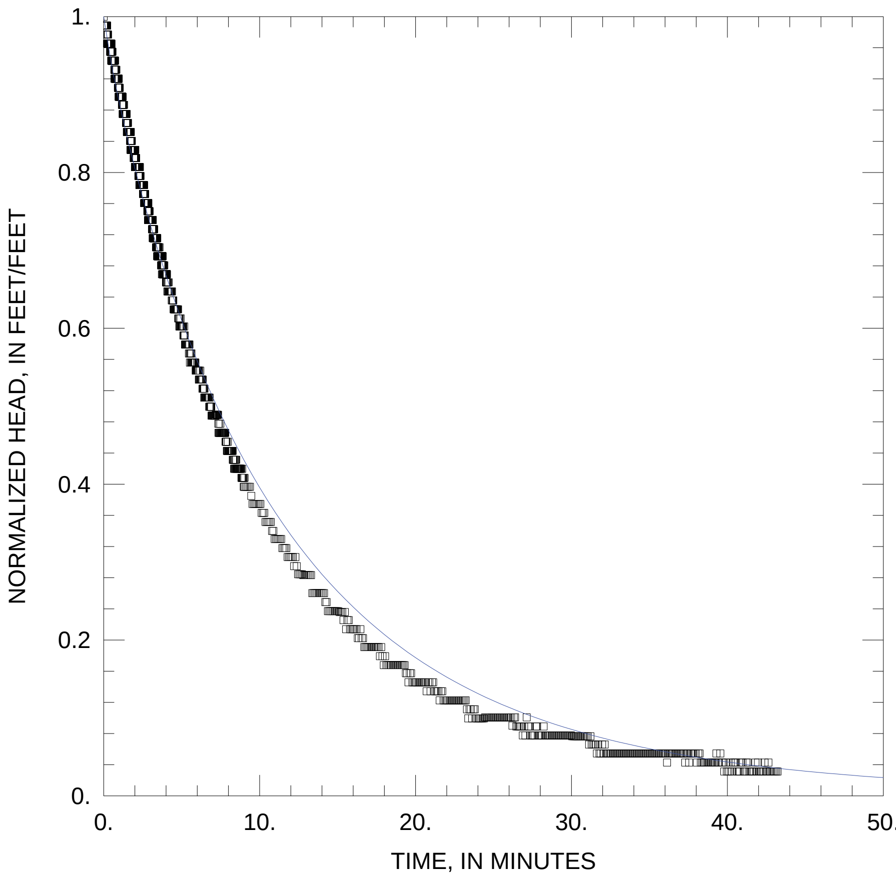
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.884 ft Static Water Column Height: 1209.6 ft
Total Well Penetration Depth: 315. ft Screen Length: 40. ft
Casing Radius: 0.09652 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Bredehoeft-Papadopulos

T = 1.207 ft^2/day S = 2.4E-5



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 14 1317-1357 A_KGS.aqt
Date: 12/12/22 Time: 14:42:02

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 4/19/2018

AQUIFER DATA

Saturated Thickness: 889. ft

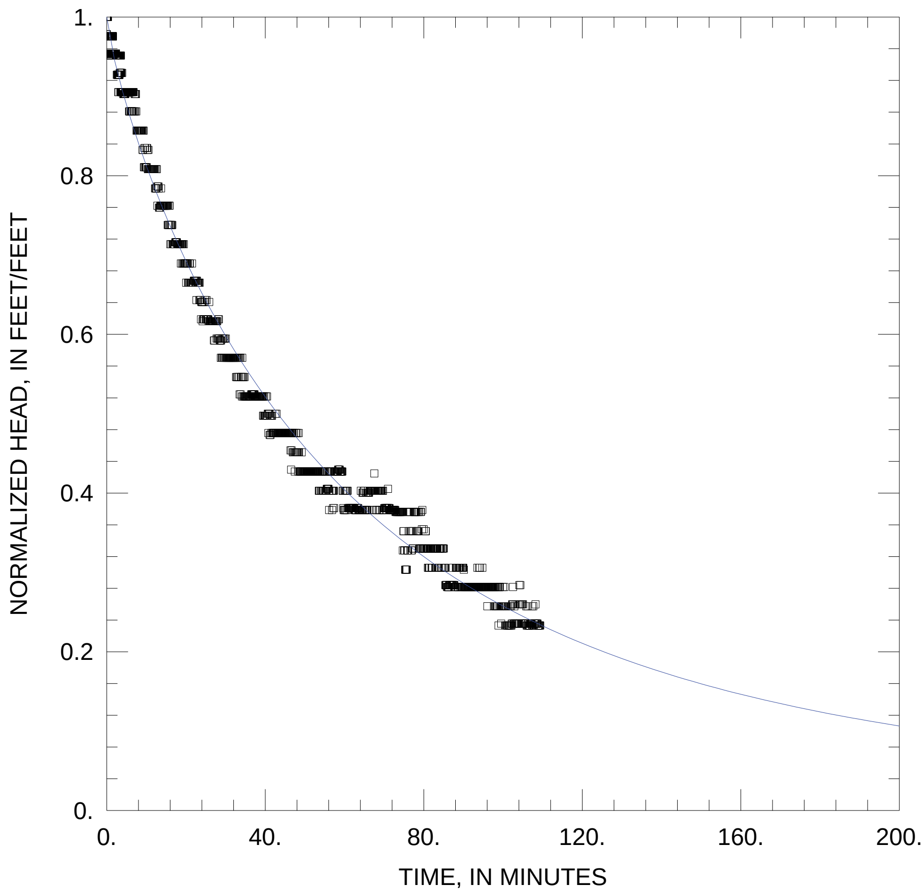
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.865 ft
Total Well Penetration Depth: 445. ft
Casing Radius: 0.09652 ft
Static Water Column Height: 1339. ft
Screen Length: 40. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.07569 ft/day
Kz/Kr = 1.
Ss = 1.0E-6 ft^{-1}



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 15 1417-1457 B_CJ.aqt
Date: 12/12/22 Time: 14:44:09

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 8/16/2018

AQUIFER DATA

Saturated Thickness: 889. ft Anisotropy Ratio (Kz/Kr): 1.

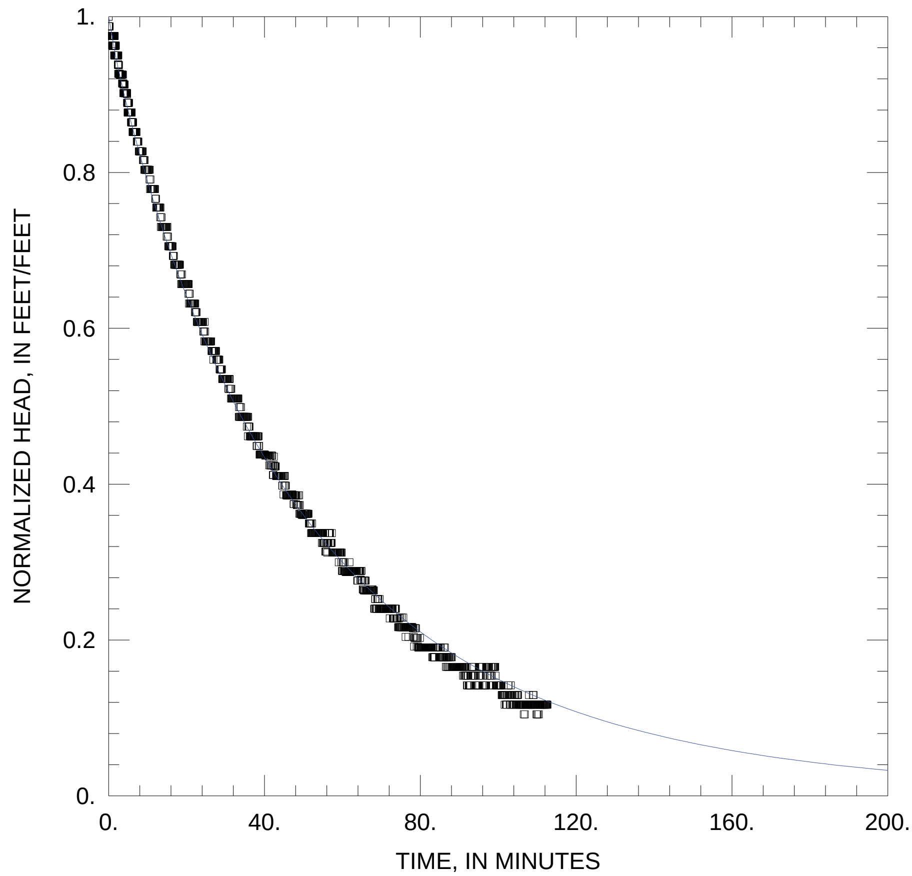
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.412 ft Static Water Column Height: 1436.8 ft
Total Well Penetration Depth: 223. ft Screen Length: 40. ft
Casing Radius: 0.09652 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Bredehoeft-Papadopulos

T = 0.4118 ft^2/day S = 0.0005295



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 16 1517-1557 A_KGS.aqt
Date: 12/12/22 Time: 14:46:18

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 3/26/2019

AQUIFER DATA

Saturated Thickness: 889. ft

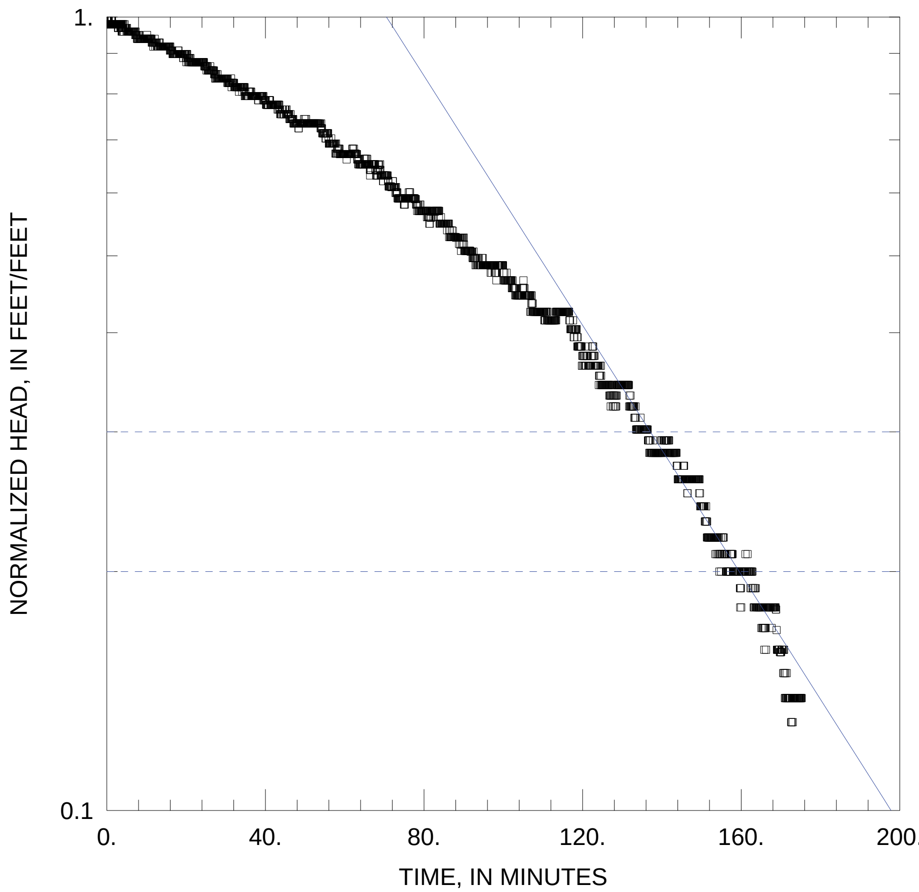
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.804 ft
Total Well Penetration Depth: 123. ft
Casing Radius: 0.09652 ft
Static Water Column Height: 1532.9 ft
Screen Length: 40. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.01683 ft/day
Kz/Kr = 1.
Ss = 1.0E-6 ft^{-1}



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 17 1617-1657 B_BR.aqt
Date: 12/12/22 Time: 14:48:36

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 4/30/2019

AQUIFER DATA

Saturated Thickness: 889. ft Anisotropy Ratio (Kz/Kr): 1.

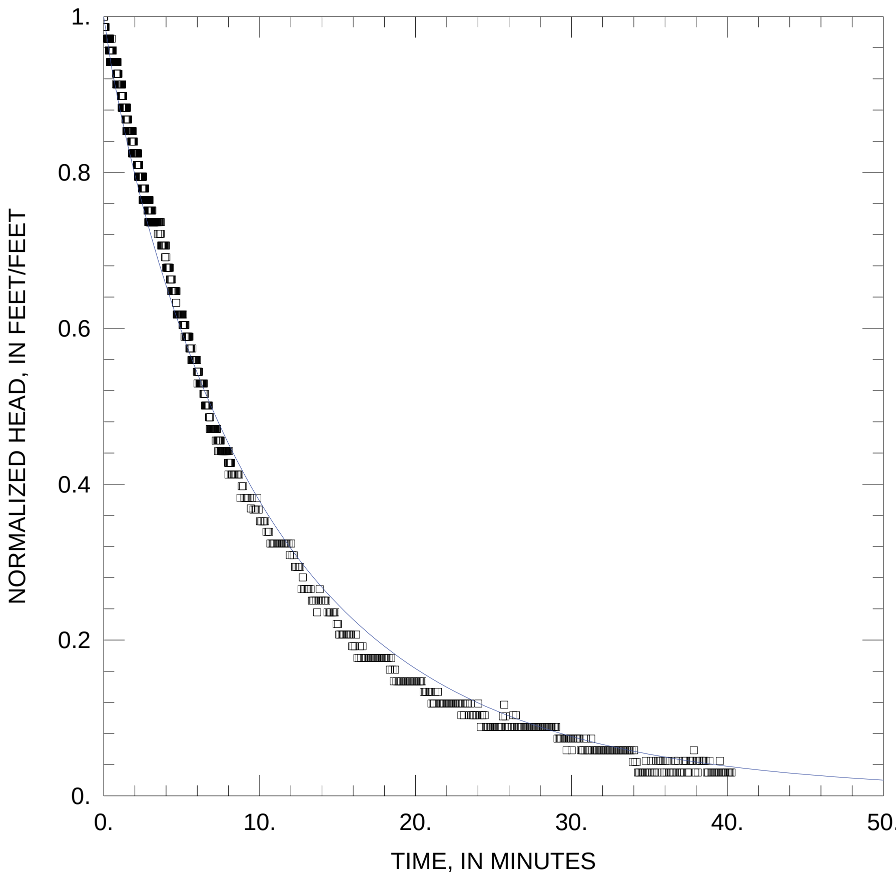
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.96 ft
Total Well Penetration Depth: 224. ft
Casing Radius: 0.09652 ft
Static Water Column Height: 1638.3 ft
Screen Length: 40. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Bouwer-Rice

K = 0.01518 ft/day y0 = 3.441 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 18 1737-1777 A KGS.aqt
Date: 12/12/22 Time: 14:50:11

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 5/8/2019

AQUIFER DATA

Saturated Thickness: 889. ft

WELL DATA (CORE HOLE 3)

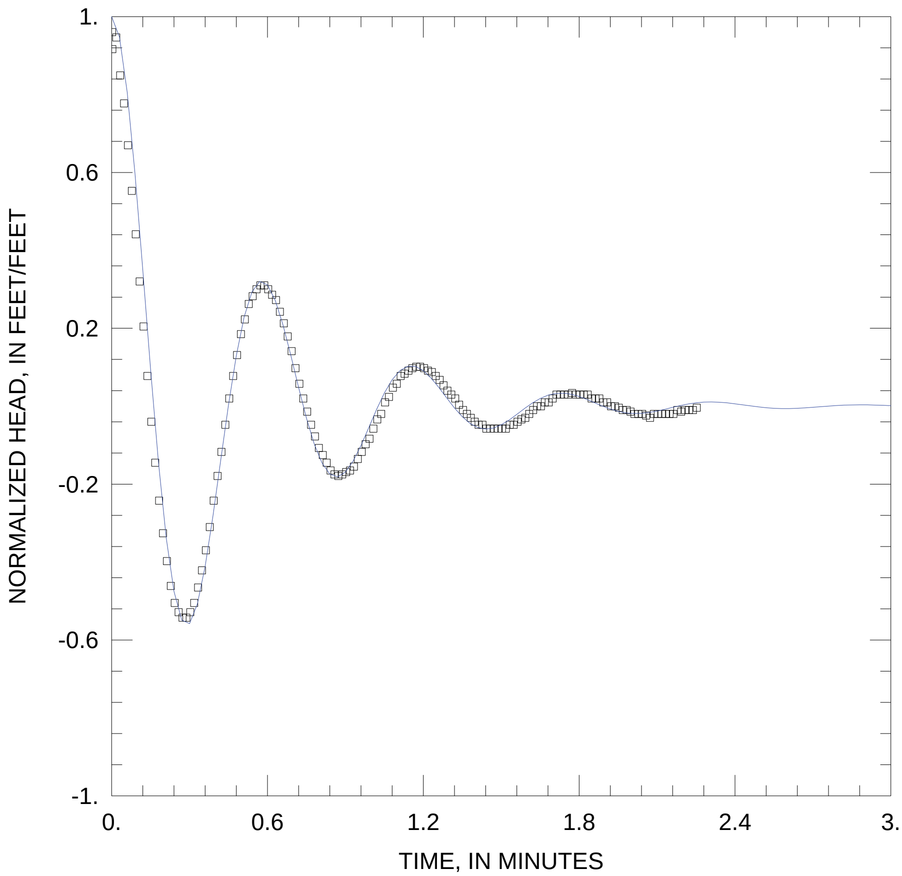
Initial Displacement: 0.667 ft
Total Well Penetration Depth: 104. ft
Casing Radius: 0.09652 ft

Static Water Column Height: 1744.1 ft
Screen Length: 40. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined
Solution Method: KGS Model

Kr = 0.07977 ft/day
Kz/Kr = 1.
Ss = 1.0E-6 ft^{-1}



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 19 1810-1857 C BZ.aqt
Date: 12/13/22 Time: 17:47:52

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 5/20/2019

AQUIFER DATA

Saturated Thickness: 526.5 ft Anisotropy Ratio (Kz/Kr): 1.

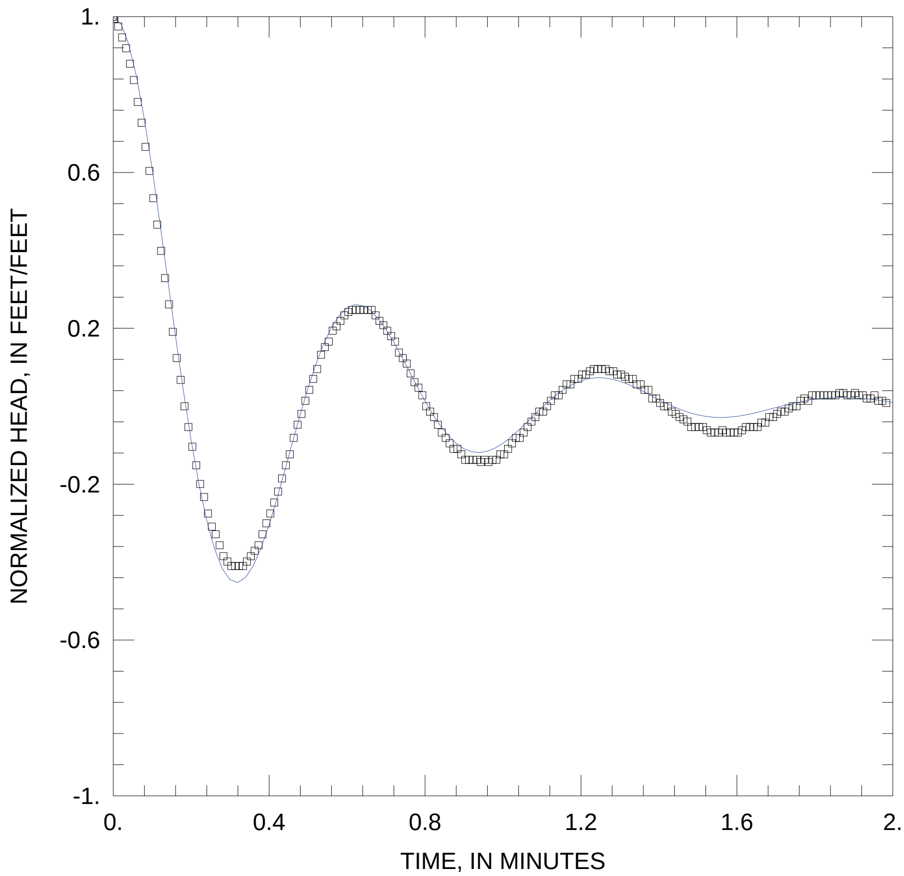
WELL DATA (CORE HOLE 3)

Initial Displacement: -0.503 ft Static Water Column Height: 1824.7 ft
Total Well Penetration Depth: 56. ft Screen Length: 47. ft
Casing Radius: 0.06723 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler-Zhan

Kr = 21.56 ft/day Ss = 1.0E-6 ft^{-1}
Kz/Kr = 1. Le = 961.7 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 20 1897-1937 D BZ_translated.aqt
Date: 12/13/22 Time: 17:53:47

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 5/29/2019

AQUIFER DATA

Saturated Thickness: 526.5 ft
Anisotropy Ratio (Kz/Kr): 1.

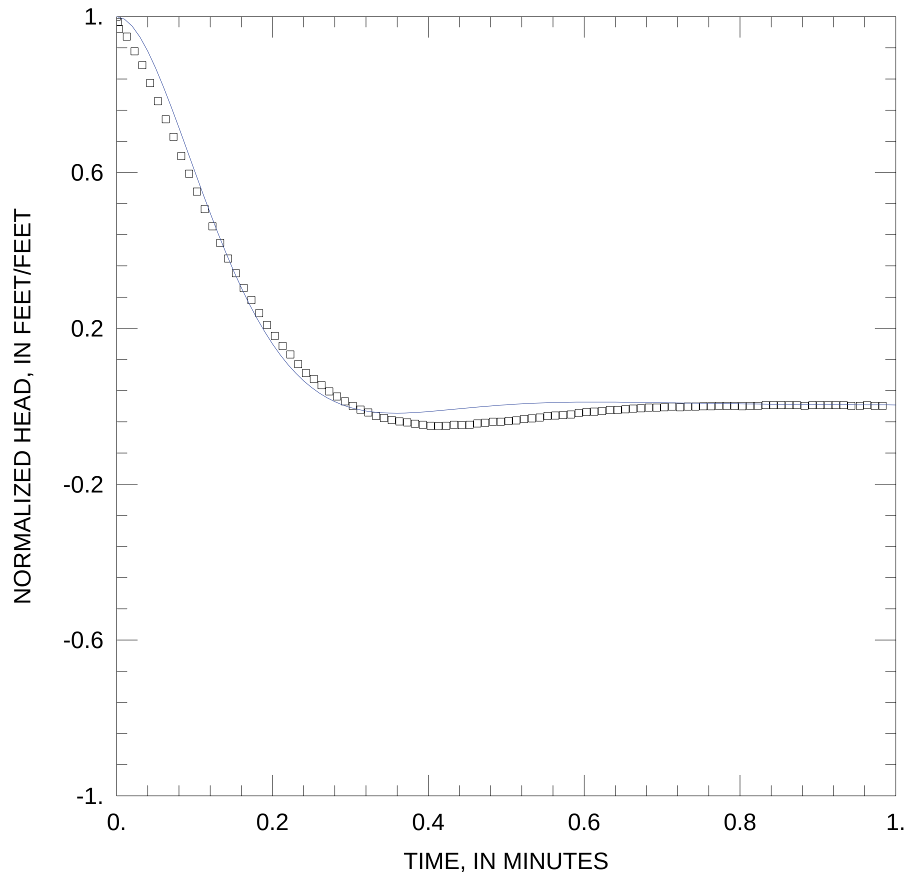
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.356 ft
Total Well Penetration Depth: 136. ft
Casing Radius: 0.06723 ft
Static Water Column Height: 1903.9 ft
Screen Length: 40. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler-Zhan

Kr = 4.779 ft/day
Kz/Kr = 1.
Ss = 0.001266 ft^{-1}
Le = 1227.1 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 21 2007-2047 A BZ.aqt
Date: 12/13/22 Time: 17:58:42

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 11/21/2019

AQUIFER DATA

Saturated Thickness: 526.5 ft Anisotropy Ratio (Kz/Kr): 1.

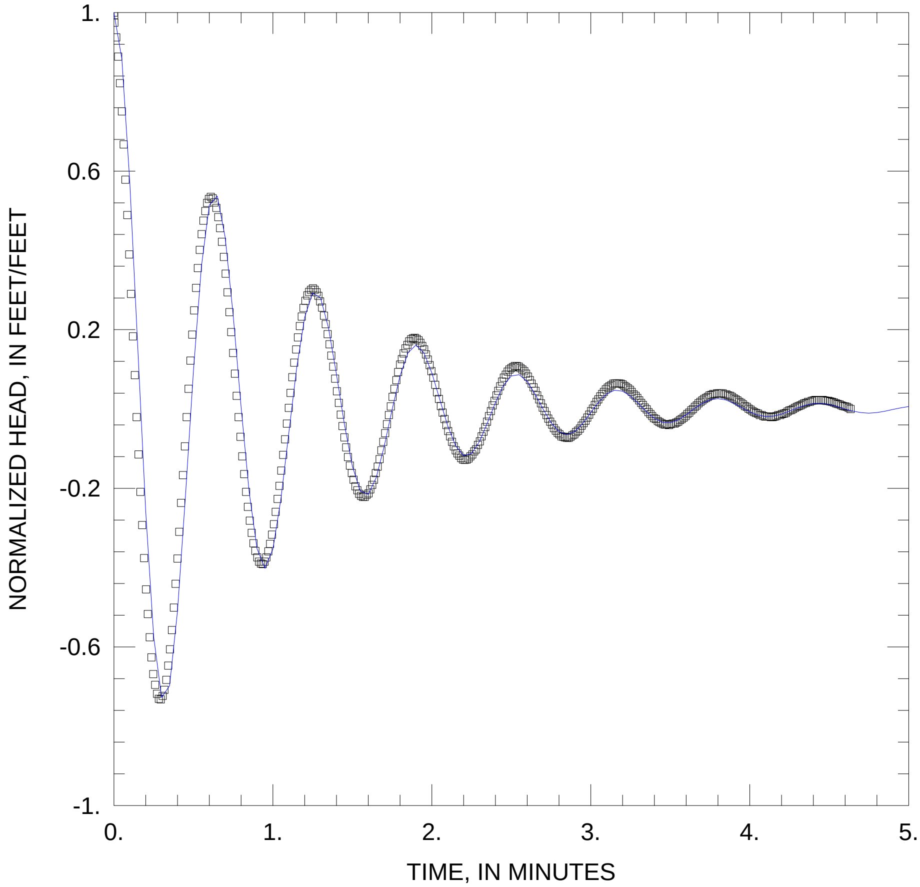
WELL DATA (CORE HOLE 3)

Initial Displacement: -1.928 ft Static Water Column Height: 2015.7 ft
Total Well Penetration Depth: 246. ft Screen Length: 40. ft
Casing Radius: 0.06723 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler-Zhan

Kr = 3.843 ft/day Ss = 1.0E-6 ft^{-1}
Kz/Kr = 1. Le = 862.2 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 22 2134-2177 A ButlerCorrection.aqt
Date: 05/06/24 Time: 11:28:11

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 02/12/2020

AQUIFER DATA

Saturated Thickness: 526.5 ft
Anisotropy Ratio (Kz/Kr): 0.2197

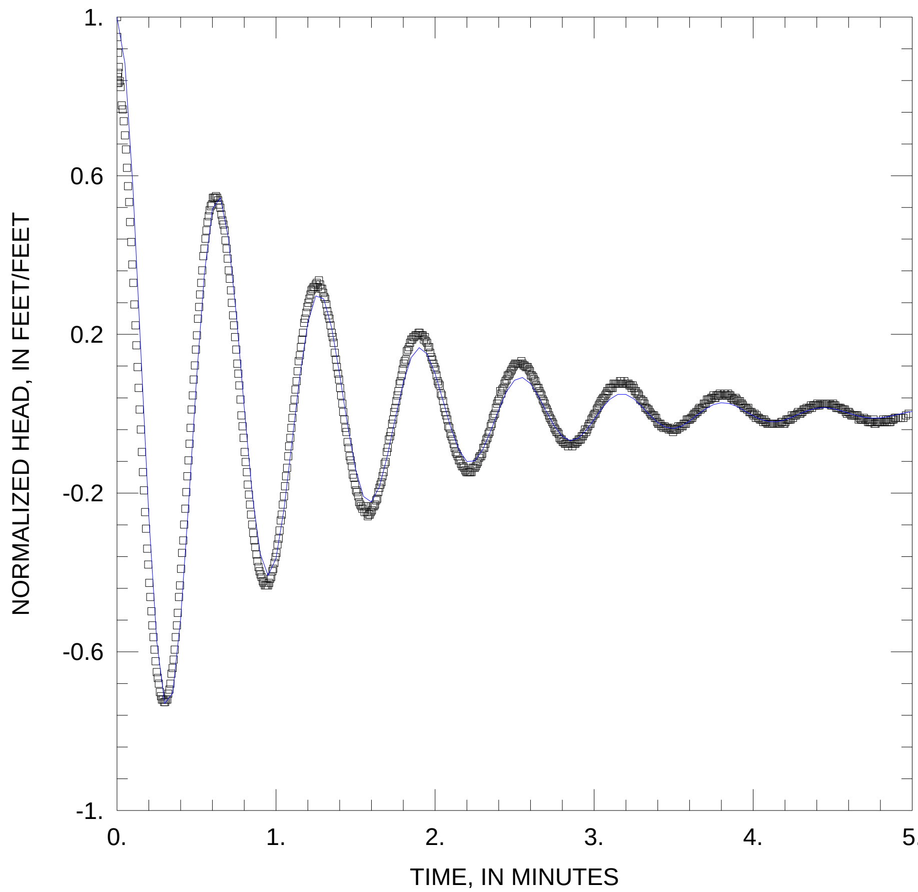
WELL DATA (CORE HOLE 3)

Initial Displacement: -1.899 ft
Static Water Column Height: 2145.5 ft
Total Well Penetration Depth: 376. ft
Screen Length: 43. ft
Casing Radius: 0.06723 ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Butler

K = 3103. ft/day
Le = 1165. ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 23 2109-2177 A ButlerCorrection.aqt
Date: 05/06/24 Time: 11:37:18

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 02/18/2020

AQUIFER DATA

Saturated Thickness: 526.5 ft Anisotropy Ratio (Kz/Kr): 0.1482

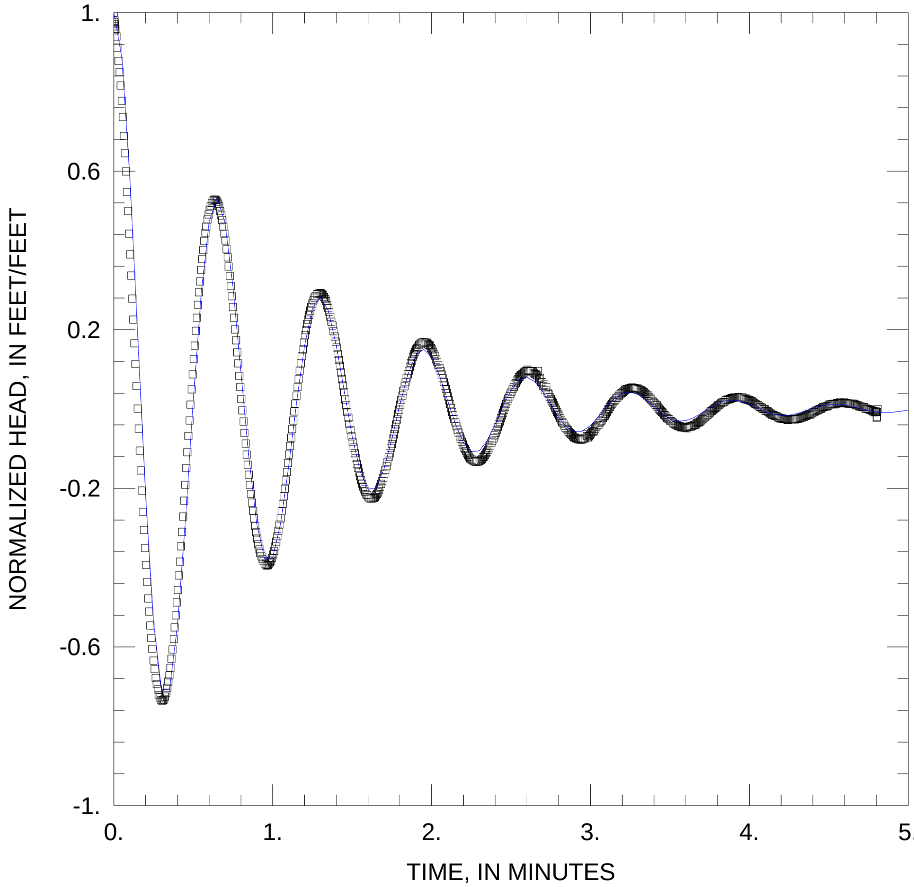
WELL DATA (CORE HOLE 3)

Initial Displacement: -0.476 ft Static Water Column Height: 2145.8 ft
Total Well Penetration Depth: 376. ft Screen Length: 68. ft
Casing Radius: 0.06723 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 3405.3 ft/day Le = 1172.2 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 24 2220-2277 A ButlerCorrection.aqt
Date: 05/06/24 Time: 11:43:41

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 03/04/2020

AQUIFER DATA

Saturated Thickness: 526.5 ft Anisotropy Ratio (Kz/Kr): 0.1

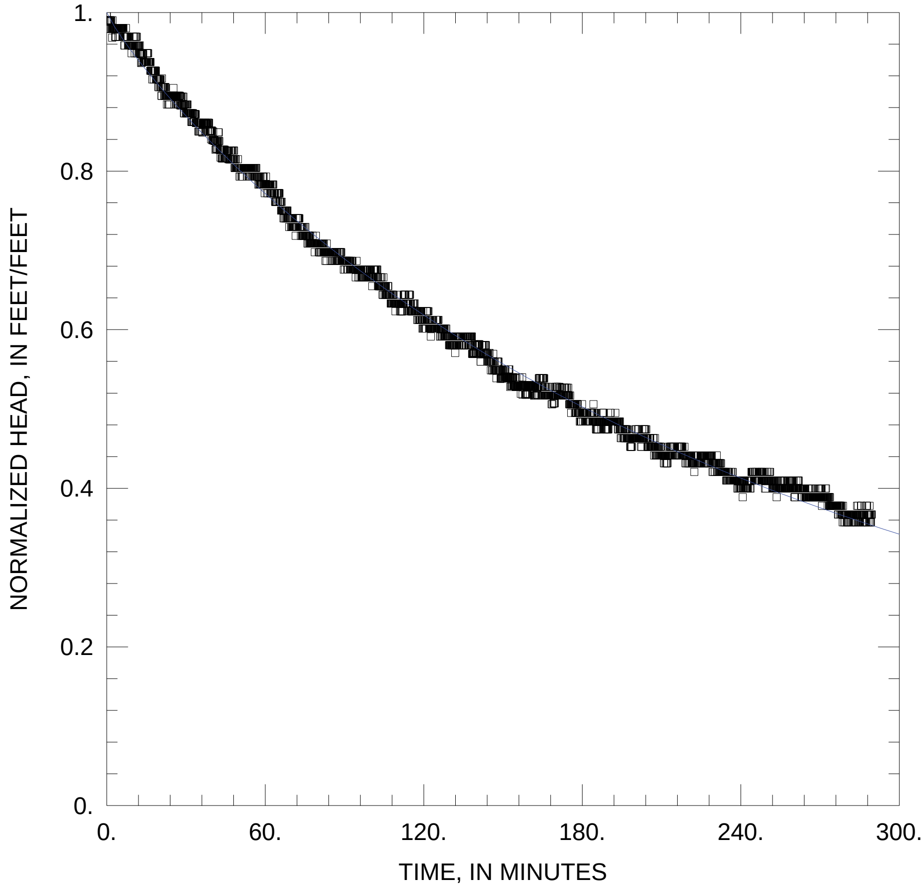
WELL DATA (CORE HOLE 3)

Initial Displacement: -1.998 ft Static Water Column Height: 2245.3 ft
Total Well Penetration Depth: 476. ft Screen Length: 57. ft
Casing Radius: 0.06723 ft Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Butler

K = 3542.5 ft/day Le = 1221.5 ft



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 25 2357-2397 A_CJ.aqt
Date: 12/12/22 Time: 14:56:06

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 3/19/2020

AQUIFER DATA

Saturated Thickness: 279.5 ft
Anisotropy Ratio (Kz/Kr): 1.

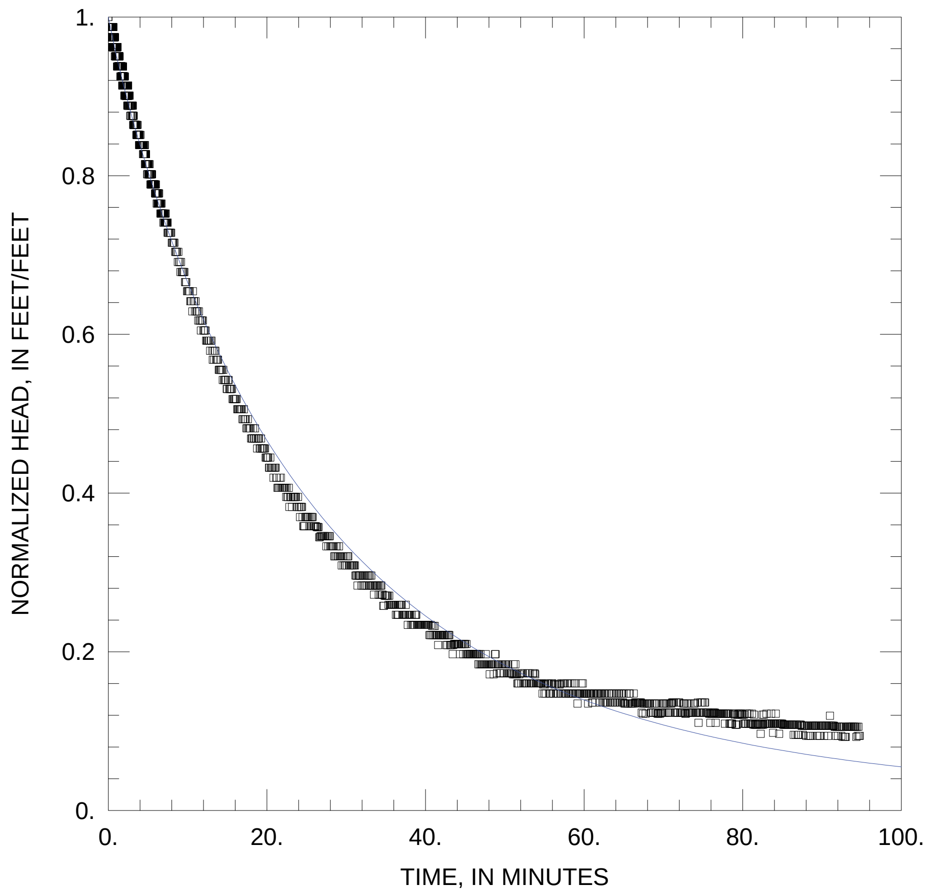
WELL DATA (CORE HOLE 3)

Initial Displacement: 0.913 ft
Total Well Penetration Depth: 69.5 ft
Casing Radius: 0.09652 ft
Static Water Column Height: 2363.2 ft
Screen Length: 40. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined
Solution Method: Cooper-Bredehoeft-Papadopulos

T = 0.15 ft^2/day
S = 1.285E-5



SLUG TEST ANALYSIS

Data Set: C:\...\ROMP 88 ST 26 2547-2607 A_CJ_2.aqt
Date: 12/12/22 Time: 14:55:06

PROJECT INFORMATION

Company: SWFWMD
Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: CORE HOLE 3
Test Date: 4/8/2020

AQUIFER DATA

Saturated Thickness: 279.5 ft Anisotropy Ratio (Kz/Kr): 1.

WELL DATA (CORE HOLE 3)

Initial Displacement: 0.787 ft
Total Well Penetration Depth: 279.5 ft
Casing Radius: 0.09652 ft
Static Water Column Height: 2568.3 ft
Screen Length: 60. ft
Well Radius: 0.1263 ft

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Bredehoeft-Papadopulos

T = 1.87 ft^2/day S = 1.0E-6

Appendix I. Water Level Data Collected During Core Drilling and Testing at the ROMP 88 – Rock Ridge Well Site in Polk County, Florida

Table I1. Daily water levels recorded during core drilling and testing in core hole 2 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; Fldn, Floridan; ft, feet; HH:MM, hours:minutes; 2.38-inch inner diameter steel core drilling rod; UDR, Universal Drill Rigs 200D LS drill rig; U, upper]

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT Deepest Casing Depth (ft bls)	4-inch HWT Temporary Casing Static Water Level (ft btoc)	4-inch HWT Temporary Casing Static Water Level (ft bls)	4-inch HWT Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 2 Total Depth (ft bls)	NQ/NRQ Core Hole 2 Static Water Level (ft btoc)	NQ/NRQ Core Hole 2 Static Water Level (ft bls)
11/01/2016	09:45	--	--	--	--	0	--	--
11/02/2016	10:05	--	--	--	--	50	--	--
11/03/2016	09:41	--	--	--	--	90	--	--
11/07/2016	--	42	7.17	4.26	104.37	100	--	--
11/08/2016	10:15	73	6.17	4.75	103.88	100	--	--
11/09/2016	09:45	73.1	5.69	4.39	104.24	100	7.39	4.38
11/14/2016	11:30	--	--	--	--	100	10.94	4.49
11/15/2016	09:40	73.2	5.91	4.62	104.01	100	7.47	4.67
11/16/2016	09:20	73.2	--	--	--	100	12.0	5.2
11/21/2016	10:30	73.2	6.30	5.01	103.62	100	--	--
11/28/2016	12:00	73.2	6.60	5.31	103.32	100	--	--
11/29/2016	10:15	73.2	6.63	5.34	103.29	100	8.00	5.35

site in Polk County, Florida

HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/day/year; NAVD 88, North American Vertical Datum of 1988; NQ/NRQ,

NQ/NRQ Core Hole 2 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
--	8.47	4.54	104.09	--	--	--	0	
--	8.51	4.58	104.05	--	--	--	0	Water supply pump was turned on before core hole water level was measured and it was steadily dropping.
--	8.55	4.62	104.01	--	--	--	0	Water level in core hole steadily dropping. Mud could be a factor.
--	8.71	4.78	103.85	--	--	--	0.10	NQ tripped out to set HWT
--	8.81	4.88	103.75	--	--	--	0	NQ tripped out to set HWT
104.25	8.81	4.88	103.75	--	--	--	0	
104.14	9.06	5.13	103.50	--	--	--	0	NQ tripped 10 feet inside HWT. NQ and HWT are open to same interval and should have same water level
103.96	9.04	5.11	103.52	--	--	--	0	NQ tripped 10 feet inside HWT. NQ and HWT are open to same interval and should have same water level
103.40	9.12	5.19	103.44	--	--	--	0	NQ tripped 10 feet in HWT and are open to same interval and should have same water level
--	9.41	5.48	103.15	--	--	--	0	NQ tripped out of hole
--	9.66	5.73	102.90	--	--	--	0	NQ tripped out of hole
103.28	9.71	5.78	102.85	--	--	--	0	

Table I1. Daily water levels recorded during core drilling and testing in core hole 2 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; Fldn, Floridan; ft, feet; HH:MM, hours:minutes; 2.38-inch inner diameter steel core drilling rod; UDR, Universal Drill Rigs 200D LS drill rig; U, upper]

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT Deepest Casing Depth (ft bls)	4-inch HWT Temporary Casing Static Water Level (ft btoc)	4-inch HWT Temporary Casing Static Water Level (ft bls)	4-inch HWT Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 2 Total Depth (ft bls)	NQ/NRQ Core Hole 2 Static Water Level (ft btoc)	NQ/NRQ Core Hole 2 Static Water Level (ft bls)
11/30/2016	10:50	91	6.75	5.36	103.27	104	--	--
12/01/2016	10:55	91	6.75	5.36	103.27	105	--	--
12/12/2016	11:55	91	7.69	5.62	103.11	113.2	--	--
12/13/2016	09:50	91	7.73	5.66	103.07	113.2	8.89	5.65
12/14/2016	09:30	91	7.75	5.68	103.05	127	8.65	5.67
12/19/2016	13:00	91	8.00	5.93	102.80	167	9.17	6.10
12/20/2016	09:25	91	8.05	5.98	102.75	167	8.85	5.99
12/21/2016	09:55	91	8.01	5.94	102.79	167	8.95	5.97
01/17/2017		91	8.33	6.26	102.47	187	9.25	6.26
01/18/2017	10:00	91	8.29	6.22	102.51	187	9.70	6.23
01/19/2017	09:30	91	8.31	6.24	102.49	187	9.20	6.27
01/25/2017	12:04	91	7.94	5.87	102.86	247	8.90	5.96
01/30/2017	11:34	91	7.95	5.88	102.85	267	11.00	5.83

site in Polk County, Florida

HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/day/year; NAVD 88, North American Vertical Datum of 1988; NQ/NRQ,

NQ/NRQ Core Hole 2 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
--	9.68	5.75	102.88	--	--	--	0	NQ tripped out of hole
--	9.75	5.82	102.81	--	--	--	0	NQ tripped out of hole
--	9.78	5.85	102.78	--	--	--	0.38	NRQ tripped out. First water level reading with UDR. Ground was leveled and lowered when setting UDR. This made water levels lower than previous water level readings.
103.08	9.79	5.86	102.77	--	--	--	0	NRQ tripped in to 83 feet bls
103.06	9.80	5.87	102.76	--	--	--	0	
102.53	10.01	6.08	102.55	--	--	--	0	Air compressor shot air down hole before water levels were taken at 11:30. Remeasured several times till 13:00.
102.74	10.15	6.22	102.41	--	--	--	0	NRQ tripped out to 120 feet
102.76	10.10	6.17	102.46	--	--	--	0	NRQ tripped out to 120 feet
102.47	10.37	6.44	102.19	--	--	--	0.13	
102.50	10.30	6.37	102.26	9.10	5.67	103.08	0.80	U Fldn Aq (Ocala) Monitor well installed 01/18/2017. Water level likely not equilibrated. Not used.
102.46	10.32	6.39	102.24	9.62	6.52	102.98	0.02	
102.77	9.98	6.05	102.58	9.22	6.12	103.38	0.90	
102.90	9.97	6.04	102.59	9.21	6.11	103.39	0.28	NRQ tripped up to 227 feet

Table I1. Daily water levels recorded during core drilling and testing in core hole 2 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; Fldn, Floridan; ft, feet; HH:MM, hours:minutes; 2.38-inch inner diameter steel core drilling rod; UDR, Universal Drill Rigs 200D LS drill rig; U, upper]

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT Deepest Casing Depth (ft bls)	4-inch HWT Temporary Casing Static Water Level (ft btoc)	4-inch HWT Temporary Casing Static Water Level (ft bls)	4-inch HWT Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 2 Total Depth (ft bls)	NQ/NRQ Core Hole 2 Static Water Level (ft btoc)	NQ/NRQ Core Hole 2 Static Water Level (ft bls)
01/31/2017	08:30	91	7.99	5.92	102.81	267	10.15	5.90
02/20/2017	11:45	91	8.47	6.40	102.33	267	12.71	6.42
02/21/2017	09:00	91	8.60	6.53	102.20	307	9.38	6.49
02/22/2017	09:35	91	8.55	6.48	102.25	367	10.55	6.48
02/23/2017	10:00	91	8.12	6.05	102.68	367	9.25	6.04
02/27/2017	09:35	91	8.30	6.23	102.50	395	13.35	6.23
02/28/2017	09:10	91	8.14	6.07	102.66	407	9.95	6.46
03/01/2017	09:30	91	8.08	6.01	102.72	437	12.37	6.34
03/08/2017	11:10	91	8.86	6.79	101.94	437	--	--
03/09/2017	09:10	91	--	--	--	437	--	--

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
05/18/2017	11:45	384	12.25	10.12	98.61	384	--	--
05/22/2017	11:15	384	12.26	10.13	98.60	384	--	--
05/23/2017	10:00	384	12.15	10.02	98.71	384	--	--
05/24/2017	10:00	384	--	--	--	384	13.33	9.84

site in Polk County, Florida

HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/day/year; NAVD 88, North American Vertical Datum of 1988; NQ/NRQ,

NQ/NRQ Core Hole 2 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
102.83	9.98	6.05	102.58	9.27	6.17	103.33	0	NRQ tripped up to 230 feet
102.31	10.46	6.53	102.10	9.75	6.65	102.85	0.58	
102.24	10.48	6.55	102.08	9.78	6.68	102.82	0	
102.25	10.41	6.48	102.15	9.73	6.63	102.87	0.04	NRQ tripped up to 327 feet
102.69	10.08	6.15	102.48	9.39	6.29	103.21	1.0	
102.50	10.02	6.09	102.54	9.30	6.20	103.30	0.05	
102.27	10.09	6.16	102.47	9.36	6.26	103.24	0	
102.39	10.08	6.15	102.48	9.34	6.24	103.26	0	
--	10.58	6.65	101.98	9.89	6.79	102.71	0	
--	10.59	6.66	101.97	9.89	6.79	102.71	0	

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/ tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
--	14.99	11.06	97.57	13.21	10.11	99.39	0.70	Begin CH3 water level readings and HQ/NRQ. Total depth is 384 feet.
--	13.94	10.01	98.62	13.29	10.19	99.31	3.0	
--	13.81	9.88	98.75	13.20	10.10	99.40	0.13	
98.89	13.66	9.73	98.90	13.12	10.02	99.48	0	

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
05/25/2017	10:00	384	--	--	--	384	--	--
05/30/2017	11:15	384	11.69	9.56	99.17	387	12.79	9.56
05/31/2017	10:05	384	11.74	9.61	99.12	407	12.80	9.71
06/01/2017	10:00	397	13.02	9.66	99.07	407	--	--
06/02/2017	09:30	397	12.06	9.93	98.80	407	--	--
06/05/2017	13:00	397	11.42	9.29	99.44	437	12.69	9.44
06/06/2017	09:10	397	11.33	9.20	99.53	437	14.38	9.37
06/07/2017	13:15	397	10.32	8.19	100.54	437	14.33	8.16
06/08/2017	13:20	397	8.56	6.43	102.30	437	11.16	6.18
06/09/2017	09:14	397	7.35	5.22	103.51	437	8.27	5.41
06/12/2017	11:40	397	7.11	4.98	103.75	457	11.79	5.23
06/13/2017	09:15	397	7.20	5.07	103.66	457	11.30	5.24
06/14/2017	10:45	397	7.17	5.04	103.69	457	12.01	5.24
06/15/2017	09:15	397	6.92	4.79	103.94	457	11.31	4.96
06/19/2017	13:10	397	5.65	3.52	105.21	457	8.46	3.83
06/20/2017	12:45	397	5.28	3.15	105.58	457	9.17	2.00
06/21/2017	09:13	397	5.23	3.10	105.63	457	6.44	3.61
06/22/2017	08:57	397	5.34	3.21	105.52	457	9.94	3.64
06/23/2017	08:30	397	6.89	3.63	105.10	457	--	--
06/26/2017	11:00	397	7.68	4.18	104.55	457	--	--
06/27/2017	09:25	452	10.82	3.85	104.88	457	--	--

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
--	13.60	9.67	98.96	13.04	9.94	99.56	0.28	
99.17	13.55	9.62	99.01	12.94	9.84	99.66	0	
99.02	13.51	9.58	99.05	12.96	9.86	99.64	0.10	
--	13.51	9.58	99.05	12.93	9.83	99.67	0	
--	13.54	9.61	99.02	12.95	9.85	99.65	0	
99.29	13.29	9.36	99.27	12.78	9.68	99.82	1.50	
99.36	13.13	9.20	99.43	12.68	9.58	99.92	0.60	
100.57	12.07	8.14	100.49	12.19	9.09	100.41	3.05	Packer set. NRQ water level measured from transducer in core hole.
102.55	10.07	6.14	102.49	10.60	7.50	102.00	0.90	
103.32	9.21	5.28	103.35	9.04	5.94	103.56	0	
103.50	8.99	5.06	103.57	8.38	5.28	104.22	0.05	
103.49	8.99	5.06	103.57	8.40	5.30	104.20	0.02	
103.49	9.03	5.10	103.53	8.42	5.32	104.18	0.02	Rocks in NRQ
103.77	8.73	4.80	103.83	8.18	5.08	104.42	0.35	Rocks in NRQ
104.90	7.69	3.76	104.87	6.63	3.53	105.97	3.90	
106.73	7.17	3.24	105.39	6.13	3.03	106.47	1.25	NRQ tripped up. Bit is at 410 feet bls, rocks in hole to 452 feet
105.12	7.27	3.34	105.29	6.24	3.14	106.36	0.00	NRQ tripped up. Bit is at 410 feet bls, rocks in hole to 452 feet
105.09	7.29	3.36	105.27	6.28	3.18	106.32	0.48	NRQ tripped up, rocks in hole to 452 feet
--	7.36	3.43	105.20	6.42	3.32	106.18	0.02	NRQ tripped out, rocks in hole to 452 feet
--	7.86	3.93	104.70	6.96	3.86	105.64	0.01	NRQ tripped out, HQ at 452 feet
--	7.55	3.62	105.01	6.66	3.56	105.94	0.74	NRQ tripped out, HQ at 452 feet

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
06/28/2017	10:00	452	6.67	3.59	105.14	457	--	--
06/29/2017	--	452	11.24	3.64	105.09	457	--	--
07/05/2017	11:30	452	11.32	3.81	104.92	457	--	--
07/06/2017	08:45	452	9.43	3.98	104.75	457	--	--
07/10/2017	11:00	457	6.45	4.32	104.41	457	--	--
07/11/2017	09:15	457	6.08	3.95	104.78	457	7.10	4.02
07/12/2017	09:30	457.5	6.07	3.94	104.79	477	7.10	4.04
07/13/2017	09:15	457.5	6.06	3.93	104.80	497	7.0	3.9
07/14/2017	09:00	487	6.60	3.87	104.86	497	--	--
07/24/2017	11:20	487	6.30	3.15	105.58	497	--	--
07/25/2017	09:00	497	8.20	3.31	105.42	497	--	--
07/26/2017	09:00	497	5.50	3.37	105.36	517	6.39	3.28
07/27/2017	09:40	497	5.70	3.57	105.16	557	9.43	3.42
07/31/2017	11:30	497	5.27	3.14	105.59	597	6.42	3.19
08/01/2017	10:00	497	5.12	2.99	105.74	597	8.30	3.05
08/02/2017	09:15	497	5.23	3.10	105.63	597	8.39	3.17
08/03/2017	08:30	497	5.16	3.03	105.70	597	6.24	3.11
08/04/2017	10:45	497	5.05	2.92	105.81	627	6.28	2.93
08/07/2017	11:00	497	5.32	3.19	105.54	627	6.09	3.07
08/08/2017	08:30	497	5.07	2.94	105.79	657	6.03	2.89
08/09/2017	09:30	497	4.91	2.78	105.95	697	8.02	2.76
08/10/2017	10:30	497	4.92	2.79	105.94	717	5.99	2.80
08/14/2017	11:00	497	4.75	2.62	106.11	757	5.75	2.61
08/15/2017	09:30	497	4.87	2.74	105.99	797	5.83	2.80
08/16/2017	09:00	497	4.99	2.86	105.87	817	6.93	2.93

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
--	7.25	3.32	105.31	6.30	3.20	106.30	1.35	NRQ tripped out, HQ at 452 feet
--	7.31	3.38	105.25	6.31	3.21	106.29	0	NRQ tripped out, HQ at 452 feet
--	7.51	3.58	105.05	6.48	3.38	106.12	1.75	NRQ tripped out, HQ at 452 feet
--	7.66	3.73	104.90	6.69	3.59	105.91	0	NRQ tripped out, HQ at 452 feet
--	8.06	4.13	104.50	7.15	4.05	105.45	0.15	NRQ tripped out, HQ at 452 feet
104.71	7.74	3.81	104.82	6.87	3.77	105.73	0.70	Beginning of annulus measurements through PVC tube
104.69	7.73	3.80	104.83	6.85	3.75	105.75	0.05	
104.88	7.70	3.77	104.86	6.88	3.78	105.72	0.10	
--	7.61	3.68	104.95	6.77	3.67	105.83	0.22	NRQ tripped out
--	7.02	3.09	105.54	6.94	3.84	105.66	3.90	NRQ tripped out
--	7.13	3.20	105.43	6.13	3.03	106.47	0.02	NRQ tripped out
105.45	7.26	3.33	105.30	6.32	3.22	106.28	0	
105.31	7.43	3.50	105.13	6.51	3.41	106.09	0	
105.54	7.18	3.25	105.38	6.21	3.11	106.39	1.80	
105.68	7.11	3.18	105.45	5.99	2.89	106.61	0.17	NRQ tripped up to 557 feet and packer set at 557 feet
105.56	7.18	3.25	105.38	6.15	3.05	106.45	0	
105.62	7.08	3.15	105.48	6.05	2.95	106.55	0.20	
105.80	6.94	3.01	105.62	5.90	2.80	106.70	0.70	
105.66	7.32	3.39	105.24	6.37	3.27	106.23	0	
105.84	7.09	3.16	105.47	6.18	3.08	106.42	1.15	
105.97	6.80	2.87	105.76	5.85	2.75	106.75	2.55	
105.93	6.87	2.94	105.69	5.90	2.80	106.70	0.02	
106.12	6.67	2.74	105.89	5.67	2.57	106.93	2.60	
105.93	6.76	2.83	105.80	5.79	2.69	106.81	0.32	
105.80	6.87	2.94	105.69	5.90	2.80	106.70	0.15	NRQ tripped up to 766 feet

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
08/17/2017	09:30	497	5.1	2.97	105.76	837	6.23	3.20
08/18/2017	09:00	497	5.22	3.09	105.64	857	6.51	3.22
08/21/2017	10:45	497	5.46	3.33	105.40	897	7.07	4.12
08/22/2017	09:30	497	5.58	3.45	105.28	917	7.55	4.55
08/23/2017	09:00	497	5.74	3.61	105.12	917	10.04	4.90
08/24/2017	10:45	497	5.49	3.36	105.37	937	--	--
08/28/2017	11:35	497	5.11	2.98	105.75	937	7.57	4.65
08/29/2017	10:30	497	4.95	2.82	105.91	957	7.58	4.47
08/30/2017	10:00	497	4.95	2.82	105.91	957	9.79	4.68
08/31/2017	09:00	497	5.05	2.92	105.81	957	9.59	4.48
01/31/2018	09:45	497	6.91	4.84	103.89	957	9.17	4.10
02/01/2018	09:25	497	6.88	4.81	103.92	997	9.25	6.24
02/02/2018	08:30	497	6.87	4.8	103.93	997	9.16	6.17
03/13/2018	09:00	497	8.26	6.19	102.54	1,007	10.24	7.24
03/14/2018	09:15	497	8.37	6.3	102.43	1,047	10.44	7.52
03/19/2018	11:00	497	8.50	6.43	102.30	1,067	11.78	8.58
03/20/2018	08:30	497	8.51	6.44	102.29	1,067	21.26	16.17
03/21/2018	09:00	497	8.57	6.5	102.23	1,067	13.52	8.44
03/22/2018	08:45	497	8.69	6.62	102.11	1,107	12.13	8.96
03/23/2018	09:15	497	8.78	6.71	102.02	1,147	11.78	8.77
03/27/2018	08:45	497	8.89	6.82	101.91	1,167	11.99	8.87
03/29/2018	11:30	497	8.96	6.89	101.84	1,207	11.70	8.68

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
105.53	6.96	3.03	105.60	5.97	2.87	106.63	0	
105.51	7.04	3.11	105.52	6.14	3.04	106.46	0	
104.61	7.36	3.43	105.20	6.44	3.34	106.16	0.3	
104.18	7.40	3.47	105.16	6.47	3.37	106.13	0	
103.83	7.52	3.59	105.04	6.66	3.56	105.94	0	Packer set at 877 feet
--	7.41	3.48	105.15	6.54	3.44	106.06	0.28	
104.08	6.97	3.04	105.59	6.02	2.92	106.58	1.25	NRQ tripped up to 920 feet
104.26	6.78	2.85	105.78	5.81	2.71	106.79	1.10	NRQ tripped up to 953 feet
104.05	6.76	2.83	105.80	5.74	2.64	106.86	0.22	Packer set at 940 feet
104.25	6.89	2.96	105.67	5.90	2.80	106.70	0	Packer set at 940 feet
104.63	8.80	4.87	103.76	8.02	4.92	104.58	--	Rain gauge not re-installed after Hurricane Irma
102.49	8.82	4.89	103.74	8.03	4.93	104.57	--	Rain gauge not re-installed after Hurricane Irma
102.56	8.80	4.87	103.76	8.03	4.93	104.57	--	Rain gauge not re-installed after Hurricane Irma
101.49	10.27	6.34	102.29	9.53	6.43	103.07	--	Rain gauge not re-installed after Hurricane Irma
101.21	10.31	6.38	102.25	9.54	6.44	103.06	--	Rain gauge not re-installed after Hurricane Irma
100.15	10.52	6.59	102.04	9.76	6.66	102.84	0	NRQ rods tripped up to 1,027 feet
92.56	10.52	6.59	102.04	9.78	6.68	102.82	0.03	Packer installed at 1,027 feet
100.29	10.53	6.6	102.03	9.82	6.72	102.78	0.28	NRQ rods tripped up to 1,027 feet
99.77	10.65	6.72	101.91	9.92	6.82	102.68	0.02	
99.96	10.75	6.82	101.81	9.98	6.88	102.62	0	
99.86	10.95	7.02	101.61	10.16	7.06	102.44	0	
100.05	11.02	7.09	101.54	10.25	7.15	102.35	0	

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
04/02/2018	11:00	497	8.22	6.15	102.58	1,222	11.62	8.84
04/03/2018	12:00	497	7.94	5.87	102.86	1,222	--	--
04/04/2018	08:45	497	7.86	5.79	102.94	1,222	12.19	8.99
04/05/2018	08:30	497	7.92	5.85	102.88	1,227	22.77	17.36
04/09/2018	10:45	497	8.15	6.08	102.65	1,227	21.55	16.14
04/10/2018	08:45	497	8.26	6.19	102.54	1,237	11.26	8.37
04/12/2018	12:15	497	6.81	4.74	103.99	1,257	11.03	7.91
04/16/2018	10:00	497	6.92	4.85	103.88	1,277	10.10	7.15
04/17/2018	08:30	497	7.02	4.95	103.78	1,317	10.91	7.90
04/18/2018	08:30	497	7.12	5.05	103.68	1,357	11.04	8.08
04/19/2018	08:45	497	7.22	5.15	103.58	1,357	23.40	18.02
04/27/2018	08:00	497	7.97	5.9	102.83	1,367	12.77	8.57
08/03/2018	11:00	497	5.12	4.36	104.37	1,367	--	--
08/06/2018	09:20	497	5.23	4.47	104.26	1,367	--	--
08/07/2018	09:11	497	5.32	4.56	104.17	1,367	9.81	8.00
08/08/2018	09:03	497	5.52	4.76	103.97	1,377	9.80	8.14
08/13/2018	10:45	497	4.94	4.18	104.55	1,397	10.24	8.62
08/14/2018	09:00	497	4.94	4.18	104.55	1,417	10.46	8.80
08/15/2018	07:00	497	5.11	4.35	104.38	1,437	10.63	8.92
08/16/2018	07:00	497	5.15	4.39	104.34	1,457	24.30	20.39
08/20/2018	07:15	497	5.18	4.42	104.31	1,457	17.73	13.12
08/21/2018	07:15	497	4.98	4.22	104.51	1,477	--	--
08/22/2018	07:00	497	5.03	4.27	104.46	1,477	--	--
08/23/2018	12:50	497	5.24	4.48	104.25	1,477	--	--

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
99.89	10.12	6.19	102.44	9.46	6.36	103.14	2.80	
--	9.83	5.9	102.73	8.91	5.81	103.69	0.02	NRQ rods tripped up to clean core hole
99.74	9.79	5.86	102.77	8.86	5.76	103.74	0	
91.37	9.87	5.94	102.69	8.95	5.85	103.65	0	Packer set at 1,187 feet
92.59	10.14	6.21	102.42	9.24	6.14	103.36	0.12	Packer set at 1,187 feet
100.36	10.22	6.29	102.34	9.33	6.23	103.27	0.08	
100.82	8.57	4.64	103.99	7.54	4.44	105.06	2.30	
101.58	8.83	4.9	103.73	7.91	4.81	104.69	0.32	
100.83	8.89	4.96	103.67	8.00	4.90	104.60	0	
100.65	9.03	5.1	103.53	8.13	5.03	104.47	0	
90.71	9.18	5.25	103.38	8.30	5.20	104.30	0	Packer set at 1,317 feet
100.16	10.01	6.08	102.55	9.15	6.05	103.45	0.13	
--	6.92	2.99	105.64	5.79	2.69	106.81	>6.0	First measurement after UDR repaired and reset. New MPs.
--	7.28	3.35	105.28	6.13	3.03	106.47	0.04	
100.73	7.40	3.47	105.16	6.28	3.18	106.32	0.04	
100.59	7.56	3.63	105.00	6.50	3.40	106.10	0	
100.11	7.02	3.09	105.54	5.78	2.68	106.82	2.15	
99.93	6.97	3.04	105.59	5.85	2.75	106.75	0.02	
99.81	7.12	3.19	105.44	6.0	2.9	106.60	0	
88.34	7.18	3.25	105.38	6.09	2.99	106.51	1.5	Packer set at 1,417 feet
94.91	7.11	3.18	105.45	5.94	2.84	106.66	1.65	NRQ tripped up to 1,417 feet
--	6.97	3.04	105.59	5.75	2.65	106.85	0.34	NRQ rods tripped out
--	7.05	3.12	105.51	5.88	2.78	106.72	0.01	NRQ rods tripped out
--	7.21	3.28	105.35	6.07	2.97	106.53	0	NRQ rods tripped out

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
08/24/2018	07:30	497	5.21	4.45	104.28	1,477	--	--
08/27/2018	10:00	497	5.46	4.70	104.03	1,477	11.11	9.41
08/28/2018	07:30	497	5.44	4.68	104.05	1,497	11.01	9.38
09/12/2018	12:15	497	5.35	4.59	104.14	1,537	12.05	8.76
09/19/2018	08:45	497	5.83	5.07	103.66	1,537	10.83	9.11
10/01/2018	12:30	497	6.04	5.28	103.45	1,537	10.78	9.06
01/28/2019	07:00	497	5.11	4.35	104.38	1,537	--	--
01/29/2019	07:30	497	5.19	4.43	104.30	1,537	6.04	4.23
01/30/2019	07:15	497	5.08	4.32	104.41	1,537	13.50	11.61
02/18/2019	11:13	497	5.58	4.82	103.91	1,537	10.58	9.08
03/11/2019	08:00	497	6.21	5.45	103.28	1,557	8.73	6.74
03/12/2019	08:30	497	6.26	5.5	103.23	1,557	9.84	7.91
03/13/2019	07:30	497	6.22	5.46	103.27	1,557	12.23	10.34
03/14/2019	09:30	497	6.41	5.65	103.08	1,557	13.97	9.81
03/25/2019	09:45	497	6.86	6.1	102.63	1,557	11.80	9.80
03/26/2019	07:45	497	6.92	6.16	102.57	1,557	28.20	24.09
03/28/2019	07:30	497	7.12	6.36	102.37	1,557	11.79	9.84

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
--	7.12	3.19	105.44	5.99	2.89	106.61	0.28	NRQ rods tripped out
99.32	7.4	3.47	105.16	6.29	3.19	106.31	0.28	
99.35	7.46	3.53	105.10	6.42	3.32	106.18	0.01	
99.97	7.37	3.44	105.19	6.24	3.14	106.36	4.27	
99.62	7.77	3.84	104.79	6.77	3.67	105.83	0.15	
99.67	8.01	4.08	104.55	7.00	3.90	105.6	1.25	
--	6.65	2.72	105.91	5.40	2.30	107.2	3.55	NRQ rods tripped out
104.50	6.62	2.69	105.94	5.39	2.29	107.21	0	NRQ rods tripped up to 493 feet
97.12	6.76	2.83	105.80	5.61	2.51	106.99	0	
99.65	7.40	3.47	105.16	6.44	3.34	106.16	0.68	
101.99	8.06	4.13	104.50	7.08	3.98	105.52	0.44	NRQ rods 20 feet off bottom
100.82	8.08	4.15	104.48	7.20	4.10	105.4	0	NRQ rods 20 feet off bottom; UFA Prod Temp water level is 5.63 feet btoc
98.39	8.07	4.14	104.49	7.16	4.06	105.44	0	UFA Prod Temp water level is 5.63 feet btoc
98.92	8.17	4.24	104.39	7.28	4.18	105.32	0	UFA Prod Temp water level is 5.73 btoc; NRQ 40 feet off bottom
98.93	8.64	4.71	103.92	7.85	4.75	104.75	0.15	UFA Prod Temp water level is 6.26 btoc; NRQ 40 feet off bottom
84.64	8.72	4.79	103.84	7.89	4.79	104.71	0	UFA Prod Temp water level is 6.27 btoc; Packer set at 1,557 feet
98.89	8.91	4.98	103.65	8.07	4.97	104.53	0	UFA Prod Temp water level is 6.46 btoc; NRQ at 1,517 feet.

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
04/01/2019	08:30	497	7.36	6.6	102.13	1,573	11.72	10.14
04/02/2019	07:00	497	7.24	6.48	102.25	1,577	12.51	10.50
04/03/2019	07:30	497	--	--	--	1,608	--	--
04/08/2019	08:30	497	--	--	--	1,608	--	--
04/09/2019	07:00	497	--	--	--	1,608	--	--
04/10/2019	07:30	497	--	--	--	1,608	--	--
04/11/2019	07:30	497	--	--	--	1,608	--	--
04/15/2019	07:00	497	--	--	--	1,608	--	--
04/16/2019	07:30	497	--	--	--	1,608	--	--
04/17/2019	07:00	497	--	--	--	1,608	--	--
04/18/2019	07:30	497	--	--	--	1,608	8.61	5.71

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
98.59	9.17	5.24	103.39	8.34	5.24	104.26	0	UFA Prod Temp water level is 6.73 feet btoc
98.23	9.09	5.16	103.47	8.26	5.16	104.34	0.05	UFA Prod Temp water level is 6.65 feet btoc
--	9.19	5.26	103.37	8.33	5.23	104.27	0.06	UFA Prod Temp water level is 6.78 feet btoc; HQ broke, trying to fix.
--	9.02	5.09	103.54	8.13	5.03	104.47	1.05	UFA Prod Temp water level is 6.59 feet btoc
--	8.81	4.88	103.75	7.96	4.86	104.64	0.54	UFA Prod Temp water level is 6.38 feet btoc
--	8.82	4.89	103.74	7.93	4.83	104.67	0.05	UFA Prod Temp water level is 6.36 feet btoc
--	8.94	5.01	103.62	8.10	5.00	104.5	0	UFA Prod Temp water level is 6.51 feet btoc
--	9.24	5.31	103.32	8.43	5.33	104.17	0.52	UFA Prod Temp water level is 6.81 feet btoc
--	9.31	5.38	103.25	8.47	5.37	104.13	0.03	UFA Prod Temp water level is 6.86 feet btoc
--	9.41	5.48	103.15	8.55	5.45	104.05	0	UFA Prod Temp water level is 6.97 feet btoc
103.02	9.43	5.50	103.13	8.61	5.51	103.99	0	UFA Prod Temp water level is 7.00 feet btoc; NRQ rods are 733 feet bls

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
04/22/2019	07:30	497	--	--	--	1,608	10.63	7.25
04/23/2019	07:00	497	--	--	--	1,608	10.69	7.31
04/24/2019	07:30	497	--	--	--	1,647	11.70	8.02
04/29/2019	12:00	497	--	--	--	1,657	12.81	8.87
04/30/2019	08:00	497	--	--	--	1,657	23.33	18.29
05/01/2019	07:30	497	--	--	--	1,657	14.02	8.98
05/02/2019	08:00	497	--	--	--	1,657	11.95	8.82
05/03/2019	07:15	497	--	--	--	1,697	12.38	8.69
05/06/2019	11:30	497	--	--	--	1,717	11.72	8.39
05/07/2019	07:30	497	--	--	--	1,737	12.06	8.69
05/08/2019	07:00	497	--	--	--	1,777	13.37	10.39
05/09/2019	07:30	497	--	--	--	1,777	15.09	10.06

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
101.48	9.55	5.62	103.01	8.73	5.63	103.87	0.52	UFA Prod Temp water level is 7.11 feet btoc; NRQ rods are on bottom
101.42	9.63	5.70	102.93	8.81	5.71	103.79	0	UFA Prod Temp water level is 7.19 feet btoc
100.71	9.68	5.75	102.88	8.88	5.78	103.72	0	UFA Prod Temp water level is 7.25 feet btoc
99.86	10.15	6.22	102.41	9.33	6.23	103.27	0.1	UFA Prod Temp water level is 7.71 feet btoc
90.44	10.24	6.31	102.32	9.41	6.31	103.19	0	UFA Prod Temp water level is 7.80 feet btoc
99.75	10.33	6.40	102.23	9.51	6.41	103.09	0	UFA Prod Temp water level is 7.90 feet btoc
99.91	10.38	6.45	102.18	9.56	6.46	103.04	0.04	UFA Prod Temp water level is 7.93 feet btoc
100.04	10.38	6.45	102.18	9.59	6.49	103.01	0.1	UFA Prod Temp water level is 7.95 feet btoc
100.34	9.97	6.04	102.59	9.1	6.0	103.5	1.35	UFA Prod Temp water level is 7.52 feet btoc
100.04	9.93	6.00	102.63	9.00	5.90	103.6	0	UFA Prod Temp water level is 7.52 feet btoc
98.34	10.00	6.07	102.56	9.16	6.06	103.44	0	UFA Prod Temp water level is 7.57 feet btoc
98.67	10.11	6.18	102.45	9.26	6.16	103.34	0	UFA Prod Temp water level is 7.68 feet btoc; NRQ tripped up 40 feet

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
05/10/2019	07:30	497	--	--	--	1,777	13.05	9.87
05/14/2019	07:30	497	--	--	--	1,797	13.49	10.04
05/15/2019	07:00	497	--	--	--	1,817	33.63	30.66
05/20/2019	09:30	497	--	--	--	1,857	32.84	30.03
05/21/2019	07:30	497	--	--	--	1,857	36.21	31.14
05/22/2019	07:30	497	--	--	--	1,857	34.55	31.40
05/23/2019	07:30	497	--	--	--	1,897	33.65	30.53
05/28/2019	08:30	497	--	--	--	1,937	34.16	30.92
05/29/2019	07:00	497	--	--	--	1,937	37.36	32.18
05/30/2019	11:00	497	--	--	--	1,937	--	--
05/31/2019	07:00	497	--	--	--	1,937	--	--

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
98.86	10.2	6.27	102.36	9.37	6.27	103.23	0	UFA Prod Temp water level is 7.77 feet btoc
98.69	9.95	6.02	102.61	9.07	5.97	103.53	1.4	UFA Prod Temp water level is 7.54 feet btoc
78.07	9.08	5.15	103.48	7.98	4.88	104.62	1.2	UFA Prod Temp water level is 6.68 feet btoc
78.70	9.51	5.58	103.05	8.57	5.47	104.03	0	UFA Prod Temp water level is 7.08 feet btoc
77.59	9.66	5.73	102.90	8.72	5.62	103.88	0	UFA Prod Temp water level is 7.22 feet btoc; NRQ tripped up 40 feet and packer in hole but not inflated.
77.33	9.88	5.95	102.68	8.96	5.86	103.64	0	UFA Prod Temp water level is 7.44 feet btoc
78.20	10.02	6.09	102.54	9.12	6.02	103.48	0	UFA Prod Temp water level is 7.60 feet btoc
77.81	10.71	6.78	101.85	9.80	6.70	102.8	0	UFA Prod Temp water level is 8.26 feet btoc
76.55	10.89	6.96	101.67	9.95	6.85	102.65	0	UFA Prod Temp water level is 8.44 feet btoc; NRQ tripped up 40 feet
--	11.09	7.16	101.47	10.11	7.01	102.49	0	UFA Prod Temp water level is 8.64 feet btoc; NRQ tripped out
--	11.17	7.24	101.39	10.23	7.13	102.37	0	UFA Prod Temp water level is 8.72 feet btoc; NRQ tripped out

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
11/04/2019	10:15	497	--	--	--	1,937	18.33	15.27
11/05/2019	07:00	497	--	--	--	1,937	30.22	27.05
11/06/2019	08:00	497	--	--	--	1,937	31.84	28.61
11/07/2019	07:30	497	--	--	--	1,937	32.2	29.09
11/12/2019	11:00	497	--	--	--	1,937	36.1	29.95
11/13/2019	08:00	497	--	--	--	1,947	33.11	30.07
11/18/2019	09:00	497	--	--	--	1,997	33.75	30.57
11/19/2019	07:00	497	--	--	--	2,017	34.24	31.13
11/20/2019	08:00	497	--	--	--	2,047	34.1	30.81

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
93.46	9.15	5.22	103.41	7.15	3.78	104.97	0	UDR was moved and MPs were remeasured at same elevation. UFA Prod Temp water level is 7.09 feet btoc; NRQ rods at 1,113 feet. U Fldn Aq (Ocala) well was hit by Cannon and casing could be broken (new toc is 112.12 NAVD 88)
81.68	7.83	3.90	104.73	6.84	3.47	105.28	0	UFA Prod Temp water level is 5.81 feet btoc; NRQ rods at 1,673 feet
80.12	7.62	3.69	104.94	6.73	3.36	105.39	0	UFA Prod Temp water level is 6.73 feet btoc; NRQ rods at 1,833 feet
79.64	7.47	3.54	105.09	6.58	3.21	105.54	0.13	UFA Prod Temp water level is 5.15 feet btoc
78.78	7.31	3.38	105.25	6.40	3.03	105.72	0.74	UFA Prod Temp water level is 4.94 feet btoc
78.66	7.57	3.64	104.99	6.50	3.13	105.62	0.14	UFA Prod Temp water level not recorded because Cannon pumping
78.16	7.46	3.53	105.10	6.57	3.20	105.55	0.2	UFA Prod Temp water level is 5.18 feet btoc
77.60	7.59	3.66	104.97	6.67	3.30	105.45	0	UFA Prod Temp water level is 5.34 feet btoc
77.92	7.74	3.81	104.82	6.77	3.40	105.35	0	UFA Prod Temp water level is 5.48 feet btoc

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
11/21/2019	07:30	497	--	--	--	2,047	37.43	30.98
11/25/2019	11:30	497	--	--	--	2,047	37.1	30.65
11/26/2019	07:30	497	--	--	--	2,047	37.13	30.68
12/02/2019	11:30	497	--	--	--	2,047	37.13	30.76
12/03/2019	10:00	497	--	--	--	2,047	34.40	31.37
12/04/2019	07:30	497	--	--	--	2,047	34.39	31.37
12/05/2019	07:30	497	--	--	--	2,087	33.59	30.36
12/06/2019	07:30	497	--	--	--	2,107	33.73	30.49
12/10/2019	07:30	497	--	--	--	2,107	--	--
12/11/2019	07:30	497	--	--	--	2,107	34.45	31.37
12/12/2019	07:30	497	--	--	--	2,107	--	--

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/ tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
77.75	7.83	3.90	104.73	6.80	3.43	105.32	0	UFA Prod Temp water level is 5.55 feet btoc; packer set at 2,007 feet
78.08	7.41	3.48	105.15	6.41	3.04	105.71	0.74	UFA Prod Temp water level is 5.15 feet btoc; NRQ rods at 2,005 feet
78.05	7.47	3.54	105.09	6.51	3.14	105.61	0	UFA Prod Temp water level is 5.22 feet btoc; NRQ rods at 2,005 feet
77.97	7.66	3.73	104.90	6.76	3.39	105.36	0.30	UFA Prod Temp water level is 5.41 feet btoc; NRQ rods at 2,005 feet
77.36	7.44	3.51	105.12	6.81	3.44	105.31	0	UFA Prod Temp water level is 5.48 feet btoc
77.36	7.80	3.87	104.76	6.90	3.53	105.22	0	UFA Prod Temp water level is 5.56 feet btoc
78.37	7.92	3.99	104.64	7.01	3.64	105.11	0	UFA Prod Temp water level is 5.67 feet btoc
78.24	7.98	4.05	104.58	7.03	3.66	105.09	0	UFA Prod Temp water level is 5.65 feet btoc
--	8.27	4.34	104.29	7.23	3.86	104.89	0	UFA Prod Temp water level is 6.00 feet btoc
77.36	8.17	4.24	104.39	7.35	3.98	104.77	0	NRQ rods at 1,773 feet; oil in UFA Prod Temp well - water level not recorded
--	8.37	4.44	104.19	7.35	3.98	104.77	0	NRQ tripped out; oil in UFA Prod Temp well - water level not recorded

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
12/16/2019	15:15	497	--	--	--	2,107	--	--
12/17/2019	07:30	497	--	--	--	2,107	18.52	15.43
01/06/2020	09:00	497	--	--	--	2,107	35.13	32.12
01/07/2020	07:30	497	--	--	--	2,107	--	--
01/08/2020	07:30	497	--	--	--	2,107	33.30	30.26
01/13/2020	10:00	497	--	--	--	2,113	--	--
01/14/2020	08:00	497	--	--	--	2,113	33.20	30.14
01/16/2020	07:30	497	--	--	--	2,116	--	--
01/17/2020	09:00	497	--	--	--	2,116	36.15	30.24
01/21/2020	08:00	497	--	--	--	2,117	--	--

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HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
--	8.14	4.21	104.42	7.19	3.82	104.93	0.30	NRQ rods at 773 feet; oil in UFA Prod Temp well - water level not recorded
93.30	8.10	4.17	104.46	7.17	3.80	104.95	0	NRQ rods at 843 feet; oil in UFA Prod Temp well - water level not recorded
76.61	6.92	2.99	105.64	5.94	2.57	106.18	3.55	NRQ rods 100 feet off bottom; UFA Prod Temp water level is 4.57 feet btoc
--	6.98	3.05	105.58	6.08	2.71	106.04	0	NRQ rods tripped out; UFA Prod Temp water level is 4.61 feet btoc
78.47	7.13	3.20	105.43	6.27	2.90	105.85	0	UFA Prod Temp water level is 4.75 feet btoc
--	7.40	3.47	105.16	6.57	3.20	105.55	0	UFA Prod Temp water level is 5.03 feet btoc
78.59	7.39	3.46	105.17	6.54	3.17	105.58	0	UFA Prod Temp water level is 5.02 feet btoc
--	7.42	3.49	105.14	6.57	3.20	105.55	0.10	Rocks stuck in NRQ; UFA Prod Temp water level is 5.04 feet btoc
78.49	7.50	3.57	105.06	6.65	3.28	105.47	0	UFA Prod Temp water level is 5.13 feet btoc
--	7.69	3.76	104.87	6.87	3.50	105.25	0	Airline in rods; UFA Prod Temp water level is 5.34 feet btoc

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
01/22/2020	07:45	497	--	--	--	2,127	--	--
01/23/2020	07:30	497	--	--	--	2,137	34.03	30.62
01/24/2020	08:00	497	--	--	--	2,157	33.79	30.59
01/27/2020	08:00	497	--	--	--	2,177	33.74	30.47
01/28/2020	07:30	497	--	--	--	2,177	36.22	30.74
01/29/2020	07:30	497	--	--	--	2,177	36.38	30.93
01/30/2020	07:30	497	--	--	--	2,177	36.46	31.08
01/31/2020	07:30	497	--	--	--	2,177	36.87	31.26
02/03/2020	11:30	497	--	--	--	2,177	--	--

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
--	7.70	3.77	104.86	6.90	3.53	105.22	0	Airline in rods; UFA Prod Temp water level is 5.38 feet btoc
78.11	7.71	3.78	104.85	6.90	3.53	105.22	0	UFA Prod Temp water level is 5.37 btoc
78.14	7.68	3.75	104.88	6.87	3.50	105.25	0.04	Oil in UFA Prod Temp well - water level not recorded
78.26	7.81	3.88	104.75	7.02	3.65	105.1	0	Oil in UFA Prod Temp well - water level not recorded
77.99	7.88	3.95	104.68	7.11	3.74	105.01	0	NRQ rods tripped up 40 feet for packer test; Oil in UFA Prod Temp well - water level not recorded
77.80	7.93	4.00	104.63	7.06	3.69	105.06	0	NRQ rods tripped up 40 feet for packer test; Oil in UFA Prod Temp well - water level not recorded
77.65	7.97	4.04	104.59	7.08	3.71	105.04	0	NRQ rods tripped up 40 feet for packer test; Oil in UFA Prod Temp well - water level not recorded
77.47	8.02	4.09	104.54	7.11	3.74	105.01	0	NRQ rods tripped up 40 feet for packer test; Oil in UFA Prod Temp well - water level not recorded
--	8.00	4.07	104.56	7.07	3.70	105.05	0.20	Oil in UFA Prod Temp well - water level not recorded

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
02/04/2020	07:45	497	--	--	--	2,177	--	--
02/05/2020	07:30	497	--	--	--	2,177	36.86	31.26
02/10/2020	08:00	497	--	--	--	2,177	37.63	31.67
02/11/2020	07:30	497	--	--	--	2,177	37.57	31.61
02/12/2020	07:30	497	--	--	--	2,177	37.49	31.54
02/13/2020	07:30	497	--	--	--	2,177	34.82	31.04
02/18/2020	07:00	497	--	--	--	2,177	37.19	31.23

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
--	8.01	4.08	104.55	7.06	3.69	105.06	0	Oil in UFA Prod Temp well - water level not recorded
77.47	8.02	4.09	104.54	7.12	3.75	105	0	NRQ rods tripped up 40 feet for packer test; Oil in UFA Prod Temp well - water level not recorded
77.06	7.64	3.71	104.92	6.71	3.34	105.41	0.82	NRQ rods tripped up 40 feet for packer test; Oil in UFA Prod Temp well - water level not recorded
77.12	7.69	3.76	104.87	6.79	3.42	105.33	0.03	NRQ rods tripped up 40 feet for packer test; Oil in UFA Prod Temp well - water level not recorded
77.19	7.76	3.83	104.80	6.83	3.46	105.29	0	Packer set at 2,134 feet; Oil in UFA Prod Temp well - water level not recorded
77.69	7.88	3.95	104.68	6.88	3.51	105.24	0	NRQ rods tripped up for packer test; Oil in UFA Prod Temp well - water level not recorded
77.50	7.55	3.62	105.01	6.87	3.50	105.25	0.64	NRQ rods tripped up to 2,109 feet for packer test; Oil in UFA Prod Temp well - water level not recorded

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
02/19/2020	10:45	497	--	--	--	2,177	34.42	31.22
02/20/2020	07:00	497	--	--	--	2,197	34.49	31.33
02/24/2020	07:00	497	--	--	--	2,217	34.07	30.90
02/25/2020	07:30	497	--	--	--	2,237	33.87	30.62
02/26/2020	07:00	497	--	--	--	2,247	34.15	30.59
02/27/2020	10:40	497	--	--	--	2,257	--	--
03/02/2020	10:00	497	--	--	--	2,257	--	--
03/03/2020	07:30	497	--	--	--	2,257	36.43	33.18
03/04/2020	11:00	497	--	--	--	2,277	34.37	31.17
03/09/2020	09:30	497	--	--	--	2,277	34.44	31.53

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
77.51	7.62	3.69	104.94	6.90	3.53	105.22	0	NRQ rods tripped up to 2,109 feet for packer test; Oil in UFA Prod Temp well - water level not recorded
77.40	7.63	3.70	104.93	6.91	3.54	105.21	0	Oil in UFA Prod Temp well - water level not recorded
77.83	7.89	3.96	104.67	7.17	3.80	104.95	0.04	Oil in UFA Prod Temp well - water level not recorded
78.11	7.91	3.98	104.65	7.22	3.85	104.9	0	Oil in UFA Prod Temp well - water level not recorded
78.14	7.98	4.05	104.58	7.12	3.75	105	0	Oil in UFA Prod Temp well - water level not recorded
--	8.01	4.08	104.55	7.11	3.74	105.01	0.15	Bit is plugged; Oil in UFA Prod Temp well - water level not recorded
--	8.39	4.46	104.17	7.36	3.99	104.76	0	Bit is plugged; Oil in UFA Prod Temp well - water level not recorded
75.36	8.27	4.34	104.29	7.32	3.95	104.8	0	NRQ at 1,833 feet; Oil in UFA Prod Temp well - water level not recorded
77.56	8.54	4.61	104.02	7.35	3.98	104.77	0	Oil in UFA Prod Temp well - water level not recorded; airline in NRQ
77.20	8.73	4.80	103.83	8.06	4.69	104.06	0	Oil in UFA Prod Temp well - water level not recorded; MP for U Fldn Aq (Ocala) well changed again

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
03/10/2020	07:30	497	--	--	--	2,277	34.57	31.51
03/11/2020	07:30	497	--	--	--	2,317	37.34	34.23
03/12/2020	07:30	497	--	--	--	2,357	36.77	33.71
03/16/2020	11:00	497	--	--	--	2,397	37.44	34.22
03/17/2020	07:00	497	--	--	--	2,397	36.89	33.34
03/19/2020	07:30	497	--	--	--	2,397	39.26	33.79
03/20/2020	07:30	497	--	--	--	2,397	39.25	33.78
03/23/2020	08:00	497	--	--	--	2,397	37.47	34.16
03/24/2020		497	--	--	--	2,397	37.80	34.42
03/25/2020	07:30	497	--	--	--	2,437	37.10	33.75
03/26/2020	08:30	497	--	--	--	2,477	40.57	37.29
03/30/2020	09:30	497	--	--	--	2,517	39.75	36.61

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/
tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
77.22	8.65	4.72	103.91	8.03	4.66	104.09	0	Oil in UFA Prod Temp well - water level not recorded
74.50	8.66	4.73	103.90	7.99	4.62	104.13	0	Oil in UFA Prod Temp well - water level not recorded
75.02	8.66	4.73	103.90	8.04	4.67	104.08	0	Oil in UFA Prod Temp well - water level not recorded
74.51	8.95	5.02	103.61	8.35	4.98	103.77	0	Oil in UFA Prod Temp well - water level not recorded
75.39	8.94	5.01	103.62	8.36	4.99	103.76	0	Oil in UFA Prod Temp well - water level not recorded
74.94	9.11	5.18	103.45	8.50	5.13	103.62	0	Packer set; Oil in UFA Prod Temp well - water level not recorded
74.95	9.16	5.23	103.40	8.59	5.22	103.53	0	Packer set; Oil in UFA Prod Temp well - water level not recorded
74.57	9.34	5.41	103.22	8.83	5.46	103.29	0	NRQ rods tripped up 40 feet; Oil in UFA Prod Temp well - water level not recorded
74.31	9.38	5.45	103.18	8.89	5.52	103.23	0	Oil in UFA Prod Temp well - water level not recorded
74.98	9.46	5.53	103.10	8.94	5.57	103.18	0	Oil in UFA Prod Temp well - water level not recorded
71.44	9.53	5.60	103.03	9.05	5.68	103.07	0	Oil in UFA Prod Temp well - water level not recorded
72.12	9.87	5.94	102.69	9.29	5.92	102.83	0	Oil in UFA Prod Temp well - water level not recorded

Table I2. Daily water levels recorded during core drilling and testing in core hole 3 at the ROMP 88 – Rock Ridge well

[--, not recorded; Aq, aquifer; Avpk, Avon Park Formation; bls, below land surface; btoc, below top of casing; CH3, core hole 3; Fldn, Floridan; ft, feet; day/year; MPs, measuring points; NAVD 88,North American Vertical Datum of 1988; NQ/NRQ, 2.38-inch inner diameter steel core drilling rod; Prod, produc-

Date (MM/DD/YYYY)	Time (HH:MM)	4-inch HWT/HQ Deepest Casing Depth (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft btoc)	4-inch HWT/HQ Temporary Casing Static Water Level (ft bls)	4-inch HWT/HQ Temporary Casing Static Water Level (ft NAVD 88)	NQ/NRQ Core Hole 3 Total Depth (ft bls)	NQ/NRQ Core Hole 3 Static Water Level (ft btoc)	NQ/NRQ Core Hole 3 Static Water Level (ft bls)
03/31/2020	07:30	497	--	--	--	2,527	36.34	33.29
04/01/2020	07:15	497	--	--	--	2,527	41.48	38.43
04/02/2020	07:30	497	--	--	--	2,557	42.10	38.92
04/06/2020	07:00	497	--	--	--	2,577	40.37	36.98
04/07/2020	07:30	497	--	--	--	2,577	41.32	37.93
04/08/2020	07:00	497	--	--	--	2,607	44.60	38.96

site in Polk County, Florida

HH:MM, hours:minutes; HQ, 3.06-inch inner diameter steel core drilling rod; HWT, 4-inch inner diameter temporary steel casing; MM/DD/YYYY, month/ tion; PVC, polyvinyl chloride; Temp; temporary; toc, top of casing; UDR, Universal Drill Rigs 200D LS drill rig; UFA; upper Floridan aquifer; U, upper]

NQ/NRQ Core Hole 3 Static Water Level (ft NAVD 88)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft btoc)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft bls)	U Fldn Aq (Avpk) Monitor/ Drilling Water Supply Static Water Level (ft NAVD 88)	U Fldn Aq (Ocala) Monitor Static Water Level (ft btoc)	U Fldn Aq (Ocala) Monitor Static Water Level (ft bls)	U Fldn Aq (Ocala) Monitor Static Water Level (ft NAVD 88)	Rain Gauge (inches)	Comments
75.44	9.84	5.91	102.72	9.21	5.84	102.91	0	NRQ rods up to 1,427 feet; Oil in UFA Prod Temp well - water level not recorded
70.30	10.02	6.09	102.54	9.37	6.00	102.75	0.03	Oil in UFA Prod Temp well - water level not recorded
69.81	10.06	6.13	102.50	9.49	6.12	102.63	0	Oil in UFA Prod Temp well - water level not recorded
71.75	10.26	6.33	102.30	9.76	6.39	102.36	0.28	
70.80	10.32	6.39	102.24	9.84	6.47	102.28	0.03	
69.77	10.35	6.42	102.21	9.88	6.51	102.24	0	Packer set at 2,547 feet

Appendix J. Aquifer Performance Test Data Acquisition Sheets for the ROMP 88 – Rock Ridge Well Site in Polk County, Florida

GEOHYDROLOGIC DATA SECTION

AQUIFER PERFORMANCE TEST - DATA ACQUISITION SHEET

General Information: UFA APT

Site Name: ROMP 88 – Rock Ridge
Date: 4-13-23 / 4-24-23
Reporting Code: LWRK
Performed by: T Horstman
County: Polk
S/T/R:
Pumped Well: UFA Temp
Pumped Zone OB(s): UFA Avpk Monitor, UFA Ocala Monito
Pump Type: 10 inch turbine
Test Rate/Duration: 3000 / 72 hrs
Non-Pumped Zone OB(s): LFA VIII, LFA I
Pump Set Depth: 108 ft

Setup Information:

Datalogger: Virtual Hermit / Michelangelo
Time Synchronized:
Datalogger SN:
Time Datum:
Program Name:
BG start 4-13-23
end 4-24-23
Program Start Date:
Program End Date:

Test Information:

Pump On Time:
Flow Meter Totalizer Start: 123907 x1000
Pump Off Time: left right high low
Flow Meter Totalizer End: 135954

		CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	
Well		UFA temp AP	UFA AP Temp	UFA AVm	UFA AP mon	UFA Ocala	LFA VIII m	LFA I mon	Baro	Baro every 5 mins
Riser ht.	**als ft**	~0.8	~0.8						—	
TOC elev	**elev ft**	~109.63	~109.63	112.625	112.50	112.60	111.40	112.91	—	<- Elev Ref.
static W/L	**btoc ft**	8.6	8.6	11.65	11.55	11.41	35.57	10.86	—	<- Date
static W/L	**elev ft**	101.03	101.03	100.975	100.95	101.19	78.83	102.05	—	TOC elev - static WL(btoc)
XD Rating	**psi**								—	UFA Temp elev TOC estimated because mp [illegible]
Serial No.		987867	396485	464414	464546	464596	460490	991307	804808	
Reading in Air	**ft**	0.004	0.006	-0.013	0.003	0.003	-0.001	0.009	759.266	
XD depth	**btoc ft**	40	40	35	35	35	40	22	—	
XD elev	**elev ft**	69.63	69.63	77.625	77.5	77.6	71.4	90.91	—	TOC elev - XD depth(btoc)
XD subm.	**wl tape ft**	31.40	31.40	23.35	23.45	23.59	4.43	11.14	—	WL tape value of submergence
XD subm.	**XD read ft**	31.173	31.317	23.269	23.403	23.451	4.346	11.048	—	XD value of submergence
XD Diff.	**ft**								—	Subm.$_{WL\ tape}$ - Subm.$_{XD}$

Date	Time	CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	Totalizer (g x 1000)	Notes
Units	------------->										
4/13/23		Setup all Level Trolls									
	15:40:58	Start BG									
	Set up	Campbell flowmeter program name									
		R88_UFA DAY APT Michelangelo ch8 flowmeter copy									
		10 inch flow meter									
	"										
4/24/23	9:35	Stop Background									
4/24/23	9:43	8.05	8.05	10.95	10.85	10.9	35.78	10.67	—		2" rain

GEOHYDROLOGIC DATA SECTION

AQUIFER PERFORMANCE TEST - DATA ACQUISITION SHEET

General Information: UFA APT

Site Name: ROMP 88 – Rock Ridge
Date:
Reporting Code: LWRK
Performed by: T Horstman
County: Polk
S/T/R:

Datalogger:		CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	Totalizer	Notes
Date	Time								Every	(g x 1000)	
4/24/23	9:58	Create DD test on UH							5min		
		log @ 5min intervals									
sub w/ E tape		31.95	31.95	24.05	24.15	24.1	4.22	11.33			
sub px		31.635	31.789	23.846	23.970	23.931	4.13	11.248	—		
4/24/23	10:40:12	Start program									
4/24/23	10:42:28	Pump on									
4/25/23	~1800	2 inches rain fell at site within ~2 hrs									
4/26/23	~1800	0.70 inches rain									
4/27/23	12:02:09	Step test									
4/27/23	12:02:30	pump off									

GEOHYDROLOGIC DATA SECTION

AQUIFER PERFORMANCE TEST - DATA ACQUISITION SHEET

General Information: UFA APT

Site Name: ROMP 88 – Rock Ridge
Date:
Reporting Code: LWRK
Performed by: T Horstman
County: Polk
S/T/R: 16/25/24

Pumped Well: UFA Temp
Pumped Zone OB(s): UFA Avpk Monitor, UFA Ocala Monito
Pump Type: 10-inch turbine
Test Rate/Duration: 2,900 gpm/72 hours
Non-Pumped Zone OB(s): LFA VIII, LFA I
Pump Set Depth:

Setup Information:

Datalogger: Virtual Hermit/Michelangelo
Time Synchronized:
Datalogger SN:
Time Datum:
Program Name:
Program Start Date:
Program End Date:

Test Information:

Pump On Time:
Flow Meter Totalizer Start:
Pump Off Time:
Flow Meter Totalizer End:

		Troll	Tube	Logger							
Well		Manometer	Manometer	Flowmeter							
Riser ht.	***als ft***	-	-	-							
TOC elev	***elev ft***	-	-	-						<- Elev Ref.	
static W/L	***btoc ft***	-	-	-						<- Date	
static W/L	***elev ft***	-	-	-						TOC elev - static WL(btoc)	
XD Rating	***psi***	30	-	-							
Serial No.		393760	-	-							
Reading in Air	***ft***	0.03	-	-11.8							
XD depth	***btoc ft***	-	-	-							
XD elev	***elev ft***	-	-	-						TOC elev - XD depth(btoc)	
XD subm.	***wl tape ft***	-	-	-						WL tape value of submergence	
XD subm.	***XD read ft***	-	-	-						XD value of submergence	
XD Diff.	***ft***	-	-	-						$Subm._{WL\ tape} - Subm._{XD}$	
Date	**Time**	**Troll**	**Tube**	**Logger**						Totalizer	Notes
		Manometer	Manometer	Flowmeter						(g x 1000)	
Units	----------->	inches	inches	gpm							
4/13/23		battery		Programmed Manometer (PXD)							
		45%		3 minutes / Depth in inches							
4/24/23	10:14	Check manometer PXD. RIA ~ C.07 "									

GEOHYDROLOGIC DATA SECTION

AQUIFER PERFORMANCE TEST - DATA ACQUISITION SHEET

General Information: LFA I APT 2nd Attempt

Site Name:	ROMP 88 – Rock Ridge	Date:	3-27-2023
Reporting Code:	LWRK	Performed by:	T Horstman
County:	Polk	S/T/R:	16/25/24
Pumped Well:	LFA I Temp	Pumped Zone OB(s):	LFA I Monitor
Pump Type:	6 inch submersible 30hp		
Test Rate/Duration:	350 gpm / 72hrs	Non-Pumped Zone OB(s):	LFA VIII, UFA
Pump Set Depth:	113 ft		

Setup Information:

Datalogger:	Virtual Hermit/Michelangelo	Time Synchronized:	3/27/23 9:47:44
Datalogger SN:		Time Datum:	
Program Name:	LFA I APT 2		
Program Start Date:	3-27-2023 10:12:45		
Program End Date:			

Test Information:

Pump On Time:	10:13:04	Flow Meter Totalizer Start:	21786 x100
Pump Off Time:	Lower PVC	Flow Meter Totalizer End:	37542

		CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	
Well		LFA I Temp	LFA I Temp	LFA I mon	LFA I Mon	UFA APmon	UFA APMon	LFA VIII mon	Baro	
Riser ht.	*als ft*									
TOC elev	*elev ft*	110.53	110.53	112.91	112.91	112.50	112.625	111.40	—	<- Elev Ref.
static W/L	*btoc ft*	7.3	7.3	9.73	9.73	10.13	10.26	34.92	—	<- Date
static W/L	*elev ft*	103.23	103.23	103.18	103.18	102.37	102.37	76.48	—	TOC elev - static WL(btoc)
XD Rating	*psi*	100	100	15	15	15	15	15	—	
Serial No.		396485	987867	464396	694636	464414	672687	460490	804808	
Reading in Air	*ft*									
XD depth	*btoc ft*	55	55	22	22	15	15	40	—	
XD elev	*elev ft*	55.53	55.53	90.91	90.91	97.5	97.6	71.4	—	TOC elev - XD depth(btoc)
XD subm.	*wl tape ft*	47.7	47.7	12.27	12.27	4.87	4.74	5.08	—	WL tape value of submergence
XD subm.	*XD read ft*	47.56	47.47	12.169	12.155	4.74	4.67	4.974	—	XD value of submergence
XD Diff.	*ft*	0.14	0.23	0.101	0.115	0.13	0.07	0.106	—	$Subm._{WL\ tape}$ - $Subm._{XD}$

Date	Time	CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	Totalizer (g x 1000)	Notes
Units	----------->	feet									
3/27/23	Start APT										
3/28/23	~915	UFA Level Troll 672 687 lost									
		communication - still have backup									
3/28/23	~919		comm. lost on Troll 987867								
	~925	changed 9 volt batteries in VIII and all									
			Trolls reconnected.								
3/30/23	2:01:03	Step recovery									
3/30/23	2:01:11	Pump off									

GEOHYDROLOGIC DATA SECTION

AQUIFER PERFORMANCE TEST - DATA ACQUISITION SHEET

General Information: LFA I APT

Site Name: ROMP 88 – Rock Ridge
Date:
Reporting Code: LWRK
Performed by: T Horstman
County: Polk
S/T/R: 16/25/24

Pumped Well: LFA I Temp
Pumped Zone OB(s): LFA I Monitor
Pump Type:
Test Rate/Duration:
Non-Pumped Zone OB(s): LFA VIII, UFA
Pump Set Depth:

Setup Information:

Datalogger: Virtual Hermit/Michelangelo
Time Synchronized:
Datalogger SN:
Time Datum:
Program Name:
Program Start Date:
Program End Date:

Test Information:

Pump On Time:
Flow Meter Totalizer Start:
Pump Off Time:
Flow Meter Totalizer End:

		Troll	Tube	Logger						
Well		Manometer	Manometer	Flowmeter						
Riser ht.	*als ft*	-	-	-						
TOC elev	*elev ft*	-	-	-						<- Elev Ref.
static W/L	*btoc ft*	-	-	-						<- Date
static W/L	*elev ft*	-	-	-						TOC elev - static WL(btoc)
XD Rating	*psi*	30	-	-						
Serial No.		393760	-	-						
Reading In Air	*ft*		-	0.22						
XD depth	*btoc ft*	-	-	-						
XD elev	*elev ft*	-	-	-						TOC elev - XD depth(btoc)
XD subm.	*wl tape ft*	-	-	-						WL tape value of submergence
XD subm.	*XD read ft*	-	-	-						XD value of submergence
XD Diff.	*ft*	-	-	-						$Subm._{WL\ tape}$ - $Subm._{XD}$

Date	Time	Troll	Tube	Logger						Totalizer	Notes
		Manometer	Manometer	Flowmeter						(g x 1000)	
Units	----------->	inches	inches	gpm							

GEOHYDROLOGIC DATA SECTION
AQUIFER PERFORMANCE TEST - DATA ACQUISITION SHEET

General Information: LFA VIII APT

Site Name: ROMP 88 – Rock Ridge | Date: 2-20-2023
Reporting Code: LWRK | Performed by: T Horstman
County: Polk | S/T/R: 16/25/24
Pumped Well: LFA VIII Temp | Pumped Zone OB(s): LFA VIII Monitor, core hole 3
Pump Type: 10-inch turbine
Test Rate/Duration: 2,900 gpm/72 hours | Non-Pumped Zone OB(s): LFA I, UFA
Pump Set Depth: 200 feet

Setup Information:

Datalogger: Virtual Hermit / michelangelo | Time Synchronized:
Datalogger SN: | Time Datum:
Program Name:
Program Start Date: BG – 1:34 pm on 2/20/23
Program End Date:

Test Information:

Pump On Time: | Flow Meter Totalizer Start: ~~112130~~ 112156
Pump Off Time: Left Right | Flow Meter Totalizer End: 123436

		CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	hole on steel plate =108.95 for CH3
Well		LFA VIII temp	LFA VIII Temp	LFA VIII mon	LFA VIII mon	LFA I mon	UFA AP	CH 3	Baro	
Riser ht.	als ft	+0.22	+0.12						—	
TOC elev	elev ft	109.57	109.48	111.40	111.40	112.91	112.50	113.17	—	<- Elev Ref.
static W/L	btoc ft	30.91	30.84	33.88	33.88	8.09	8.34	35.21	—	<- Date
static W/L	elev ft	78.66	78.64	77.52	77.52	104.82	104.16	77.96	—	TOC elev - static WL(btoc)
XD Rating	psi	100	100	15	15	15	15	15	—	LFA VIII Temp mps are 2 ft above the outlet
Serial No.		396485	987867	460490	694636	464396	464414	672687	804808	
Reading in Air	ft	0.012	-0.016	0.002	0.002	0.005	-0.004	-0.006	761.56	LFA I mon mp = SF
XD depth	btoc ft	~~80~~ 90	~~80~~ 90	40	40	12	11	43	—	UFA AP mp = SF 112.50
XD elev	elev ft	29.57	29.48	71.4	71.4	100.91	101.5	70.17		TOC elev - XD depth(btoc)
XD subm.	wl tape ft	49.09	49.16	6.12	6.12	3.91	2.66	7.79		WL tape value of submergence
XD subm.	XD read ft	48.8	48.77	6.00	6.02	3.82	2.59	7.68		XD value of submergence
XD Diff.	ft	0.29	0.39	0.12	0.10	0.09	0.07	0.11		$Subm._{WL\ tape}$ - $Subm._{XD}$

Date	Time	CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	Totalizer (g x 1000)	Notes
Units	----------->	Level	DTW	- ft							
2/20/23	13:34	Start	BG								
2/23/23	11:15	31.19	31.11	34.11	34.11	8.32	8.52	35.44	766.5		VH reading
2/27/23	10:05	31.21	31.11	34.08	34.09	8.34	8.63	35.40	761.9		VH reading
2/27/23	10:25	31.18	31.11	34.08	34.08	8.33	8.61	35.40	—		Taped readings
2/27/23	10:42	Stop	BG	—	—	—	—	—	—		
2/27/23	11:45	Start	DD	program							
2/27/23		Stop	DD	Pumped	well	drew down	more	than	expected		
				reset	transducers		10 ft	lower			
2/27/23	13:10	29.45	29.35		transducers	in	pumped	well	now	90 ft	

GEOHYDROLOGIC DATA SECTION

AQUIFER PERFORMANCE TEST - DATA ACQUISITION SHEET

General Information: LFA VIII APT

Site Name: ROMP 88 – Rock Ridge

Date: 2-27-2023

Reporting Code: LWRK

Performed by: T Horstman

County: Polk

S/T/R: 16/25/24

Datalogger:		CH 1	CH 2	CH 3	CH 4	CH 5	CH 6	CH 7	CH 8	Totalizer	Notes
		LFA VIII Tm	LFA VIII Tmo	LFA VIII Ms	LFA VIII Mm	LFA I Mn	AP Mn	CH3			
Date	Time	396485	987867	460490	694636	464396	464414	692687	Baro	(g x 1000)	
2/27/23	1345	Start	2nd	dd	pump	on	1346				
2/27/23	1406	87.366	87.447	34.336	34.327	8.318	8.615	35.829	759.7		VH #5
2/27/23	1429	—	—	—	—	—	—	—	—	112271	
2/27/23	1523	86.731	86.945	34.248	34.236	8.311	8.605	35.852	759.3	—	VH #5
2/28/23	956	86.835	86.833	34.319	34.310	8.386	8.664	35.950	760.3	—	
2/28/23	~	9pm	RPMs	on pu	mp lo	wered	and	gpm	lowered		
	~	1130pm	RPMs	were	ra	mped	back	up			
3/2/23		Step	DD	to RC	@	13:	52:55				
3/2/23		pump	off	@		13:	53:26				
3/2/23	1351	—	—	—	—	—	—	—	—	123436	
3/9/23	1104	31.272	31.166	34.526	34.532	8.946	9.130	35.949	764.377	—	VH #5

GEOHYDROLOGIC DATA SECTION

AQUIFER PERFORMANCE TEST - DATA ACQUISITION SHEET

General Information: LFA VIII APT

Site Name:	ROMP 88 – Rock Ridge	Date:	
Reporting Code:	LWRK	Performed by:	T Horstman
County:	Polk	S/T/R:	16/25/24
Pumped Well:	LFA VIII Temp	Pumped Zone OB(s):	LFA VIII Monitor, core hole 3
Pump Type:	10-inch turbine		
Test Rate/Duration:	2,900 gpm/72 hours	Non-Pumped Zone OB(s):	LFA I, UFA
Pump Set Depth:	200 feet		

Setup Information:

Datalogger:	Virtual Hermit/Michelangelo	Time Synchronized:	
Datalogger SN:		Time Datum:	
Program Name:			
Program Start Date:			
Program End Date:			

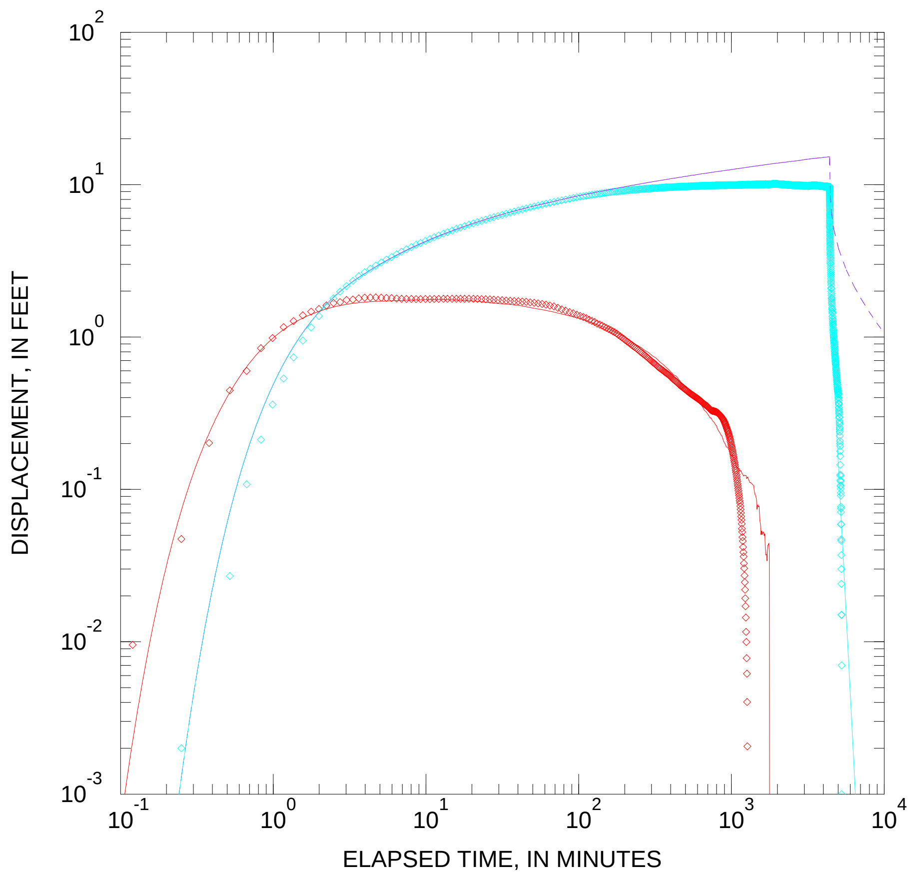
Test Information:

Pump On Time:		Flow Meter Totalizer Start:	~~112130~~ 112156
Pump Off Time:		Flow Meter Totalizer End:	

		Troll	Tube	Logger						
Well		Manometer	Manometer	Flowmeter						
Riser ht.	*als ft*	-	-	-						
TOC elev	*elev ft*	-	-	-						<- Elev Ref.
static W/L	*btoc ft*	-	-	-						<- Date
static W/L	*elev ft*	-	-	-						TOC elev - static WL(btoc)
XD Rating	*psi*	30	-	-						2/20/23 - scheduled start for manometer 2/27/23 @ 7:00 am. Readings every 5 minutes, units in inches
Serial No.		393760	-	-						
Reading in Air	*ft*	0.017	-	-2.6						
XD depth	*btoc ft*	-	-	-						
XD elev	*elev ft*	-	-	-						TOC elev - XD depth(btoc)
XD subm.	*wl tape ft*	-	-	-						WL tape value of submergence
XD subm.	*XD read ft*	-	-	-						XD value of submergence
XD Diff.	*ft*	-	-	-						$Subm._{WL\ tape}$ - $Subm._{XD}$

Date	Time	Troll	Tube	Logger						Totalizer	Notes
		Manometer	Manometer	Flowmeter						(g x 1000)	
Units	----------->	inches	inches	gpm							
2/23/23	1411	[illegible]		2852							
2/27/23	1615	~~49.5~~	49.5	–							[illegible] W/o
2/27/23	1620	49	~~49~~ [illegible]	–							49.51
2/28/23	1533	–	50	–							
2/28/23	1536	49.16	–	–							
3/1/23	11:09	49.16	50	–							
3/1/23	1235	–	–	2850							

Appendix K. Aquifer Performance Test Curve-Match Analyses for the ROMP 88 – Rock Ridge Well Site in Polk County, Florida



UPPER FLORIDAN AQUIFER (AVPK) AQUIFER PERFORMANCE TEST

Data Set: C:\...\ROMP 88 U FLDN_HJ.aqt
Date: 05/14/25 Time: 08:22:07

PROJECT INFORMATION

Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: U Fldn (Avpk) Aq Prod Temp
Test Date: 04/24/2023

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
U Fldn Aq (Avpk) Prod Temp	0	0

Observation Wells

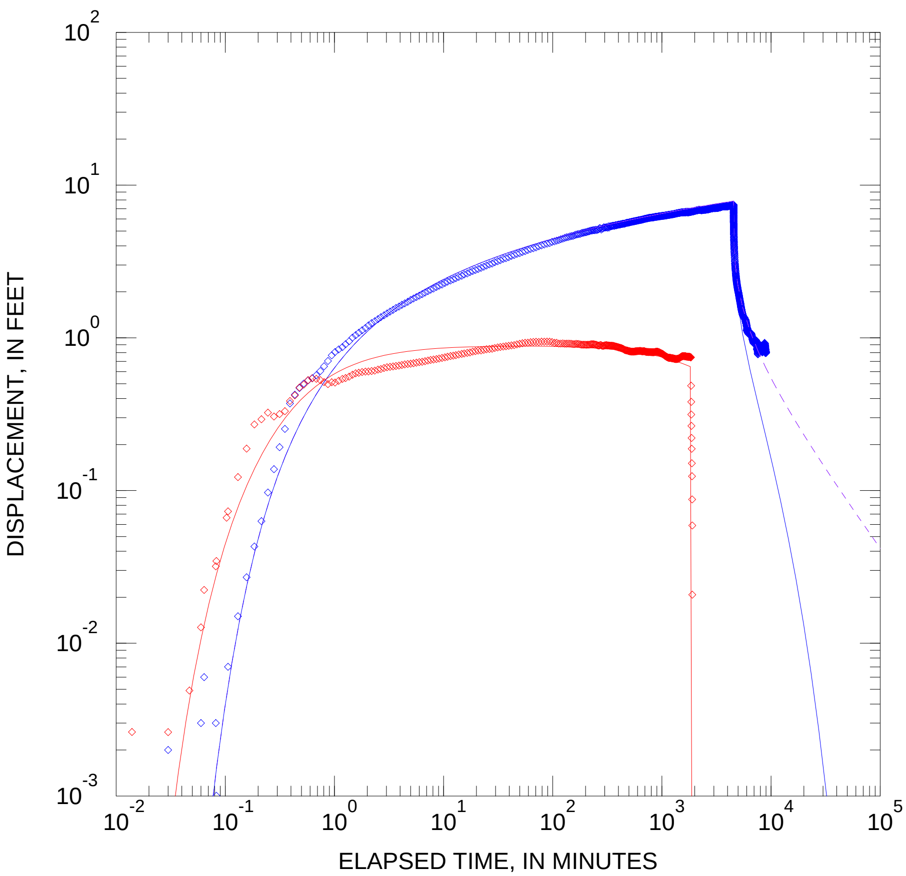
Well Name	X (ft)	Y (ft)
◇ U Fldn Aq (Avpk) Monitor	217	0

SOLUTION

Aquifer Model: Leaky
Solution Method: Hantush-Jacob

T = 2.495E+4 ft^2/day
1/B = 0.0005201 ft^{-1}
b = 494. ft
S = 0.001726
Kz/Kr = 0.1665

Figure K1. AQTESOLV© curve-match solution of the drawdown and recovery data collected from the U Fldn Aq (Avpk) Monitor well during the upper Floridan aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



LOWER FLORIDAN AQUIFER (BL MCU I) AQUIFER PERFORMANCE TEST

Data Set: C:\...\ROMP88L_FLDN_I_Hantush_JJL.aqt
Date: 05/14/25 Time: 08:39:40

PROJECT INFORMATION

Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: L Fldn Aq (bl MCU I) Prod Temp
Test Date: 03/27/2023

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
L Fldn Aq (bl MCU I) Prod Tem	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
◇ L Fldn Aq (bl MCU I) Monitoı	167	0

SOLUTION

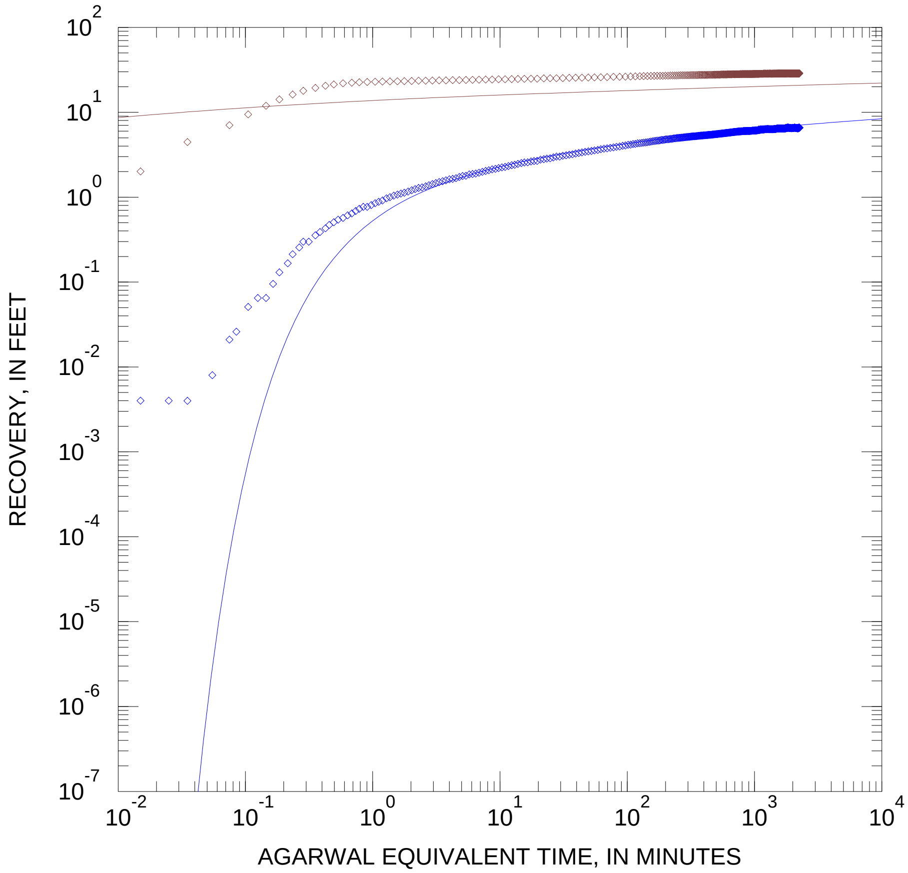
Aquifer Model: Leaky

Solution Method: Hantush-Jacob

T = 5900. ft^2/day
r/B = 0.01622
b = 315. ft

S = 0.0002352
Kz/Kr = 1.

Figure K2. AQTESOLV© curve-match solution of the drawdown and recovery data collected from the L Fldn Aq (bl MCU I) Monitor well during the lower Floridan aquifer below middle confining unit I aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



LOWER FLORIDAN AQUIFER (BL MCU I) AQUIFER PERFORMANCE TEST

Data Set: C:\...\ROMP88L_FLDN_I_TheisAgarwal.aqt
Date: 05/14/25 Time: 08:35:59

PROJECT INFORMATION

Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: L Fldn Aq (bl MCU I) Prod Temp
Test Date: 03/27/2023

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
L Fldn Aq (bl MCU I) Prod Tem	0	0

Observation Wells

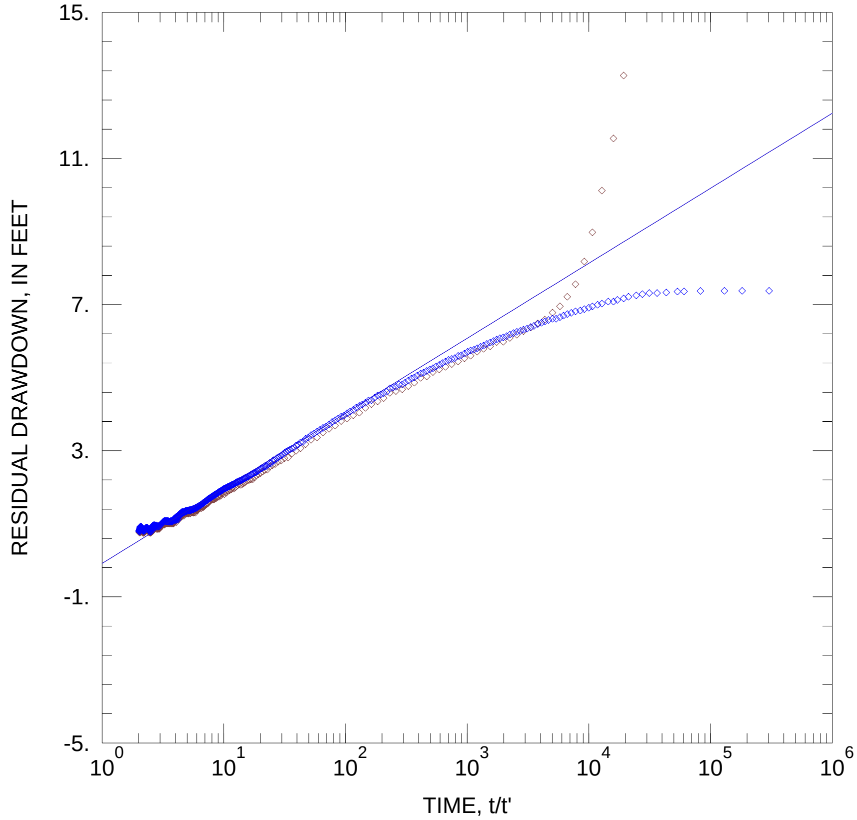
Well Name	X (ft)	Y (ft)
◇ L Fldn Aq (bl MCU I) Prod Temp	0	0
◇ L Fldn Aq (bl MCU I) Monito	167	0

SOLUTION

Aquifer Model: Confined
Solution Method: Theis

T = 5944. ft^2/day
S = 0.0003409
Kz/Kr = 0.1
b = 315. ft

Figure K3. AQTESOLV© Agarwal recovery of the Theis solution curve-match analysis of the lower Floridan aquifer below middle confining unit I aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



LOWER FLORIDAN AQUIFER (BL MCU I) AQUIFER PERFORMANCE TEST

Data Set: C:\...\ROMP88L_FLDN_I_TheisRecovery.aqt
Date: 05/14/25 Time: 08:40:50

PROJECT INFORMATION

Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: L Fldn Aq (bl MCU I) Prod Temp
Test Date: 03/27/2023

AQUIFER DATA

Saturated Thickness: 315. ft Anisotropy Ratio (Kz/Kr): 0.1

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
L Fldn Aq (bl MCU I) Prod Tem	0	0

Observation Wells

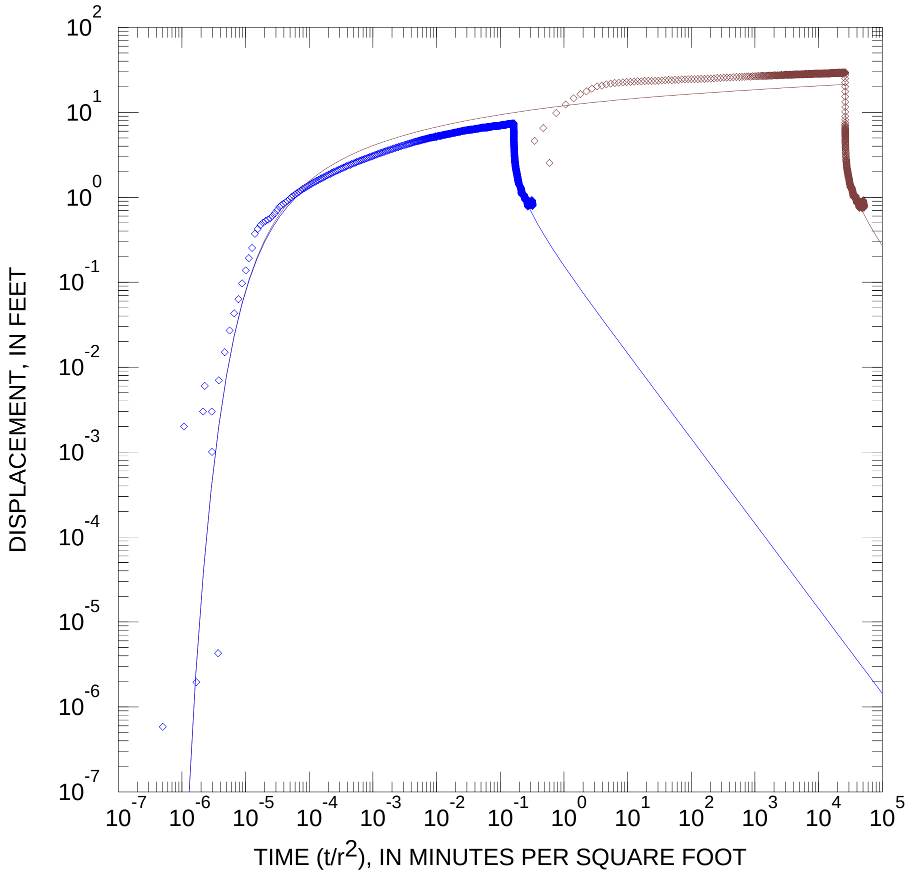
Well Name	X (ft)	Y (ft)
◇ L Fldn Aq (bl MCU I) Prod Temp	0	0
◇ L Fldn Aq (bl MCU I) Monitor	167	0

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 5943. ft^2/day S/S' = 1.1

Figure K4. AQTESOLV© Theis residual drawdown and recovery curve-match solution of the lower Floridan aquifer below middle confining unit I aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



LOWER FLORIDAN AQUIFER (BL MCU I) AQUIFER PERFORMANCE TEST

Data Set: C:\...\ROMP88L_FLDN_I_TheisHantushComp.aqt
Date: 05/14/25 Time: 08:41:30

PROJECT INFORMATION

Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: L Fldn Aq (bl MCU I) Prod Temp
Test Date: 03/27/2023

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
L Fldn Aq (bl MCU I) Prod Tem	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
◇ L Fldn Aq (bl MCU I) Prod Temp	0	0
◇ L Fldn Aq (bl MCU I) Monitor	167	0

SOLUTION

Aquifer Model: Confined

Solution Method: Theis

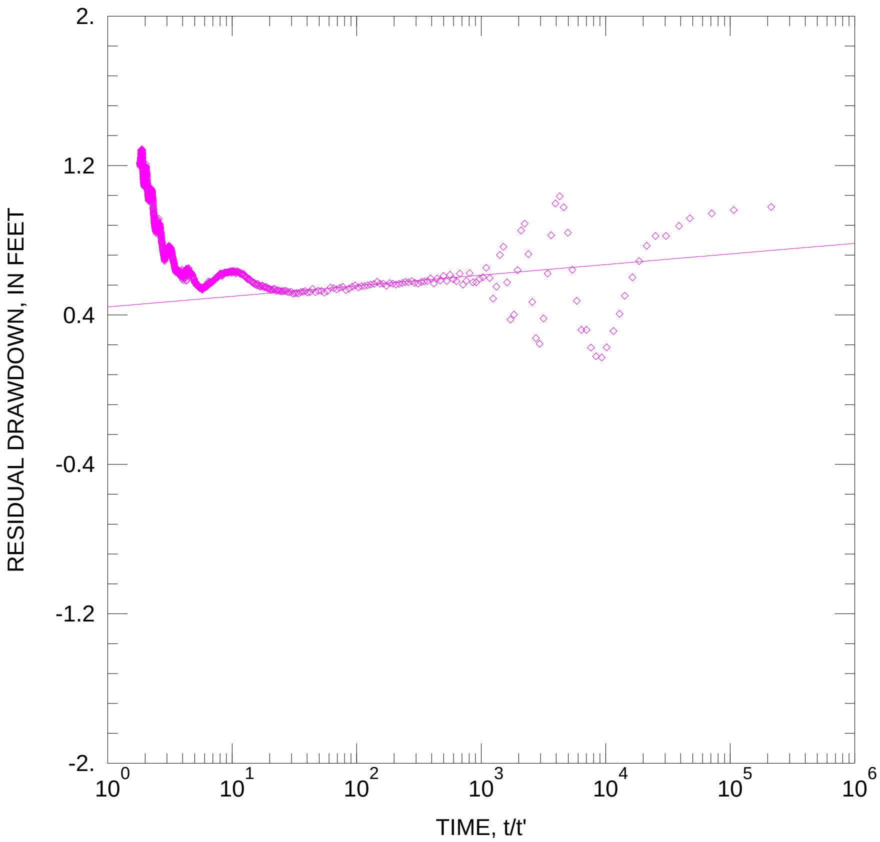
T = 6000.4 ft^2/day

S = 0.0002936

Kz/Kr = 0.1

b = 315. ft

Figure K5. AQTESOLV© curve-match solution of the lower Floridan aquifer below middle confining unit I aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



LOWER FLORIDAN AQUIFER (BL MCU VIII) AQUIFER PERFORMANCE TEST

Data Set: C:\...\ROMP 88 L FLDN VIII_ConfinedTheisRecoveryCH3.aqt
Date: 05/14/25 Time: 08:42:44

PROJECT INFORMATION

Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: L Fldn Aq (bl MCU VIII) Prod T
Test Date: 02/27/2023

AQUIFER DATA

Saturated Thickness: 526.5 ft   Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
L Fldn Aq (bl MCU VIII) Prod T	0	0

Observation Wells

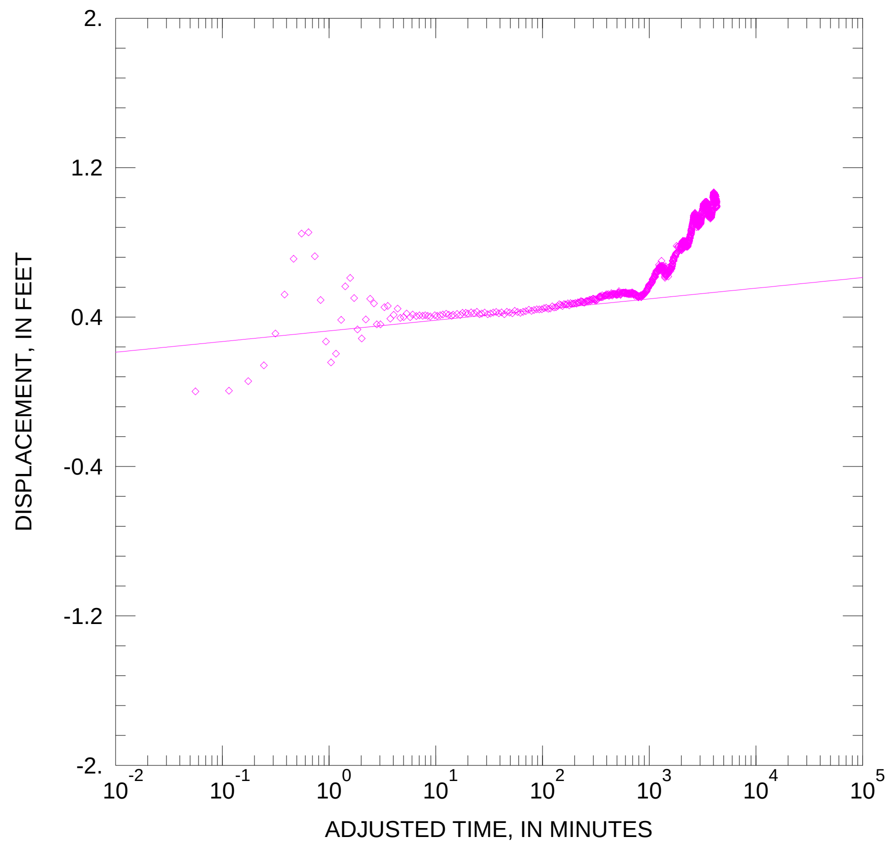
Well Name	X (ft)	Y (ft)
◇ Core Hole 3 (L Fldn Aq bl MCU VIII Observation)	175	0

SOLUTION

Aquifer Model: Confined   Solution Method: Theis (Recovery)

T = 1.763E+6 ft^2/day   S/S' = 1.565E-8

Figure K6. AQTESOLV© curve-match solution of the dlower Floridan aquifer below middle confining unit VIII aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.



LOWER FLORIDAN AQUIFER (BL MCU VIII) AQUIFER PERFORMANCE TEST

Data Set: C:\...\ROMP 88 L FLDN VIII_ConfinedCJCH3trend.aqt
Date: 05/14/25 Time: 08:43:35

PROJECT INFORMATION

Project: ROMP 88 – Rock Ridge
Location: Polk County, Florida
Test Well: L Fldn Aq (bl MCU VIII) Prod T
Test Date: 02/27/2023

AQUIFER DATA

Saturated Thickness: 526.5 ft Anisotropy Ratio (Kz/Kr): 0.5

WELL DATA

Pumping Wells

Well Name	X (ft)	Y (ft)
L Fldn Aq (bl MCU VIII) Prod Temp	0	0

Observation Wells

Well Name	X (ft)	Y (ft)
◇ Core Hole 3 (L Fldn Aq bl MCU VIII Observation)	175	0

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 1.751E+6 ft^2/day S = 1.758E-7

Figure K7. AQTESOLV© curve-match solution of the lower Floridan aquifer below middle confining unit VIII aquifer performance test conducted at the ROMP 88 – Rock Ridge well site in Polk County, Florida.

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Appendix L. Water Quality Sample Data Acquisition Sheets for the ROMP 88 – Rock Ridge Well Site in Polk County, Florida

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 1

Site Name: **ROMP 88 - Rock Ridge** Date: 11/15/2016
Well Name: CH2 Performed by: T. Horstman
SID: 876052

Well Depth (ft bls)	100	Packed Interval (ft-ft bls)	73.2 - 100
Casing (HQ) Depth (ft bls)	73.2	Packed Interval (m-m bls)	22.3 - 30.5
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	4.67
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1	0.6528	g/ft	X	73	ft (interval)	=	48	gallons
2	0.3623	g/ft	X	27	ft (interval)	=	10	gallons

TOTAL PURGE VOLUME (one) = 58 gallons

Pump Method Airlift
Airline Length 80 feet
Discharge Rate (gpm) 8.5 gpm
Pump Time / Volume 7 minutes **X THREE =** 21 minutes

Collection Method: Surface Discharge $\boxed{\text{Wireline Baller}}$ Nested Baller

Comments: Tripod filter cleaned day of test

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
11:52	593	22.78	8.04
11:56	593	22.69	8.05
12:00	592	22.68	8.05
12:04	592	22.96	8.05
12:08	592	23.05	8.05
12:12	592	22.92	8.05

Purge Start Time: 11:52

Purge End Time: 12:30

Sample Time: 12:38

Shipping Batch ID: 11/15/2016 17:55

Sample Field Analysis

YSI Multimeter

Spec.Cond. (uS)	606
Temperature (°C)	21.89
pH (SU)	7.19

YSI 9300 Photometer

Chloride (mg/L)	11.5
Sulfate (mg/L)	0

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information

Water Quality No.: 2

Site Name: **ROMP 88 - Rock Ridge** Date: 12/20/2016

Well Name: CH2 Performed by: T. Horstman

SID: 876052

Well Depth (ft bls)	167	Packed Interval (ft-ft bls)	120 - 167
Casing (HQ) Depth (ft bls)	91	Packed Interval (m-m bls)	37 - 51.4
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	5.85
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	5.88

Purge Volume (gallons)

1	0.2301	g/ft X	120	ft (interval)	=	28	gallons
2	0.3623	g/ft X	47	ft (interval)	=	17	gallons
			TOTAL PURGE VOLUME (one) =			45	gallons

Pump Method Airlift

Airline Length 100 feet

Discharge Rate (gpm) 16.7 gpm

Pump Time / Volume 3 minutes **X THREE =** 9 minutes

Collection Method: Surface Discharge $\boxed{\text{Wireline Bailer}}$ Nested Bailer

Comments: Tripod filter cleaned before and after test sampling

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
15:34	534	23.01	7.62
15:35	534	23.04	7.68
15:36	533	23.06	7.72
15:37	533	23.07	7.77
15:38	535	23.08	7.82
15:39	535	23.09	7.85
15:41	536	23.10	7.89
15:43	535	23.11	7.90
15:45	535	23.11	7.91
15:47	533	23.12	7.92
15:49	533	23.12	7.93
15:51	532	23.14	7.95

Purge Start Time: 15:30

Purge End Time: 15:53

Sample Time: 16:10

Shipping Batch ID: 12/20/2016 17:43

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer	
Spec.Cond. (uS)	548	Chloride (mg/L)	18
Temperature (°C)	22.02	Sulfate (mg/L)	8
pH (SU)	7.29		

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 3

Site Name: **ROMP 88 - Rock Ridge** Date: 1/31/2017

Well Name: CH2 Performed by: T. Horstman, J. Zydek

SID: 876052

Well Depth (ft bls)	267	Packed Interval (ft-ft bls)	246 - 267
Casing (HQ) Depth (ft bls)	91	Packed Interval (m-m bls)	76 - 82
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	12.32
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	7.99

Purge Volume (gallons)

1	21	g/ft	X	0.3623	ft (interval)	=	8	gallons
2	246	g/ft	X	0.2301	ft (interval)	=	57	gallons
					TOTAL PURGE VOLUME (one) =		65	gallons

Pump Method Reverse air

Airline Length 100 feet

Discharge Rate (gpm) 7 gpm

Pump Time / Volume 9 minutes **X THREE =** 27 minutes

Collection Method: Surface Discharge $\boxed{\text{Wireline Bailer}}$ Nested Bailer

Comments: Tripod filter cleaned before and after sampling
sun shining on flow cell

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
15:34	467	23.46	7.32
15:38	467	23.60	7.93
15:42	465	23.69	7.99
15:46	464	23.70	8.01
15:50	463	23.77	8.02
15:54	462	23.76	8.04

Purge Start Time: 15:15

Purge End Time: 16:00

Sample Time: 16:15

Shipping Batch ID: 01/31/2017 17:23

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer	
Spec.Cond. (uS)	471	Chloride (mg/L)	15.0
Temperature (°C)	22.38	Sulfate (mg/L)	7
pH (SU)	6.95		

Density (atm) not taken

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information

Water Quality No.: 4

Site Name: **ROMP 88 - Rock Ridge** Date: 2/22/2017

Well Name: CH2 Performed by: T. Horstman

SID: 876052

Well Depth (ft bls)	367	Packed Interval (ft-ft bls)	327 - 367
Casing (HQ) Depth (ft bls)	91	Packed Interval (m-m bls)	100.7 - 113
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	11.77 (6.5 bls)
Hole Diameter (in.)	~2.38	Initial Annulus WL (ft bls)	8.55

Purge Volume (gallons)

1	40	g/ft	X	0.3623	ft (interval)	=	14.5	gallons
2	327	g/ft	X	0.2301	ft (interval)	=	75.2	gallons
					TOTAL PURGE VOLUME (one) =		89.7	gallons

Pump Method: Airlift

Airline Length: 100 feet

Discharge Rate (gpm): 12.4 gpm

Pump Time / Volume: 7.3 minutes **X THREE =** 22 minutes

Collection Method: Surface Discharge $\boxed{\text{Wireline Bailer}}$ Nested Bailer

Comments: Light drizzle, tripod cleaned before and after sampling

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
14:40	493	23.60	7.82
14:44	479	23.65	7.87
14:48	472	23.73	7.92
14:52	470	23.75	7.93
14:56	469	23.75	7.94
15:00	467	23.81	7.96

Purge Start Time: 14:20

Purge End Time: 15:05

Sample Time: 15:15

Shipping Batch ID: 02/22/2017 17:03

Sample Field Analysis

YSI Multimeter

Spec.Cond. (uS): 474

Temperature (°C): 23.01

pH (SU): 7.51

YSI 9300 Photometer

Chloride (mg/L): 13.5

Sulfate (mg/L): 4

Density (atm): --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information

Water Quality No.: 5

Site Name: **ROMP 88 - Rock Ridge**

Date: 6/7/2017

Well Name: CH3

Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	437	Packed Interval (ft-ft bls)	398 - 437
Casing (HQ) Depth (ft bls)	397	Packed Interval (m-m bls)	121.3 - 133.2
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	7.79
Hole Diameter (in.)	~2.38	Initial Annulus WL (ft bls)	8.09

Purge Volume (gallons)

1 | 39 | g/ft X | 0.3623 | ft (interval) = | 14.1 | gallons

2 | 397 | g/ft X | 0.2301 | ft (interval) = | 91.3 | gallons

TOTAL PURGE VOLUME (one) = 105.4 gallons

Pump Method: Airlift

Airline Length: 100 feet

Discharge Rate (gpm): 15.1 gpm

Pump Time / Volume: 7 minutes **X THREE =** 21 minutes

Collection Method: Surface Discharge $\boxed{\text{Wireline Bailer}}$ Nested Bailer

Comments:

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
16:00	520	24.35	7.20
16:03	520	24.36	7.35
16:09	519	24.37	7.53
16:12	514	24.44	7.75
16:15	511	24.46	7.80
16:18	508	24.46	7.83

Purge Start Time: 15:55

Purge End Time: 16:19

Sample Time: 16:35

Shipping Batch ID: 06/07/2017 18:01

Sample Field Analysis

YSI Multimeter

Spec.Cond. (uS): 519

Temperature (°C): 24.11

pH (SU): 7.50

YSI 9300 Photometer

Chloride (mg/L): 44

Sulfate (mg/L): 0

Density (atm): --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 6

Site Name: **ROMP 88 - Rock Ridge** Date: 6/22/2017

Well Name: CH3 Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	457	Packed Interval (ft-ft bls)	437 - 457
Casing (HQ) Depth (ft bls)	397	Packed Interval (m-m bls)	133.3 - 139.4
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	3.52
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	3.09

Purge Volume (gallons)

1	20	g/ft X	0.3623	ft (interval)	=	7.2	gallons
2	437	g/ft X	0.2301	ft (interval)	=	100.5	gallons
			TOTAL PURGE VOLUME (one) =			107.7	gallons

Pump Method Airlift

Airline Length 100 feet

Discharge Rate (gpm) 19 gpm

Pump Time / Volume 6 minutes **X THREE =** 18 minutes

Collection Method: Surface Discharge $\boxed{\text{Wireline Bailer}}$ Nested Bailer

Comments:

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
12:43	481	25.14	7.10
12:46	480	25.07	7.43
12:49	480	25.11	7.59
12:52	478	25.05	7.73
12:55	478	25.05	7.81
12:58	478	25.07	7.84
13:01	478	25.07	7.87

Purge Start Time: 12:10

Purge End Time: 13:05

Sample Time: 13:18

Shipping Batch ID: 06/22/2017 17:29

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer	
Spec.Cond. (uS)	491	Chloride (mg/L)	14.5
Temperature (°C)	26.24	Sulfate (mg/L)	1
pH (SU)	7.31		

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 7

Site Name: **ROMP 88 - Rock Ridge** Date: 8/1/2017
Well Name: CH3 Performed by: T. Horstman
SID: 887169

Well Depth (ft bls)	597	Packed Interval (ft-ft bls)	562 - 597
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	171 - 182
Casing (HQ) Diameter (in.)	4	Initial Test Interval WL (ft bls)	2.88
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	2.89

Purge Volume (gallons)

1	35	g/ft X	0.3623	ft (interval)	=	13	gallons
2	562	g/ft X	0.2301	ft (interval)	=	130	gallons
				TOTAL PURGE VOLUME (one) =		143	gallons

Pump Method Airlift
Airline Length 100 feet
Discharge Rate (gpm) 6.65 gpm
Pump Time / Volume 21.5 minutes **X THREE =** 64.5 minutes
Collection Method: Surface Discharge $\boxed{\text{Wireline Bailer}}$ Nested Bailer
Comments: Very strong hydrogen sulfide smell. The color standard C failed color check on 8/1/2017. Rechecked on 8/2/2017, and it was within range.
Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
16:38	398	24.62	7.72
16:45	397	24.68	7.82
16:55	396	24.77	7.90
17:05	395	24.78	7.90
17:15	394	24.73	7.94
17:25	393	24.71	7.95

Purge Start Time: 16:24
Purge End Time: 17:28
Sample Time: 17:39
Shipping Batch ID: 08/1/2017 19:10

Sample Field Analysis

YSI Multimeter
Spec.Cond. (uS) 410
Temperature (°C) 25.35
pH (SU) 7.19

YSI 9300 Photometer
Chloride (mg/L) 11.0
Sulfate (mg/L) 4

Density (atm) --
Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 8

Site Name: **ROMP 88 - Rock Ridge** Date: 8/9/2017

Well Name: CH3 Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	697	Packed Interval (ft-ft bls)	657 - 697
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	200 - 212.5
Casing (HQ) Diameter (in.)	4	Initial Test Interval WL (ft bls)	8.03 (2.68 bls)
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	2.71

Purge Volume (gallons)

1	40	g/ft	X	0.3623	ft (interval)	=	15	gallons
2	657	g/ft	X	0.2301	ft (interval)	=	151	gallons
				TOTAL PURGE VOLUME (one) =			166	gallons

Pump Method Airlift

Airline Length 100 feet

Discharge Rate (gpm) 17.8 gpm

Pump Time / Volume 9.3 minutes **X THREE =** 28 minutes

Collection Method: Surface Discharge $\boxed{\text{Wireline Bailer}}$ Nested Bailer

Comments: Very strong hydrogen sulfide odor, water turns dark gray after ~1 min

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
14:00	415	25.72	7.69
14:05	413	25.49	7.88
14:10	412	25.38	7.97
14:15	410	25.33	8.01
14:20	409	25.34	8.03
14:25	407	25.34	8.04

Purge Start Time: 13:34

Purge End Time: 14:30

Sample Time: 14:47

Shipping Batch ID: 08/09/2017 17:01

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer	
Spec.Cond. (uS)	416	Chloride (mg/L)	7.9
Temperature (°C)	25.29	Sulfate (mg/L)	53
pH (SU)	7.80		

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 9

Site Name: **ROMP 88 - Rock Ridge** Date: 8/16/2017
Well Name: CH3 Performed by: T. Horstman
SID: 887169

Well Depth (ft bls)	817	Packed Interval (ft-ft bls)	766 - 817
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	233.5 - 249
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	8.14 (2.8 bls)
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	2.76

Purge Volume (gallons)

1 | 41 | g/ft X | 0.3623 | ft (interval) = | 15 | gallons
2 | 766 | g/ft X | 0.2301 | ft (interval) = | 176 | gallons

TOTAL PURGE VOLUME (one) = 191 gallons

Pump Method: Airlift
Airline Length: 100 feet
Discharge Rate (gpm): 17.8 gpm
Pump Time / Volume: 11 minutes **X THREE =** 33 minutes

Collection Method: Surface Discharge | **Wireline Bailer** | Nested Bailer

Comments: Very strong hydrogen sulfide odor, water turns dark gray after ~1 min

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
13:10	1,221	26.28	7.63
13:16	1,216	26.17	7.72
13:22	1,212	25.89	7.78
13:28	1,210	25.83	7.76
13:34	1,209	25.87	7.79
13:40	1,209	25.98	7.77

Purge Start Time: 12:41
Purge End Time: 13:43
Sample Time: 13:57
Shipping Batch ID: 08/16/2017 17:30

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer	
Spec.Cond. (uS)	1,227	Chloride (mg/L)	7.4
Temperature (°C)	25.05	Sulfate (mg/L)	540 (180*3) dilution factor x3
pH (SU)	7.41		

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 10

Site Name: **ROMP 88 - Rock Ridge** Date: 8/22/2017

Well Name: CH3 Performed by: J. Zydek

SID: 887169

Well Depth (ft bls)	917	Packed Interval (ft-ft bls)	877 - 917
Casing (HQ) Depth (ft bls)	496	Packed Interval (m-m bls)	267 - 280
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	4.47
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	3.43

Purge Volume (gallons)

1	0.3623	g/ft X	40	ft (interval)	=	14.5	gallons
2	0.2301	g/ft X	877	ft (interval)	=	202	gallons
				TOTAL PURGE VOLUME (one) =		216.5	gallons

Pump Method Airlift

Airline Length 100 feet

Discharge Rate (gpm) 17.8 gpm

Pump Time / Volume 12.16 minutes **X THREE =** 36.5 minutes

Collection Method: Surface Discharge $\boxed{\text{Wireline Bailer}}$ Nested Bailer

Comments:

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
12:36	2,684	26.70	6.66
12:42	2,693	26.34	7.40
12:48	2,691	26.36	7.52
12:54	2,689	26.37	7.54
13:00	2,685	26.40	7.56
13:06	2,678	26.40	7.56

Purge Start Time: 12:05

Purge End Time: 13:15

Sample Time: 13:23

Shipping Batch ID: 08/22/2017 17:21

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer	
Spec.Cond. (uS)	2,733	Chloride (mg/L)	4.0
Temperature (°C)	25.97	Sulfate (mg/L)	180
pH (SU)	6.8		

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 11

Site Name: **ROMP 88 - Rock Ridge** Date: 8/31/2017
Well Name: CH3 Performed by: T. Horstman
SID: 887169

Well Depth (ft bls)	957	Packed Interval (ft-ft bls)	940 - 957
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	286.5 - 291.7
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	9.57 (4.36 bls)
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	5.05 (2.82 bls)

Purge Volume (gallons)

1 0.3623 g/ft X 17 ft (interval) = 6.2 gallons
2 -- g/ft X -- ft (interval) = -- gallons
TOTAL PURGE VOLUME (one) = 6.2 gallons

Pump Method: Airlift
Airline Length: 100 feet
Discharge Rate (gpm): 0.2 gpm
Pump Time / Volume: 31 minutes **X THREE =** 93 minutes
Collection Method: Surface Discharge Wireline Bailer Nested Bailer
Comments: V. strong hydrogen sulfide odor, turned black

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
14:23	2,378	28.22	6.92
14:39	2,393	28.28	7.40
14:55	2,423	28.72	7.50
15:11	2,431	28.72	7.42
15:27	2,432	28.54	7.35
15:43	2,440	28.38	7.20
15:59	2,445	28.20	7.00
16:15	2,437	28.32	6.72
16:30	2,434	28.13	6.63
16:45	2,428	28.17	6.56

Purge Start Time: 14:07
Purge End Time: 16:46
Sample Time: 17:40
Shipping Batch ID: 08/31/2017 19:15

Sample Field Analysis

YSI Multimeter
Spec.Cond. (uS): 2,887
Temperature (°C): 26.39
pH (SU): 7.02

YSI 9300 Photometer
Chloride (mg/L): 5.2
Sulfate (mg/L): 190 seems low

Density (atm): --
Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information

Water Quality No.: 12

Site Name: **ROMP 88 - Rock Ridge**
Date: 3/20/2018

Well Name: CH3
Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	1,067	Packed Interval (ft-ft bls)	1,027 - 1,067
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	316 - 325
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	16.23
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	6.44

Purge Volume (gallons)

1	0.3623	g/ft X	40	ft (interval) =	15	gallons
2	--	g/ft X	--	ft (interval) =	--	gallons

TOTAL PURGE VOLUME (one) = 15 gallons

Pump Method: Airlift

Airline Length: 100 feet

Discharge Rate (gpm): 5.16 gpm

Pump Time / Volume: 3 minutes **X THREE =** 9 minutes

Collection Method: Surface Discharge   Wireline Bailer   Nested Bailer

Comments: Started pouring rain/thunder after airlifting began
Was not raining during collection

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
14:43	2,170	23.88	6.41
14:46	2,149	24.15	6.91
14:49	2,151	24.37	7.11
14:52	2,162	24.46	7.22
14:55	2,177	24.53	7.27
14:58	2,199	24.59	7.32

Purge Start Time: 14:27

Purge End Time: 15:00

Sample Time: 15:50

Shipping Batch ID: 03/20/2018 17:18

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer	
Spec.Cond. (uS)	2,277	Chloride (mg/L)	4.7
Temperature (°C)	23.14	Sulfate (mg/L)	195
pH (SU)	7.43		

seems low
used other
photometer too

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 13

Site Name: **ROMP 88 - Rock Ridge** Date: 4/5/2018 - 4/9/2018
Well Name: CH3 Performed by: T. Horstman
SID: 887169

Well Depth (ft bls)	1,227	Packed Interval (ft-ft bls)	1,187 - 1,227
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	366 - 378
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	17.33
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	5.85

Purge Volume (gallons)

1 0.3623 g/ft X 40 ft (interval) = 14.5 gallons
2 -- g/ft X -- ft (interval) = -- gallons
TOTAL PURGE VOLUME (one) = 14.5 gallons

Pump Method Airlift
Airline Length 100 feet
Discharge Rate (gpm) 0.4 gpm
Pump Time / Volume 36.25 minutes **X THREE =** 109 minutes
Collection Method: Surface Discharge Wireline Bailer Nested Bailer
Comments: Due to long purge time and time of day, will purge today and finish Monday 4/9 to collect sample. Strong hydrogen sulfide odor. Water turns gray
Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
4/5/2018			
14:49	2,307	25.06	6.62
15:07	2,303	25.40	7.13
15:25	2,301	25.66	7.16
15:43	2,318	25.27	7.26
4/9/2018			
11:43	2,244	27.70	7.22
12:01	2,256	27.97	7.40
12:19	2,281	29.57	7.56
12:37	2,273	29.58	7.67
12:55	2,280	28.96	7.75
13:13	2,290	28.0	7.70

Purge Start Time: 4/5/2018 14:30 4/9/2018 11:25
Purge End Time: 4/9/2018 13:20
Sample Time: 4/9/2018 14:30
Shipping Batch ID: 04/09/2018 17:23

Sample Field Analysis

YSI Multimeter
Spec.Cond. (uS) 2,897
Temperature (°C) 24.52
pH (SU) 7.01

YSI 9300 Photometer
Chloride (mg/L) 6.1* *tab expiry 3/18
Sulfate (mg/L) 1,750 x10 dilution
(diluted SO4 x3 and x5 but still too high)

Density (atm) --
Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 14

Site Name: **ROMP 88 - Rock Ridge** Date: 4/18/2018

Well Name: CH3 Performed by: T. Horstman, J Zydek

SID: 887169

Well Depth (ft bls)	1,357	Packed Interval (ft-ft bls)	1,317 - 1,357
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	401.4 - 413.6
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	--
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1	0.3623	g/ft X	40	ft (interval)	=	14.5	gallons
2	--	g/ft X	--	ft (interval)	=	--	gallons
				TOTAL PURGE VOLUME (one) =		14.5	gallons

Pump Method: Airlift

Airline Length: 100 feet

Discharge Rate (gpm): 1 gpm

Pump Time / Volume: 14.5 minutes **X THREE =** 44 minutes

Collection Method: Surface Discharge Wireline Bailer **Nested Bailer**

Comments: Strong hydrogen sulfide odor, water turned gray

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
12:55	2,393	28.15	6.15
13:03	2,380	27.88	6.87
13:11	2,360	27.93	7.26
13:19	2,377	28.07	7.40
13:27	2,381	20.04	7.50
13:35	2,388	28.16	7.59
13:43	2,388	28.06	7.65

Purge Start Time: 12:25

Purge End Time: 13:49

Sample Time: 14:40

Shipping Batch ID: 04/18/2018 16:26

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer		
Spec.Cond. (uS)	2,769	Chloride (mg/L)	6.9	
Temperature (°C)	25.44	Sulfate (mg/L)	1,750	x5 out of
pH (SU)	7.47			(x10 dilution)

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information

Water Quality No.: 15

Site Name: **ROMP 88 - Rock Ridge**

Date: 8/20/2018

Well Name: CH3

Performed by: T. Horstman, H. Rahman

SID: 887169

Well Depth (ft bls)	1,457	Packed Interval (ft-ft bls)	1,417 - 1,457
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	432 - 444
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	13.82
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	4.42

Purge Volume (gallons)

1	0.3623	g/ft X	40	ft (interval)	=	14.5	gallons
2	--	g/ft X	--	ft (interval)	=	--	gallons

TOTAL PURGE VOLUME (one) = 14.5 gallons

Pump Method: Airlift

Airline Length: 100 feet

Discharge Rate (gpm): 0.27 gpm

Pump Time / Volume: 54 minutes **X THREE =** 162 minutes

Collection Method: Surface Discharge Wireline Bailer **Nested Bailer**

Comments:

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
10:10	2,375	29.66	6.45
10:20	2,365	30.05	7.33
10:30	2,362	29.87	7.43
10:40	2,366	29.86	7.50
10:50	2,371	29.84	7.52
11:00	2,373	29.84	7.49
11:10	2,373	29.88	7.47

Purge Start Time: 8:20

Purge End Time: 11:13

Sample Time: 13:20

Shipping Batch ID: 08/20/2018 17:02

201010684 parent sample
100075868 submission

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer	
Spec.Cond. (uS)	2,772	Chloride (mg/L)	5.9
Temperature (°C)	26.00	Sulfate (mg/L)	1,600
pH (SU)	6.57		

Density (atm): --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information

Water Quality No.: 16

Site Name: **ROMP 88 - Rock Ridge**

Date: 3/25/2019

Well Name: CH3

Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	1,557	Packed Interval (ft-ft bls)	1,517 - 1,557
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	462 - 475
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	24.13
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	6.1

Purge Volume (gallons)

1	0.3623	g/ft X	40	ft (interval) =	14.5	gallons
2	--	g/ft X	--	ft (interval) =	--	gallons

TOTAL PURGE VOLUME (one) = 14.5 gallons

Pump Method: Reverse air

Airline Length: 100 feet

Discharge Rate (gpm): 0.25 gpm

Pump Time / Volume: 58 minutes **X THREE =** 174 minutes

Collection Method: Surface Discharge Wireline Bailer Nested Bailer

Comments:

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
12:40	2,329	28.37	7.37
13:00	2,392	28.62	7.77
13:20	2,381	27.40	7.87
13:40	2,365	27.83	7.84
14:00	2,409	27.68	7.80
14:20	2,408	27.61	7.76
14:40	2,411	27.30	7.75

Purge Start Time: 11:40

Purge End Time: 14:40

Sample Time: 15:45

Shipping Batch ID: 03/25/2019 17:46

Sample Field Analysis

YSI Multimeter		YSI 9300 Photometer		
Spec.Cond. (uS)	2,723	Chloride (mg/L)	6.1	
Temperature (°C)	24.79	Sulfate (mg/L)	1,600	x10 dilution
pH (SU)	7.26			

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 17

Site Name: **ROMP 88 - Rock Ridge** Date: 5/1/2019
Well Name: CH3 Performed by: T. Horstman
SID: 887169

Well Depth (ft bls)	1,657	Packed Interval (ft-ft bls)	1,617-1,657
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	492.8 - 505
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	--
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)
1 0.3623 g/ft X 40 ft (interval) = 14.5 gallons
2 -- g/ft X -- ft (interval) = -- gallons
TOTAL PURGE VOLUME (one) = 14.5 gallons

Pump Method: Reverse air
Airline Length: 100 feet
Discharge Rate (gpm): 0.06 gpm
Pump Time / Volume: 242 minutes **X THREE =** 726 minutes

Collection Method: Submersible Pump or Wireline Bailer or Nested Bailer or Reverse-air

Comments: Discharge = 1 L per 4 min 36 sec -> 0.264 gal per 4.6 min -> 0.06 gal/min
Because of such long purge time, doing 1.5 volumes (half)

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
12:15	2,792	29.40	6.22
12:47	2,923	30.40	6.80
13:19	3,016	29.90	7.30
13:51	3,038	29.66	7.33
14:23	3,048	29.52	7.46
14:39	2,945	29.68	7.50
14:55	2,854	29.48	7.53
15:11	2,804	29.57	7.46

Purge Start Time: 8:50

Purge End Time: 15:15

Sample Time: 16:05

Shipping Batch ID: 05/01/2019 18:10

100075867 submission

Sample Field Analysis

YSI Multimeter Serial # 08L100684/03C0289AB
YSI 9300 Photometer Serial # A09121570-d56b

Spec.Cond. (uS): 2,619
Temperature (°C): 25.18
pH (SU): 6.05

Chloride (mg/L): 0 (got << using 0-50 mg test range)
Sulfate (mg/L): 1,500 x10 dilution

Density (atm): --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 18

Site Name: **ROMP 88 - Rock Ridge** Date: 5/9/2018

Well Name: CH3 Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	1,777	Packed Interval (ft-ft bls)	1,737 - 1,777
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	529.4 - 541.6
Casing (HQ) Diameter (in.)	4	Initial Test Interval WL (ft bls)	--
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1 -- g/ft X -- ft (interval) = -- gallons

2 0.3623 g/ft X 40 ft (interval) = 14.5 gallons

TOTAL PURGE VOLUME (one) = 14.5 gallons

Pump Method Airlift

Airline Length 100 feet

Discharge Rate (gpm) 1 gpm

Pump Time / Volume 14.5 minutes **X THREE =** 44 minutes

Collection Method: Submersible Pump or Wireline Bailer or Nested Bailer or Reverse-air

Comments:

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
12:45	1,837	29.95	6.61
13:00	1,835	29.73	7.18
13:08	1,842	30.01	7.44
13:16	1,858	29.75	7.69
13:24	1,865	29.70	7.80
13:32	1,870	29.73	7.90
13:40	1,880	29.79	7.89

Purge Start Time: 12:15

Purge End Time: 13:45

Sample Time: 14:41

Shipping Batch ID: 05/09/2019 16:41

Sample Field Analysis

YSI Multimeter Serial # 08L100684/03C0289AB YSI 9300 Photometer Serial # A09121570-d56b

Spec.Cond. (uS)	1,910	Chloride (mg/L)	6.7	
Temperature (°C)	25.30	Sulfate (mg/L)	1,180	x10 dilution
pH (SU)	7.33			

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 19

Site Name: **ROMP 88 - Rock Ridge** Date: 5/21/2019
Well Name: CH3 Performed by: T. Horstman
SID: 887169

Well Depth (ft bls)	1,857	Packed Interval (ft-ft bls)	1,810 - 1,857
Casing (HQ) Depth (ft bls)	~497	Packed Interval (m-m bls)	551.7 - 566
Casing (HQ) Diameter (in.)	~4	Initial Test Interval WL (ft bls)	31.17
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1 0.3623 g/ft X 47 ft (interval) = 17 gallons
2 -- g/ft X -- ft (interval) = -- gallons
TOTAL PURGE VOLUME (one) = 17 gallons

Pump Method Reverse air
Airline Length 100 feet
Discharge Rate (gpm) 7 gpm
Pump Time / Volume 2.4 minutes **X THREE =** 7.3 minutes

Collection Method: Submersible Pump or Wireline Bailer or Nested Bailer or Reverse-air

Comments: GPM a bit above 6.65 on tank, rounding to 7
strong hydrogen sulfide odor, turned black/dark gray in sun

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
13:20	1,473	26.07	6.70
13:22	1,473	26.02	6.74
13:24	1,475	26.02	6.78
13:26	1,472	25.84	6.92
13:28	1,470	25.83	6.92
13:30	1,465	25.92	6.94

Purge Start Time: 13:00
Purge End Time: 13:38
Sample Time: 14:25
Shipping Batch ID: 05/21/2019 16:40

Sample Field Analysis

YSI Multimeter Serial # 08L100684/03C0289AB YSI 9300 Photometer Serial # A09121570-d56b

Spec.Cond. (uS) 1,571 Chloride (mg/L) 1.7
Temperature (°C) 25.78 Sulfate (mg/L) 500 x10 dilution
pH (SU) 7.03

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 20

Site Name: **ROMP 88 - Rock Ridge** Date: 5/28/2019

Well Name: CH3 Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	1,937	Packed Interval (ft-ft bls)	1,897 - 1,937
Casing (HQ) Depth (ft bls)	497	Packed Interval (m-m bls)	578.2 - 590.4
Casing (HQ) Diameter (in.)	4	Initial Test Interval WL (ft bls)	30.92
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1 0.3623 g/ft X 40 ft (interval) = 14.5 gallons

2 -- g/ft X -- ft (interval) = -- gallons

TOTAL PURGE VOLUME (one) = 14.5 gallons

Pump Method Reverse air

Airline Length 100 feet

Discharge Rate (gpm) 5.16 gpm

Pump Time / Volume 2.8 minutes **X THREE =** 9 minutes

Collection Method: Submersible Pump or Wireline Bailer or Nested Bailer or Reverse-air

Comments:

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge			
Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
13:55	1,603	27.18	6.64
13:57	1,602	26.98	7.01
13:59	1,601	26.97	7.15
14:01	1,600	27.02	7.21
14:03	1,599	26.92	7.26
14:05	1,597	27.02	7.28

Purge Start Time: 13:18

Purge End Time: 14:20

Sample Time: 15:10

Shipping Batch ID: 05/28/2019 17:13

Sample Field Analysis

YSI Multimeter Serial # 08L100684/03C0289AB YSI 9300 Photometer Serial # A09121570-d56b

Spec.Cond. (uS)	1,442	Chloride (mg/L)	5.7	
Temperature (°C)	26.74	Sulfate (mg/L)	730	x10 dilution
pH (SU)	7.16			

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 21

Site Name: **ROMP 88 - Rock Ridge** Date: 12/2/2019

Well Name: CH3 Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	2,047	Packed Interval (ft-ft bls)	2,005.5 - 2,047
Test Casing Depth (ft bls)	497	Packed Interval (m-m bls)	611.3 - 623.9
Test Casing Type/Diameter (in.)	HQ/~4	Initial Test Interval WL (ft bls)	--
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1 0.3623 g/ft X 41.5 ft (interval) = 15.03 gallons

2 -- g/ft X -- ft (interval) = -- gallons

TOTAL PURGE VOLUME (one) = 15.03 gallons

Pump Method Reverse air

Airline Length 100 feet

Discharge Rate (gpm) 6.65 gpm

Pump Time / Volume 2.3 minutes **X THREE =** 7 minutes

Collection Method: Submersible Pump or Wireline Bailer or Nested Bailer or Reverse-air

Comments:

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
14:50	1,115	22.39	7.20
14:52	1,102	22.50	7.40
14:54	1,077	22.40	7.46
14:56	1,079	22.40	7.47
14:58	1,081	22.28	7.47
15:00	1,079	22.18	7.48

Purge Start Time: 14:10

Purge End Time: 15:02

Sample Time: 15:50

Shipping Batch ID: 12/02/2019 17:44

Sample Field Analysis

YSI Multimeter Serial # 04G13202/08M100149 YSI 9300 Photometer Serial # A09121570-d56b

Spec.Cond. (uS)	1,088	Chloride (mg/L)	5.1
Temperature (°C)	20.75	Sulfate (mg/L)	185
pH (SU)	7.46		

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 22

Site Name: **ROMP 88 - Rock Ridge** Date: 2/12/2020

Well Name: CH3 Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	2,177	Packed Interval (ft-ft bls)	2,134 - 2,177
Test Casing Depth (ft bls)	497	Packed Interval (m-m bls)	650.4 - 663.5
Test Casing Type/Diameter (in.)	HQ / ~4	Initial Test Interval WL (ft bls)	31.6
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1	0.3623	g/ft X	43	ft (interval)	=	16	gallons
2	0.2301	g/ft X	2,134	ft (interval)	=	491	gallons
			TOTAL PURGE VOLUME (one) =			507	gallons

Pump Method Reverse air

Airline Length 100 feet

Discharge Rate (gpm) 12.6 gpm

Pump Time / Volume 40.2 minutes **X THREE =** 121 minutes

Collection Method: Submersible Pump or Wireline Bailer or Nested Bailer or Reverse-air

Comments: Turned dark gray in sun. Hydrogen sulfide smell

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
12:02	937	26.66	7.54
12:23	975	25.50	7.96
12:44	976	25.29	7.99
13:05	979	25.57	8.03
13:26	980	25.81	8.06
13:47	980	25.54	8.04
14:08	980	25.54	8.09
		sun/clouds	
		affect temp	

Purge Start Time: 11:40

Purge End Time: 14:08

Sample Time: 14:23

Shipping Batch ID: 02/12/2020 17:12

Sample Field Analysis

YSI Multimeter Serial # 04G13202/08M100149 YSI 9300 Photometer Serial # A09121570-d56b

Spec.Cond. (uS)	988	Chloride (mg/L)	7.7	
Temperature (°C)	24.40	Sulfate (mg/L)	420	diluted x10
pH (SU)	7.48			42 mg/L

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 24

Site Name: **ROMP 88 - Rock Ridge** Date: 3/9/2020
Well Name: CH3 Performed by: T. Horstman
SID: 887169

Well Depth (ft bls)	2,277	Packed Interval (ft-ft bls)	2,220 - 2,277
Test Casing Depth (ft bls)	2,220	Packed Interval (m-m bls)	676.6 - 694
Test Casing Type/Diameter (in.)	NRQ / ~3	Initial Test Interval WL (ft bls)	31.65
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1 0.3623 g/ft X 57 ft (interval) = 21 gallons
2 -- g/ft X -- ft (interval) = -- gallons
TOTAL PURGE VOLUME (one) = 21 gallons

Pump Method: Reverse air
Airline Length: 100 feet
Discharge Rate (gpm): 8.38 gpm
Pump Time / Volume: 2.5 minutes **X THREE =** 8 minutes
Collection Method: Submersible Pump or Wireline Bailer or Nested Bailer or Reverse-air
Comments:

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
16:30	684	23.71	8.47
16:32	663	23.69	8.28
16:34	655	23.65	8.16
16:36	642	23.54	8.12
16:38	633	23.51	8.19
16:40	613	23.53	8.08
16:42	614	23.71	8.05
16:44	614	23.55	8.03

Purge Start Time: 16:20
Purge End Time: 16:47
Sample Time: 17:20
Shipping Batch ID: 03/09/2020 18:40

Sample Field Analysis

YSI Multimeter Serial # 04G13202/08M100149 YSI 9300 Photometer Serial # A09121570-d56b

Spec.Cond. (uS)	638	Chloride (mg/L)	7.4
Temperature (°C)	22.94	Sulfate (mg/L)	190
pH (SU)	7.86		

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION

WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 25

Site Name: **ROMP 88 - Rock Ridge** Date: 3/23/2020

Well Name: CH3 Performed by: T. Horstman

SID: 887169

Well Depth (ft bls)	2,397	Packed Interval (ft-ft bls)	2,357 - 2,397
Test Casing Depth (ft bls)	2,357	Packed Interval (m-m bls)	718.4 - 730.6
Test Casing Type/Diameter (in.)	NRQ / ~3	Initial Test Interval WL (ft bls)	34.16
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1	0.3623	g/ft X	40	ft (interval) =		14.5	gallons
2	--	g/ft X	--	ft (interval) =		--	gallons
					TOTAL PURGE VOLUME (one) =	14.5	gallons

Pump Method Reverse air

Airline Length 100 feet

Discharge Rate (gpm) 0.08 gpm

Pump Time / Volume 181 minutes **X THREE =** 544 minutes

Collection Method: Submersible Pump or Wireline Bailer or Nested Bailer or Reverse-air

Comments: Because the purge time is very long (~9 hrs) only doing ~1.5 volume purge.
Very strong hydrogen sulfide odor, water turned black during collection

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
11:45	2,972	29.20	7.58
12:30	3,624	30.73	7.76
13:15	3,611	28.55	7.80
14:00	3,892	29.65	7.83
14:45	3,924	29.28	7.84
15:30	3,911	28.50	7.80

Purge Start Time: 11:00

Purge End Time: 15:30

Sample Time: 16:22

Shipping Batch ID: 03/23/2020 17:41

Sample Field Analysis

YSI Multimeter Serial # 08L100684/03C0289AB YSI 9300 Photometer Serial # A09121570-d56b

Spec.Cond. (uS)	25,536	Chloride (mg/L)	2.6
Temperature (°C)	24.92	Sulfate (mg/L)	1,780
pH (SU)	7.28		

89 mg/L x20 dilution (est. x20 from dilution tube)

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

GEOHYDROLOGIC DATA SECTION
WATER QUALITY SAMPLE ACQUISITION

General Information Water Quality No.: 26

Site Name: **ROMP 88 - Rock Ridge** Date: 4/8/2020
Well Name: CH3 Performed by: T. Horstman
SID: 887169

Well Depth (ft bls)	2,607	Packed Interval (ft-ft bls)	2,547 - 2,607
Test Casing Depth (ft bls)	2,547	Packed Interval (m-m bls)	776.3 - 794.6
Test Casing Type/Diameter (in.)	NRQ / ~3	Initial Test Interval WL (ft bls)	44.29
Hole Diameter (in.)	~3	Initial Annulus WL (ft bls)	--

Purge Volume (gallons)

1	0.3623	g/ft X	60	ft (interval)	=	21.7	gallons
2	--	g/ft X	--	ft (interval)	=	--	gallons

TOTAL PURGE VOLUME (one) = 21.7 gallons

Pump Method Airlift
Airline Length 100 feet
Discharge Rate (gpm) 0.4 gpm
Pump Time / Volume 54.25 minutes **X THREE =** 162.75 minutes

Collection Method: Submersible Pump or Wireline Bailer or Nested Bailer or Reverse-air

Comments: Did 60-foot interval to help get more discharge. ~2.75 hr purge for 3 volumes.
Will purge 1.5 volumes for 82 min purge

Note: NQ=0.2301 gal/ft; HW=0.6528 gal/ft; open hole(NQ)=0.3623 gal/ft

Test Information

Water Quality During Purge

Time	Specific Cond. (±5%)	Temp. (±0.2°C)	pH (±0.1 SU)
14:00	7,731	28.30	7.45
14:14	7,787	28.96	7.80
14:28	7,849	29.00	7.80
14:42	7,897	29.40	7.80
14:56	7,963	29.53	7.75
15:10	7,987	29.53	7.75

Purge Start Time: 13:45

Purge End Time: 15:15

Sample Time: 16:15

Shipping Batch ID:
04/08/2020 18:21

v. strong hydrogen sulfide odor
water seems stratified, fresher on top, bottom turned black. mixed together

Sample Field Analysis

YSI Multimeter Serial # 08L100684/03C0289AB YSI 9300 Photometer Serial # A09121570-d56b

Spec.Cond. (uS)	38,225	Chloride (mg/L)	<< (not detected)
Temperature (°C)	25.17	Sulfate (mg/L)	2,360
pH (SU)	7.16		

118 mg/L x20 dilution, est. the x20 mark on dilution tube

Density (atm) --

Samples Sent to District's Laboratory for Standard Complete Analysis? Y or N

Appendix M. Water Quality Data for the Groundwater Samples Collected at the ROMP 88 – Rock Ridge Well Site in Polk County, Florida

Table M1. Field analyses results of the water quality samples collected during core drilling and testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[ºC, degrees Celsius; µmhos/cm, micromhos per centimeter; bls, below land surface; Cl^-, chloride; ft, feet; HH:MM, hours:minutes; HWT, 4-inch inner diameter temporary steel casing; mg/L, milligrams per Liter; MM/DD/YYYY, month/day/year; No., number; SID, station identification; SO_4^{2-}, sulfate; SU, standard units; Shaded rows indicate slug tests conducted in a confining unit]

								MAJOR ANIONS		
Water Quality Sample No.	Monitor Well SID No.	Date MM/DD/YYYY	Time (HH:MM)	Sample Interval (ft bls)	Temperature (ºC)	pH (SU)	Specific Conductance (µmhos/cm)	Cl^- (mg/L)	SO_4^{2-} (mg/L)	Sample Collection Method/Remarks
1	876052	11/15/2016	12:38	73.2-100	21.89	7.19	606	11.5	0	Tested using HWT to isolate test interval
2	876052	12/20/2016	16:10	120-167	22.02	7.29	548	18.0	8	
3	876052	01/31/2017	16:15	246-267	22.38	6.95	471	15.0	7	
4	876052	02/22/2017	15:15	327-367	23.01	7.51	474	13.5	4	
5	887169	06/07/2017	16:35	397-437	24.11	7.50	519	44	0	Begin core hole 3 water samples
6	887169	06/22/2017	13:18	437-457	26.24	7.31	491	14.5	1	
7	887169	08/01/2017	17:39	562-597	25.35	7.19	410	11[J3]	4[J3]	Photometer color standard C was not within range on day of sample collection but it was the day after when performing another check. Very strong hydrogen sulfide odor.
8	887169	08/09/2017	14:47	657-697	25.29	7.80	416	7.9	53	Very strong hydrogen sulfide odor. Water turned dark gray.
9	887169	08/16/2017	13:57	766-817	25.05	7.41	1,227	7.4	540	Very strong hydrogen sulfide odor. Water turned dark gray.
10	887169	08/22/2017	13:23	877-917	25.97	6.80	2,773	4.0	180	Field sulfate value a lot lower than expected and lower than lab value. Need to check photometer.
11	887169	08/31/2017	17:40	940-957	26.39	7.02	2,887	5.2	190	Field sulfate value a lot lower than expected. Need to check photometer. Very strong hydrogen sulfide odor. Water turned dark gray.

Table M1. Field analyses results of the water quality samples collected during core drilling and testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[ºC, degrees Celsius; µmhos/cm, micromhos per centimeter; bls, below land surface; Cl^-, chloride; ft, feet; HH:MM, hours:minutes; HWT, 4-inch inner diameter temporary steel casing; mg/L, milligrams per Liter; MM/DD/YYYY, month/day/year; No., number; SID, station identification; SO_4^{2-}, sulfate; SU, standard units; Shaded rows indicate slug tests conducted in a confining unit]

								MAJOR ANIONS		
Water Quality Sample No.	Monitor Well SID No.	Date MM/DD/YYYY	Time (HH:MM)	Sample Interval (ft bls)	Temperature (ºC)	pH (SU)	Specific Conductance (µmhos/cm)	Cl^- (mg/L)	SO_4^{2-} (mg/L)	Sample Collection Method/Remarks
12	887169	03/20/2018	15:50	1,027-1,067	23.14	7.43	2,277	4.7	195	Field sulfate value a lot lower than expected. Need to check photometer. Very strong hydrogen sulfide odor. Water turns gray.
13	887169	04/09/2018	14:30	1,187-1,227	24.52	7.01	2,897	6.1	1,750	Very strong hydrogen sulfide odor. Water turned gray. Chloridol tab was expired.
14	887169	04/18/2018	14:40	1,317-1,357	25.44	7.47	2,769	6.9	1,750	Very strong hydrogen sulfide odor. Water turned gray.
15	887169	08/20/2018	13:20	1,417-1,457	26.00	6.57	2,772	5.9	1,600	Strong hydrogen sulfide odor. Water turned gray.
16	887169	03/25/2019	15:45	1,517-1,557	24.79	7.26	2,723	6.1	1,600	Water turned gray.
17	887169	05/01/2019	16:05	1,617-1,657	25.18	6.05	2,619	0	1,500	Photometer did not detect chlorides.
18	887169	05/09/2019	14:41	1,737-1,777	25.30	7.33	1,910	6.7	1,180	
19	887169	05/21/2019	14:25	1,810-1,857	25.78	7.03	1,571	1.7	500	
20	887169	05/28/2019	15:10	1,897-1,937	26.74	7.16	1,442	5.7	730	
21	887169	12/02/2019	15:50	2,005.5-2,047	20.75	7.46	1,088	5.1	185	
22	887169	02/12/2020	14:23	2,134-2,177	24.40	7.48	988	7.7	420	Water turned dark gray and had a hydrogen sulfide odor.
24	887169	03/09/2020	17:20	2,220-2,277	22.94	7.86	638	7.4	190	
25	887169	03/23/2020	16:22	2,357-2,397	24.92	7.28	25,536	2.6	1,780	Water turned black and had a very strong hydrogen sulfide odor.

Table M1. Field analyses results of the water quality samples collected during core drilling and testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[°C, degrees Celsius; µmhos/cm, micromhos per centimeter; bls, below land surface; Cl^-, chloride; ft, feet; HH:MM, hours:minutes; HWT, 4-inch inner diameter temporary steel casing; mg/L, milligrams per Liter; MM/DD/YYYY, month/day/year; No., number; SID, station identification; SO_4^{2-}, sulfate; SU, standard units; Shaded rows indicate slug tests conducted in a confining unit]

								MAJOR ANIONS		
Water Quality Sample No.	Monitor Well SID No.	Date MM/DD/ YYYY	Time (HH:MM)	Sample Interval (ft bls)	Tem- perature (°C)	pH (SU)	Specific Conduc- tance (µmhos/ cm)	Cl^- (mg/L)	SO_4^{2-} (mg/L)	Sample Collection Method/Remarks
26	887169	04/08/2020	16:15	2,547-2,607	25.17	7.16	38,225	0	2,360	Water turned black and had a very strong hydrogen sulfide odor. The water seemed to be stratified in the bailer. Photometer did not detect chlorides.

[J3]Estimated value, value not accurate. The reported value failed to meet the established quality control criteria for either precision or accuracy.

Table M2. Laboratory analyses results of the water quality samples collected during core drilling and testing at the

[<, less than; --, District Laboratory did not perform analysis for specific conductance; µg/L, micrograms per Liter; µmmhos/cm, micromhos per centimeter; temporary steel casing; K^+, potassium; Mg^{2+}, magnesium; mg/L, milligrams per Liter; MM/DD/YYYY, month/day/year; Na^+, sodium; No., number; Si, silica; quality samples from a confining unit]

Water Quality Sample No.	Monitor Well SID No.	Date MM/DD/YYYY	Time (HH:MM)	Sample Interval (ft bls)	Specific Conductance (µmhos/cm)[N1]	MAJOR ANIONS Cl^- (mg/L)	MAJOR ANIONS SO_4^{2-} (mg/L)
1	876052	11/15/2016	12:38	73.2-100	608.00	22.6	0.7
2	876052	12/20/2016	16:10	120-167	542.40	22.6	<0.1[U]
3	876052	01/31/2017	16:15	246-267	478.60	20.1	<0.1[U]
4	876052	02/22/2017	15:15	327-367	474.00	18.6	<0.1[U]
5	887169	06/07/2017	16:35	398-437	516.50	19.4	0.5
6	887169	06/22/2017	13:18	437-457	482.10	17.9	0.1[I]
7	887169	08/01/2017	17:39	562-597	417	18.4	4.99
8	887169	08/09/2017	14:47	657-697	405	17.8	4.81
9	887169	08/16/2017	13:57	766-817	1,230	10.1	573
10	887169	08/22/2017	13:23	877-917	2,710	8.88	1,750
11	887169	08/31/2017	17:40	940-957	2,880	9.15	1,910
12	887169	03/20/2018	15:50	1,027-1,067	--	9.66	1,400
13	887169	04/09/2018	14:30	1,187-1,127	--	14.9	1,870
14	887169	04/18/2018	14:40	1,317-1,357	--	14.6	1,740
15	887169	08/20/2018	13:20	1,417-1,457	--	11.8	1,780
16	887169	03/25/2019	15:45	1,517-1,557	--	11.5	1,710

[N1] This test is not NELAC certified by this laboratory and certification not requested/required by client.

[U] The ion was analyzed for but not detected. Value is reported as the method detection limit.

[I] The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit. The practical quantitation limit is four times the detection limit.

[J3] Estimated value, value not accurate. The reported value failed to meet the established quality control criteria for either precision or accuracy.

[Q] Sample was held beyond holding time.

ROMP 88 – Rock Ridge well site in Polk County, Florida

bls, below land surface; Ca^{2+}, calcium; $CaCO_3$, calcium carbonate; Cl^-, chloride; Fe^{2+}, iron; ft, feet; HH:MM, hours:minutes; HWT, 4-inch inner diameter SiO_2, silicon dioxide; SID, Site identification; SO_4^{2-}, sulfate; Sr^{2+}, strontium; SU, standard units; TDS, total dissolved solids; Shaded rows indicate water

MAJOR CATIONS									
Ca^{2+} (mg/L)	Mg^{2+} (mg/L)	Na^+ (mg/L)	K^+ (mg/L)	Fe^{2+} (µg/L)	Sr^{2+} (mg/L)	Si as SiO_2 (mg/L)[N1]	Total Dissolved Solids (mg/L)	Total Alkalinity $CaCO_3$ (mg/L)	Sample Collection Method/Remarks
101	8.91	16.4	0.55	72.5	0.24[N1]	14.0	351	308.4	Used HWT to isolate test interval
90.1	6.75	16.3	0.66	213	0.17[N1]	15.9	312	252.7	
76.8	7.82	16.5	1.16	337	0.17[N1]	16.3	286	217.1	
74.2	7.61	14.6	1.07	170	0.18[N1]	16.3	266	218.0	
79.4	9.09	13.8	0.94	543	0.2[N1]	15.4	294	245.5	Begin core hole 3 water samples
78.5	8.18	13.6	1.03	217	0.2[N1]	15.6	277	229.8	
57.1	7.87	11.7	1.36	195	3.34	14.5	236[Q]	178[Q]	Very strong hydrogen sulfide odor.
60.4	8.27	12	1.46	205	3.36	15.2	240[Q]	178	Very strong hydrogen sulfide odor. Water turned dark gray.
198	54.3	6.12	2.23	926	18.5	13.8	1,100	124	Very strong hydrogen sulfide odor. Water turned dark gray.
556	129	6.28	3.11	4,660	11.1	14.3	2,700[Q]	107	
628	146	6.82	3.78	1,280	10.6	15.6	2,960	120[Q]	Very strong hydrogen sulfide odor. Water turned dark gray.
447	97	6.29	2.92	954[J3]	14.3[N1,J3]	14.7	2,220	119	Very strong hydrogen sulfide odor. Water turns gray.
591	134	10	7.85	999	12.6[N1]	15.4	3,020	126	Very strong hydrogen sulfide odor. Water turned gray.
598	94.1	17.1	6.23	1,430	11.8[N1]	16	2,790	131	Very strong hydrogen sulfide odor. Water turned gray.
589	105	10	4.84	2,260	14.7[N1]	13.8	2,840	117	Strong hydrogen sulfide odor. Water turned gray.
630[J3]	88.2	7.65	2.45	4,000	12.2[N1]	13.4	2,770	118	Water turned gray.

Table M2. Laboratory analyses results of the water quality samples collected during core drilling and testing at the

[<, less than; --, District Laboratory did not perform analysis for specific conductance; µg/L, micrograms per Liter; µmmhos/cm, micromhos per centimeter; temporary steel casing; K^+, potassium; Mg^{2+}, magnesium; mg/L, milligrams per Liter; MM/DD/YYYY, month/day/year; Na^+, sodium; No., number; Si, silica; quality samples from a confining unit]

Water Quality Sample No.	Monitor Well SID No.	Date MM/DD/YYYY	Time (HH:MM)	Sample Interval (ft bls)	Specific Conductance (µmhos/cm)[N1]	MAJOR ANIONS Cl^- (mg/L)	MAJOR ANIONS SO_4^{2-} (mg/L)
17	887169	05/01/2019	16:05	1,617-1,657	--	18.3	1,740
18	887169	05/09/2019	14:41	1,737-1,777	--	15.6	1,040
19	887169	05/21/2019	14:25	1,810-1,857	--	13.0	795
20	887169	05/28/2019	15:10	1,897-1,937	--	12.8	692
21	887169	12/02/2019	15:50	2,005.5-2,047	--	14.0	454
22	887169	02/12/2020	14:23	2,134-2,177	--	18.0	375
24	887169	03/09/2020	17:20	2,220-2,277	--	19.0	165
25	887169	03/23/2020	16:22	2,357-2,397	--	7,850	3,480
26	887169	04/08/2020	16:15	2,547-2,607	--	13,000	3,750

[N1] This test is not NELAC certified by this laboratory and certification not requested/required by client.

[U] The ion was analyzed for but not detected. Value is reported as the method detection limit.

[I] The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit. The practical quantitation limit is four times the detection limit.

[J3] Estimated value, value not accurate. The reported value failed to meet the established quality control criteria for either precision or accuracy.

[Q] Sample was held beyond holding time.

ROMP 88 – Rock Ridge well site in Polk County, Florida

bls, below land surface; Ca^{2+}, calcium; $CaCO_3$, calcium carbonate; Cl^-, chloride; Fe^{2+}, iron; ft, feet; HH:MM, hours:minutes; HWT, 4-inch inner diameter SiO_2, silicon dioxide; SID, Site identification; SO_4^{2-}, sulfate; Sr^{2+}, strontium; SU, standard units; TDS, total dissolved solids; Shaded rows indicate water

MAJOR CATIONS									
Ca^{2+} (mg/L)	Mg^{2+} (mg/L)	Na^+ (mg/L)	K^+ (mg/L)	Fe^{2+} (µg/L)	Sr^{2+} (mg/L)	Si as SiO_2 (mg/L)[N1]	Total Dissolved Solids (mg/L)	Total Alkalinity $CaCO_3$ (mg/L)	Sample Collection Method/Remarks
586	87.6	18.5	3.12	7,690	10.2[N1]	9.25	2,840[Q]	88.6	
379[J3]	63.4	12.4	2.33	6,480	7.71[N1]	13.1	1,790	131	
265	60.5	8.86	2.33	1,080	9.86[N1]	14.4	1,420	142	
247	55.6	8.34	1.99	1,030	8.61[N1]	14.0	1,260	129	
159	37.6	8.86	1.53	1,370	6.29[N1]	12.7	912	141	
141	37.4	12.2	2.29	581	3.93[N1]	13.2	1,080	143	Water turned dark gray and had a hydrogen sulfide odor.
86.2	21.3	12.1	1.50	142	1.41[N1]	12.3	445	136	
1,560	815	6,550	196	881	16.4[N1]	13.9	20,600	168	Water turned black and had a very strong hydrogen sulfide odor.
1,210	744	6,960	190	1,380	19.1[N1]	12.4	25,800	170	Water turned black and had a very strong hydrogen sulfide odor. The water seemed to be stratified in the bailer.

Table M3. The equivalent weight and percent equivalent weight for select ions and the water type for groundwater

[%, percent; bls, below land surface; Ca^{2+}, calcium; Cl^{-}, chloride; ft, feet; HCO_3^{-}, bicarbonate; K^{+}, potassium; Mg^{2+}, magnesium; meq/L, milliequivalents per negligible based on groundwater pH at this site because hydroxyl ions are insignificant in groundwater and carbonate ions are typically not present if pH is samples from a confining unit]

Water Quality Sample No.	Sample Interval (ft bls)	CATIONS							
		Ca^{2+}		Mg^{2+}		Na^{+}		K^{+}	
		meq/L	%	meq/L	%	meq/L	%	meq/L	%
1	73.2-100	5.04	77.5	0.73	11.3	0.71	11.0	0.01	0.22
2	120-167	4.50	77.8	0.56	9.6	0.71	12.3	0.02	0.29
3	246-267	3.83	73.4	0.64	12.3	0.72	13.7	0.03	0.57
4	327-367	3.70	74.2	0.63	12.5	0.63	12.7	0.03	0.55
5	397-437	3.96	74.3	0.75	14.0	0.60	11.2	0.02	0.45
6	437-457	3.92	75.2	0.67	12.9	0.59	11.4	0.03	0.51
7	562-597	2.85	70.5	0.65	16.0	0.51	12.6	0.03	0.86
8	657-697	3.01	70.9	0.68	16.0	0.52	12.3	0.04	0.88
9	766-817	9.88	67.3	4.47	30.5	0.27	1.8	0.06	0.39
10	877-917	27.74	71.7	10.61	27.4	0.27	0.7	0.08	0.21
11	940-957	31.34	71.6	12.01	27.5	0.30	0.7	0.10	0.22
12	1,027-1,067	22.31	72.8	7.98	26.1	0.27	0.9	0.07	0.24
13	1,187-1,227	29.49	71.7	11.02	26.8	0.43	1.1	0.20	0.49
14	1,317-1,357	29.84	77.5	7.74	20.1	0.74	1.9	0.16	0.41
15	1,417-1,457	29.39	76.2	8.64	22.4	0.43	1.1	0.12	0.32
16	1,517-1,557	31.44	80.4	7.26	18.6	0.33	0.9	0.06	0.16
17	1,617-1,657	29.24	78.3	7.21	19.3	0.80	2.2	0.08	0.21
18	1,737-1,777	18.91	76.5	5.22	21.1	0.54	2.2	0.06	0.24
19	1,810-1,857	13.22	70.9	4.98	26.7	0.39	2.1	0.06	0.32
20	1,897-1,937	12.33	71.2	4.57	26.4	0.36	2.1	0.05	0.29
21	2,005.5-2,047	7.93	69.3	3.09	27.0	0.39	3.4	0.04	0.34
22	2,134-2,177	7.04	65.7	3.08	28.8	0.53	5.0	0.06	0.55
24	2,220-2,277	4.30	65.0	1.75	26.5	0.53	7.9	0.04	0.58
25	2,357-2,397	77.84	17.9	67.05	15.4	284.78	65.5	5.01	1.15
26	2,547-2,607	60.38	14.1	61.21	14.3	302.61	70.5	4.86	1.13

quality samples collected during core drilling and testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

liter; Na^+, sodium; No., number; SO_4^{2-}, sulfate; Total alkalinity is used as HCO_3^- because it is assumed CO_3^{2-} (carbonate ion) and H_2CO_3 (carbonic acid) are less than 8.3 standard units (SU) (Hem, 1985); See tables M1 and M2 for sample station identification (SID) numbers; Shaded rows indicate water quality

ANIONS						Water Type
HCO_3^-		Cl^-		SO_4^{2-}		
meq/L	%	meq/L	%	meq/L	%	
5.054	88.52	0.638	11.17	0.018	0.31	Calcium Bicarbonate
4.141	86.61	0.638	13.33	0.003	0.05	Calcium Bicarbonate
3.558	86.20	0.567	13.74	0.003	0.06	Calcium Bicarbonate
3.573	87.14	0.525	12.80	0.003	0.06	Calcium Bicarbonate
4.023	87.78	0.547	11.94	0.013	0.28	Calcium Bicarbonate
3.766	88.12	0.505	11.82	0.003	0.06	Calcium Bicarbonate
2.917	81.85	0.519	14.56	0.128	3.58	Calcium Bicarbonate
2.917	82.35	0.502	14.17	0.123	3.47	Calcium Bicarbonate
2.032	11.97	0.285	1.68	14.655	86.35	Calcium Sulfate
1.754	3.75	0.250	0.54	44.757	95.71	Calcium Sulfate
1.967	3.85	0.258	0.51	48.849	95.64	Calcium Sulfate
1.950	5.13	0.272	0.72	35.806	94.16	Calcium Sulfate
2.065	4.10	0.420	0.84	47.826	95.06	Calcium Sulfate
2.147	4.56	0.412	0.88	44.501	94.56	Calcium Sulfate
1.917	4.01	0.333	0.70	45.524	95.29	Calcium Sulfate
1.934	4.20	0.324	0.71	43.734	95.09	Calcium Sulfate
1.452	3.12	0.516	1.11	44.501	95.76	Calcium Sulfate
2.147	7.36	0.440	1.51	26.598	91.14	Calcium Sulfate
2.327	10.11	0.367	1.59	20.332	88.30	Calcium Sulfate
2.114	10.48	0.361	1.79	17.698	87.73	Calcium Sulfate
2.311	16.14	0.395	2.76	11.611	81.10	Calcium Sulfate
2.344	18.84	0.508	4.08	9.591	77.08	Calcium Sulfate
2.229	31.91	0.536	7.67	4.220	60.42	Calcium Sulfate
2.753	0.88	221.439	70.70	89.003	28.42	Sodium Chloride
2.786	0.60	366.714	78.79	95.908	20.61	Sodium Chloride

Table M4. Select molar ratios for groundwater quality samples collected during core drilling and testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[bls, below land surface; Ca^{2+}, calcium; Cl^-, chloride; ft, feet; HCO_3^-, bicarbonate; Mg^{2+}, magnesium; Na^+, sodium; No., number; SO_4^{2-}, sulfate; Total alkalinity is used as HCO_3^- because it is assumed CO_3^{2-} (carbonate ion) and H_2CO_3 (carbonic acid) are negligible based on groundwater pH at this site because hydroxyl ions are insignificant in groundwater and carbonate ions are typically not present if pH is less than 8.3 standard units (SU) (Hem, 1985): See tables M1 and M2 for sample station identification (SID) numbers; Shaded rows indicate water quality samples from a confining unit]

Water Quality Sample No.	Open Interval (ft bls)	$Cl^-:SO_4^{2-}$	$Ca^{2+}:HCO_3^-$	$Ca^{2+}:Mg_{2+}$	$Cl^-:HCO_3^-$	$Na^+:HCO_3^-$	$Na^+:Cl^-$	$SO_4^{2-}:HCO_3^-$
1	73.2-100	71.22	0.499	6.88	0.126	0.141	1.12	0.0018
2	120-167	498.54	0.543	8.10	0.154	0.171	1.11	0.0003
3	246-267	443.39	0.539	5.96	0.159	0.202	1.27	0.0004
4	327-367	410.30	0.518	5.91	0.147	0.178	1.21	0.0004
5	397-437	85.59	0.492	5.30	0.136	0.149	1.10	0.0016
6	437-457	394.86	0.520	5.82	0.134	0.157	1.17	0.0003
7	562-597	8.13	0.488	4.40	0.178	0.174	0.98	0.0219
8	657-697	8.16	0.517	4.43	0.172	0.179	1.04	0.0211
9	766-817	0.04	2.431	2.21	0.140	0.131	0.93	3.6057
10	877-917	0.01	7.911	2.61	0.143	0.156	1.09	12.7616
11	940-957	0.01	7.967	2.61	0.131	0.151	1.15	12.4195
12	1,027-1,067	0.02	5.719	2.80	0.140	0.140	1.00	9.1798
13	1,187-1,227	0.02	7.141	2.68	0.204	0.211	1.03	11.5804
14	1,317-1,357	0.02	6.950	3.85	0.192	0.346	1.81	10.3640
15	1,417-1,457	0.01	7.664	3.40	0.174	0.227	1.31	11.8709
16	1,517-1,557	0.01	8.128	4.33	0.168	0.172	1.03	11.3075
17	1,617-1,657	0.02	10.069	4.06	0.356	0.554	1.56	15.3238
18	1,737-1,777	0.03	4.405	3.63	0.205	0.251	1.23	6.1946
19	1,810-1,857	0.04	2.841	2.66	0.158	0.166	1.05	4.3685
20	1,897-1,937	0.04	2.915	2.69	0.171	0.172	1.00	4.1857
21	2005.5-2047	0.07	1.717	2.56	0.171	0.167	0.98	2.5124
22	2,134-2,177	0.11	1.501	2.29	0.217	0.226	1.04	2.0462
24	2,220-2,277	0.25	0.965	2.45	0.240	0.236	0.98	0.9467
25	2,357-2,397	4.98	14.137	1.16	80.427	103.434	1.29	16.1630
26	2,547-2,607	7.65	10.836	0.99	131.624	108.615	0.83	17.2121

Table M5. Field analyses results of the water quality samples and discharge area collected during aquifer performance testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[--, not applicable; °C, degrees Celsius; µmhos/cm, micromhos per centimeter; bls, below land surface; ft, feet; HH:MM, hours:minutes; MM/DD/YYYY, month/day/year; SID, station identification; SU, standard units]

Aquifer Performance Test	Date MM/DD/YYYY	Time (HH:MM)	Sample Interval (ft bls)	Temperature (°C)	pH (SU)	Specific Conductance (µmhos/cm)	Sample Collection Remarks
lower Floridan Aquifer below middle confining unit VIII	02/23/2023	13:22	--	23.2	5.67	150.6	Grass Creek before drawdown starts
lower Floridan Aquifer below middle confining unit VIII	02/27/2023	15:30	1,800-2,422	30.6	7.09	682	Water quality sample from well discharge about 2 hours after drawdown start
lower Floridan Aquifer below middle confining unit VIII	02/27/2023	16:11	--	31.2	7.58	682	Grass Creek near discharge on first day of drawdown
lower Floridan Aquifer below middle confining unit VIII	02/28/2023	15:29	--	30.8	7.42	685	Grass Creek near discharge on second day of drawdown
lower Floridan Aquifer below middle confining unit VIII	03/01/2023	09:15	1,800-2,422	30.1	7.03	710	Water quality sample from well discharge about 43.5 hours after drawdown start
lower Floridan Aquifer below middle confining unit VIII	03/01/2023	10:59	--	30.6	6.98	702	Downstream of Grass Creek
lower Floridan Aquifer below middle confining unit VIII	03/01/2023	11:02	--	27.6	7.06	578	Upstream of Grass Creek
lower Floridan Aquifer below middle confining unit VIII	03/02/2023	11:58	--	30.8	7.26	715	Downstream of Grass Creek
lower Floridan Aquifer below middle confining unit VIII	03/02/2023	12:12	--	21.4	6.16	245.5	Withlacoochee River at Main Grade near SID 17533
lower Floridan Aquifer below middle confining unit VIII	03/02/2023	12:38	1,800-2,422	31.4	7.03	721	Water quality sample from well discharge about 71 hours after drawdown start
lower Floridan Aquifer below middle confining unit I	03/09/2023	14:34	--	21	5.83	206.3	Grass Creek before drawdown start
lower Floridan Aquifer below middle confining unit I	03/20/2023	14:49	615-853	24.8	7.3	483.2	Water quality sample from well discharge about 4 hours after drawdown start
lower Floridan Aquifer below middle confining unit I	03/22/2023	10:10	615-853	25.3	7.35	567	Water quality sample from well discharge about 47.5 hours after drawdown start

Table M5. Field analyses results of the water quality samples and discharge area collected during aquifer performance testing at the ROMP 88 – Rock Ridge well site in Polk County, Florida

[--, not applicable; °C, degrees Celsius; µmhos/cm, micromhos per centimeter; bls, below land surface; ft, feet; HH:MM, hours:minutes; MM/DD/YYYY, month/day/year; SID, station identification; SU, standard units]

Aquifer Performance Test	Date MM/DD/YYYY	Time (HH:MM)	Sample Interval (ft bls)	Temperature (°C)	pH (SU)	Specific Conductance (µmhos/cm)	Sample Collection Remarks
lower Floridan Aquifer below middle confining unit I	03/30/2023	09:54	615-853	25.7	7.25	601	Water quality sample from well discharge about 72 hours after drawdown start
upper Floridan aquifer	04/24/2023	14:08	202-477	25	7.15	402.9	Water quality sample from well discharge about 3.5 hours after drawdown start
upper Floridan aquifer	04/26/2023	09:59	202-477	24.6	7.03	465.1	Water quality sample from well discharge about 47 hours after drawdown start
upper Floridan aquifer	04/27/2023	11:14	202-477	25	7.06	467.5	Water quality sample from well discharge at end of test about 72.5 hours after drawdown start

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Table M6. Laboratory analyses results of the water quality samples collected during aquifer performance testing at the

[µg/L, micrograms per Liter; bls, below land surface; Ca^{2+}, calcium; $CaCO_3$, calcium carbonate; Cl^-, chloride; Fe^{2+}, iron; ft, feet; HH:MM, hours:minutes; SID, Site identification; SO_4^{2-}, sulfate; Sr^{2+}, strontium; TDS, total dissolved solids]

Aquifer Performance Test	Monitor Well SID No.	Date (MM/DD/YYYY)	Time (HH:MM)	Sample Interval (ft bls)	MAJOR ANIONS	
					Cl^- (mg/L)	SO_4^{2-} (mg/L)
lower Floridan Aquifer below middle confining unit VIII	938848	02/27/2023	15:30	1,800-2,422	19.6	190
lower Floridan Aquifer below middle confining unit VIII	938848	03/01/2023	09:15	1,800-2,422	19.5	234
lower Floridan Aquifer below middle confining unit VIII	938848	03/02/2023	12:40	1,800-2,422	19.4	217
lower Floridan Aquifer below middle confining unit I	916330	03/20/2023	14:45	615-853	15.5	87.6
lower Floridan Aquifer below middle confining unit I	916330	03/22/2023	10:10	615-853	15.0	125
lower Floridan Aquifer below middle confining unit I	916330	03/30/2023	09:50	615-853	15.2	148
upper Floridan aquifer	986871	04/24/2023	14:05	200-477	17.9	4.50
upper Floridan aquifer	986871	04/26/2023	10:00	200-477	18.4	3.13
upper Floridan aquifer	986871	04/27/2023	10:15	200-477	18.4	3.05

[N1] This test is not NELAC certified by this laboratory and certification not requested/required by client.

[J3] Estimated value, value not accurate. The reported value failed to meet the established quality control criteria for either precision or accuracy.

[I] The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit. The practical quantitation limit is four times the detection limit.

[Q] Sample was held beyond holding time.

ROMP 88 – Rock Ridge well site in Polk County, Florida

K^+, potassium; Mg^{2+}, magnesium; mg/L, milligrams per Liter; MM/DD/YYYY, month/day/year; Na^+, sodium; No., number; Si, silica; SiO_2, silicon dioxide;

MAJOR CATIONS									
Ca^{2+} (mg/L)	Mg^{2+} (mg/L)	Na^+ (mg/L)	K^+ (mg/L)	Fe^{2+} (µg/L)	Sr^{2+} (mg/L)[N1]	Si as SiO_2 (mg/L)	Total Dissolved Solids (mg/L)	Total Alkalinity $CaCO_3$ (mg/L)	Sample Collection Remarks
91.8	22.1	12.1	1.52	23.2	1.59	13.2	453	140	Water quality sample from well discharge about 2 hours after drawdown start
95.8	23.0	12.2	1.55	23.1	1.89	13.4	481	135	Water quality sample from well discharge about 43.5 hours after drawdown start
99.4	23.5	12.5	1.59	30.2	2.01	13.4	481	140	Water quality sample from well discharge about 71 hours after drawdown start
58.4	12.5	8.24	1.70	47.3	17.7	15.0	331	144	Water quality sample from well discharge about 4 hours after drawdown start
70.7	15.7	8.23	1.83	37.8	16.8	14.9	379	149	Water quality sample from well discharge about 47.5 hours after drawdown start
75.3	17.1	8.09	1.76	37.0	16.2	15.0	401	142[J3]	Water quality sample from well discharge about 72 hours after drawdown start
58.2	6.51	13.9	1.57	11.0[I]	0.704	16.5	230	184[Q]	Water quality sample from well discharge about 3.5 hours after drawdown start
70.5	7.74	13.4	1.14	16.2	0.592	16.3	273	221[Q]	Water quality sample from well discharge about 47 hours after drawdown start
69.3	7.77	13	1.11	191	0.547	16.2	268	221	Water quality sample from well discharge at end of test about 72.5 hours after drawdown start

Southwest Florida
Water Management District