



2481 N.W. Boca Raton Blvd. Boca Raton, Florida 33431 Phone # 1 (561) 391-8102

Legend for Geotechnical Data

(SP), (SM), etc.

Refers to the Army Corps of Engineers Unified Soils Classification System. Class types are defined primarily by grain size, sorting and percent of material passing the 200 sieve. Classification of materials on the core logs based on visual field examinations are identified on the core logs under the Classification of Materials Description. Classifications based on laboratory sieve analyses are identified on the core logs in the Legend and under Remarks.

Grain Size Terms

Cobble – retained on the 3.0" sieve

Gravel – greater than the #4 sieve and less than the 3.0" sieve

Coarse: greater than the 3/4" sieve and less than the 3.0" sieve

Fine – greater than the #4 sieve and less than the 3/4" sieve

Sand - greater than the #200 sieve and less than the #4 sieve

Coarse - greater than the #10 sieve and less than the #4 sieve Medium - greater than the #40 sieve and less than the #10 sieve Fine - greater than the #230 sieve and less than the #40 sieve

Fines – (silt or clay) passing the #230 sieve

Proportional definition of descriptive terms

Descriptive Term	Range of Proportions
Sandy, gravelly, etc.	35 % to 50 %
Some	20 % to 35 %
Little	10 % to 20 %
Trace	1 % to 10 %





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ĠŴ	Ø	VVell graded gravels or gravel-sand mixtures, little or no fines	ML		Inorganic sitts and very fine sands, rock flour, sandy sitts or clayey sitts with slight plasticity
GP		Poorly graded gravels or gravel-sand mixtures, w/ little or no fines	MH	Ш	Inorganic sifts, micaceous or diatomaceous fine sandy or sifty soild, elastic sifts
GM		Sitty gravels, gravel- sand-sitt mixtures	OL		Organic sifts and organic sift-clays of low plasticity
GC		Clayey gravels, gravel- sand-clay mixtures	ОН		Organic clays of medium to high plasticity, organic silts.
SW	, ,	Well graded sands or gravelly sands, little or no fines	CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, sitty clays, lean clays
SP		Poorly graded sands or gravelly sands, little or no fines	СН		Inorganic clays of high plasticity, fat clays
SM		Sitty sands, sand-sitt mixtures	PT		Peat and other highly organic soils
SC		Clayey sands, sand-clay mixtures	SP-SM		Poorly-graded silty sand
SVV-SM		VVeil-graded sity sand	SM-SC		Silty clayey sand
GW-GM	g g	VVell-graded silty gravel	ML-CL		Inorganic sitty lean clay
GM-GC		Clayey sifty gravel			

Note: Information is after ACOE Atlantic Division Manual # 1110-1-1 titled *Engineering and Design Geotechnical Manual for Surface and Subsurface Investigations*



APTIM

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Legend for Geotechnical Data

The naming convention used by APTIM incorporates key information about the item in the title. The naming format uses the following information:

- Abbreviated area name (two letters that will be used throughout the project)
- Abbreviated data type: vibracore (VC) or surface sample (SS)
- Collection year (YY)
- Identification number
- Sample or composite identification number in the case of jet probes or vibracores.
 Composite samples are indicated by COMP following the identification number.
 COMP represents a composite developed to characterize beach compatible material.

Format examples:

- A) MBVC-19-05
- B) MBVC-19-10 S#1

Example A is vibracore number 05, collected in the Mexico Beach area in the year 2019.

Example B refers to sample number 1 taken from vibracore number 10, which was collected in the Mexico Beach area in 2019.

Bay	ico Beach S County, Flo	orida	APTIM	10.	. cc	Florida Stat	SYSTEM/DATUM HORIZONTAL te Plane North NAD 1983	VERTICAL NAVD
	I NG DESIGI I/BVC-19-0		LOCATION COORDINATES (ft) X = 1.664.634 Y = 336.951	11.		NUFACTUF Electric	=	NUTO HAMI MANUAL H <i>A</i>
	LING AGEN		CONTRACTOR FILE NO.	10			DISTURBED	NDISTURB
	Athena Tecl		es, Inc.	12.	. тс	TAL SAMPL	LES 5	
	IE OF DRILL			13.	. то	TAL NUMB	ER CORE BOXES	
	Palmer McC		G DEG. FROM BEARING	14.	EL	EVATION G	ROUND WATER	
	VERTICAL INCLINED		VERTICAL	15.	. DA	TE BORING		OMPLETED
	CKNESS OF	OVERE	l l	16	=-	EVATION T		06-18-19
				-			OP OF BORING -18.0 Ft. VERY FOR BORING 21.5 Ft.	
7. DEP	TH DRILLED	O INTO	ROCK 0.0 Ft.				AND TITLE OF INSPECTOR	
8. ТОТ	AL DEPTH (OF BOR	ING 22.0 Ft.			Kristina Mc		
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured value	s	% REC.	BOX OR SAMPLE	REMARKS	
-18.0	0.0	-	SAND, fine grained, quartz, trace shell hash,	4		1	Sample #1, Depth = 0.3'	
-18.6	0.6	 .::: 	trace silt, color mottled light gray (2.5Y-7/2) and	ı, <u>/</u> -		- -	Mean (mm): 0.20, Phi Sorting: 0.53	3
		$ \cdots $	gray (2.5Y-5/1), (SP). SAND, fine grained, quartz, trace shell	ا		2	Fines (230): 1.18% (SP) Sample #2, Depth = 1.5'	
-20.4	2.4	:::	fragments, trace shell hash, trace silt, trace whole shell, shell fragments up to (0.75"x1.0"),	г			Mean (mm): 0.25, Phi Sorting: 0.73 Fines (230): 1.03% (SP)	3
	-	$ \cdots $	whole shells up to 1.0", 1.5" some shell hash	71			1 11100 (200): 110070 (017)	
	_	$ \cdots $	pocket @ 0.7', 0.5" silty organic pocket @ 1.1', (1.0"x1.5") & (0.75"x1.5") shell fragments @	П				
			2.3', light gray (2.5Y-7/1), (SP).	IJ				
			SAND, fine grained, quartz, trace shell hash, trace silt, silt includes silty pockets up to 0.25",				Sample #3, Depth = 5.9'	
	_		2 (0.5"x0.75") shell fragments @ 3.7' & 8.1', (0.75"x1.0") whole shell @ 5.4', white (N-8/0),			3	Mean (mm): 0.23, Phi Sorting: 0.34 Fines (230): 0.86% (SP)	4
	-	<u> </u> ∷:	(SP).				1 11100 (200): 0.0070 (017)	
	_							
		:·::						
-27.5	9.5	-:					_	
	_	:·:	SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.75"), 0.5"				Cample #4 Donth = 11 0	
	-	$ \cdots $	shell fragment @ 9.8', (0.5"x0.75") shell fragment @ 11.7', 1.5" pocket of silty shell hash			4	Sample #4, Depth = 11.0' Mean (mm): 0.24, Phi Sorting: 0.4'	1
			& fragments up to 0.5" @ 12.4', light greenish				Fines (230): 1.12% (SP)	
-30.5	12.5	. 7/2	gray (10Y-8/1), (SP). SAND, fine grained, quartz, some shell hash,	_			Sample #5, Depth = 13.4'	
	-		little clay, trace shell fragments, trace whole shell, shells up to 0.75", 1.25" whole shell @			5	Mean (mm): 0.49, Phi Sorting: 1.96	6
-32.2	- 14.2		13.3', dark greenish gray (10Y-4/1), (SW-SC).				Fines (230): 11.04% (SW-SC)	
	ļ-		Shelly SAND, fine to medium grained, quartz, some clay, shell components: shell hash, shell					
	_		fragments & whole shells up to (1.0"x1.25"),					
-34.5	16.5		greenish gray (10Y-5/1), (GC). SAND, fine to medium grained, quartz, some	-				
-35.9	- 17.9		clay, little shell hash, trace organics, trace shell					
-33.8	17.9		fragments up to 0.75", (0.75"x3.0") wood fragment @ 17.5', 0.75" wood fragment @					
	-		17.8', dark gray (2.5Y-4/1), (SC). Clayey SAND, fine to medium grained, quartz,	<i>」</i>				
-37.9	19.9		some shell hash, trace organics, trace shell					
-37.9 -39.5 -40.0			fragments & whole shells up to 1.25", 1.5" wood fragments @ 19.0' & 19.2', dark gray	1/				
-39.5	21.5	ШЦ	(2.5Y-4/1), (SC). Sandy SILT, trace clay, trace shell hash, 1.0"	┚┃				
-40.0	22.0	1 1	wood fragment @ 21.2', color mottled light	$ \cdot $				
	L		brownish gray (2.5Y-6/2), gray (10YR-5/1) and very dark grayish brown (2.5Y-3/2), (ML).	<u>,</u>				
	L		No Recovery.]				
•		1						
			End of Boring	ļ				

	ico Beach S County, Flo		earch APTIM		coc		SYSTEM/DATUM HORIZONTAL VERTICA e Plane North NAD 1983 NAVD
2. BOR	ING DESIGN	IATION		11.			RER'S DESIGNATION OF DRILL AUTO HAMI
	/IBVC-19-0		X = 1,665,511 Y = 337,136		El	ectric	MANUAL H
	LING AGEN Athena Tech		CONTRACTOR FILE NO.	12.	тот	AL SAMPL	DISTURBED UNDISTURE LES 4
	E OF DRILL		es, IIIc.	13.	тот	AL NUMB	ER CORE BOXES
	Palmer McC						ROUND WATER
	CTION OF I	BORIN	DEG. FROM BEARING VERTICAL				STARTED COMPLETE
	INCLINED			15.	DAT	E BORING	06-18-19 07:43 06-18-19
6. THIC	CKNESS OF	OVER	BURDEN 0.0 Ft.	16.	ELE	VATION T	OP OF BORING -16.7 Ft.
7. DEP	TH DRILLED	INTO	ROCK 0.0 Ft.	17.	тот	AL RECOV	/ERY FOR BORING 21.5 Ft.
8. TOT	AL DEPTH C	F BOR	ING 22.0 Ft.	18.			AND TITLE OF INSPECTOR
			22.011.		- Kı	ristina Mc	Coy, P.G. T
ELEV. (ft) -16.7	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured value	s R	% REC.	BOX OR Sample	REMARKS
-17.4	0.7		SAND, fine grained, quartz, trace shell hash,		_	VS	
	-	000	trace silt, 0.25" shell fragment @ 0.6', color mottled light gray (2.5Y-7/2) and, gray	\prod	ŀ	VC01#1	1
	-		(2.5Y-5/1), (SP). SAND, fine grained, quartz, trace shell	/		1	Sample #1, Depth = 2.1' Mean (mm): 0.29, Phi Sorting: 1.14
		°°°	fragments, trace shell hash, trace silt, trace			•	Fines (230): 1.17% (SW)
-20.2	3.5	0000	whole shell, shell fragments up to 1.25", whole shells up to 0.75", silty pockets up to 0.25", 2.0"	$\overline{}$	F		
	-	 ∷∷	some shell hash pocket @ 0.8', light gray (2.5Y-7/1), (SW).	$/ \perp$		2	Sample #2, Depth = 4.5' Mean (mm): 0.25, Phi Sorting: 0.60
-22.1	5.4	-:::	SAND, fine grained, quartz, trace shell	'		_	Fines (230): 0.93% (SP)
	_		fragments, trace shell hash, trace silt, silty pockets up to 0.5", shell fragments up to 0.75",	П			
		 ∷∷ 	1.5" little shell hash pocket @ 3.6', 0.75" whole	Ш			
	-	·:·:·	shell @ 3.8', 2.0" shell fragment @ 4.9', white (2.5Y-8/1), (SP).	Ш			0 1 1/0 5 11 001
	-	$ \cdots $	SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, silty			3	Sample #3, Depth = 8.3' Mean (mm): 0.23, Phi Sorting: 0.37
	-	·:::	pockets up to 0.25", shell fragments up to				Fines (230): 1.71% (SP)
	_		(0.5"x1.0"), white (N-8/0), (SP).				
-27.8	_ 11.1	 ∷∵ 					
-21.0	_ !!.!		SAND, fine grained, quartz, trace shell hash,		f		
	-		trace silt, silty pockets up to (0.25"x1.0"), 0.75"			4	Sample #4, Depth = 12.3' Mean (mm): 0.22, Phi Sorting: 0.42
-30.2	13.5		whole shell @ 13.1', light greenish gray (10Y-7/1), (SP).				Fines (230): 1.28% (SP)
-50.2	- 13.3		SAND, fine grained, quartz, some shell hash,	\dashv	f	VS	
-31.5	14.8		little clay, trace shell fragments, trace whole shell, shells up to 0.75", (1.0"x1.5") whole shell			VC01#5	
	_		@ 14.2', dark greenish gray (10Y-4/1), (SW-SC).	/			
	_		Shelly SAND, fine to medium grained, quartz,	'			
-33.7	17.0		some clay, trace coral, shell components: shell hash, shell fragments & whole shells up to 1.5",	$\overline{}$			
	_		coral up to (0.25"x1.25"), greenish gray (10Y-5/1), (GC).	/			
			SAND, fine to medium grained, quartz, some	'			
-36.3	19.6		clay, little shell hash, trace shell fragments up to 1.0", some shell hash from 18.6' to 19.2',	<u> </u>			
	_	$\ \ \ $	(0.5"x1.0") wood fragments @ 17.7' & 18.1', (0.5"x2.5") wood fragment @ 18.0', dark gray				
20.0	- 04.5		(2.5Y-4/1), (SC).				
-38.2 -38.7	21.5 22.0	Ш	Sandy SILT, trace clay, trace shell hash, (1.0"x1.25") wood fragment @ 20.9', color				
			mottled light brownish gray (2.5Y-6/2), gray	\prod			
	-		(10YR-5/1) and, very dark grayish brown (2.5Y-3/2), (ML).				
	-		No Recovery.	1			
		ı I	End of Boring	- 1	- 1		

DRI	ILLING	LOC	DIVISI	ION		INS	STAL	LATION	<u> </u>	dion wibve		SHEET 1 OF 1 SHEETS
1. PRO	JECT				A	9.	SIZE	AND TYPE	OF BIT	2.0 ln.		1 0 0
	ico Beach S County, Flo		Search		ADTIM	Ŀ	СО	ORDINATE	SYSTEM/DAT	rum HORIZO		VERTICAL
	ING DESIGN		<u>. ;</u>	LOCATION COORD	APTIM	44			e Plane Nort	h NAD		NAVD 88
	MBVC-19-0		•	X = 1,664,216	` '	111.		Electric	KEK 2 DESIGI	NATION OF DRIL	ᅟ 님	AUTO HAMMER MANUAL HAMMER
	LING AGEN				ACTOR FILE NO.	\vdash				DISTURBED		UNDISTURBED (UD)
	Athena Tech		ies, Inc.			12.	то	TAL SAMPL	.ES	4		,
4. NAM	IE OF DRILL	ER		•		13.	то	TAL NUMB	ER CORE BO	XES		
	Palmer McC					14.	EL	EVATION G	ROUND WAT	ER		
\boxtimes	ECTION OF E VERTICAL INCLINED	BORIN	G	DEG. FROM VERTICAL	BEARING			TE BORING		STARTED		COMPLETED
	CKNESS OF	OVERI	BURDEN	0.0 Ft.	!	16.	EL	EVATION T	OP OF BORIN	06-18-19 0 -18.2 Ft.		06-18-19 08:16
7 DED	TU DDU I ED	INTO	DOCK	0.0.54		17.	то	TAL RECOV	/ERY FOR BO	RING 21 Ft		
7. DEP	TH DRILLED	INIO	RUCK	0.0 Ft.		⊢				INSPECTOR	-	
8. TOT	AL DEPTH O	F BOR	RING 2	2.0 Ft.			ŀ	Kristina Mc	Coy, P.G.			
ELEV.	DEPTH (ft)	LEGEND		CLASSIFICATION OF nd elevations based		es I	" REC.	BOX OR SAMPLE	·	REMA	\RKS	
-18.2 -18.7	0.0		SAND	fine grained, quartz	r trace shell hash	\dashv		VS				
-10.7		000		color mottled light	gray (2.5Y-7/2) and	d, /		VC01#1		1, Depth = 1.2'		
-20.0	1.8	°°°	SAND	gray (2.5Y-5/1) fine grained, quart), (SP). z little shell hash	ノ		1	Mean (mr (230): 0.9	n): 0.40, Phi Sc 15% (SW)	rting: 1	.74 Fines
-20.8	2.6	<i>°°°</i>	trace s	hell fragments, trac	e silt, trace whole	Π		2	Sample#	2, Depth = 2.2'		
-20.0			√ shell, sh	nells up to 1.25", lig	ht gray (2.5Y-7/1),	ΙΠ				n): 0.26, Phi Sc	rting: 0	.90 Fines
		$ \cdots $	SAN	(SW). ID, fine grained, qu	artz. trace shell	-/			(230): 1.1	7% (SW)		
	-		fragme	ents, trace silt, trace	whole shell, silty	Ш						
	_	:·::	pockets	s up to 0.25", shells gray (2.5Y-7/1)		Ш						
		-::-		ID, fine grained, qu	artz, trace shell	۱ ۲		_		3, Depth = 5.9'		
	-	·.::		nents, trace silt, silty nents up to (0.25"x0				3	Mean (mr (230): 0.8	n): 0.22, Phi So 5% (SP)	rting: 0	0.38 Fines
	_			t @ 8.8', 1.5" whole		e			(200): 0.0	.070 (01)		
				(N-8/0), (S	P).							
	-	<u> </u> :::										
-27.4	- 9.2											
			SAND	fine grained, guartz	z trace shell hash							
		:::	trace sil	t. silty pockets up to	o (0.25"x1.0"), 1.0"			4		4, Depth = 10.6 n): 0.21, Phi Sc		38 Fines
	-	.:.:.	whole	e shell @ 11.9', ligh (10Y-7/1), (nt greenish gray			7	(230): 1.2		rung. o	.50111165
-30.2	12.0	· · · · ·								,		
				fine grained, quartz				VS				
-31.4	- 13.2			ay, trace shell fragm shells up to 0.75", d		_		VC01#5				
	L		\	(10Y-4/1), (SV	V-SC).] [
				SAND, fine to mediu ay, shell componen		ıΙ						
	-			nts & whole shells u	ıp to 1.5", greenish							
-34.1	15.9		Clavar	gray (10Y-5/1) SAND, fine to mediu								
				SAND, fine to medit ell hash, trace shell								
-35.7	17.5			o to 1.0", 0.5" wood	l fragment @ 17.1'							
	_			dark gray (2.5Y-4	<i></i>	-/						
				SAND, fine to medic								
	-			ell hash, trace shell p to 1.25", dark gra								
-38.4	- 20.2		·		, , ,							
-39.2	21.0		Sandy S	SILT, trace clay, trac	ce shell hash, trace							
		 '''' 		gments, wood up to fragment @ 20.6', o) _[
-40.2	22.0	\square	√ brownish	gray (2.5Y-6/2), gi	ray (10YR-5/1) and	اــر/ ,						
			very d	lark grayish brown (No Recove		<i>-</i> ∥						
	<u> </u>			INO LIECOVE	н у.	ا						
	-			End of Bori	ing							
					-							
	•											

DR	ILLING	LO	3 DIVIS	SION			INS	STAL	LATION					SHEET 1 OF 1 SHEETS
1. PRO	JECT					_ A	9.	SIZE	AND TYPE	OF BIT	2.0 ln.			
Mex	ico Beach S	Sand S	Search			2				SYSTEM/DA		IZONTAL		VERTICAL
Bay	County, Flo	orida				APTIM				e Plane Nor	!	AD 1983	. !	NAVD 88
2. BOR	ING DESIGN	OITA	N	LOCATION	COORDI	NATES (ft)	11.				NATION OF D	RILL [] AI	JTO HAMMER
N	ИBVC-19-04	4		X = 1,664	1,923	Y = 337,914		E	lectric				_ м	ANUAL HAMMER
	LING AGEN			į	CONTRA	ACTOR FILE NO.	12.	то	TAL SAMPL	ES	DISTURBE)	UN	DISTURBED (UD)
	Athena Tech		ies, Inc.				ļ. <u>-</u>				3		į	
	IE OF DRILL						13.	. то	TAL NUMBI	ER CORE BO	XES			
	Palmer McC		<u>. </u>	DEG. FRO	м	BEARING	14.	. EL	EVATION G	ROUND WAT	ER			
\boxtimes	VERTICAL INCLINED	JORIN	G	VERTICAL	-	BEARING	15.	. DA	TE BORING	ì	STARTED 06-18-1	9 08:33		MPLETED 08:39
. THIC	CKNESS OF	OVER	BURDEN	0.0 Ft.			16.	. EL	EVATION T	OP OF BORI	NG -18.1	Ft.	•	
. DEP	TH DRILLED	INTO	ROCK	0.0 Ft.			17.	. то	TAL RECOV	/ERY FOR BO	ORING 1	9.5 Ft.		
				0.011.			18.	. SIC	NATURE A	ND TITLE O	FINSPECTOR	<u> </u>		
. тот	AL DEPTH C	F BOF	RING	22.0 Ft.				ŀ	ristina Mc	Coy, P.G.				
		END							8.1					
(ft)	DEPTH (ft)	(1)	Depths	CLASSIFICAT and elevations		MATERIALS on measured valu	s	" REC.	BOX OR SAMPLE		R	EMARKS		
-18.1	0.0	LEC	·						BC	<u> </u>				
		ೲೲ				rtz, trace shell	П				1, Depth = 0			
	} . <u> </u>	000				n, trace silt, shell silty pocket @ 1.1'			1		n): 0.26, Phi 0): 0.95% (S		0.98	
19.8	1.7	 • • • •	√ 1.Ŏ" w	hole shell @	1.3', 2.0	" pocket of some	-			Sample #	0): 0.95% (S 2, Depth = 2	.0'		
20.5	2.4	 				whole shells up t 5Y-7/2), (SW).	ᆘ		2	Mean (mı	n): 0.25, Phi	Sorting:	0.84	
	-		SA	ND, fine grair	gray (z., ned, qua	rtz, trace shell	711			Fines (23	0): 0.90% (S	P)		
		.∵ .				h, trace silt, silty	Ш							
	Γ		pocke	ts & shell frag light gray (ip to (0.25"x0.5"),	Ш							
	-		L	iigiit gray (2.51-11	1), (01).	-							
		. · · ·												
	<u> </u>					trace shell hash,								
	-		trace s	It, silty pocket	ts up to (0.75", (0.5"x0.75")		2		3, Depth = 7		0 40	
		. · · ·				Ity pocket @ 11.8 & shell fragment			3		n): 0.22, Phi 0): 1.00% (S		0.43	
	<u> </u>					(N-8/0), (SP).				1 (20	0)0070 (0	. ,		
	-													
		. · · ·												
	-													
20.2	40.0	$ \cdots $												
30.3	- 12.2	: 1//	SAND	, fine grained	quartz	some shell hash,	\dashv							
	 		little c	lay, trace she	ll fragme	ents, trace whole			VS					
32.2	14.1					x2.5") whole shell ray (10Y-4/1),			VC01#5					
<u>-</u>	<u> </u>		\	(S	W-SC).		/			1				
	H					n grained, quartz, s: shell hash, shel								
34.1	16.0			agments & wh			ٰ ا							
				0.75") coral @) 15.7', d	dark greenish gra	/ [l							
	} . <u>.</u>		Clavev	SAND fine to	4/1), (G o mediui	<u>C).</u> m grained, quartz	ノ							
35.8	17.7		\ little sh	ell hash, trac	e shell fr	ragments & whole	-							
						(2.5Y-4/1), (SC).	J							
37.6	19.5					m grained, quartz fragments up to								
57.0	19.5	14/1/6/		trace whole s	hells up	to 1.0", dark gray	<i>_</i> _							
	Γ		\		-4/1), (S -		ノ							
	-			No I	Recover	y.								
40.1	22.0													
10.1							\neg							
	ļ.			End	of Borin	ng								
	ļ													
										1				

	kico Beach S County, Flo		earch	APTIM	⊢		TE SYSTEM/DATUM HORIZONTA tate Plane North NAD 198	:
	RING DESIGN		LOCATION COOR	` '	11.		URER'S DESIGNATION OF DRILL	AUTO HAMI
	MBVC-19-0:		X = 1,664,065	Y = 338,329	╀	Electric	DISTURBED	MANUAL HA
	Athena Tech		!	RACTOR FILE NO.	12.	TOTAL SAN	IPLES 6	UNDISTURB
	ME OF DRILL		5, 110.		13.	TOTAL NUM	MBER CORE BOXES	:
F	Palmer McC	lellan			\vdash		I GROUND WATER	
	ECTION OF I VERTICAL	BORING	DEG. FROM VERTICAL	BEARING		LLLVAIION	STARTED	COMPLETED
	INCLINED				15.	DATE BORI	NG 06-18-19 08:5	!
6. THI	CKNESS OF	OVERB	URDEN 0.0 Ft.		16.	ELEVATION	TOP OF BORING -18.6 Ft.	
7. DEP	TH DRILLED	INTO	ROCK 0.0 Ft.		17.	TOTAL REC	COVERY FOR BORING 22.8 Ft.	
					18.	SIGNATURI	E AND TITLE OF INSPECTOR	
8. TOT	AL DEPTH C	F BORI	NG 23.0 Ft.		<u>L</u>	Alexandra	a Valente	
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF Depths and elevations based		es I	BOX OR SAMPLE	REMARK	(S
-18.6	0.0	<u> </u>	SAND, fine grained, guart	z. trace shell hash.	\dashv		Sample #1, Depth = 0.5'	
-19.5	0.9	 	trace silt, 0.75" shell fragme	ent @ 0.5', 0.5" she	:II	1	Mean (mm): 0.26, Phi Sorting	g: 0.51
		[∷∷]`	fragment @ 0.8', white of SAND, fine grained, qu	artz, trace shell	-/		Fines (230): 0.80% (SP) Sample #2, Depth = 2.3'	
	[<u> </u> ∷:	fragments, trace silt, silty p shell fragments up to (0.5")	ockets up to 0.25",		2	Mean (mm): 0.25, Phi Sorting	g: 0.42
00.0	- ~-	::::	(1.25") whole shells & (0.75"x2̂.0") shell			Fines (230): 0.96% (SP)	
-22.3	3.7	┟┼┼┤	fragment @ 1.2', (0.5"x1.75 1.3', light gray (2.5)	i") shell fragment @ /-7/1\ (SP)	[®] /-		\dashv	
		.::.			-′			
			SAND, fine grained, que fragments, trace shell has					
	-		whole shell, silty pocket	ts & shells up to			Sample #3, Depth = 5.4'	
	L	·```	(0.25"x0.5"), 3 shell fr (1.0"x1.75") @ 4.1', (0.	agments up to 75"x1 25") shell		3	Mean (mm): 0.24, Phi Sorting Fines (230): 0.89% (SP)	g: 0.56
			fragment @ 5.5', (1.5"x2.0") whole shell @ 6.3	j',		1 11100 (200). 0.00 % (61)	
	<u> </u>	-::-	white (N-8/0)	(SP).				
-27.7	9.1							
			SAND, fine grained, quart				Sample #4, Depth = 10.1'	
00.7			trace silt, silty pockets up (5Y-7/1), (5			4	Mean (mm): 0.21, Phi Sorting Fines (230): 1.24% (SP)	g: 0.45
-29.7	11.1		SAND, fine grained, quarta	,			Sample #5, Depth = 11.4'	4 20
-30.6	12.0	: 2	trace shell fragments, trace	silt, shell fragment		5	Mean (mm): 0.33, Phi Sorting Fines (230): 2.02% (SW)	g: 1.36
			up to 0.5", (0.75"x1.5") she color mottled light gray (2		,			
	Γ	0	olive gray (5Y-6/ Shelly SAND, fine to media	2), (SW).	اـ	6	Sample #6, Depth = 13.5' Mean (mm): 0.66, Phi Sorting	a: 2.21
	†	0	trace clay, shell componen	ts: shell hash, shel	ı		Fines (230): 6.54% (SW-SC)	
-33.7	_ 15.1		fragments & whole shells u @ 14.8', dark greenish	p to 1.5", 1.0" cora				
			(GW-GC).	_/			
-35.3	16.7		Clayey SAND, fine to med shell hash, some silt, trace					
	- <u> </u>		trace shell fragments & who	ole shells up to 0.5'	', ∏			
	-		wood up to (1.0"x2.0"), da (SC).	гк gray (2.5Y-4/1),				
-37.5	18.9		Shelly SAND, fine to media	um grained, quartz,				
			some clay, shell component fragments & whole shells up	to (1.0"x1.5"), cold				
			mottled gray (2.5Y-6/1) (2.5Y-4/1), (and, dark gráy				
-37.5 -41.4 -41.6	-		Sandy SILT, trace shell ha	sh, 0.5" whole shel	۲			
	L		@ 19.1', 0.75" whole sh mottled light gray (2.5Y-7/2					
-41.4	22.8		brown (10YR-4/					
-41.6	23.0		No Recove	ery.				
	-		End of Dec	in a				
			End of Bor	ing				

DRIL	LING	LOC	DIVISION		INS	TAL	LATION				SHEET 1 OF 1 SHEETS
1. PROJI	ECT		<u> </u>	A	9.	SIZE	AND TYPE	OF BIT	2.0 ln.		
Mexic	o Beach S	and S	Search	2				SYSTEM/DAT		Δ1	VERTICAL
Bay C	county, Flo	rida		APTIM	10.			e Plane Norti	!		NAVD 88
2. BORIN	NG DESIGN	IOITAI	N LOCATION COORD	INATES (ft)	11.	MA	NUFACTUR	ER'S DESIGN	IATION OF DRILL		AUTO HAMMER
	3VC-19-06		X = 1,665,060			E	lectric				MANUAL HAMMER
	ING AGEN			ACTOR FILE NO.	12.	то	TAL SAMPL	.ES	DISTURBED	U	INDISTURBED (UD)
	hena Tech		ies, Inc.						5	!_	
	Imer McC				13.	то	TAL NUMBI	ER CORE BOX	ŒS		
	TION OF E		G DEG. FROM	BEARING	14.	ELI	EVATION G	ROUND WATI	ER		
_	ERTICAL ICLINED		VERTICAL		15.	DA	TE BORING		STARTED		OMPLETED
			!	!					06-18-19 09:2	25	06-18-19 09:30
6. ТНІСК	(NESS OF	OVER	BURDEN 0.0 Ft.		16.	EL	EVATION TO	OP OF BORIN	-17.8 Ft.		
7. DEPTI	H DRILLED	INTO	ROCK 0.0 Ft.	_				ERY FOR BO			
R TOTAL	L DEPTH O	F ROR	RING 22.0 Ft.		18.			ND TITLE OF	INSPECTOR		
1			22.011.		$\overline{}$	r	(ristina Mc	Coy, P.G.			
ELEV.	DEPTH	END	CLASSIFICATION OF	MATERIALS		%	PLE		DEMARK	7 0	
(ft)	(ft)		Depths and elevations based		s I	« REC.	BOX OR SAMPLE		REMARI	13	
-17.8	0.0	-	SAND, fine grained, qua	artz trace shell	+			Sample #1	, Depth = 0.6'		
10.4	1 2	.	fragments, trace shell has	h, trace silt, shell			1	Mean (mm	n): 0.26, Phi Sortin	g: 0.7	6
-19.1	1.3		fragments up to (0.5"x1.0"), @ 1.3', white (2.5Y-	, U. /5" whole shell 8/1) (SP)	r			,)): 0.88% (SP)		
 		.∷.	SAND, fine grained, quartz	, trace shell hash,	′		2	Sample #2 Mean (mm	2, Depth = 2.3' n): 0.25, Phi Sortin	a: 0.4	.8
-21.1	3.3	: : :	trace silt, silty pockets & she 0.25", 1.0" silty pocket @ 3	ell fragments up to			-)): 0.85% (SP)	J. 0. 1	-
-21.1	0.0		(SP).	. i , wille (14-6/0),	/						
 		ŀ∷ŀ									
-		:::									
		$ \cdots $									
F		:::	CANID (
-		[.∵.]	SAND, fine grained, qua fragments, trace shell has						3, Depth = 7.4'		
L		$ \cdots $	pockets & shell fragments i	up to (0.5"x0.75"),			3		n): 0.24, Phi Sortin 0): 0.88% (SP)	ıg: 0.6	13
		l:∵:	white (N-8/0),	(SP).				1 11100 (200), 0.00 / (Ci)		
-		:::.									
L	_	```									
		[::::]									
-29.3	11.5	$ \cdot \cdot $						Sample #/	I, Depth = 12.0'		
-30.2	12.4	:::	SAND, fine grained, qua fragments, trace shell has				4	Mean (mm	n): 0.21, Phi Sortin	ıg: 0.4	8
			pockets up to 0.5", shell t		Π		5)): 1.48% (SP) 5, Depth = 12.8'		
-31.0 -	13.2		(0.5"x0.75"), gray (2.5 SAND, fine grained, guartz	Y-6/1), (SP).	/┌			Mean (mm	n): 0.27, Phi Sortin	ıg: 1.1	9
}			trace clay, trace shell fragm		\prod			Fines (230	Ó): 6.44% (SW-SC	C)	
L	_	:°	shell, shell fragments up to	0.5", whole shells			VS VC05#6				
		0	up to 1.0", dark greenish (SW-SC).								
-34.0 -	16.2		Shelly SAND, fine to mediu	m grained, quartz,	-						
			trace clay, shell components fragments & whole shells								
-35.6	17.8		greenish gray (10Y-4/1	I), (GW-GC).	_						
<u> </u>			SAND, fine to medium grain clay, little shell hash, trace o								
-36.8	19.0		fragments & whole shells	up to 0.75", dark	-						
			greenish gray (10Y- Clayey SAND, fine to mediu		41						
-38.1	20.3		little shell hash, trace shell f	ragments & whole	-						
}			shells up to (0.5"x0.75"), v	, ,	$\ \ $						
-39.8	22.0		gray (10Y-3/1), Clayey SAND, fine to mediu	(SC). m grained, guartz							
			little shell hash, trace orga	nics, trace wood	П						
}			fragments, trace shell fragmup to 1.0", wood up to 1.25",								
			(10Y-4/1), (S	SC).							
Γ			No Recover								
1		1	End of Borii	ng							

DRI	LLING	LOC	DIVIS	ION			INS	TAL	LATION				SHEET 1 OF 1 SHEETS
1. PRO	JECT					A	9.	SIZE	AND TYPE	OF BIT	2.0 ln.		1
Mex	ico Beach S	Sand S	Search			2				SYSTEM/DA		ONTAL	VERTICAL
Bay	County, Flo	orida				APTIM				e Plane Nor		1983	NAVD 88
2. BOR	ING DESIGN	IOITA	N	LOCATION CO	ORDINATES	(ft)	11.				NATION OF DRIL		AUTO HAMMER
N	/IBVC-19-0	7		X = 1,665,9	948 Y = 33	38,851		E	Electric				MANUAL HAMMER
3. DRIL	LING AGEN	ICY		C	ONTRACTOR	FILE NO.	12.	то	TAL SAMPI	ES	DISTURBED	į.	JNDISTURBED (UD)
	thena Tech		ies, Inc.						TAL OAMI I		6		
	E OF DRILL						13.	то	TAL NUMB	ER CORE BO	XES		
	Palmer McC			'			14.	EL	EVATION G	ROUND WAT	ER		
\boxtimes	ECTION OF I VERTICAL INCLINED	BORIN	G	DEG. FROM VERTICAL	BEAR	ING	15.	DA	TE BORING	•	STARTED 06-18-19		O6-18-19 10:20
5. THIC	CKNESS OF	OVER	BURDEN	0.0 Ft.	•		16.	EL	EVATION T	OP OF BORII	·	•	
7. DEP	TH DRILLED	INTO	ROCK	0.0 Ft.			17.	то	TAL RECOV	/ERY FOR BO	DRING 19.8	Ft.	
				0.0 1 t.			18.	SIC	NATURE A	ND TITLE O	FINSPECTOR		
в. тот	AL DEPTH C	F BOF	RING 2	21.0 Ft.				ŀ	Kristina Mc	Coy, P.G.			
		₽							ЖW				
ELEV. (ft)	DEPTH (ft)	GEND		CLASSIFICATIOn to the community of the c			.	% REC.	BOX OR SAMPLE		REM	ARKS	
-17.5	0.0	FE	nehma a	iiu cicvations I	ascu on mei	asureu vaiUE	ٔ ا ٔ		SAI				
-18.0	0.5			fine grained, o			寸		1		1, Depth = 0.3'		
-18.7	- 1.2	°°°°	\ trace	silt, 1.0" whole		, light gray	\prod		2		n): 0.26, Phi Sc	orting: 0.6	62
		$\left \cdots \right $	SAND	(2.5Y-7), fine to mediu	/1), (SP). m grained. g	uartz little	7[0): 0.93% (SP) 2, Depth = 0.8'		
	-	-:::		nash, trace she			H			Mean (mr	m): 0.65, Phi Sc		31
		· ·	trace w	hole shell, shel		", light gray	II		3		0): 0.83% (SW))	
-21.2	3.7		L	(2.5Y- <i>1)</i> ND, fine graine	<u>1), (SW).</u>	co shall	۱ ا				3, Depth = 2.5' n): 0.27, Phi Sc	rtina: 0 8	84
	_			ents, trace she			Π				0): 0.79% (SP)	ating. o.	7 T
		-::·	pockets	up to 0.25", she	ell fragments	up to 0.75'				,	, , ,		
	_)") whole shell			3						
	_	:·:::		.0' and 2.3', wh ND, fine graine			۱ ا			Sample #	4, Depth = 6.4'		
			fragn	nents, trace silt	siltv pocket	ts & shell			4		n): 0.21, Phi Sc	rting: 0.3	35
	-	.···	fragmer	its up to (0.25"	x0.5"), (0.5")	(0.75") shell				Fines (23	0): 0.88% (SP)	_	
		-:·:·	fragmen	it @ 4.1', 1.0" \		2) 4.6', white	•						
	_	····		(2.51-8	/1), (SP).								
-26.6	_ 9.1												
		$ \cdot $		fine grained, o							5, Depth = 9.9'		
	_			t, silty pockets					5		n): 0.23, Phi Sc	orting: 0.4	16
-28.2 -28.7	10.7 - 11.2		WITI	n depth, light gr , fine to mediu	ay (2.5Y-7/1), (SP).			- 6		0): 1.23% (SP) 6, Depth = 10.9	,	
-20.1	- 11.2		SAND shell h	ash, trace clay	trace shell t	fragments.	П		6		n): 0.49, Phi Sc		21
	_	1	trace	whole shell, sh	nells up to 1.	25", dark	/1				60): 4.16% (SW		
		0		greenish gray (<i>]</i>		VS				
	-			SAND, fine to r ay, shell comp					VS VC08#7				
				ts up to (1.5"x2									
22.4	14.9	0	1.25", da	ark greenish gr	ay (10Y-4/1)), (GW-GC)	.						
-32.4	14.9		SAND	fine to mediun	n grained, gu	ıartz. some	-			1			
-33.5	16.0		clay, little	e shell hash, tra	ace shell frag	gments up to	,						
55.0			0.75	, 0.25" wood fr	agment @ 1	5.7', dark	/						
			Shelly	greenish gray SAND, fine to r	(IUY-4/1), (S nedium grair	ou). ned guartz	۱ ا						
-35.2	17.7			ay, shell comp									
	-	HIII	fragm	ents & whole s	hells up to 1	.25", dark	\prod						
		[]]		greenish gray (۱ ل						
-37.3	- 19.8	$\parallel \parallel $		ND, trace shell sh gray (10YR-			۱						
-31.3		+++++		(N-3/0), (SM).		\mathcal{A}						
38 5	24.0			No Re	ecovery.		_						
-38.5	21.0	\vdash					-						
				End of	f Boring								
					3								
	-												

Size and Type of Bit	1 SHEETS
Mesico Baech Sand Search Bay Courty, Florida APTIM 10. GORDINATE SYSTEMDATUM NAD 1988 N	JHEE13
Bay County, Florida APTIM Florida State Plane North NAD 1983 NA	
MBVC-19-08 X = 1,666,629	/D 88
3. DRILLING AGENCY Aftheral Technologies, Inc. 4. NAME OF PROFILER Palmer McClellan 5. DIRECTION OF BORING □ VERTICAL □ NCLINED 5. THICKNESS OF OVERBURDEN 7. DEPTH DRILLED INTO ROCK 8. TOTAL DEPTH OF BORING □ CLASSIFICATION OF MATERIALS Depths and elevations based on measured values (16.9 0.0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Athena Technologies, Inc. 12. TOTAL SAMPLES 7	
13. TOTAL NUMBER CORE BOXES All Color Color Color Color	(BED (UD)
Palmer McClellan S. Direction of Boring Service	-
DEC. FROM VERTICAL DECTION OF BORING DEC. FROM VERTICAL STATED COMPLE DATE BORING O6-18-19 10-40 O6-18.	
SAND, fine grained, quartz, trace shell fragments, trace shell fragments, trace shell hash, trace sitt, trace whole shells up to 1.0"; 1.5" (2.5"/7.1"), (SW).	
16. Standard 16.	
18. SIGNATURE AND TITLE OF INSPECTOR Kristina McCoy, P. G.	3 10.40
18. SIGNATURE AND TITLE OF INSPECTOR Kristina McCoy, P.G.	
CLASSIFICATION OF MATERIALS Depths and elevations based on measured values Rec.	
SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shells, shell fragments up to (0.25 "%0.5"), whole shells up to 1.0", light gray (2.5Y-7/2), (SW). SAND, fine grained, quartz, little shell hash, trace shell fragments up to (0.25 "%0.5"), whole shells up to 1.0", light gray (2.5Y-7/2), (SW). SAND, fine grained, quartz, little shell hash, trace shell fragments the trace shell fragment (0.5 "xt.25"), whole shells up to 1.0", 1.5" shell fragment (0.5"), whole shells up to 1.0", 1.5" shell fragment (0.25", shells up to 1.0", 1.5" shell fragment (0.5", (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell fragment (0.5", (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell fragment (0.5", 2.5", shells up to 0.75", (0.5", 2.5") shell fragment (0.5", 2.5", shells up to 0.75", (0.5", 2.5"), shell sup to 0.75", (0.5", 2.5"), shell fragment (0.5", 2.5", 3.7", light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), shell fragment (0.5", 2.5", 3.7", light gray (2.5", 3.7", light	
SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace slit, trace whole shells, shell fragments up to (0.25"x0.5"), whole shells up to 1.0", light gray (2.5Y-7/2), (SW). SAND, fine grained, quartz, little shell hash, trace shell fragments up to (0.25"x0.5"), whole shells up to 1.0", light gray (2.5Y-7/2), (SW). SAND, fine grained, quartz, little shell hash, trace shell fragments to (0.5"x1.25"), whole shells up to 1.0", 1.5" shell fragment @ 1.5", (1.25"x1.75") whole shells up to 1.0", 1.5" shell fragment @ 1.5", (1.25"x1.75") whole shells up to 1.0", 1.5" shell fragment @ 1.5", (1.25"x1.75") whole shells up to 1.0", 1.5" shell fragment @ 2.4", 3.0" pocket of shell fragments & whole shells up to 0.75", (0.5"x2.5") shell fragment @ 2.4", 3.0" pocket of shell fragments & whole shells up to 1.5" @ 3.7", light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), unite (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), unite (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), unite (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), unite (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), unite (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), unite (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), unite (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace (30), 0.90% (SP). SAND, fine grained, quartz, trace shell hash, trace (30), 0.90% (SP). SAND, fine grained, quartz, trace shell hash, trace (30), 0.90% (SP). SAND, fine grained, quartz, trace shell	
SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace shell hash, trace shell hash, trace shell hash, trace shell fragments, trace shell hash, trace shell hash, trace shell fragments, trace shell hash, trace shell fragments, trace shell hash, trace shell fragments, trace shell fragments (0.5°x1.25"), whole shells up to 1.0°, 1.5" shell fragment (0.15°x1.25"), whole shell sup to 1.0°, 1.5" shell fragment (0.15°x1.25"), whole shell sup to 1.0°, 1.5" shell fragment (0.15°x1.25"), whole shell sup to 1.0°, 1.5" shell fragment (0.15°x1.25"), whole shell, shly pockets up to 0.25° shells up to 0.75°, (0.5°x2.5") shell fragment (0.25°x0.5"), white (0.15°x0.5"), 1.0" shell fragment (0.15°x0.5"), 1.	
whole shell, shell fragments up to (0.25"x0.5"), whole shells up to 1.0", light gray (2.5Y-7/2), whole shell, shell fragments, trace shell hash, trace shell fragments up to (0.5"x1.25"), whole shells up to 1.0", 1.5" shell fragment @ 1.5", (1.25"x1.75") whole shell @ 1.8", light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell fragments, trace shell mash, trace sit, sit pockets up to 0.25", shells up to 0.75", (0.5"x2.5") shell fragment @ 2.4", 3.0" pocket of shell fragments & whole shells up to 1.5" @ 3.7", light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace sit, sity pockets up to 0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace sit, sity pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace sit, sity pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 12.2", light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace sit, sity pockets up to (0.25"x0.5"), 1.0" shell fragment @ 12.2", light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace day, trace shell fragment @ 12.2", light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, some shell hash, trace day, trace shell fragments, trace whole shells, shell components: shell fragment, trace whole shells, shell components: shell hash, shell fragments, shell components: shell hash, shell fragments, shell components: shell hash, shell fragments, trace whole shells, shell hash, trace organics, trace shell fragments, trace shell fragments, trace shell fragments, trace shell fragments, trace shell fragment, trace shell fragment, trace shell fragment, trace shell fragment @ 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
## 2.0 *** whole shells up to 1.0", light gray (2.5Y-7/2), (SW). ## SAND, fine grained, quartz, little shell hash, trace shell fragments up to (0.5"x1.25"), whole shells up to 1.0", 1.5" shell fragment @ 1.5", (1.25"x1.75") whole shell sup to 1.0", 1.5" shell fragment @ 1.5", (2.5Y-7/1), (SW). ## SAND, fine grained, quartz, trace shell fragment @ 2.4", 3.0" poket of shell fragments & whole shells up to 1.5", shells up to 1.5", shells up to 1.5", (0.5"x2.5") shell fragment @ 2.4", 3.0" poket of shell fragments & whole shells up to 0.15", shells up to 1.5", white (N-8/0), (SP). ## SAND, fine grained, quartz, trace shell hash, trace sitt, sitty pockets up to (0.25"x0.5"), white (N-8/0), (SP). ## SAND, fine grained, quartz, trace shell hash, trace sitt, sitty pockets up to (0.25"x0.5"), white (N-8/0), (SP). ## SAND, fine grained, quartz, trace shell hash, trace sitt, sitty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 1.2", light gray (2.5Y-7/1), (SP). ## SAND, fine grained, quartz, trace shell hash, trace sitt, sitty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 1.2", light gray (2.5Y-7/1), (SP). ## SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragment @ 1.2", light gray (2.5Y-7/1), (SP). ## SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragment, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). ## SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell fragment @ 1.8", light gray (2.5Y-7/1), (SW). ## SAND, fine grained, quartz, some shell hash, trace organics, trace shell hash, trace organics, trace shell fragment @ 1.2", light gray (2.5Y-7/1), income trace shell hash, trace shell hash, trace shell hash, trace organics, trace shell hash, t	
SAND, fine grained, quartz, trace whole shell, shell fragments up to (0.5"x1.25"), whole shell shell, shell fragments up to (0.5"x1.25"), whole shell sup to 1.0", 1.5" shell fragment @ 1.5", (1.25"x1.75") whole shell @ 1.8", light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell fragment by 0.75", (0.5"x2.5") shell fragment @ 2.4", 3.0" pocket of shell fragments & whole shell sup to 1.5" (0.37", light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 11.8", 0.5" shell fragment @ 12.2", light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 12.2", light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 12.2", light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
trace shell fragments, trace silt, trace whole shell, shell fragments up to (0.5"x1.25"), whole shells, shell fragments up to (0.5"x1.25"), whole shells up to 1.0", 1.5" shell fragments (2.5"y.7/1), (SW). SAND, fine grained, quartz, trace shell fragments, up to 0.75", (0.5"y.2.5") shell fragment @ 2.4", 3.0" pocket of shell fragments & whole shells up to 1.5", (3.3", light gray (2.5"y.7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 12.2", light gray (2.5"y.71'1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 12.2", light gray (2.5"y.71'1), (SP). SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10"y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace shell fragments & whole shells up to 1.5", dark greenish gray (10"y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
Shell, shell fragments up to (0.5"x1.25"), whole shells up to 1.0", 1.5" shell fragment (@.1.5", (1.25"x1.75") whole shell @.1.8", light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), unit trace silt, silty pockets up to (0.25"	
shells up to 1.0", 1.5" shell fragment @ 1.5", (1.25"x1.75") whole shell @ 1.8", light gray (2.57-7/1), (SW). SAND, fine grained, quartz, trace shell fragment @ 2.4", 3.0" pocket of shell fragments & whole shells up to 0.75", (0.5"x2.5") shell fragment @ 2.4", 3.0" pocket of shell fragment & whole shells up to 1.5" @ 3.7', light gray (2.57-7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 12.2", light gray (2.57-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 12.2", light gray (2.57-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, trace shell fragment @ 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, trace shell fragment, trace whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC).	
(2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, silty pockets up to 0.25", shells up to 1.5" (9.3.7", light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), unite (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment (2.21, light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment (2.21, light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment (2.30): 0.96% (SP) SAND, fine grained, quartz, trace shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace shell with trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragments, trace shell hash, shell fragments (230): 0.96% (SP) Sanple #5, Depth = 11.5' Mean (mm): 0.23, Phi Sorting: 0.39 Fines (230): 0.96% (SP) Sample #6, Depth = 12.8' Mean (mm): 0.37, Phi Sorting: 1.40 Fines (230): 2.59% (SW) Sample #7, Depth = 14.8' Mean (mm): 0.68, Phi Sorting: 2.03 Fines (230): 6.62% (SW-SC) SAND, fine to medium grained, quartz, some clay, little shell hash, trace shell fragments, trace shell shell hash, trace shell fragments, trace shell shell hash, trace shell shell hash	
SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, trace whole shell, silty pockets up to 0.25", shells up to 0.75", (0.5"\text{\cdots}\cd	
fragments, trace shell hash, trace silt, trace whole shell, silty pockets up to 0.25", shells up to 0.75", (0.5"\2.5"\2.5") shell fragment @ 2.4", 3.0" pocket of shell fragments & whole shells up to 1.5" @ 3.7", light gray (2.5\2.5\7\7\1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"\0.5"\), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"\0.5"\), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 12.2', light gray (2.5\2.5\7\7\1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"\0.5"\0.5"\), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 12.2', light gray (2.5\2.7\7\1), (SP). SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10\7\5\1), (SW). Shelly SAND, fine to medium grained, quartz, trace shell fragments & whole shells up to 1.5", dark greenish gray (10\7\4\1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
to 0.75", (0.5"x2.5") shell fragment @ 2.4', 3.0" pocket of shell fragments & whole shells up to 1.5" @ 3.7', light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 1.8', 0.5" shell fragment @ 1.2.2', light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 1.2.2', light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
pocket of shell fragments & whole shells up to 1.5" @ 3.7", light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 12.2', light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
-27.3 10.4 SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8", 0.5" shell fragment @ 12.2", light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace clay, trace shell fragment @ 12.2", light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace whole shell, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), white (N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 12.2', light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 12.2', light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), under trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.5' Mean (mm): 0.23, Phi Sorting: 0.39 Fines (230): 0.96% (SP) Sample #6, Depth = 12.8' Mean (mm): 0.37, Phi Sorting: 1.40 Fines (230): 2.59% (SW) Shelly SAND, fine to medium grained, quartz, trace whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC).	
(N-8/0), (SP). SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 12.2', light gray (2.5Y-7/1), (SP). SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
-27.3	
SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 12.2', light gray (2.5Y-7/1), (SP). 30.0 13.1 0 0 SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
trace silt, silty pockets up to (0.25"x0.5"), 1.0" shell fragment @ 11.8', 0.5" shell fragment @ 12.2', light gray (2.5Y-7/1), (SP). 30.0 13.1 5 5 SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). 33.5 16.6 5 SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
shell fragment @ 11.8', 0.5" shell fragment @ 12.2', light gray (2.5Y-7/1), (SP). 30.0 13.1 3" SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
-29.5 12.6 12.2', light gray (2.5Y-7/1), (SP). -30.0 13.1 °°° SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
-30.0 13.1 5.6 SAND, fine grained, quartz, some shell hash, trace clay, trace shell fragments, trace whole shell, shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
trace clay, trace shell fragments, trace whole shells up to 0.75", greenish gray (10Y-5/1), (SW). Shelly SAND, fine to medium grained, quartz, trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
Sample #7, Depth = 14.8' Mean (mm): 0.68, Phi Sorting: 2.03 Fines (230): 6.62% (SW-SC) SAND, fine to medium grained, quartz, trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
Shelly SAND, fine to medium grained, quartz, trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
trace clay, shell components: shell hash, shell fragments & whole shells up to 1.5", dark greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
-33.5 16.6 greenish gray (10Y-4/1), (GW-GC). SAND, fine to medium grained, quartz, some clay, little shell hash, trace shell clay, little shell hash, trace shell	
SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell	
-34.7 17.8 clay, little shell hash, trace organics, trace shell	
-34./ 1 1/.0 [4////] *********************************	
25.1 F 18.2 Finally Hagineria up to 1.0, dark greenish gray /	
(10Y-4/1), (SC). WOOD FRAGMENTS, some sand, trace shell	
-36.4 19.5 hash, black (10YR-2/1), (PT).	
Shelly SAND, fine to medium grained, quartz,	
some clay, trace organics, trace wood	
21.6	
38.0 27.0 1111 to 2.5", dark greenish gray (10Y-4/1), (GC)	
Silty SAND, fine grained, quartz, trace shell	
hash, color mottled light brownish gray	
(10YR-6/2) and, very dark gray (N-3/0), (SM). No Recovery.	
End of Boring	

1. PRO	JECT		A	9.	SIZE AND TYP	OF 1 SE E OF BIT 2.0 ln.
	co Beach S		earch	10.	COORDINATE	SYSTEM/DATUM HORIZONTAL VERTICAL
Bay	County, Flo	orida	APTIM		Florida Sta	te Plane North NAD 1983 NAVD
	NG DESIGN			11.		RER'S DESIGNATION OF DRILL AUTO HAMM
	IBVC-19-0		X = 1,663,701 Y = 339,173		Electric	MANUAL HA
	LING AGEN thena Tech		CONTRACTOR FILE NO.	12.	TOTAL SAMP	DISTURBED UNDISTURBE
	E OF DRILL		55, IIIC.	42	TOTAL NUMB	BER CORE BOXES
	almer McC					
	CTION OF I	BORING	DEG. FROM BEARING VERTICAL	14.	ELEVATION (GROUND WATER
	/ERTICAL NCLINED		VERTICAL	15.	DATE BORING	STARTED COMPLETED 06-18-19 06-18-19
	KNESS OF	OVERE	: : SURDEN 0.0 Ft.	16	ELEVATION 1	TOP OF BORING -18.4 Ft.
0. 11110	KITLOO OI	OVERL	0.0 Ft.	-		
7. DEPT	H DRILLED	INTO	ROCK 0.0 Ft.			VERY FOR BORING 19.7 Ft.
8. ТОТ	AL DEPTH C	F BOR	ing 20.0 Ft.	18.	Alexandra V	AND TITLE OF INSPECTOR
				┱		Valente
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS Depths and elevations based on measured value	.	SBOX OR	REMARKS
-18.4	0.0	<u>ĕ</u>	Deptils and elevations based on measured value	, I.	SAI SAI	
-19.0	0.6	$\overline{\cdot \cdot \cdot \cdot}$	SAND, fine grained, quartz, trace silt, light	寸	1	Sample #1, Depth = 0.3'
	-	000	brownish gray (2.5Y-6/2), (SP). SAND, fine grained, quartz, trace shell	_	2	Mean (mm): 0.22, Phi Sorting: 0.42 Fines (230): 1.26% (SP)
-20.1	1.7		fragments, trace shell hash, trace silt, shell	႕	<u> </u>	Sample #2, Depth = 1.1
,	-	[:::]	fragments up to 0.75", (0.5"x0.75") whole shell @ 0.8', (0.25"x0.5") coral @ 0.9', light gray	/1		Mean (mm): 0.29, Phi Sorting: 1.02 Fines (230): 0.97% (SW)
, }	-	$ \cdot \cdot $	(2.5Y-7/1), (SW).] [
	-	<u> :::: </u>				
		$ \cdots $	SAND, fine grained, quartz, trace shell hash,			0 1 10 5 11 5 01
ŀ	-	$ \cdots $	trace silt, silty laminae & pockets up to 0.25", 0.5" whole shell @ 1.8', (0.75"x1.0") shell		3	Sample #3, Depth = 5.3' Mean (mm): 0.23, Phi Sorting: 0.44
	-	::::	fragment @ 2.4', 0.75" coral @ 7.2', 0.5" coral			Fines (230): 0.94% (SP)
			@ 8.9', white (N-8/0), (SP).			
İ	-	·:·:				
	-					
-27.4	9.0	$ \cdots $				Sample #4, Depth = 9.4'
-28.2	9.8		SAND, fine grained, quartz, trace shell hash,		4	Mean (mm): 0.22, Phi Sorting: 0.52
-29.0	10.6	000	trace silt, silty pockets up to 0.5", 3 shell fragments up to (0.75"x1.5") @ 9.7', light gray	Γ	5	Fines (230): 1.53% (SP) Sample #5, Depth = 10.2'
-29.0	- 10.0	٥	(2.5Y-7/1), (SP).][Mean (mm): 0.30, Phi Sorting: 1.63
. [SAND, fine to medium grained, quartz, little shell hash, trace shell fragments, trace silt,	П		Fines (230): 3.67% (SW)
ŀ	-	l° 💹	trace whole shell, shells up to 1.0", light	П	\/0	
	-	0	brownish gray (2.5Y-6/2), (SW). Shelly SAND, fine to medium grained, quartz,	ا	VS VC05#6	
			trace clay, shell components: shell hash, shell			
20.0	- 440		fragments & whole shells up to (0.75"x2.0"), grayish brown (2.5Y-5/2), (GW-GC).			
-33.3	<u>14.9</u>		Shelly SAND, fine to medium grained, quartz,	-		4
	_		little clay, shell components: shell hash, shell			
-35.0	16.6		fragments & whole shells up to 1.75", (1.75"x2.0") wood fragment @ 15.7',	_		
ŀ	-		(0.75"x1.0") wood fragment @ 16.3', greenish	/1		
	=		gray (10Y-5/1), (GC). Sandy SILT, fine grained, quartz, trace clay,	J		
-37.2	18.8	ШШ	color mottled gray (2.5Y-6/1) and, dark gray			
-38.1	- 19.7	$HH\Pi$	(10YR-4/1), (ML). Silty SAND, fine grained, quartz, color mottled	7]		
-38.4	20.0	 	light brownish gray (2.5Y-6/2) and, white	F		
			(Ñ-8/0), (SM). No Recovery.	4		
,	-		IND NECOVERY.	۱ ۲		
	-		End of Boring			
			.9			
	-					
	-					
		_				

DRILL	ING L)G	DIVISION	IN	ISTAL	LATION		SHEET 1 OF 1 SHEETS
1. PROJECT	-			a	SIZ	E AND TYPE	E OF BIT 2.0 ln.	U. I ONEEIS
Mexico B	each San	d Sear	rch	<u> </u>			SYSTEM/DATUM HORIZONTAL	VERTICAL
	nty, Florid		APT	IM	ı	Florida Stat	te Plane North NAD 1983	NAVD 88
2. BORING I		ION	LOCATION COORDINATES (ft)				RER'S DESIGNATION OF DRILL	AUTO HAMMER
MBVC 3. DRILLING	C-19-10		X = 1,664,472 Y = 339,19		l	Electric	DISTURBED	MANUAL HAMMER UNDISTURBED (UD)
	a Techno	onies		12	2. TC	TAL SAMPI	LES 5	ONDISTORBED (OD)
4. NAME OF		ogics,	inc.	1	2 TC	TAL NIIMB	ER CORE BOXES	
Palme	er McClell	an		-				
5. DIRECTIO		ING	DEG. FROM BEARING	1	4. EL	EVATION G	ROUND WATER	
⊠ VERT			VERTICAL	11	5. DA	TE BORING	STARTED 06-18-19 11:57	COMPLETED 06-18-19 12:05
6. THICKNE			DEN 0054			EVATION T	•	00-10-19 12.03
b. IHICKNE	.55 UF UV	KBUK	RDEN 0.0 Ft.					
7. DEPTH DI	RILLED IN	TO RO	CK 0.0 Ft.				VERY FOR BORING 20.5 Ft.	
B. TOTAL DI	EPTH OF E	ORING	G 21.0 Ft.	11			AND TITLE OF INSPECTOR	
1			21.011.		Τ ΄	Alexandra \ T	valente T	
ELEV. DE	EPTH (ft)	חוו	CLASSIFICATION OF MATERIALS epths and elevations based on measured	d values	REC.	BOX OR SAMPLE	REMARKS	
-17.6 0.0) .	'	CAND fine grained guests trace of	الم	_	⊞ ∅	Sample #1, Depth = 0.7'	
		fra	SAND, fine grained, quartz, trace shagments, trace silt, trace whole shell, shagments			1	Mean (mm): 0.28, Phi Sorting: 0).85
-18.9 -	1.3	+	to 0.75", light gray (2.5Y-7/1), (SP)		-		Fines (230): 0.95% (SP) Sample #2, Depth = 1.8'	
-19.9	2.3 👶	۰	SAND, fine grained, quartz, trace shell I trace silt, 1.0" shell hash pocket @ 1.]	2	Mean (mm): 0.30, Phi Sorting: 1	.01
	·:)) [F.	0.5"x0.75") shell fragment @ 1.4', (0.25	"x0.5")			Fines (230): 1.05% (SW)	
	·.	.: \	shell fragment @ 2.2', light gray (2.5Y-(SW).	7/1),				
-	:-	·]	(GVV).					
	·:	:						
Γ	 •.	.						
-	:-	\cdot]	SAND, fine grained, quartz, trace shell I trace silt, silty laminae & pockets up				Sample #3, Depth = 6.4'	
	:	\Box (c	0.25"x0.5"), (0.5"x0.75") shell fragment (3	Mean (mm): 0.24, Phi Sorting: 0).53
Ī	·.	. `	white (N-8/0), (SP).				Fines (230): 0.65% (SP)	
-	:-	\cdot]						
	-:	:						
Γ	 •.	.						
		\cdot]						
-28.2	10.6	\div	SAND, fine grained, quartz, trace shell I	hash	-		Sample #4, Depth = 11.2'	
20.5	110	٠.	trace silt, silty laminae & pockets up	to		4	Mean (mm): 0.21, Phi Sorting: 0).43
-29.5 -30.0	11.9 ·	; }∖((0.25"x0.5"), color mottled gray (2.5Y-6/1 gray (2.5Y-6/1), (SP).	1) and, _/	1	5	Fines (230): 1.15% (SP) Sample #5, Depth = 12.1'	
	.0	//	SAND, fine grained, quartz, trace shell I	hash, /	1		Mean (mm): 0.22, Phi Sorting: 0	0.90
Γ			trace silt, grayish brown (2.5Y-5/2), (S	SW).		VS VC05#6	Fines (230): 4.44% (SW)	
-31.8 -	14.2		Shelly SAND, fine to medium grained, q trace clay, shell components: shell hash		_		_	
L		% } \ 1	fragments & whole shells up to (0.75"x1	.75"),				
Γ		/ \ (0.5" silt pocket @ 13.8', dark gray (2.5Y (GW-GC).	-4/1),				
24 2 F	166	/	Shelly SAND, fine to medium grained, q	uartz,				
	16.6	¥An s	some clay, shell components: shell hash	i, shell r	1			
-35.0	17.4	A \	fragments & whole shells up to (1.75"x dark greenish gray (10Y-4/1), (GC)		-			
}			SAND, fine to medium grained, quartz,	some				
Ĺ		/	elay, some shell hash, trace shell fragme to 0.5", dark gray (2.5Y-4/1), (SC).					
ſ			راد از					
	20.3	/// s	some clay, shell components: shell hash	, shell				
-38.1	20.5		fragments & whole shells up to 2.0", 3 (0		1			
-38.6	21.0/	- 11\	vood fragments @ 19.4', dark gray (2.5\ (GC).		1			
-			Sandy SILT, fine grained, quartz, trace					
			hash, 0.75" whole shell @ 20.4', color m light gray (2.5Y-7/1) and, (25Y-4/2), (N					
ļ			No Recovery.	v1L J.				
-			•					
			End of Boring		1			

DRILL	ING I	LOG	DIVISION		INS	STAL	LATION		adon WBVC		SHEET 1 OF 1 SHEETS
1. PROJECT	г				9.	SIZI	E AND TYPE	OF BIT	2.0 ln.		1 0
Mexico B	Beach Sa	and S	earch	2	\vdash			SYSTEM/DAT			VERTICAL
Bay Cou				APTIM	'0.			e Plane Nort	!		NAVD 88
2. BORING			!	OORDINATES (ft)	11.			RER'S DESIGN	IATION OF DRILL		AUTO HAMMER
MBVC 3. DRILLING	C-19-11		X = 1,665,5	066 Y = 339,430 ONTRACTOR FILE NO.	╀	ŀ	Electric		DISTURBED		MANUAL HAMMER NDISTURBED (UD)
	na Techr			ON I RACTOR FILE NO.	12.	. то	TAL SAMPL	.ES	4	Ů	NDISTORBED (OD)
4. NAME OF			00, 1110.		13	TO	TAI NIIMRI	ER CORE BOX		•	
Palme	er McCle	ellan			\vdash						
5. DIRECTIO		ORING	DEG. FROM	BEARING	14.	. EL	EVATION G	ROUND WAT			
⊠ VERT			VERTICAL		15.	. DA	TE BORING)	STARTED 06-18-19 12:2		OMPLETED 06-18-19 12:30
6. THICKNE		WEDE	:	:	16		EVATION T	OP OF BORIN	•	24 !	00-10-19 12.30
O. INICANE	33 UF C	VERE	BURDEN 0.0 Ft.		╀						
7. DEPTH D	RILLED	INTO	ROCK 0.0 Ft.		\vdash			ERY FOR BO			
8. TOTAL D	EPTH O	F BOR	ING 20.0 Ft.		18.			ND TITLE OF	INSPECTOR		
1	1		20.011.		┷	ľ	Kristina Mc	Coy, P.G.			
ELEV. DE	EPTH (ft)	GEND	CLASSIFICATIO Depths and elevations b	N OF MATERIALS		% REC.	BOX OR SAMPLE		REMARI	KS	
-17.8 0.0		Ĭ	Deptils and elevations b	aseu on measureu valu	-3	NLO.	SAI				
		\cdots		uartz, trace shell hash,			VS				
-18.7	0.9	···		y (2.5Y-7/2), (SP). quartz, trace silt, silty			VC12#1		1, Depth = 1.4'		
-19.7	1.9		pockets & shell fragme	ents up to (0.25"x0.5"),			1		n): 0.41, Phi Sorti 0): 0.55% (SW)	ng: 1.	71
		\cdots	whole shells up to 1.25	", (1.0"x1.5") silty pock	et /			Filles (23)	0). 0.55% (544)		
-			(a) 1.8°, light gray	(2.5Y-7/1), (SW).	-/						
		\cdots									
<u> </u>			SAND fine grained	d, quartz, trace shell							
L		\cdots		trace whole shell, silty				Sample #2	2, Depth = 5.4'		
		```	pockets up to (0.25)	"x0.75"), shells up to			2		n): 0.24, Phi Sortin	ng: 0.4	1
-		$\cdots$		nole shell @ 7.0', white ), (SP).				Fines (230	)): 0.54% (SP)		
L		$\cdots$	(14-0/0	), (Oi ).							
-		:::									
-26.7	8.9										
			CAND fine graines	d guertz trace shell							
-		$\cdots$		d, quartz, trace shell ll hash, trace silt, silty				Sample #3	3, Depth = 10.5'		
			pockets up to (0.5"x1.0	"), shell fragments up t	0		3	Mean (mn	n): 0.21, Phi Sortin	ng: 0.3	8
Γ		$\cdots$	·	nell @ 12.3', light gray				Fines (230	)): 0.87% (SP)		
-30.1	12.3		(2.31-77	(1), (SP).				Sample #4	I, Depth = 12.6'		
	13.0	ुगा		quartz, little shell hash,			4	Mean (mn	n): 0.38, Phi Sortin		5
		· 0	trace clay, trace shell fragm				VS		0): 6.36% (SW-SN		
-32.0 -	14.2		whole shells up to (0.75	5"x1.25"), dark greenis			VC08#7				
	14.9		gray (10Y-4/	1), (SW-SM).	ПΠ						
			trace clay, shell compo	nedium grained, quartz onents: shell hash, she							
Ļ			fragments & whole she	ells up to (0.75"x1.25")	.						
				3.0', dark greenish gray	′						
-35.2	17.4			(GW-GC). grained, quartz, some	ᅦᅟᅴ						
26.2	10 1		clay, little shell hash, t	race shell fragments &							
-36.2 - -36.6	18.4 18.8			0", 1.5" whole shell @							
F			Shelly SAND, fine to n	gray (10Y-4/1), (SC). nedium grained, quartz	7[						
-37.8	20.0		some clay, shell compo	onents: shell hash, she							
	Ţ		fragments up to 1.5" &		", <b>    </b>						
}				y (10Y-4/1), (GC). clay, shell components:	-[[						
			shell hash, shell fragme	ents & whole shells up							
Γ			1.25", dark greenish SAND, fine grained, qu		<u> </u>						
ŀ			(2.5Y-7/1)		^y						
				covery.	╛╽						
ľ											
			End of	Boring							

1. PRO	ico Beach S	Sand Se	earch	1	-		E AND TYPE		0 ln.	
	County, Flo		on on	APTIM	10			SYSTEM/DATUM e Plane North	HORIZONT NAD 19	!
2. BOR	ING DESIGN	IATION	LOCATION COOR	DINATES (ft)	11			RER'S DESIGNAT		D AUTO
N	1BVC-19-12	2	X = 1,666,365	Y = 339,904	┸	E	Electric			MANU/
	LING AGEN			RACTOR FILE NO.	12	. то	TAL SAMPL	ES	STURBED	UNDIST
	thena Tech		es, Inc.		+-			1	5	!
	almer McC				$\vdash$			ER CORE BOXES		
	CTION OF	BORING	DEG. FROM	BEARING	14	. EL	EVATION G	ROUND WATER		
	VERTICAL INCLINED		VERTICAL		15	. DA	TE BORING	ì !	<b>ARTED</b> 06-18-19 12:4	<b>COMPL</b>   19   06-1
	KNESS OF	OVERB	URDEN 0.0 Ft.	•	16	. EL	EVATION TO	OP OF BORING	-17.4 Ft.	10 1 00 1
					+			ERY FOR BORIN		
7. DEP	TH DRILLED	INTO F	ROCK 0.0 Ft.		_			ND TITLE OF IN		•
8. ТОТ	AL DEPTH C	F BORI	NG 22.0 Ft.		'		Kristina Mc		0.0	
		9					89			
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION Of Depths and elevations base		ues	ĸEC.	BOX OR SAMPLE		REMARI	KS
-17.4	0.0	=					S/S			
-18.3	0.9		SAND, fine grained, quart trace silt, (0.5"x0.75") she				1	Sample #1, D Mean (mm): (	epth = 0.4' ).25, Phi Sortir	ng: 0.53
- 5.5	- 5.0	· · · · · ·	light gray (2.5Y-7	7/2), (SP).				Fines (230): 0		J. 2.00
	_		SAND, fine grained, qu fragments, trace shell ha	artz, trace shell				Sample #2, D	onth = 2.7	
			whole shell, shell fragment				2		epui – 2.7 ).45, Phi Sortir	ıg: 1.83
	_	૾૾૾ૺ૾ૺ	whole shells up to 1.0",					Fines (230): 0	).78% (SW)	-
-21.9	- 4.5		fragment @ 4.4', light gray	y (2.5Y-7/1), (SVV)	٠.					
21.0								1		
		$ \cdots $								
	_	<u> </u> ∷:	SAND, fine grained, qu	uartz trace shell						
	_		fragments, trace silt, silt	y pockets & shell			3	Sample #3, D	epth = 7.0' ).24, Phi Sortir	na: 0.48
			fragments up to (0.25"x0.9 pocket @ 8.2', white	5"), (0.5"x1.5") silty (N-8/0) (SP)	y			Fines (230): 0		19. 0. 10
	_	:::	promot @ 0:2,	(1.1.0), (2.1.).						
-27.0	- 9.6									
-21.0			SAND, fine grained, quart					Sample #4, D	enth = 10 5'	
		-::-	trace silt, silty pockets up increases with depth, ligh		t		4	Mean (mm): (	).21, Phi Sortin	ıg: 0.38
-28.8	11.4		(SP).					Fines (230): 1 Sample #5, D		
-29.3	11.9	· · ·	SAND, fine grained, quart trace silt, gray (2.5)		, _		5 VS	Mean (mm): (	 20, Phi Sortin	ıg: 0.41
-30.0	12.6		SAND, fine grained, quart	z, some shell hash			VC08#6	Fines (230):	1.37% (SP)	
		0	trace clay, trace shell frag shell, shells up to 0.75		e					
	_	i i	(10Y-5/1), (	SW).	╝		VS VC08#7			
		0	Shelly SAND, fine to medi trace clay, shell component				000#1			
-33.1	15.7		fragments up to 1.0" & who	le shells up to 1.25	5", _					
24.0	- 16.9		2.25" whole shell @ 15.2', (10Y-4/1), (GV	dark greenish gra N-GC)	у /					
-34.3	- 10.9		SAND, fine to medium gra	ained, quartz, some						
	_		clay, little shell hash, trace whole shells up to 0.75",							
-36.4	19.0		(10Y-4/1), (	SC).	-11					
50.4	13.0		Shelly SAND, fine to medi some clay, trace organics,	um grained, quartz shell components	<u>z,</u> Г					
	_		shell hash, shell fragments	& whole shells up	to					
			1.0", (1.0"x1.5") wood frag 18.9', dark greenish gray	ments @ 17.5' and / (10Y-4/1). (GC)	a					
-39.0	21.6		Clayey SAND, fine to medi	um grained, quartz						
-39.4	22.0	<del>   </del>	trace organics, trace shelf ragments, wood up to 0.75							
	_	\	(2.5Y-6/1), dark gray (2.5	5Y-4/1) and, black						
			(10YR-2/1), No Recove		-					
	_		End of Bo		_					

DRI	LLING	LOC	DIVIS	ION		INS	STAL	LATION		dion weve		SHEET 1 OF 1 SHEETS
1. PRO	JECT				_ A	9.	SIZI	AND TYPE	OF BIT	2.0 ln.		J
	co Beach S County, Flo		Search		APTIM	⊢	. со	ORDINATE	SYSTEM/DAT	TUM HORIZON		VERTICAL
	ING DESIGN		u .	LOCATION COORE		11			e Plane Nort	th NAD 1		NAVD 88
	IBVC-19-13		.•	:	Y = 339,928	l		Electric	LK O DEGIGI	NATION OF BRIEF		MANUAL HAMMER
3. DRIL	LING AGEN	ICY		<del> </del>	RACTOR FILE NO.	142	Τ.	TAL SAMPL	=e	DISTURBED		JNDISTURBED (UD)
	thena Tech		ies, Inc.	!		12.	. 10	I AL SAMPL	.E3	4	<u> </u>	
	E OF DRILL					13.	. то	TAL NUMB	ER CORE BO	XES		
	almer McC		G	DEG. FROM	BEARING	14.	. EL	EVATION G	ROUND WAT	ER		
$\boxtimes$ v	/ERTICAL NCLINED			VERTICAL		15.	. DA	TE BORING	1	<b>STARTED</b> 06-18-19 13		06-18-19 13:24
6. THIC	KNESS OF	OVER	BURDEN	0.0 Ft.	•	16.	. EL	EVATION T	OP OF BORIN	NG -17.8 Ft.		
	TH DRILLED	INTO	ROCK	0.0 Ft.		17.	. то	TAL RECOV	ERY FOR BO	oring 20 Ft.		
						18.	. SIG	NATURE A	ND TITLE OF	INSPECTOR		
В. ТОТ	AL DEPTH O	F BOF	RING 2	21.0 Ft.		<u>L</u>	ŀ	Kristina Mc	Coy, P.G.			
<b>ELEV.</b> (ft) -17.8	<b>DEPTH</b> (ft)	LEGEND		CLASSIFICATION OI and elevations based		es	« REC.	BOX OR SAMPLE		REMA	RKS	
-18.5	0.0			fine grained, quart				VS				
	•	000		<u>ice silt, light gray (2.</u> ND, fine grained, qu		-/		VC12#1	1			
	-	000	fragment	ts, trace silt, trace w	vhole shell, shells u	р				1, Depth = 2.2'		
		000	(0.25	", (1.25"x2.0") shell "x0.5") coral @ 1.7'	', (1.0"x1.5") shell			1		n): 0.38, Phi Sort 0): 0.68% (SW)	ing: 1.6	51
ا م ر	-	000		nts @ 2.1' & 3.6', lio					1 11100 (20)	0). 0.0070 (011)		
<u>-21.6</u>	3.8			(SW).		-						
	_			ND, fine grained, qu								
-	-	<b>::::</b>		ents, trace shell ha s & shell fragments						2, Depth = 6.4'		20
	_		0.75" w	vhole shells @ 4.5'	& 4.8', (0.25"x1.0")			2		n): 0.24, Phi Sort 0): 1.07% (SP)	ing: U.S	39
			Silty	/ pocket @ 6.7', ligh (10Y-8/1), (						-, - ( ,		
-	=			(121 2/1), (	/-							
-26.8	9.0	·.··	CANIE	S fine emained and								
			pocket	D, fine grained, qua ts up to (0.25"x0.5"	), (0.5"x1.0") shell			,		3, Depth = 9.9'	ina. O	10
20.7		<b>.∵</b>	fragme	ent @ 10.2', greenis	sh gray (10Ý-6/1),			3		n): 0.22, Phi Sort 0): 1.32% (SP)	ing: U.4	10
-28.7 -29.4	10.9 - 11.6		SAND,	(SP). , fine grained, quart	z, trace clay, trace			4	Sample #	4, Depth = 11.2'	O (	20
<u>-23.4</u>	- 11.0	0	η shell	hash, 0.5" whole sl	hell & 0.75" shell	r		· ·	Fines (23	n): 0.23, Phi Sort 0): 4.11% (SP)	ıııg: U.t	) <u>Z</u>
			1	ent @ 11.5', greenis (SP).	,			VS		. ,		
ŀ	-			SAND, fine to medic				VS VC08#7				
-32.3	14.5	0		ay, shell componen its & whole shells u								
-JZ.J	14.5			gment @ 14.3', darl	k greenish gray	<i>_</i> -						
Ī	_		Clave	(10Y-4/1), (GV ey SAND, fine grain		-/						
}	-		orga	anics, trace shell ha	ash, trace wood							
L	_			nents, wood up to (0ed gray (2.5Y-6/1), o								
25.0	40.4			(SC).	5 7 ( · · · //							
-35.9	_ 18.1		Shelly S	SAND, fine to medio	um grained, quartz,							
			some cl	lay, shell componen	nts: shell hash, shel							
-37.4 -37.8	19.6 20.0	/////		ents up to 0.75" & \ , dark greenish gray		$\neg$						
			Sandy	WOOD FRAGMEN	NTS, little organics,	<u> </u>						
-38.8	21.0			ilt, wood up to 2.0", n gray (10Y-4/1) and		). <i> </i> -						
	_		9. 5511131	(PT).	. ,	"   [						
				No Recove	ery.	J						
}	-			End of Bor	rina							
	_			End of Bol	a							
		1						l .	1			

1. PRO	<b>JECT</b> ico Beach S	Sand C	earch	Ŀ		E AND TYPE	
	County, Flo		APTIM	10			SYSTEM/DATUM   HORIZONTAL   VERTICAL e Plane North   NAD 1983   NAVD
2. BOR	ING DESIGI	NATION	LOCATION COORDINATES (ft)	11			RER'S DESIGNATION OF DRILL AUTO HAM
	1BVC-19-1		X = 1,668,115 Y = 340,089	L	E	Electric	MANUAL H
	LING AGEN thena Tech		CONTRACTOR FILE NO.	12	2. то	TAL SAMPL	DISTURBED UNDISTUR
	E OF DRILL		55, IIIC.	13	ь то	TAL NUMB	ER CORE BOXES
	almer McC			⊢			ROUND WATER
	CTION OF VERTICAL	BORIN	DEG. FROM BEARING VERTICAL	H			STARTED COMPLETI
<u> </u>	NCLINED			15	. DA	TE BORING	06-23-19 08:45 06-23-1
6. THIC	KNESS OF	OVER	BURDEN 0.0 Ft.	16	. EL	EVATION T	OP OF BORING -16.9 Ft.
7. DEP	TH DRILLE	OTNI C	ROCK 0.0 Ft.	17	'. то	TAL RECOV	<b>/ERY FOR BORING</b> 20.6 Ft.
8. TOT	AL DEPTH (	OF BOR	ING 21.0 Ft.	18			ND TITLE OF INSPECTOR
		т т	21.01.0	L	<u> </u>	Kristina Mo	Соу, Р.G. 
ELEV.	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS  Depths and elevations based on measured value		% REC.	BOX OR SAMPLE	REMARKS
-16.9	0.0	LE	שפישוים and elevations based on measured value	75	LEC.	SAI	
-17.5	0.6	°°°	SAND, fine grained, quartz, trace shell fragments, trace shell hash, trace silt, shell			1	Sample #1, Depth = 0.3' Mean (mm): 0.33, Phi Sorting: 1.38
ŀ	-	000	fragments up to 0.5", light gray (2.5Y-7/2),				Fines (230): 0.60% (SW)
,	_	000	(SW). SAND, fine grained, quartz, trace shell	J		2	Sample #2, Depth = 1.9' Mean (mm): 0.30, Phi Sorting: 1.36
-20.1	- 3.2	000	fragments, trace shell hash, trace silt, trace				Fines (230): 0.81% (SW)
-V.1	0.2		whole shell, silty pockets up to 0.25", shells up to 1.0", (1.0"x1.5") shell fragment @ 2.2', light	Γ			
ŀ	_	$ \cdots $	gray (2.5Y-7/1), (SW).	J			
}	_						
	_	$ \cdots $	SAND, fine grained, guartz, trace shell				
		$ \cdots $	fragments, trace shell hash, trace silt, silty				Sample #3, Depth = 7.1'
Ì	-		pockets up to 0.75", shell fragments up to (0.75"x1.0"), 2 (1.0") whole shells @ 4.8', 1.25'			3	Mean (mm): 0.22, Phi Sorting: 0.35
	_		whole shell @ 7.3', (0.5"x0.75") whole shell @ 9.9', light greenish gray (10Y-8/1), (SP).				Fines (230): 0.68% (SP)
	_		9.9 , light greenish gray (101-6/1), (3F).				
		$ \cdots $					
-28.0	_ 11.1	<del> </del>	SAND, fine grained, quartz, trace shell hash,				   Sample #4, Depth = 11.7'
-29.3	12.4	$ \cdots $	trace silt, silty pockets up to (0.25"x0.5"), (0.25"x0.5") shell fragment @ 12.0', greenish			4	Mean (mm): 0.22, Phi Sorting: 0.33 Fines (230): 0.84% (SP)
-29.9	13.0		gray (10Y-6/1), (SP).	<i></i>		5	Sample #5, Depth = 12.7'
		0	SAND, fine grained, quartz, trace clay, trace shell fragments, trace shell hash, shell				Mean (mm): 0.23, Phi Sorting: 0.56 Fines (230): 8.45% (SP-SC)
Ì	=	0	fragments up to (0.25"x0.5"), dark greenish gra	у		VS	
}	_	0	(10Y-4/1), (SP-SC). Shelly SAND, fine to medium grained, quartz,	L		VC08#7	
-33.2	- 16.3		trace clay, shell fragments up to 1.5", whole shells up to (1.5"x2.0"), 0.25" wood fragment @	D			
	_		\ 14.0', dark greenish gray (10Y-4/1), (GW-GC).	<u></u>			
-34.8	17.9		SAND, fine to medium grained, quartz, some clay, little shell hash, trace shell fragments &				
	-		whole shells up to 0.75", dark greenish gray (10Y-4/1), (SC).	$\int$			
20.0	-		Shelly SAND, fine to medium grained, quartz,	_			
-36.6	19.7		some clay, shell components: shell hash, shell fragments up to 2.0" & whole shells up to 1.25"				
-37.5 -37.9	20.6 21.0	<del>                                      </del>	dark greenish gray (10Y-4/1), (GC). Silty SAND, fine grained, quartz, trace shell	Jr			
27.0			hash, color mottled light brownish gray	$\int$			
ŀ	_		(10YR-6/2) and, very dark gray (N-3/0), (SM). No Recovery.	4			
,	_			_			
	_		End of Boring				
		1			I	I	

DR	ILLING	LOG	DIVISION	IN	ISTAL	LATION	<u> </u>	AUGIT IVID V C	SHEET 1	
I. PRO	JECT		1	A 0	SIZ	E AND TYPE	OF RIT	2.0 ln.	01 1 31	13
	ico Beach S	and S	earch				SYSTEM/DAT		TAL VERTICAL	
Bay	County, Flo	rida		APTIM	ı	Florida State	e Plane North	NAD 19	!	
	RING DESIGN		<u>!</u>	` ′			RER'S DESIGN	ATION OF DRILL	AUTO HAMN	
	MBVC-19-15			= 339,972 OR FILE NO.		Electric	<del></del>	DISTURBED	UNDISTURBE	
	Athena Tech			OR FILE NO.	2. то	TAL SAMPL	ES	7	UNDISTURBE	נטט)
	ME OF DRILL		es, IIIc.				ED CODE DOY			
	Palmer McC			<u> </u>			ER CORE BOX			
	ECTION OF E		DEG. FROM BE	ARING 14	1. EL	EVATION G	ROUND WATE	R		
	VERTICAL		VERTICAL	15	5. DA	TE BORING	;	STARTED	COMPLETED	
<u> </u>	INCLINED		! !				i	06-18-19 14:	42 06-18-19	14:48
3. THI	CKNESS OF	OVERE	BURDEN 0.0 Ft.	16	3. EL	EVATION TO	OP OF BORIN	<b>G</b> -18.7 Ft.		
. DEP	TH DRILLED	INTO	ROCK 0.0 Ft.	17	7. ТО	TAL RECOV	ERY FOR BO	<b>RING</b> 17.4 Ft	t.	
				18	3. SI	GNATURE A	ND TITLE OF	INSPECTOR		
з. тот	AL DEPTH O	F BOR	ING 20.0 Ft.			Kristina Mc	Coy, P.G.			
		9				絽				
ELEV. (ft)	DEPTH (ft)	GEND	CLASSIFICATION OF MA  Depths and elevations based on a		% REC.	BOX OR SAMPLE		REMAR	KS	
-18.7	0.0	Ľ	-			S B				
40 -	4.0	∵:: <u> </u>	SAND, fine grained, quartz, tra			1		, Depth = 0.5' ı): 0.21, Phi Sortir	ng: 0.58	
-19.7 -20.1	1.0	· · · ·	trace silt, silty pockets up to 0.2 shell fragment @ 0.8', gray (2.		1	VS		i): 0.21, Pili 30itii )): 1.15% (SP)	ng. 0.50	
20.9	- 2.2		SAND, fine to medium grained	, quartz, some	1	VC18#2	`	, , ,		
20.5			shell hash, trace silt, trace she whole shells up to 0.75", (1.25		-	2 /		2, Depth = 1.8' n): 0.27, Phi Sorti	ina: 0.85	
21.8		• •	shell @ 1.1', light gray (2.5Y	7-7/1), (SW).	-		Fines (230	)): 0.88% (SP)	g. 0.00	
22.4	3.7	• • •	SAND, fine grained, quartz, litt	tle shell hash,	-	3		3, Depth = 3.4'	4 0 <b>7</b>	
		$ \cdots $	trace silt, silty pockets up to 0.2 fragments up to 0.5", light gray (					n): 0.36, Phi Sorti )): 0.59% (SW)	ing: 1.37	
	_	$ \cdots $	SAND, fine grained, quartz, tra	ace shell hash,			,	, , ,		
		-::: ₋	trace silt, silty pockets & trace s	shell fragments		4		l, Depth = 5.7' n): 0.22, Phi Sorti	ina: 0.60	
	ļ	`.`:	up to (0.75"x1.25"), white (N SAND, fine grained, quartz, litt					)): 1.13% (SP)	g. 0.00	
	-	$ \cdots $	trace silt, trace shell fragments							
-26.5	7.8		up to 1.25", white (2.5Y-8/							
	ļ	ຶ້	SAND, fine grained, quartz, tra trace silt, silty pockets up to 0.2			5		5, Depth = 8.4' n): 0.24, Phi Sorti	ina: 0 92	
-27.8	9.1	000	fragments up to 0.75", (0.5"x1.0"	') silty pocket @/_	_		Fines (230	)): 0.90% (SW)	ing. 0.52	
-28.6	9.9	-:::	4.5', white (N-8/0), (3			6		6, Depth = 9.5'		
	-	。。 。。。	SAND, fine grained, quartz, litt trace silt, trace shell fragments			7		n): 0.21, Phi Sorti )): 1.36% (SP)	ing: 0.60	
-29.7	11.0	。。。。 •	up to (0.5"x0.75"), (0.75"x1.5")	shell fragment	_	/		7, Depth = 10.5'		
			@ 8.4', light gray (2.5Y-7/ SAND, fine grained, guartz, tra	1), (SW).				n): 0.24, Phi Sorti	ing: 1.33	
	-		trace silt, silty pockets up to (0.3				Fines (230	): 3.81% (SW)		
	L		(2.5Y-6/1), (SP).							
			SAND, fine grained, quartz, litt trace clay, trace shell fragments	ue sneil hash,						
33.3	14.6		up to 1.25", dark greenish gra							
55.0			(SW). Clayey SAND, fine to medium of	rained quartz	1					
34.6	15.9		little shell hash, trace shell fra							
	T		(0.75"x1.5"), trace whole shell	s up to 1.25",	1					
-35.5	16.8	(///	dark greenish gray (10Y-4 Clayey SAND, fine to medium g	rained guartz	-					
<u>-36.1</u>	17.4	<del>   </del>	little shell hash, 0.75" whole s	shell @ 15.3',	1					
	-		(0.5"x1.5") shell fragment @	) 15.4', dark						
			greenish gray (10Y-4/1) Shelly SAND, fine to medium g	), (SC). Irained guartz						
20 -	00.0		some clay, shells up to 1.25",							
-38.7	20.0	$\vdash$	gray (10Y-4/1), (G0	C)	1					
			SAND, fine grained, quartz, tra trace silt, trace shell fragments							
			(2.5Y-6/1), (SP).	10 0.0 , gray	1	1	1			
	-		No Recovery.							
			No Recovery.							
	-									
	-		No Recovery.							

1. PROJ Mexic	co Beach S	Sand S	o o rob			YPE OF BIT 2.0 In.  ATE SYSTEM/DATUM HORIZONTAL VERTI
Bay (	County, Flo	orida	APTIM			State Plane North NAD 1983 NAV
	NG DESIGN		! ' !	11.		TURER'S DESIGNATION OF DRILL AUTO HA
	BVC-19-1		X = 1,664,895 Y = 339,807 CONTRACTOR FILE NO.		Electric	DISTURBED UNDISTU
	thena Tech			12.	TOTAL SAM	MPLES 5
	E OF DRILL			13.	TOTAL NU	IMBER CORE BOXES
	almer McC			14.	ELEVATIO	N GROUND WATER
⊠ v	CTION OF I ERTICAL	BORIN	VERTICAL	15	DATE BORI	STARTED COMPLET
	NCLINED					06-18-19 15:08   06-18-
6. THIC	KNESS OF	OVER	BURDEN 0.0 Ft.	16.	ELEVATIO	N TOP OF BORING -16.8 Ft.
7. DEPT	H DRILLED	INTO	NOCK U.U FL.			COVERY FOR BORING 19.7 Ft.
8. TOT <i>A</i>	L DEPTH C	F BOR		18.		RE AND TITLE OF INSPECTOR  McCoy, P.G.
		□				
ELEV. (ft)	DEPTH (ft)	LEGEND	CLASSIFICATION OF MATERIALS  Depths and elevations based on measured values	RI	SAMPLE	REMARKS
-16.8	0.0	=		4		
-17.8	1.0	<u>[</u> ∷:]	SAND, fine grained, quartz, trace shell hash, trace silt, light gray (2.5Y-7/2), (SP).		VS VC12#	#1
-18.4	1.6	°°°	SAND, fine to medium grained, quartz, some shell hash, trace shell fragments, trace silt,	7	1	Mean (mm): 0.62, Phi Sorting: 2.03
-	•	<u> </u> :∷	trace whole shell, shells up to 0.75",	П	2	Fines (230): 0.59% (SW) Sample #2, Depth = 2.3'
-19.8	3.0	<del>  </del>	(1.25"x1.75") shell fragment @ 1.2', 0.5" silty pocket @ 1.5', light gray (2.5Y-7/1), (SW).	-		Mean (mm): 0.27, Phi Sorting: 0.57
		$ \cdots $	SAND, fine grained, quartz, trace shell	П		Fines (230): 0.87% (SP)
		$ \cdots $	fragments, trace shell hash, trace silt, trace whole shell, silty pockets up to 0.25", shell	П		
	_		fragments up to (0.5"x0.75"), whole shells up to 0.75", light gray (2.5Y-7/1), (SP).			Sample #3, Depth = 5.8'
-	•	<b> ∷:</b>	SAND, fine grained, quartz, trace shell hash,		3	Mean (mm): 0.23, Phi Sorting: 0.38 Fines (230): 0.92% (SP)
-		-:::·	trace silt, silty pockets up to 0.25", white (N-8/0), (SP).			
		<u> </u> :::	(			
-25.3	8.5	<del>  </del>		_		
		$ \cdots $	SAND, fine grained, quartz, trace shell			Sample #4, Depth = 9.8'
-	_	::::	fragments, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), shell fragments up to		4	Mean (mm): 0.21, Phi Sorting: 0.38 Fines (230): 0.86% (SP)
-28.0	11.2		0.5", light gray (2.5Y-7/1), (SP).			Sample #5, Depth = 11.4'
-28.4	11.6		SAND, fine grained, quartz, little shell hash, trace shell fragments, trace silt, trace whole	7	5	Mean (mm): 0.27, Phi Sorting: 1.42 Fines (230): 7.83% (SW-SM)
-29.8	. 42.0		shell, shells up to (0.5"x1.0"), dark greenish	H		1 11103 (200). 1:00 % (CVV-CIVI)
-29.0	13.0		gray (10Y-4/1), (SW-SM). Clayey SAND, fine to medium grained, quartz,	'гI		
,	•		little shell hash, trace shell fragments & whole shells up to 1.0", dark greenish gray (10Y-4/1),	$\prod$		
-32.2	- 15.4		(SC).			
-32.2	10.4		Clayey SAND, fine to medium grained, quartz, some shell hash, trace shell fragments & whole	Π		
	4 <del></del>		shells up to 1.25", (1.75"x2.25") shell fragment @ 15.1', dark greenish gray (10Y-4/1), (GC).			
-33.9	. 17.1		SAND, fine to medium grained, quartz, some	$  \cdot  $		
-34.8 -35.1	18.0 18.3	////	clay, little shell hash, trace shell fragments & whole shells up to 1.0", dark greenish gray			
			(10Y-4/1), (SC). Shelly SAND, fine to medium grained, quartz,			
-36.5	19.7	HHH	some clay, trace organics, shells up to 1.5", 2	-		
27.	- 04.0		(0.5"x1.0") wood fragments @ 17.4', dark greenish gray (10Y-4/1), (GC).			
-37.8	21.0	$\vdash$	WOOD FRAGMENTS, trace sand, trace shell			
-			hash, black (10YR-2/1), (PT).  SAND, fine grained, quartz, little silt, trace			
			organics, trace shell hash, silty pockets up to 0.75", color mottled light gray (2.5Y-7/1) and,			
1			very dark gray (2.5Y-3/1), (SM).			
	•	1	No Recovery.			
-36.5 -37.8		1 1	End of Boring			

1. PROJ	i <b>ec</b> t co Beach S	Sand C	earch			AND TYPE	
	County, Flo		earch	10.			e Plane North NAD 1983 NAVE
2. BORI	NG DESIGN	OITA		11.			RER'S DESIGNATION OF DRILL AUTO HAN
	BVC-19-1		X = 1,665,626 Y = 340,196		El	ectric	MANUAL H
	<b>LING AGEN</b> thena Tech		CONTRACTOR FILE NO.	12.	тот	AL SAMPL	DISTURBED UNDISTURI
	E OF DRILL		55, 1110.	13.	тот	AL NUMB	ER CORE BOXES
	almer McC						ROUND WATER
	CTION OF I	BORIN	DEG. FROM BEARING VERTICAL				STARTED COMPLETE
	NCLINED			15.	DAT	E BORING	06-18-19 15:40 06-18-1
6. THIC	KNESS OF	OVER	BURDEN 0.0 Ft.	16.	ELE	VATION T	OP OF BORING -16.2 Ft.
7. DEPT	H DRILLED	INTO	ROCK 0.0 Ft.	17.	тот	AL RECOV	VERY FOR BORING 20.8 Ft.
8 TOT/	AL DEPTH C	E ROE	ING 21.0 Ft.	18.			ND TITLE OF INSPECTOR
0. 1012	C DEF III C	<del>- 1</del>	21.0 Ft.	щ	Kr T	ristina Mo	Coy, P.G. I
ELEV.	DEPTH	LEGEND	CLASSIFICATION OF MATERIALS		% REC.	BOX OR SAMPLE	REMARKS
-16.2	( <b>ft)</b> 0.0	🖁	Depths and elevations based on measured value	s	KEG.	SAN	
-17.0	0.8	°°°	SAND, fine grained, quartz, trace shell hash,	十	$\neg$	1	Sample #1, Depth = 0.4'
		°°°°	trace silt, trace shell fragments & whole shells up to 0.75", light gray (2.5Y-7/2), (SW).	/	f		Mean (mm): 0.32, Phi Sorting: 1.24 Fines (230): 0.83% (SW)
-18.4	2.2	0 0 0	SAND, fine grained, quartz, some shell hash,	<b>~</b>		2	Sample #2, Depth = 1.5' Mean (mm): 0.52, Phi Sorting: 1.93
		000	silty pockets up to 0.25", trace shell fragments & whole shells up to 0.75", light gray (2.5Y-7/1)				Fines (230): 0.71% (SW)
ľ	•	000	(SW). SAND, fine grained, quartz, trace shell hash,	<i>J</i>			
-		000	trace silt, silty pockets & trace whole shells up				Sample #3, Depth = 4.6'
	_		to 1.25", trace shell fragments up to (1.0"x1.25"), 1.5" silty pocket @ 3.7', light gray			3	Mean (mm): 0.28, Phi Sorting: 1.00 Fines (230): 0.84% (SW)
		000	(2.5Y-7/1), (SW).				1 mes (200). 0.0470 (OVV)
		000					
-23.2	7.0			-	-		
			SAND, fine grained, quartz, trace silt, silty pockets up to 0.25", trace shell fragments up to				Sample #4, Depth = 8.3'
		::::	0.5", 0.75" whole shell @ 7.5', light greenish			4	Mean (mm): 0.23, Phi Sorting: 0.50 Fines (230): 0.98% (SP)
-25.8	9.6		gray (10Y-7/1), (SP).	_			
-26.9	- 10.7	000	SAND, fine grained, quartz, trace shell hash, trace silt, silty pockets up to (0.25"x0.5"), trace			5	Sample #5, Depth = 10.2'  Mean (mm): 0.33, Phi Sorting: 1.60
-20.9	<u>10.7</u>		shell fragments & whole shells up to	гΙ	-		Fines (230): 1.66% (SW) Sample #6, Depth = 11.4'
-28.3	. 12.1		(0.5"x0.75"), (1.25"x2.0") shell fragment @ 9.8' 2 (1.0") whole shells & 1.25" shell fragment @			6	Mean (mm): 0.25, Phi Sorting: 1.15
20.0	. 12.1		10.2', light gray (2.5Y-7/1), (SW). SAND, fine grained, quartz, trace clay, trace	7[	Ī		Fines (230): 8.89% (SW-SC)
}	•		shell hash, trace shell fragments up to 0.75",				
-	-		dark greenish gray (10Y-4/1), (SW-SC). Clayey SAND, fine to medium grained, quartz,	J			
[			some shell hash, trace shell fragments & whole				
-31.6	15.4		shells up to 2.0", dark greenish gray (10Y-4/1), (GC).	$\mathcal{A}$			
	-		SAND, fine to medium grained, quartz, some clay, little shell hash, trace organics, trace shell				
-33.2	17.0		fragments & whole shells up to 0.75", 1.25"	$  \cdot  $			
	<u>-</u>		whole shell @ 15.8', (0.25"x0.5") wood fragments @ 16.8' & 16.9', dark greenish gray				
-34.9	18.7		(10Y-4/1), (SC).	]_[			
ŀ	•		Shelly SAND, fine to medium grained, quartz, some clay, trace organics, shells up to 2.0", 1.0"				
_	_	$\parallel \parallel $	wood @ 17.1', 0.75" wood @ 17.7', dark greenish gray (10Y-4/1), (GC).				
-37.0 -37.2	20.8	1+1+1	SAND, fine grained, quartz, some silt, trace	<u>ا</u> ا			
			organics, trace shell hash, trace wood fragments, wood up to (1.0"x3.0"), color mottled	$\prod$			
ŀ	-		light gray (2.5Y-7/1), gray (2.5Y-5/1) and, black				
}			(2.5Y-2.5/1), (SM). No Recovery.	4			
			110 110001019.	<b>-</b>			
L		1	End of Boring				
}			End of Borning				

Mexico Beach Sand Bay County, Florida  BORING DESIGNATIO MBVC-19-18  DILLING AGENCY	Search		A	$\vdash$						OF 1 SHEETS
Bay County, Florida  2. BORING DESIGNATION MBVC-19-18	Search			19. 9	SIZE	AND TYPE	OF BIT	2.0 ln.		
2. BORING DESIGNATION MBVC-19-18			2				SYSTEM/DAT		ITAL	VERTICAL
MBVC-19-18			APTIM				e Plane Nort	!		NAVD 88
	N	LOCATION COORD	INATES (ft)	11.	MA	NUFACTUR	RER'S DESIGI	NATION OF DRILL	. 🗆	AUTO HAMMER
3. DRILLING AGENCY		X = 1,664,148	Y = 340,191		E	lectric				MANUAL HAMMER
		CONTR	ACTOR FILE NO.	12.	TO:	TAL SAMPL	.ES	DISTURBED		JNDISTURBED (UD)
Athena Technolo	gies, Inc.	<u> </u>						6	i_	
<ol> <li>NAME OF DRILLER</li> <li>Palmer McClellar</li> </ol>				13.	TO	TAL NUMBI	ER CORE BO	XES		
5. DIRECTION OF BORI		DEG. FROM	BEARING	14.	ELE	VATION G	ROUND WAT	ER		
VERTICAL		VERTICAL		15.	DA	TE BORING	ì	<b>STARTED</b> 06-18-19 16	! '	O6-18-19 16:16
6. THICKNESS OF OVE	BURDEN	0.0 Ft.		16.	ELE	VATION T	OP OF BORIN	NG -17.4 Ft.	•	
7. DEPTH DRILLED INT	ROCK	0.0 Ft.		17.	то	TAL RECOV	ERY FOR BO	ORING 21 Ft.		
				18.	SIG	NATURE A	ND TITLE OF	INSPECTOR		
8. TOTAL DEPTH OF BO	RING	22.0 Ft.			K	ristina Mc	Coy, P.G.			
ELEV. DEPTH						<b>K</b> 3				
(ft)   (ft)   (5		CLASSIFICATION OF and elevations based		s R	«EC.	BOX OR SAMPLE		REMA	RKS	
-17.4 0.0						S/B			_	
-18.2 0.8		), fine grained, quart nell hash, trace silt, s		Ţ		1		1, Depth = 0.4' n): 0.22, Phi Sor	ina· ∩ ⁄	17
-18.6 - 1.2	shell fra	gments up to (0.25"	x0.5"), color mottled	d /⊢		2	Fines (23)	0): 1.16% (SP)	ig. 0	••
-19.7 - 2.3 °°°	¶∖light gra	y (2.5Y-7/2) and, gr	ay (2.5Y-5/1), (SP)			3	Sample #2	2, Depth = 1.0	ina. 1 1	20
-19.7 - 2.3		, fine to medium grainash, trace silt, trace						n): 0.49, Phi Sort 0): 0.94% (SW)	.ing: 1.9	<b>9</b> U
		shells up to 0.75", 1.		#1			Sample #	3, Depth = 1.7'		
L ŀ∷		1.1', light gray (2.5Y		41				n): 0.28, Phi Sort	ing: 0.8	34
[ ]::		), fine grained, quart ilt, silty pockets up to		Ш			Fines (23)	0): 1.09% (SP)		
-  ∷		ents up to (0.5"x0.7		II				4, Depth = 5.3'		
		(SP).		┚┃		4		n): 0.22, Phi Sort 0): 1.11% (SP)	ing: 0.5	06
		, fine grained, quartz ilt, silty pockets up to					1 11105 (20)	o). 1.1170 (Gr.)		
		nts up to (0.5"x1.0"),		)						
		(2.0"x2.5") shell has								
-25.8 8.4	(0. 1.5"x2.	75"x2.0") shell hash 0") shell fragment @	роскет @ 6.8 ; ) 8.0'. white (N-8/0)							
-  ∵.	\ <u></u>	(SP).	, ,	7				5, Depth = 9.4'		
∷	SA	ND, fine grained, qui ments, trace silt, silty	artz, trace shell			5		n): 0.20, Phi Sort 0): 1.60% (SP)	ing: 0.5	51
-27.7 10.3 · ·		ents up to (0.25"x0.5		_				6, Depth = 10.8'		
-28.6 - 11.2 °	\	8.5', gray (2.5Y-6	/1), (SP).	<i>]</i> [		6	Mean (mr	n): 0.24, Phi Sort		21
1//		fine to coarse graine shell fragments, trac		, [[			Fines (23)	0): 11.35% (SW-	SC)	
	whole s	hell, shells up to 0.7	5", 2.0" some shell							
-	hash	n pocket @ 11.1', da								
	Clavev	(10Y-4/1), (SV SAND, fine to media		۱ ا						
	some sl	nell hash, trace shell	fragments & whole	•						
	shells u	o to 1.25", dark gree (GC).	nish gray (10Y-4/1)	),						
33.2 15.8	1	(GC).								
		SAND, fine to mediu								
		lay, shell componen								
35.4 18.0	iragr	nents & whole shells greenish gray (10Y-								
35.4 18.0	Siltv	SAND, fine grained,		-						
36.7	hash,	trace clay, trace org	janics, trace shell							
36.7 - 19.3		ents up to 0.5", color 5Y-7/1) and, gray (2		<u>_</u>						
		SAND, fine grained,		۱ ۲						
-38.4 21.0	trace	organics, trace shell	hash, (1.5"x9.0")							
		agment @19.7', cold 5Y-7/1) and, gray (2		<u> </u>						
-39.4 22.0	<u> </u>	No Recove		-						
			•	<b>~</b>						
† l		End of Bori	ng							
-										

DRI	ILLING	LOC	DIVISION		IN	ISTAL	LATION				SHEET 1 OF 1 SHEETS
1. PRO	JECT		l	_ A	9	SIZI	E AND TYP	E OF BIT	2.0 ln.		_ C. I CHEETS
Mex	ico Beach S	Sand S	Search	2				SYSTEM/DAT		FAI	VERTICAL
	County, Flo			APTIM	<u> </u>	F	Florida Sta	te Plane Nort	h NAD 19		NAVD 88
	ING DESIGN		<u> </u>	COORDINATES (ft)	11			RER'S DESIGN	NATION OF DRILL	=	AUTO HAMMER
	IBVC-19-19		X = 1,66	4,063 Y = 340,958 CONTRACTOR FILE NO	+		Electric		DISTURBED		MANUAL HAMMER NDISTURBED (UD)
	Athena Tech		ies Inc	CONTRACTOR FILE NO	12	2. TO	TAL SAMP	LES	6		NDISTORBED (OD)
	E OF DRILL				12	3. TO	TAL NUMB	ER CORE BOX			
F	Palmer McC	lellan			$\vdash$						
	CTION OF E	BORIN	G DEG. FRO	M BEARING		4. EL	EVAIION	ROUND WAT		i a	
_	VERTICAL INCLINED		Likiloa	-	15	5. DA	TE BORING	•	<b>STARTED</b>		<b>OMPLETED</b> 06-23-19 07:52
	CKNESS OF	OVER	BURDEN 0.0 Ft.		1,	6 FI	EVATION T	OP OF BORIN	·	10	00 20 10 01.02
	JANESS OF	OVER	0.0 Ft.		_						
. DEP	TH DRILLED	INTO	ROCK 0.0 Ft.					VERY FOR BO			
. тот	AL DEPTH O	F BOF	RING 21.0 Ft.		718			AND TITLE OF	INSPECTOR		
		_	21.01			т '	Kristina Mo	Coy, P.G.			
LEV.	DEPTH	END	CLASSIFICAT	TION OF MATERIALS		<b> </b> %			DEMAD	ve	
(ft)	DEPTH (ft)	LEGI		s based on measured va	lues	REC.	BOX OR SAMPLE		REMAR	N O	
-17.2	0.0	+	SAND fine graines	d, quartz, trace shell has	h	+		Sample #1	1, Depth = 0.3'		
17.8	0.6		trace silt, color mottle	ed light gray (2.5Y-7/1)		-	1	Mean (mn	n): 0.24, Phi Sortir	ng: 0.5	6
		。。。	gray (	N-5/0), (SP).	- 7		2		0): 1.17% (SP) 2. Depth = 1.3'		
19.2	2.0	000		ium grained, quartz, sor trace shell fragments ι		-			2, Deptn = 1.3 n): 0.39. Phi Sortir	na: 14	9
		000		hole shells up to 1.0", I				Fines (230	0): 0.78% (SW)	.g	
				5Y-7/1), (SW).			3		3, Depth = 3.0'	a.a. 1 0	0
21.1	3.9	000		ned, quartz, trace shell hell hash, trace silt, trac	e Г	-			n): 0.29, Phi Sortir 0): 1.09% (SW)	ıg. 1.0	0
		000	whole shell, shells	s up to (0.5"x0.75"), ligh	ť			,	, , ,		
	_	000		ay (10Y-8/1), (SW).			4		4, Depth = 5.2'	a. 1 0	6
		000		d, quartz, trace shell has shell fragments up to	in,		4		n): 0.31, Phi Sortir 0): 0.95% (SW)	ıg. 1.2	0
04.0	7.0	000		enish gray (10Y-8/1), (S	W).				-, (,		
-24.2	7.0	<u> </u>	SAND, fine grained	d, quartz, trace shell has	h.	-		_			
		. · · ·	trace silt, trace she	ell fragments up to 0.75					5, Depth = 8.2'		
		·::·		ells up to (0.25"x0.5"), fragment @ 8.0', light g	-0.4		5		n): 0.23, Phi Sortir 0): 0.94% (SP)	ng: 0.6	3
-26.6	9.4			/-7/1), (SP).	ay				6, Depth = 9.7'		
27.2	10.0	• • • •	SAND, fine grained	d, quartz, trace shell has	h,	]	6	Mean (mn	n): 0.20, Phi Sortir	ng: 0.4	6
				ets up to (0.25"x0.5"), 0. 0"x2.0") whole shell @ 9			VS	Fines (23	0): 2.12% (SP)		
	-		greenish gra	ay (10Y-6/1), (SP).	,.5 ,		VC18#6				
-29.0	11.8		L or wib, into granto	d, quartz, little clay, trac		-		4			
				ce shell hash, trace wh 75"x1.0"), (1.0"x2.0") so							
	-		shell hash pocket w	<i>i</i> ith organics @ 11.1', d	ark	1					
				(10Y-4/1), (SW-SC). to medium grained, gua	ct-z						
				ce shell fragments & wl							
32.5	15.3		shells up to 2.0", (0	0.25"x0.5") coral @ 14.8		_					
				gray (10Y-4/1), (GC). to medium grained, qua	rtz	1					
34.0	- 16.8			ce shell fragments & wh		1					
J4.U	- 10.6		\ shells up to (0.25")	x0.5"), dark greenish gra		-					
05.4	40.0			′-4/1), (SC). o medium grained, qual							
35.4	- 18.2		trace organics, she	Il components: shell has	sh, r	-					
36.2	19.0	<del>  [   ] [</del>		whole shells up to 1.5"		-					
				fragment @ 18.1', dark ay (10Y-4/1), (GC).	- 11						
	_		SAND, fine graine	d, quartz, some silt, trad							
-38.2	21.0	<u> </u>		s, trace shell hash, trac		-					
				ood fragments up to 1.9 brown (10YR-3/2), (SM		1					
	}			Recovery.							
	L					1					
			End	d of Boring		1					
	}					1					

DRI	ILLING	LOG	DIVISIO	ON		INS	STAL	LATION	<del>-</del>			SHEET 1 OF 1 SHEETS
1. PRO	JECT				<b>A</b>	9.	SIZE	AND TYPE	OF BIT	2.0 ln.		, : : :::10
Mex	ico Beach S	and S	earch		2	Ľ.			SYSTEM/DAT		TAL	VERTICAL
Bay	County, Flo	rida			APTIM		F	lorida Stat	e Plane Nort	h NAD 19	983	NAVD 88
2. BOR	ING DESIGN	IOITAI	4	LOCATION COOR	DINATES (ft)	11.	. MA	NUFACTUR	RER'S DESIGN	IATION OF DRILL		AUTO HAMMER
	MBVC-19-20		!	X = 1,665,053	Y = 340,834	ㄴ	E	Electric			<u> </u>	MANUAL HAMMER
	LLING AGEN			CONTI	RACTOR FILE NO.	12.	. то	TAL SAMPL	.ES	DISTURBED	- ¦'	UNDISTURBED (UD)
	Athena Tech		es, Inc.	<u> </u>						5	!	
	Palmer McC					13.	. то	TAL NUMBI	ER CORE BOX	ŒS		
	ECTION OF E			DEG. FROM	BEARING	14.	. EL	EVATION G	ROUND WAT	ER		
	VERTICAL			VERTICAL		15.	. DA	TE BORING	i	STARTED		COMPLETED
	INCLINED			!	!	⊢				06-23-19 08:	14	06-23-19 08:21
6. THIC	CKNESS OF	OVERE	BURDEN	0.0 Ft.		16.	. EL	EVATION T	OP OF BORIN	IG -17.1 Ft.		
7. DEP	TH DRILLED	INTO	ROCK	0.0 Ft.		17.	. то	TAL RECOV	ERY FOR BO	<b>RING</b> 19.7 F	t.	
. TOT	AL DEPTH O	E POP	UNG 04	I O Et		18.				INSPECTOR		
b. 101	AL DEPTH O		and Z	1.0 Ft.		Ļ	ŀ	Kristina Mc	Coy, P.G.			
ELEV.	DEPTH	END	c	LASSIFICATION O	F MATERIAI S		0/	BOX OR SAMPLE				
(ft)	(ft)	LEGE			d on measured valu	es I	REC.	AMI AMI		REMAR	KS	
-17.1	0.0		CAND 6	fine areined accept	- trace shall back	-						
-18.0	0.9		trac	e silt, light gray (2.				VS VC12#1	Sample #	1 Donth = 1.2'		
-18.5	1.4	°°°	SAND,	fine to medium gra	ained, quartz, little			1		1, Depth = 1.2' n): 0.46, Phi Sort	ing: 1	.72 Fines
-19.5	2.4				e shell fragments & '5"), 2.0" whole she	ıı /		2	(230): 0.5	2% (SW)	ŭ	
			[\ @ ·	1.3', light gray (2.5	SY-7/1), (SW).	][				2, Dèpth [´] = 1.9' n): 0.31, Phi Sort	ina: 0	96 Fines
		ŀ∷⊹l			z, trace shell hash, ents up to 0.5", 1.5	,			(230): 0.5		g. o	
	-				" whole shell @ 2.2				0	0 Dtl. 4 01		
		$ \cdots $	CANI	light gray (2.5Y-7	/1), (SW).	اـ		3		3, Depth = 4.9' n): 0.22, Phi Sort	ina: 0	56 Fines
	Γ	ŀ∷⊹l		D, fine grained, qu ents, trace shell ha					(230): 1.1	1% (SP)	g. o	
	-		pockets u	p to (0.25"x0.5"), s	shell fragments up t	0						
04.4	7.0	$ \cdots $	1.0", 0.5"	whole shell @ 4.7 (10Y-8/1), (	", light greenish gra	У						
-24.4	7.3	<del>   </del>		, ,, ,	,							
	}	$ \cdots $			z, trace shell hash, o (0.25"x0.5"), trace				Comple #	4, Depth = 8.8'		
		ŀ∷·∣	shell frac	gments up to (0.75	5"x1.0"), (1.5"x2.0")			4		n): 0.23, Phi Sort	ing: 0	.84 Fines
		····	shell frag	ment @ 8.6', (0.7	5"x1.0") whole shel	ı			(230): 1.0		Ü	
-27.4	10.3				y (10Y-7/1), (SP).				Sample #	5, Depth = 10.5'		
-27.9	10.8	°°°			z, trace shell hash,	-		5		n): 0.25, Phi Sort	ing: 0	.87 Fines
			(1.0"x1.5	silt, silty pockets u 5") whole shell @ 1	p to (0.25 x0.5 ), 10.7', greenish gray	. / [		VS	(230): 1.3	5% (SVV)		
-29.3	- 12.2		_\	(10Y-6/1), (	SW).	$\rfloor$ .		VC18#6				
					tz, little clay, trace nents & whole shell	.						
					)") shell fragment @							
	}				gment @ 12.1', dar	k						
			Clavev S	enish gray (10Y-4 AND. fine to medi	um grained, quartz	-						
-32.5	15.4		some sh	nell hash, trace sh	ell fragments up to	` ₁ -						
	-			race whole shells reenish gray (10Y		/1						
-34.1	17.0				ined, quartz, some	-						
			clay, littl	e shell hash, trace	e shell fragments &	$\lceil \rceil$						
-35.2	_ 18.1		whole s	shells up to 1.0", d (10Y-4/1), (	lark greenish gray SC).	-						
-36.3	- 19.2	[[		AND, fine to media	um grained, quartz,	7]]						
-36.8	19.7	<u>                                     </u>			shell components: & whole shells up t							
				0.5" wood fragme		ا][						
-38.1	21.0	<u> </u>	l g	reenish gray (10Y	-4/1), (GC).							
				AND, fine grained,	quartz, little shell e wood fragments,							
	-				0"x2.0"), dark gray							
				(2.5Ý-4/1), (	SM).	╜┃						
	Γ			, fine grained, qua	rtz. little silt. trace	11		l	1			
		'	Organ	nics trace wood fr								
	-			nics, trace wood fr nts up to 2.0", gray		$\prod$						